

|           |                                                                     |   |        |        |       |      |      |         |
|-----------|---------------------------------------------------------------------|---|--------|--------|-------|------|------|---------|
| 10477-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)    | X | 6.74   | 228.54 | 21.21 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 0.23   | 55.08  | 2.89  |      | 80.0 |         |
|           |                                                                     | Z | 0.64   | 60.00  | 6.98  |      | 80.0 |         |
| 10478-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)    | X | 4.84   | 230.57 | 11.22 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 24.37  | 227.68 | 30.04 |      | 80.0 |         |
|           |                                                                     | Z | 0.66   | 60.00  | 6.29  |      | 80.0 |         |
| 10479-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 3.02   | 84.98  | 21.47 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 100.00 | 125.48 | 31.72 |      | 80.0 |         |
|           |                                                                     | Z | 5.02   | 83.00  | 20.76 |      | 80.0 |         |
| 10480-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 0.47   | 60.00  | 6.63  | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.92   | 67.54  | 11.86 |      | 80.0 |         |
|           |                                                                     | Z | 1.73   | 65.44  | 11.67 |      | 80.0 |         |
| 10481-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 0.22   | 55.04  | 3.12  | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.09   | 61.90  | 8.89  |      | 80.0 |         |
|           |                                                                     | Z | 1.31   | 62.31  | 9.77  |      | 80.0 |         |
| 10482-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 53.67  | 208.87 | 10.65 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.05   | 62.14  | 9.95  |      | 80.0 |         |
|           |                                                                     | Z | 0.98   | 60.56  | 9.26  |      | 80.0 |         |
| 10483-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 64.01  | 327.64 | 15.81 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.10   | 60.00  | 7.60  |      | 80.0 |         |
|           |                                                                     | Z | 1.21   | 60.00  | 8.23  |      | 80.0 |         |
| 10484-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 72.15  | 316.72 | 7.23  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.13   | 60.00  | 7.59  |      | 80.0 |         |
|           |                                                                     | Z | 1.24   | 60.00  | 8.22  |      | 80.0 |         |
| 10485-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 0.75   | 60.00  | 6.88  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.48   | 72.41  | 16.54 |      | 80.0 |         |
|           |                                                                     | Z | 1.64   | 65.93  | 13.71 |      | 80.0 |         |
| 10486-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.01   | 60.00  | 5.53  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.68   | 63.79  | 11.57 |      | 80.0 |         |
|           |                                                                     | Z | 1.58   | 62.22  | 10.94 |      | 80.0 |         |
| 10487-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.04   | 60.00  | 5.50  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.66   | 63.28  | 11.27 |      | 80.0 |         |
|           |                                                                     | Z | 1.59   | 61.98  | 10.79 |      | 80.0 |         |
| 10488-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 1.44   | 64.72  | 13.06 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.82   | 72.60  | 18.56 |      | 80.0 |         |
|           |                                                                     | Z | 2.27   | 68.12  | 16.38 |      | 80.0 |         |
| 10489-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 1.47   | 61.87  | 10.73 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.82   | 68.91  | 16.54 |      | 80.0 |         |
|           |                                                                     | Z | 2.48   | 66.05  | 15.16 |      | 80.0 |         |
| 10490-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 1.47   | 61.55  | 10.50 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.86   | 68.61  | 16.37 |      | 80.0 |         |
|           |                                                                     | Z | 2.55   | 65.97  | 15.11 |      | 80.0 |         |
| 10491-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 1.98   | 66.25  | 14.91 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.98   | 70.44  | 18.02 |      | 80.0 |         |
|           |                                                                     | Z | 2.64   | 67.54  | 16.51 |      | 80.0 |         |
| 10492-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 2.19   | 64.63  | 13.64 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.11   | 67.88  | 16.76 |      | 80.0 |         |
|           |                                                                     | Z | 2.90   | 65.95  | 15.77 |      | 80.0 |         |

|           |                                                                      |   |      |        |       |      |      |         |
|-----------|----------------------------------------------------------------------|---|------|--------|-------|------|------|---------|
| 10493-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.21 | 64.43  | 13.47 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.16 | 67.71  | 16.66 |      | 80.0 |         |
|           |                                                                      | Z | 2.96 | 65.87  | 15.72 |      | 80.0 |         |
| 10494-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.11 | 67.23  | 15.74 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.21 | 71.79  | 18.57 |      | 80.0 |         |
|           |                                                                      | Z | 2.78 | 68.52  | 16.88 |      | 80.0 |         |
| 10495-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.35 | 65.50  | 14.66 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.14 | 68.07  | 17.04 |      | 80.0 |         |
|           |                                                                      | Z | 2.93 | 66.16  | 16.02 |      | 80.0 |         |
| 10496-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.42 | 65.39  | 14.61 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.21 | 67.85  | 16.95 |      | 80.0 |         |
|           |                                                                      | Z | 3.02 | 66.06  | 16.01 |      | 80.0 |         |
| 10497-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 4.50 | 220.48 | 26.76 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 0.82 | 60.00  | 6.90  |      | 80.0 |         |
|           |                                                                      | Z | 0.88 | 60.00  | 7.23  |      | 80.0 |         |
| 10498-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 0.00 | 60.00  | 0.00  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.06 | 60.00  | 5.49  |      | 80.0 |         |
|           |                                                                      | Z | 1.08 | 60.00  | 6.01  |      | 80.0 |         |
| 10499-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 0.00 | 60.00  | 0.00  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.10 | 60.00  | 5.30  |      | 80.0 |         |
|           |                                                                      | Z | 1.11 | 60.00  | 5.84  |      | 80.0 |         |
| 10500-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 0.83 | 60.00  | 8.23  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.68 | 72.91  | 17.52 |      | 80.0 |         |
|           |                                                                      | Z | 1.91 | 67.05  | 14.90 |      | 80.0 |         |
| 10501-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.03 | 60.00  | 6.96  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.26 | 66.74  | 13.90 |      | 80.0 |         |
|           |                                                                      | Z | 1.97 | 64.14  | 12.76 |      | 80.0 |         |
| 10502-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.05 | 60.00  | 6.86  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.24 | 66.31  | 13.60 |      | 80.0 |         |
|           |                                                                      | Z | 1.99 | 63.95  | 12.58 |      | 80.0 |         |
| 10503-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 1.42 | 64.51  | 12.94 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.78 | 72.32  | 18.42 |      | 80.0 |         |
|           |                                                                      | Z | 2.24 | 67.93  | 16.27 |      | 80.0 |         |
| 10504-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.45 | 61.75  | 10.65 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.79 | 68.76  | 16.45 |      | 80.0 |         |
|           |                                                                      | Z | 2.46 | 65.95  | 15.09 |      | 80.0 |         |
| 10505-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.46 | 61.45  | 10.42 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.84 | 68.47  | 16.29 |      | 80.0 |         |
|           |                                                                      | Z | 2.53 | 65.87  | 15.05 |      | 80.0 |         |
| 10506-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 2.09 | 67.08  | 15.65 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.18 | 71.61  | 18.48 |      | 80.0 |         |
|           |                                                                      | Z | 2.76 | 68.39  | 16.81 |      | 80.0 |         |
| 10507-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 2.34 | 65.41  | 14.60 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.12 | 67.99  | 16.99 |      | 80.0 |         |
|           |                                                                      | Z | 2.92 | 66.10  | 15.98 |      | 80.0 |         |

|           |                                                                     |   |      |        |       |      |       |         |
|-----------|---------------------------------------------------------------------|---|------|--------|-------|------|-------|---------|
| 10508-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 2.40 | 65.29  | 14.54 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.20 | 67.76  | 16.90 |      | 80.0  |         |
|           |                                                                     | Z | 3.01 | 65.99  | 15.96 |      | 80.0  |         |
| 10509-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 2.58 | 67.03  | 16.09 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.55 | 70.28  | 17.97 |      | 80.0  |         |
|           |                                                                     | Z | 3.24 | 67.94  | 16.71 |      | 80.0  |         |
| 10510-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 2.84 | 65.59  | 15.48 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.55 | 67.42  | 17.00 |      | 80.0  |         |
|           |                                                                     | Z | 3.41 | 66.05  | 16.23 |      | 80.0  |         |
| 10511-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 2.92 | 65.56  | 15.46 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.62 | 67.28  | 16.95 |      | 80.0  |         |
|           |                                                                     | Z | 3.49 | 65.96  | 16.22 |      | 80.0  |         |
| 10512-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 2.57 | 67.43  | 16.22 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.65 | 71.51  | 18.37 |      | 80.0  |         |
|           |                                                                     | Z | 3.23 | 68.73  | 16.92 |      | 80.0  |         |
| 10513-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 2.79 | 65.51  | 15.59 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.45 | 67.50  | 17.07 |      | 80.0  |         |
|           |                                                                     | Z | 3.30 | 66.08  | 16.26 |      | 80.0  |         |
| 10514-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 2.87 | 65.41  | 15.56 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.50 | 67.18  | 16.96 |      | 80.0  |         |
|           |                                                                     | Z | 3.36 | 65.86  | 16.21 |      | 80.0  |         |
| 10515-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)           | X | 0.84 | 63.77  | 14.11 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.02 | 65.86  | 16.61 |      | 150.0 |         |
|           |                                                                     | Z | 0.85 | 62.40  | 13.77 |      | 150.0 |         |
| 10516-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         | X | 0.62 | 73.89  | 17.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.44 | 111.45 | 33.24 |      | 150.0 |         |
|           |                                                                     | Z | 0.45 | 67.70  | 14.48 |      | 150.0 |         |
| 10517-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)          | X | 0.68 | 65.50  | 14.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.96 | 70.28  | 18.66 |      | 150.0 |         |
|           |                                                                     | Z | 0.68 | 63.72  | 13.93 |      | 150.0 |         |
| 10518-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)           | X | 3.70 | 67.39  | 15.82 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.26 | 67.62  | 16.61 |      | 150.0 |         |
|           |                                                                     | Z | 4.17 | 66.58  | 15.96 |      | 150.0 |         |
| 10519-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)          | X | 3.79 | 67.51  | 15.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.38 | 67.73  | 16.67 |      | 150.0 |         |
|           |                                                                     | Z | 4.31 | 66.74  | 16.05 |      | 150.0 |         |
| 10520-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)          | X | 3.65 | 67.31  | 15.75 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.25 | 67.68  | 16.61 |      | 150.0 |         |
|           |                                                                     | Z | 4.16 | 66.65  | 15.95 |      | 150.0 |         |
| 10521-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)          | X | 3.59 | 67.16  | 15.66 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.18 | 67.62  | 16.58 |      | 150.0 |         |
|           |                                                                     | Z | 4.10 | 66.58  | 15.92 |      | 150.0 |         |
| 10522-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)          | X | 3.61 | 67.21  | 15.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.20 | 67.65  | 16.61 |      | 150.0 |         |
|           |                                                                     | Z | 4.13 | 66.67  | 15.99 |      | 150.0 |         |

|           |                                                            |   |      |       |       |      |       |         |
|-----------|------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10523-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) | X | 3.58 | 67.41 | 15.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.19 | 67.90 | 16.68 |      | 150.0 |         |
|           |                                                            | Z | 4.09 | 66.77 | 15.97 |      | 150.0 |         |
| 10524-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) | X | 3.55 | 67.17 | 15.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.18 | 67.74 | 16.69 |      | 150.0 |         |
|           |                                                            | Z | 4.09 | 66.69 | 16.02 |      | 150.0 |         |
| 10525-AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)          | X | 3.68 | 66.62 | 15.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.25 | 66.93 | 16.35 |      | 150.0 |         |
|           |                                                            | Z | 4.15 | 65.82 | 15.66 |      | 150.0 |         |
| 10526-AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)          | X | 3.72 | 66.70 | 15.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.34 | 67.14 | 16.44 |      | 150.0 |         |
|           |                                                            | Z | 4.25 | 66.06 | 15.76 |      | 150.0 |         |
| 10527-AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)          | X | 3.68 | 66.74 | 15.58 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.29 | 67.16 | 16.40 |      | 150.0 |         |
|           |                                                            | Z | 4.18 | 66.03 | 15.70 |      | 150.0 |         |
| 10528-AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)          | X | 3.67 | 66.65 | 15.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.30 | 67.15 | 16.42 |      | 150.0 |         |
|           |                                                            | Z | 4.20 | 66.04 | 15.73 |      | 150.0 |         |
| 10529-AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)          | X | 3.67 | 66.65 | 15.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.30 | 67.15 | 16.42 |      | 150.0 |         |
|           |                                                            | Z | 4.20 | 66.04 | 15.73 |      | 150.0 |         |
| 10531-AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)          | X | 3.64 | 66.66 | 15.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.25 | 67.14 | 16.38 |      | 150.0 |         |
|           |                                                            | Z | 4.15 | 66.02 | 15.69 |      | 150.0 |         |
| 10532-AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)          | X | 3.57 | 66.55 | 15.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.15 | 67.03 | 16.34 |      | 150.0 |         |
|           |                                                            | Z | 4.04 | 65.89 | 15.62 |      | 150.0 |         |
| 10533-AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)          | X | 3.68 | 66.88 | 15.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.30 | 67.28 | 16.44 |      | 150.0 |         |
|           |                                                            | Z | 4.20 | 66.13 | 15.73 |      | 150.0 |         |
| 10534-AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)          | X | 4.34 | 66.44 | 15.93 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.85 | 66.86 | 16.39 |      | 150.0 |         |
|           |                                                            | Z | 4.79 | 66.06 | 15.87 |      | 150.0 |         |
| 10535-AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)          | X | 4.34 | 66.46 | 15.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.87 | 66.95 | 16.44 |      | 150.0 |         |
|           |                                                            | Z | 4.82 | 66.17 | 15.93 |      | 150.0 |         |
| 10536-AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)          | X | 4.25 | 66.45 | 15.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.78 | 66.98 | 16.43 |      | 150.0 |         |
|           |                                                            | Z | 4.71 | 66.14 | 15.89 |      | 150.0 |         |
| 10537-AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)          | X | 4.35 | 66.61 | 16.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.86 | 67.05 | 16.47 |      | 150.0 |         |
|           |                                                            | Z | 4.80 | 66.24 | 15.94 |      | 150.0 |         |
| 10538-AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)          | X | 4.37 | 66.44 | 15.94 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.89 | 66.89 | 16.42 |      | 150.0 |         |
|           |                                                            | Z | 4.84 | 66.13 | 15.93 |      | 150.0 |         |
| 10540-AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)          | X | 4.31 | 66.35 | 15.93 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.83 | 66.86 | 16.43 |      | 150.0 |         |
|           |                                                            | Z | 4.77 | 66.08 | 15.92 |      | 150.0 |         |

|           |                                                    |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10541-AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)  | X | 4.33 | 66.41 | 15.92 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 4.83 | 66.83 | 16.39 |      | 150.0 |         |
|           |                                                    | Z | 4.77 | 66.02 | 15.87 |      | 150.0 |         |
| 10542-AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)  | X | 4.45 | 66.54 | 16.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 4.97 | 66.88 | 16.43 |      | 150.0 |         |
|           |                                                    | Z | 4.91 | 66.12 | 15.94 |      | 150.0 |         |
| 10543-AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)  | X | 4.48 | 66.49 | 16.02 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.04 | 66.97 | 16.50 |      | 150.0 |         |
|           |                                                    | Z | 5.01 | 66.28 | 16.06 |      | 150.0 |         |
| 10544-AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)  | X | 4.77 | 66.20 | 15.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.21 | 66.81 | 16.32 |      | 150.0 |         |
|           |                                                    | Z | 5.15 | 66.11 | 15.87 |      | 150.0 |         |
| 10545-AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)  | X | 4.82 | 66.41 | 15.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.37 | 67.24 | 16.50 |      | 150.0 |         |
|           |                                                    | Z | 5.34 | 66.63 | 16.10 |      | 150.0 |         |
| 10546-AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)  | X | 4.77 | 66.27 | 15.89 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.24 | 66.91 | 16.35 |      | 150.0 |         |
|           |                                                    | Z | 5.18 | 66.22 | 15.90 |      | 150.0 |         |
| 10547-AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)  | X | 4.83 | 66.38 | 15.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.36 | 67.18 | 16.48 |      | 150.0 |         |
|           |                                                    | Z | 5.31 | 66.51 | 16.04 |      | 150.0 |         |
| 10548-AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)  | X | 4.82 | 66.54 | 16.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.39 | 67.48 | 16.61 |      | 150.0 |         |
|           |                                                    | Z | 5.39 | 66.96 | 16.24 |      | 150.0 |         |
| 10550-AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)  | X | 4.79 | 66.46 | 16.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.34 | 67.29 | 16.55 |      | 150.0 |         |
|           |                                                    | Z | 5.30 | 66.62 | 16.12 |      | 150.0 |         |
| 10551-AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)  | X | 4.75 | 66.25 | 15.87 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.21 | 66.84 | 16.29 |      | 150.0 |         |
|           |                                                    | Z | 5.16 | 66.14 | 15.84 |      | 150.0 |         |
| 10552-AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)  | X | 4.78 | 66.50 | 15.97 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.22 | 66.98 | 16.36 |      | 150.0 |         |
|           |                                                    | Z | 5.16 | 66.23 | 15.88 |      | 150.0 |         |
| 10553-AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)  | X | 4.79 | 66.33 | 15.90 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.26 | 66.86 | 16.32 |      | 150.0 |         |
|           |                                                    | Z | 5.20 | 66.16 | 15.87 |      | 150.0 |         |
| 10554-AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle) | X | 5.25 | 66.42 | 15.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.65 | 67.07 | 16.36 |      | 150.0 |         |
|           |                                                    | Z | 5.60 | 66.46 | 15.97 |      | 150.0 |         |
| 10555-AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle) | X | 5.31 | 66.63 | 16.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.71 | 67.24 | 16.43 |      | 150.0 |         |
|           |                                                    | Z | 5.68 | 66.67 | 16.06 |      | 150.0 |         |
| 10556-AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle) | X | 5.32 | 66.65 | 16.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.77 | 67.42 | 16.51 |      | 150.0 |         |
|           |                                                    | Z | 5.74 | 66.86 | 16.15 |      | 150.0 |         |
| 10557-AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle) | X | 5.28 | 66.55 | 16.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.72 | 67.25 | 16.45 |      | 150.0 |         |
|           |                                                    | Z | 5.67 | 66.64 | 16.06 |      | 150.0 |         |

|           |                                                                 |   |       |        |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10558-AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)              | X | 5.24  | 66.46  | 15.98 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.69  | 67.20  | 16.44 |      | 150.0 |         |
|           |                                                                 | Z | 5.65  | 66.61  | 16.06 |      | 150.0 |         |
| 10560-AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)              | X | 5.28  | 66.44  | 16.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.72  | 67.18  | 16.47 |      | 150.0 |         |
|           |                                                                 | Z | 5.68  | 66.60  | 16.09 |      | 150.0 |         |
| 10561-AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle)              | X | 5.21  | 66.38  | 15.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.66  | 67.17  | 16.49 |      | 150.0 |         |
|           |                                                                 | Z | 5.63  | 66.59  | 16.12 |      | 150.0 |         |
| 10562-AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)              | X | 5.30  | 66.67  | 16.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.70  | 67.29  | 16.55 |      | 150.0 |         |
|           |                                                                 | Z | 5.66  | 66.70  | 16.17 |      | 150.0 |         |
| 10563-AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)              | X | 5.57  | 67.31  | 16.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.83  | 67.40  | 16.57 |      | 150.0 |         |
|           |                                                                 | Z | 5.78  | 66.77  | 16.18 |      | 150.0 |         |
| 10564-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)  | X | 3.98  | 67.19  | 15.91 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.54  | 67.45  | 16.63 |      | 150.0 |         |
|           |                                                                 | Z | 4.49  | 66.59  | 16.10 |      | 150.0 |         |
| 10565-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle) | X | 4.14  | 67.73  | 16.32 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.73  | 67.88  | 16.97 |      | 150.0 |         |
|           |                                                                 | Z | 4.67  | 67.02  | 16.44 |      | 150.0 |         |
| 10566-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle) | X | 3.97  | 67.32  | 16.02 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.56  | 67.66  | 16.76 |      | 150.0 |         |
|           |                                                                 | Z | 4.51  | 66.79  | 16.21 |      | 150.0 |         |
| 10567-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle) | X | 4.06  | 67.96  | 16.56 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.62  | 68.16  | 17.21 |      | 150.0 |         |
|           |                                                                 | Z | 4.55  | 67.23  | 16.63 |      | 150.0 |         |
| 10568-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle) | X | 3.80  | 66.64  | 15.45 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.41  | 67.18  | 16.36 |      | 150.0 |         |
|           |                                                                 | Z | 4.38  | 66.42  | 15.88 |      | 150.0 |         |
| 10569-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle) | X | 4.07  | 68.35  | 16.82 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.63  | 68.53  | 17.43 |      | 150.0 |         |
|           |                                                                 | Z | 4.55  | 67.52  | 16.81 |      | 150.0 |         |
| 10570-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle) | X | 3.99  | 67.81  | 16.52 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.60  | 68.17  | 17.24 |      | 150.0 |         |
|           |                                                                 | Z | 4.53  | 67.25  | 16.66 |      | 150.0 |         |
| 10571-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)       | X | 0.93  | 63.68  | 14.15 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.11  | 65.62  | 16.53 |      | 130.0 |         |
|           |                                                                 | Z | 0.97  | 62.81  | 14.25 |      | 130.0 |         |
| 10572-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)       | X | 0.94  | 64.27  | 14.56 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.13  | 66.40  | 17.03 |      | 130.0 |         |
|           |                                                                 | Z | 0.97  | 63.27  | 14.57 |      | 130.0 |         |
| 10573-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)     | X | 1.10  | 79.41  | 19.97 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 29.09 | 140.84 | 40.18 |      | 130.0 |         |
|           |                                                                 | Z | 0.81  | 73.52  | 17.65 |      | 130.0 |         |
| 10574-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)      | X | 1.00  | 70.10  | 17.80 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.40  | 75.63  | 21.83 |      | 130.0 |         |
|           |                                                                 | Z | 0.96  | 67.63  | 16.92 |      | 130.0 |         |

|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10575-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)  | X | 3.74 | 66.83 | 15.70 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.30 | 67.12 | 16.57 |      | 130.0 |         |
|           |                                                                 | Z | 4.26 | 66.31 | 16.08 |      | 130.0 |         |
| 10576-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)  | X | 3.78 | 67.20 | 15.91 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.34 | 67.41 | 16.71 |      | 130.0 |         |
|           |                                                                 | Z | 4.29 | 66.55 | 16.18 |      | 130.0 |         |
| 10577-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) | X | 3.89 | 67.42 | 16.06 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.48 | 67.61 | 16.83 |      | 130.0 |         |
|           |                                                                 | Z | 4.44 | 66.77 | 16.33 |      | 130.0 |         |
| 10578-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) | X | 3.83 | 67.60 | 16.23 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.40 | 67.82 | 17.00 |      | 130.0 |         |
|           |                                                                 | Z | 4.35 | 66.92 | 16.45 |      | 130.0 |         |
| 10579-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) | X | 3.51 | 66.09 | 15.01 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.12 | 66.74 | 16.08 |      | 130.0 |         |
|           |                                                                 | Z | 4.09 | 65.97 | 15.60 |      | 130.0 |         |
| 10580-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) | X | 3.49 | 65.97 | 14.89 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.12 | 66.69 | 16.03 |      | 130.0 |         |
|           |                                                                 | Z | 4.11 | 65.99 | 15.59 |      | 130.0 |         |
| 10581-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) | X | 3.74 | 67.63 | 16.20 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.33 | 67.99 | 17.02 |      | 130.0 |         |
|           |                                                                 | Z | 4.26 | 67.01 | 16.43 |      | 130.0 |         |
| 10582-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) | X | 3.37 | 65.61 | 14.64 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.03 | 66.45 | 15.82 |      | 130.0 |         |
|           |                                                                 | Z | 4.01 | 65.72 | 15.36 |      | 130.0 |         |
| 10583-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)       | X | 3.74 | 66.83 | 15.70 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.30 | 67.12 | 16.57 |      | 130.0 |         |
|           |                                                                 | Z | 4.26 | 66.31 | 16.08 |      | 130.0 |         |
| 10584-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)       | X | 3.78 | 67.20 | 15.91 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.34 | 67.41 | 16.71 |      | 130.0 |         |
|           |                                                                 | Z | 4.29 | 66.55 | 16.18 |      | 130.0 |         |
| 10585-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)      | X | 3.89 | 67.42 | 16.06 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.48 | 67.61 | 16.83 |      | 130.0 |         |
|           |                                                                 | Z | 4.44 | 66.77 | 16.33 |      | 130.0 |         |
| 10586-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)      | X | 3.83 | 67.60 | 16.23 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.40 | 67.82 | 17.00 |      | 130.0 |         |
|           |                                                                 | Z | 4.35 | 66.92 | 16.45 |      | 130.0 |         |
| 10587-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)      | X | 3.51 | 66.09 | 15.01 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.12 | 66.74 | 16.08 |      | 130.0 |         |
|           |                                                                 | Z | 4.09 | 65.97 | 15.60 |      | 130.0 |         |
| 10588-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)      | X | 3.49 | 65.97 | 14.89 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.12 | 66.69 | 16.03 |      | 130.0 |         |
|           |                                                                 | Z | 4.11 | 65.99 | 15.59 |      | 130.0 |         |
| 10589-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)      | X | 3.74 | 67.63 | 16.20 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.33 | 67.99 | 17.02 |      | 130.0 |         |
|           |                                                                 | Z | 4.26 | 67.01 | 16.43 |      | 130.0 |         |
| 10590-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)      | X | 3.37 | 65.61 | 14.64 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.03 | 66.45 | 15.82 |      | 130.0 |         |
|           |                                                                 | Z | 4.01 | 65.72 | 15.36 |      | 130.0 |         |

|           |                                                       |   |      |       |       |      |       |         |
|-----------|-------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10591-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle) | X | 3.91 | 67.05 | 15.98 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.46 | 67.24 | 16.72 |      | 130.0 |         |
|           |                                                       | Z | 4.42 | 66.45 | 16.24 |      | 130.0 |         |
| 10592-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle) | X | 3.96 | 67.20 | 16.07 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.56 | 67.49 | 16.83 |      | 130.0 |         |
|           |                                                       | Z | 4.52 | 66.71 | 16.36 |      | 130.0 |         |
| 10593-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle) | X | 3.89 | 67.09 | 15.91 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.48 | 67.36 | 16.68 |      | 130.0 |         |
|           |                                                       | Z | 4.44 | 66.57 | 16.20 |      | 130.0 |         |
| 10594-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle) | X | 3.93 | 67.20 | 16.06 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.53 | 67.56 | 16.87 |      | 130.0 |         |
|           |                                                       | Z | 4.50 | 66.76 | 16.38 |      | 130.0 |         |
| 10595-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle) | X | 3.88 | 67.15 | 15.95 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.50 | 67.54 | 16.78 |      | 130.0 |         |
|           |                                                       | Z | 4.46 | 66.73 | 16.29 |      | 130.0 |         |
| 10596-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle) | X | 3.78 | 66.88 | 15.82 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.41 | 67.44 | 16.74 |      | 130.0 |         |
|           |                                                       | Z | 4.38 | 66.66 | 16.26 |      | 130.0 |         |
| 10597-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle) | X | 3.79 | 66.92 | 15.72 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.37 | 67.31 | 16.57 |      | 130.0 |         |
|           |                                                       | Z | 4.34 | 66.51 | 16.09 |      | 130.0 |         |
| 10598-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle) | X | 3.85 | 67.45 | 16.19 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.40 | 67.66 | 16.93 |      | 130.0 |         |
|           |                                                       | Z | 4.34 | 66.79 | 16.40 |      | 130.0 |         |
| 10599-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle) | X | 4.79 | 67.73 | 16.77 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.21 | 67.73 | 17.04 |      | 130.0 |         |
|           |                                                       | Z | 5.16 | 67.02 | 16.62 |      | 130.0 |         |
| 10600-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle) | X | 4.68 | 67.39 | 16.57 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.21 | 67.78 | 17.04 |      | 130.0 |         |
|           |                                                       | Z | 5.26 | 67.42 | 16.79 |      | 130.0 |         |
| 10601-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle) | X | 4.64 | 67.32 | 16.56 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.18 | 67.81 | 17.08 |      | 130.0 |         |
|           |                                                       | Z | 5.18 | 67.25 | 16.73 |      | 130.0 |         |
| 10602-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle) | X | 4.63 | 67.06 | 16.35 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.19 | 67.55 | 16.86 |      | 130.0 |         |
|           |                                                       | Z | 5.23 | 67.15 | 16.59 |      | 130.0 |         |
| 10603-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle) | X | 4.68 | 67.32 | 16.65 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.23 | 67.74 | 17.10 |      | 130.0 |         |
|           |                                                       | Z | 5.27 | 67.35 | 16.84 |      | 130.0 |         |
| 10604-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle) | X | 4.64 | 67.04 | 16.46 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.12 | 67.34 | 16.87 |      | 130.0 |         |
|           |                                                       | Z | 5.13 | 66.84 | 16.55 |      | 130.0 |         |
| 10605-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle) | X | 4.61 | 67.01 | 16.45 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.17 | 67.54 | 16.97 |      | 130.0 |         |
|           |                                                       | Z | 5.21 | 67.15 | 16.70 |      | 130.0 |         |
| 10606-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle) | X | 4.52 | 66.73 | 16.13 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.04 | 67.22 | 16.65 |      | 130.0 |         |
|           |                                                       | Z | 5.04 | 66.71 | 16.33 |      | 130.0 |         |

|           |                                                   |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10607-AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle) | X | 3.77 | 66.40 | 15.66 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.33 | 66.69 | 16.43 |      | 130.0 |         |
|           |                                                   | Z | 4.27 | 65.78 | 15.88 |      | 130.0 |         |
| 10608-AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | X | 3.82 | 66.54 | 15.73 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.44 | 66.96 | 16.55 |      | 130.0 |         |
|           |                                                   | Z | 4.38 | 66.06 | 16.01 |      | 130.0 |         |
| 10609-AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle) | X | 3.73 | 66.35 | 15.52 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.34 | 66.78 | 16.36 |      | 130.0 |         |
|           |                                                   | Z | 4.28 | 65.87 | 15.81 |      | 130.0 |         |
| 10610-AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | X | 3.78 | 66.52 | 15.70 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.40 | 66.99 | 16.56 |      | 130.0 |         |
|           |                                                   | Z | 4.34 | 66.07 | 16.00 |      | 130.0 |         |
| 10611-AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) | X | 3.70 | 66.30 | 15.52 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.30 | 66.73 | 16.37 |      | 130.0 |         |
|           |                                                   | Z | 4.25 | 65.83 | 15.82 |      | 130.0 |         |
| 10612-AAB | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) | X | 3.61 | 66.09 | 15.37 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.27 | 66.79 | 16.38 |      | 130.0 |         |
|           |                                                   | Z | 4.22 | 65.92 | 15.84 |      | 130.0 |         |
| 10613-AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) | X | 3.64 | 66.03 | 15.27 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.27 | 66.59 | 16.20 |      | 130.0 |         |
|           |                                                   | Z | 4.22 | 65.72 | 15.67 |      | 130.0 |         |
| 10614-AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) | X | 3.70 | 66.56 | 15.73 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.27 | 66.95 | 16.54 |      | 130.0 |         |
|           |                                                   | Z | 4.20 | 66.00 | 15.96 |      | 130.0 |         |
| 10615-AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) | X | 3.64 | 65.99 | 15.16 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.28 | 66.52 | 16.09 |      | 130.0 |         |
|           |                                                   | Z | 4.23 | 65.64 | 15.56 |      | 130.0 |         |
| 10616-AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) | X | 4.45 | 66.34 | 16.08 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.95 | 66.71 | 16.53 |      | 130.0 |         |
|           |                                                   | Z | 4.93 | 66.07 | 16.13 |      | 130.0 |         |
| 10617-AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) | X | 4.43 | 66.27 | 16.03 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.97 | 66.78 | 16.54 |      | 130.0 |         |
|           |                                                   | Z | 4.96 | 66.18 | 16.16 |      | 130.0 |         |
| 10618-AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) | X | 4.37 | 66.39 | 16.11 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.90 | 66.88 | 16.61 |      | 130.0 |         |
|           |                                                   | Z | 4.86 | 66.19 | 16.18 |      | 130.0 |         |
| 10619-AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) | X | 4.42 | 66.32 | 16.00 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.94 | 66.79 | 16.49 |      | 130.0 |         |
|           |                                                   | Z | 4.93 | 66.18 | 16.10 |      | 130.0 |         |
| 10620-AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) | X | 4.43 | 66.13 | 15.93 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.96 | 66.62 | 16.45 |      | 130.0 |         |
|           |                                                   | Z | 4.96 | 66.05 | 16.09 |      | 130.0 |         |
| 10621-AAB | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) | X | 4.50 | 66.48 | 16.27 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.00 | 66.84 | 16.69 |      | 130.0 |         |
|           |                                                   | Z | 4.97 | 66.18 | 16.29 |      | 130.0 |         |
| 10622-AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) | X | 4.46 | 66.43 | 16.25 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.98 | 66.91 | 16.73 |      | 130.0 |         |
|           |                                                   | Z | 4.96 | 66.27 | 16.33 |      | 130.0 |         |

|           |                                                    |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10623-AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)  | X | 4.39 | 66.10 | 15.89 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 4.89 | 66.49 | 16.36 |      | 130.0 |         |
|           |                                                    | Z | 4.86 | 65.84 | 15.96 |      | 130.0 |         |
| 10624-AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)  | X | 4.54 | 66.35 | 16.10 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.06 | 66.70 | 16.53 |      | 130.0 |         |
|           |                                                    | Z | 5.05 | 66.11 | 16.17 |      | 130.0 |         |
| 10625-AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)  | X | 4.65 | 66.63 | 16.32 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.15 | 66.88 | 16.69 |      | 130.0 |         |
|           |                                                    | Z | 5.16 | 66.34 | 16.36 |      | 130.0 |         |
| 10626-AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)  | X | 4.87 | 66.09 | 16.03 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.31 | 66.64 | 16.44 |      | 130.0 |         |
|           |                                                    | Z | 5.28 | 66.07 | 16.09 |      | 130.0 |         |
| 10627-AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)  | X | 4.96 | 66.39 | 16.17 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.52 | 67.25 | 16.73 |      | 130.0 |         |
|           |                                                    | Z | 5.53 | 66.80 | 16.43 |      | 130.0 |         |
| 10628-AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)  | X | 4.83 | 65.96 | 15.85 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.28 | 66.56 | 16.30 |      | 130.0 |         |
|           |                                                    | Z | 5.27 | 66.03 | 15.96 |      | 130.0 |         |
| 10629-AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)  | X | 4.89 | 66.11 | 15.93 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.45 | 66.99 | 16.52 |      | 130.0 |         |
|           |                                                    | Z | 5.45 | 66.49 | 16.20 |      | 130.0 |         |
| 10630-AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)  | X | 4.94 | 66.47 | 16.13 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.52 | 67.40 | 16.73 |      | 130.0 |         |
|           |                                                    | Z | 5.58 | 67.09 | 16.50 |      | 130.0 |         |
| 10631-AAB | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)  | X | 5.04 | 67.01 | 16.63 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.56 | 67.66 | 17.07 |      | 130.0 |         |
|           |                                                    | Z | 5.56 | 67.16 | 16.74 |      | 130.0 |         |
| 10632-AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)  | X | 5.02 | 66.85 | 16.55 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.59 | 67.70 | 17.10 |      | 130.0 |         |
|           |                                                    | Z | 5.59 | 67.18 | 16.77 |      | 130.0 |         |
| 10633-AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)  | X | 4.86 | 66.17 | 16.01 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.30 | 66.64 | 16.39 |      | 130.0 |         |
|           |                                                    | Z | 5.27 | 66.07 | 16.03 |      | 130.0 |         |
| 10634-AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)  | X | 4.95 | 66.64 | 16.30 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.35 | 66.92 | 16.58 |      | 130.0 |         |
|           |                                                    | Z | 5.32 | 66.32 | 16.21 |      | 130.0 |         |
| 10635-AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)  | X | 4.70 | 65.44 | 15.34 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.17 | 66.01 | 15.82 |      | 130.0 |         |
|           |                                                    | Z | 5.16 | 65.50 | 15.50 |      | 130.0 |         |
| 10636-AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle) | X | 5.37 | 66.35 | 16.11 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.75 | 66.94 | 16.50 |      | 130.0 |         |
|           |                                                    | Z | 5.74 | 66.45 | 16.20 |      | 130.0 |         |
| 10637-AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle) | X | 5.47 | 66.68 | 16.28 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.84 | 67.17 | 16.61 |      | 130.0 |         |
|           |                                                    | Z | 5.85 | 66.75 | 16.34 |      | 130.0 |         |
| 10638-AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle) | X | 5.45 | 66.60 | 16.21 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.91 | 67.37 | 16.68 |      | 130.0 |         |
|           |                                                    | Z | 5.90 | 66.89 | 16.39 |      | 130.0 |         |

|           |                                                        |   |      |        |       |       |       |         |
|-----------|--------------------------------------------------------|---|------|--------|-------|-------|-------|---------|
| 10639-AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)     | X | 5.40 | 66.48  | 16.20 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.83 | 67.15  | 16.61 |       | 130.0 |         |
|           |                                                        | Z | 5.82 | 66.67  | 16.32 |       | 130.0 |         |
| 10640-AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)     | X | 5.32 | 66.22  | 15.99 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.75 | 66.89  | 16.42 |       | 130.0 |         |
|           |                                                        | Z | 5.75 | 66.45  | 16.15 |       | 130.0 |         |
| 10641-AAC | IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)     | X | 5.45 | 66.45  | 16.13 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.88 | 67.07  | 16.54 |       | 130.0 |         |
|           |                                                        | Z | 5.90 | 66.70  | 16.30 |       | 130.0 |         |
| 10642-AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)     | X | 5.46 | 66.60  | 16.39 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.90 | 67.28  | 16.81 |       | 130.0 |         |
|           |                                                        | Z | 5.89 | 66.80  | 16.53 |       | 130.0 |         |
| 10643-AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)     | X | 5.28 | 66.13  | 16.00 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.73 | 66.91  | 16.51 |       | 130.0 |         |
|           |                                                        | Z | 5.74 | 66.48  | 16.24 |       | 130.0 |         |
| 10644-AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)     | X | 5.42 | 66.58  | 16.26 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.78 | 67.08  | 16.62 |       | 130.0 |         |
|           |                                                        | Z | 5.78 | 66.62  | 16.33 |       | 130.0 |         |
| 10645-AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)     | X | 5.81 | 67.58  | 16.73 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.91 | 67.16  | 16.62 |       | 130.0 |         |
|           |                                                        | Z | 5.93 | 66.77  | 16.38 |       | 130.0 |         |
| 10646-AAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)  | X | 2.64 | 72.38  | 24.11 | 9.30  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 4.60 | 84.41  | 29.31 |       | 60.0  |         |
|           |                                                        | Z | 4.84 | 83.41  | 28.63 |       | 60.0  |         |
| 10647-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) | X | 2.46 | 71.01  | 23.55 | 9.30  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 4.04 | 81.81  | 28.38 |       | 60.0  |         |
|           |                                                        | Z | 4.35 | 81.42  | 27.96 |       | 60.0  |         |
| 10648-AAA | CDMA2000 (1x Advanced)                                 | X | 2.44 | 155.88 | 0.83  | 0.00  | 150.0 | ± 9.6 % |
|           |                                                        | Y | 0.35 | 60.28  | 6.28  |       | 150.0 |         |
|           |                                                        | Z | 0.35 | 60.00  | 5.54  |       | 150.0 |         |
| 10652-AAB | LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)         | X | 2.08 | 63.49  | 12.30 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 3.15 | 67.39  | 16.19 |       | 80.0  |         |
|           |                                                        | Z | 2.91 | 65.29  | 15.14 |       | 80.0  |         |
| 10653-AAB | LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)        | X | 3.02 | 65.17  | 14.89 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 3.64 | 66.22  | 16.46 |       | 80.0  |         |
|           |                                                        | Z | 3.52 | 64.96  | 15.78 |       | 80.0  |         |
| 10654-AAB | LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)        | X | 3.20 | 64.95  | 15.39 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 3.67 | 65.70  | 16.49 |       | 80.0  |         |
|           |                                                        | Z | 3.57 | 64.61  | 15.88 |       | 80.0  |         |
| 10655-AAB | LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)        | X | 3.35 | 64.77  | 15.59 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 3.76 | 65.50  | 16.51 |       | 80.0  |         |
|           |                                                        | Z | 3.66 | 64.52  | 15.94 |       | 80.0  |         |
| 10658-AAA | Pulse Waveform (200Hz, 10%)                            | X | 2.01 | 62.76  | 7.94  | 10.00 | 50.0  | ± 9.6 % |
|           |                                                        | Y | 2.58 | 65.57  | 9.73  |       | 50.0  |         |
|           |                                                        | Z | 3.05 | 67.26  | 11.01 |       | 50.0  |         |
| 10659-AAA | Pulse Waveform (200Hz, 20%)                            | X | 0.84 | 60.00  | 5.36  | 6.99  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 1.33 | 63.54  | 7.82  |       | 60.0  |         |
|           |                                                        | Z | 1.53 | 64.53  | 8.66  |       | 60.0  |         |

|           |                             |   |       |         |        |      |       |         |
|-----------|-----------------------------|---|-------|---------|--------|------|-------|---------|
| 10660-AAA | Pulse Waveform (200Hz, 40%) | X | 0.39  | 60.00   | 3.98   | 3.98 | 80.0  | ± 9.6 % |
|           |                             | Y | 0.54  | 61.57   | 5.88   |      | 80.0  |         |
|           |                             | Z | 0.45  | 60.00   | 5.04   |      | 80.0  |         |
| 10661-AAA | Pulse Waveform (200Hz, 60%) | X | 17.64 | 60.43   | 1.44   | 2.22 | 100.0 | ± 9.6 % |
|           |                             | Y | 0.23  | 60.00   | 4.28   |      | 100.0 |         |
|           |                             | Z | 0.25  | 60.00   | 3.48   |      | 100.0 |         |
| 10662-AAA | Pulse Waveform (200Hz, 80%) | X | 0.00  | 84.91   | 40.93  | 0.97 | 120.0 | ± 9.6 % |
|           |                             | Y | 49.30 | 1078.61 | 357.44 |      | 120.0 |         |
|           |                             | Z | 0.03  | 139.18  | 4.12   |      | 120.0 |         |

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



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

Accreditation No.: **SCS 0108**

Client **PC Test**

Certificate No: **EX3-7410\_Jul18**

## CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:7410**

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

**BN** ✓  
**07/26/2018**

Calibration date: **July 20, 2018**

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

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

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards          | ID               | Cal Date (Certificate No.)        | Scheduled Calibration  |
|----------------------------|------------------|-----------------------------------|------------------------|
| Power meter NRP            | SN: 104778       | 04-Apr-18 (No. 217-02672/02673)   | Apr-19                 |
| Power sensor NRP-Z91       | SN: 103244       | 04-Apr-18 (No. 217-02672)         | Apr-19                 |
| Power sensor NRP-Z91       | SN: 103245       | 04-Apr-18 (No. 217-02673)         | Apr-19                 |
| Reference 20 dB Attenuator | SN: S5277 (20x)  | 04-Apr-18 (No. 217-02682)         | Apr-19                 |
| Reference Probe ES3DV2     | SN: 3013         | 30-Dec-17 (No. ES3-3013_Dec17)    | Dec-18                 |
| DAE4                       | SN: 660          | 21-Dec-17 (No. DAE4-660_Dec17)    | Dec-18                 |
| Secondary Standards        | ID               | Check Date (in house)             | Scheduled Check        |
| Power meter E4419B         | SN: GB41293874   | 06-Apr-16 (in house check Jun-18) | In house check: Jun-20 |
| Power sensor E4412A        | SN: MY41498087   | 06-Apr-16 (in house check Jun-18) | In house check: Jun-20 |
| Power sensor E4412A        | SN: 000110210    | 06-Apr-16 (in house check Jun-18) | In house check: Jun-20 |
| RF generator HP 8648C      | SN: US3642U01700 | 04-Aug-99 (in house check Jun-18) | In house check: Jun-20 |
| Network Analyzer E8358A    | SN: US41080477   | 31-Mar-14 (in house check Oct-17) | In house check: Oct-18 |

|                                                                                                                 |                              |                                          |                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------|------------------------------|------------------------------------------|----------------------------------------------------------------------------------------------------|
| Calibrated by:                                                                                                  | Name<br><b>Michael Weber</b> | Function<br><b>Laboratory Technician</b> | Signature<br> |
| Approved by:                                                                                                    | Name<br><b>Katja Pokovic</b> | Function<br><b>Technical Manager</b>     | Signature<br> |
| This calibration certificate shall not be reproduced except in full without written approval of the laboratory. |                              |                                          | Issued: July 21, 2018                                                                              |



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 Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

### Glossary:

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

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

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

### Methods Applied and Interpretation of Parameters:

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

# Probe EX3DV4

## SN:7410

Manufactured: November 24, 2015  
Calibrated: July 20, 2018

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

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7410

### Basic Calibration Parameters

|                                                           | Sensor X | Sensor Y | Sensor Z | Unc (k=2)     |
|-----------------------------------------------------------|----------|----------|----------|---------------|
| Norm ( $\mu\text{V}/(\text{V}/\text{m})^2$ ) <sup>A</sup> | 0.41     | 0.47     | 0.43     | $\pm 10.1 \%$ |
| DCP (mV) <sup>B</sup>                                     | 93.6     | 99.2     | 96.3     |               |

### Modulation Calibration Parameters

| UID | Communication System Name |   | A<br>dB | B<br>dB $\sqrt{\mu\text{V}}$ | C   | D<br>dB | VR<br>mV | Unc <sup>E</sup><br>(k=2) |
|-----|---------------------------|---|---------|------------------------------|-----|---------|----------|---------------------------|
| 0   | CW                        | X | 0.0     | 0.0                          | 1.0 | 0.00    | 142.1    | $\pm 2.5 \%$              |
|     |                           | Y | 0.0     | 0.0                          | 1.0 |         | 157.1    |                           |
|     |                           | Z | 0.0     | 0.0                          | 1.0 |         | 143.0    |                           |

Note: For details on UID parameters see Appendix.

### Sensor Model Parameters

|   | C1<br>fF | C2<br>fF | $\alpha$<br>$\text{V}^{-1}$ | T1<br>$\text{ms}\cdot\text{V}^{-2}$ | T2<br>$\text{ms}\cdot\text{V}^{-1}$ | T3<br>ms | T4<br>$\text{V}^{-2}$ | T5<br>$\text{V}^{-1}$ | T6    |
|---|----------|----------|-----------------------------|-------------------------------------|-------------------------------------|----------|-----------------------|-----------------------|-------|
| X | 32.22    | 246.3    | 37.01                       | 4.015                               | 0.380                               | 5.018    | 0.000                 | 0.327                 | 1.006 |
| Y | 34.20    | 252.5    | 34.94                       | 7.011                               | 0.000                               | 5.034    | 0.846                 | 0.193                 | 1.003 |
| Z | 38.58    | 298.4    | 37.77                       | 5.097                               | 0.373                               | 5.059    | 0.000                 | 0.338                 | 1.011 |

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

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

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

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

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7410

### Calibration Parameter Determined in Head Tissue Simulating Media

| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 750                  | 41.9                               | 0.89                            | 10.13   | 10.13   | 10.13   | 0.37               | 0.98                    | ± 12.0 %  |
| 835                  | 41.5                               | 0.90                            | 9.81    | 9.81    | 9.81    | 0.47               | 0.80                    | ± 12.0 %  |
| 1750                 | 40.1                               | 1.37                            | 8.40    | 8.40    | 8.40    | 0.60               | 0.80                    | ± 12.0 %  |
| 1900                 | 40.0                               | 1.40                            | 8.16    | 8.16    | 8.16    | 0.56               | 0.80                    | ± 12.0 %  |
| 2300                 | 39.5                               | 1.67                            | 7.78    | 7.78    | 7.78    | 0.32               | 0.85                    | ± 12.0 %  |
| 2450                 | 39.2                               | 1.80                            | 7.50    | 7.50    | 7.50    | 0.34               | 0.84                    | ± 12.0 %  |
| 2600                 | 39.0                               | 1.96                            | 7.24    | 7.24    | 7.24    | 0.32               | 0.89                    | ± 12.0 %  |

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

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

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

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7410

### Calibration Parameter Determined in Body Tissue Simulating Media

| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 750                  | 55.5                               | 0.96                            | 9.87    | 9.87    | 9.87    | 0.33               | 1.02                    | ± 12.0 %  |
| 835                  | 55.2                               | 0.97                            | 9.63    | 9.63    | 9.63    | 0.42               | 0.86                    | ± 12.0 %  |
| 1750                 | 53.4                               | 1.49                            | 8.06    | 8.06    | 8.06    | 0.35               | 0.85                    | ± 12.0 %  |
| 1900                 | 53.3                               | 1.52                            | 7.78    | 7.78    | 7.78    | 0.39               | 0.80                    | ± 12.0 %  |
| 2300                 | 52.9                               | 1.81                            | 7.64    | 7.64    | 7.64    | 0.35               | 0.85                    | ± 12.0 %  |
| 2450                 | 52.7                               | 1.95                            | 7.45    | 7.45    | 7.45    | 0.32               | 0.86                    | ± 12.0 %  |
| 2600                 | 52.5                               | 2.16                            | 7.34    | 7.34    | 7.34    | 0.31               | 0.94                    | ± 12.0 %  |

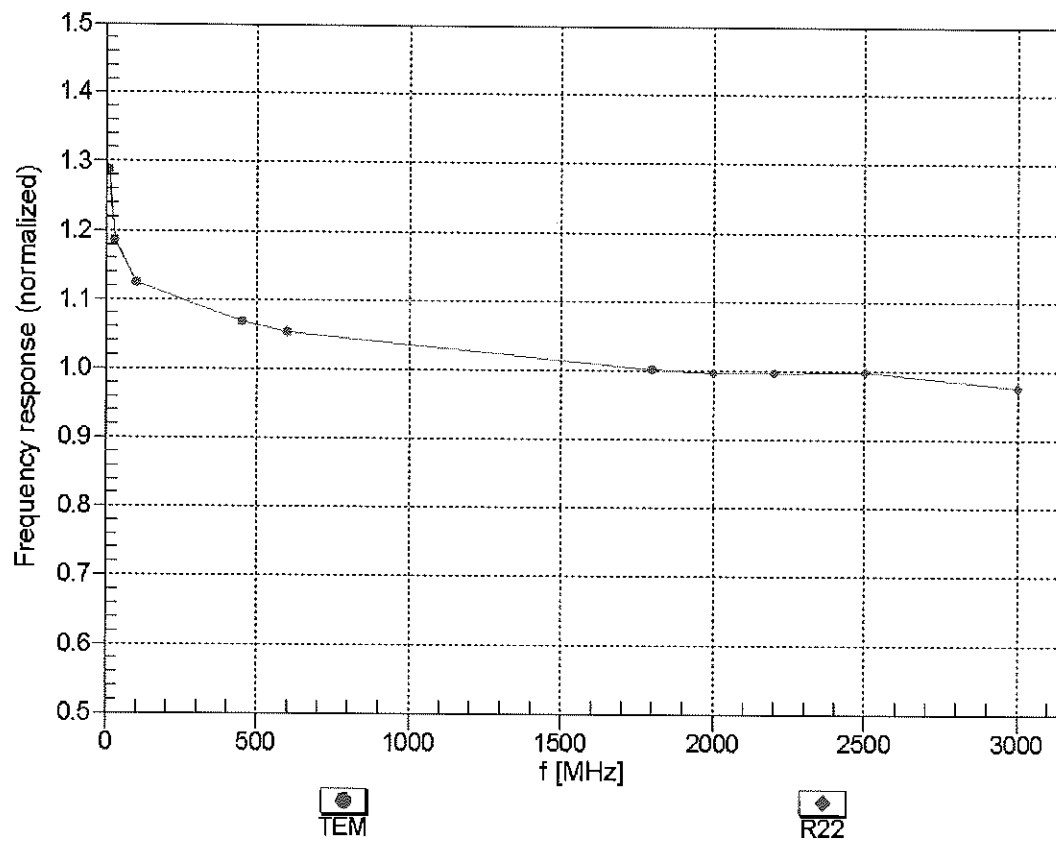
<sup>C</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below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

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

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

## Frequency Response of E-Field

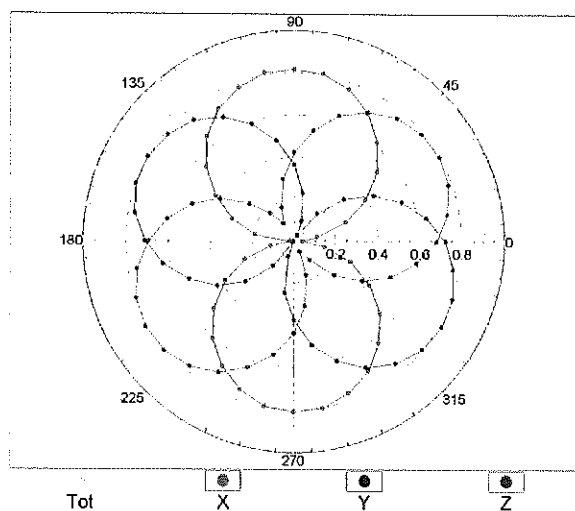
(TEM-Cell:ifi110 EXX, Waveguide: R22)



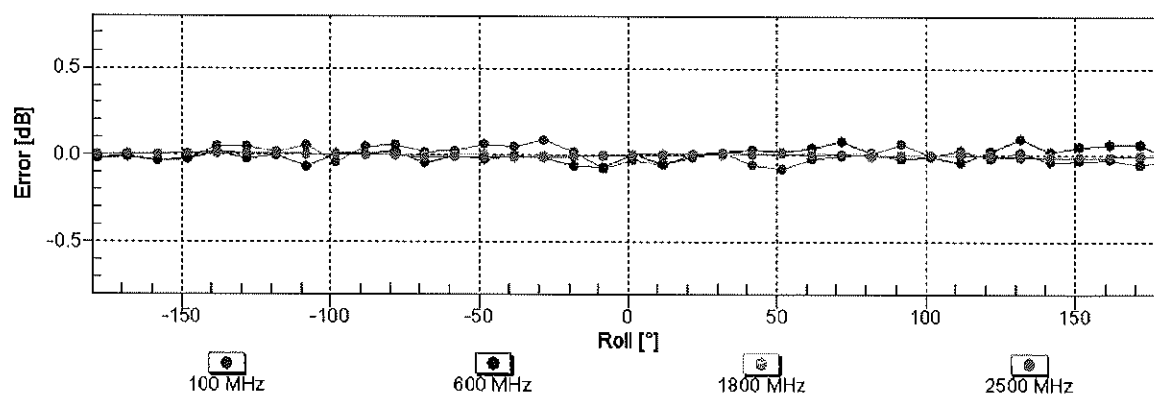
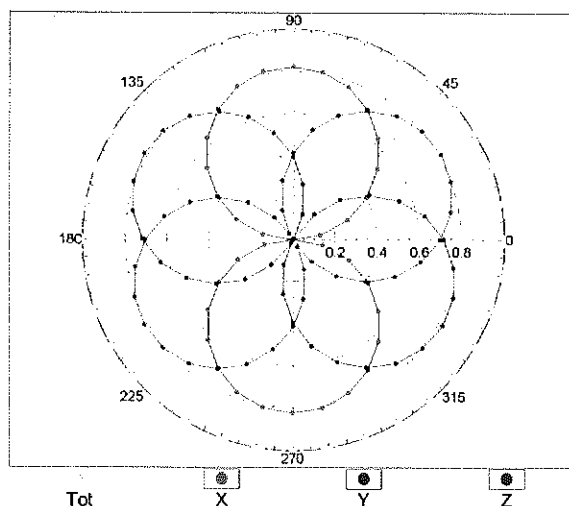
Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  ( $k=2$ )

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

f=600 MHz,TEM

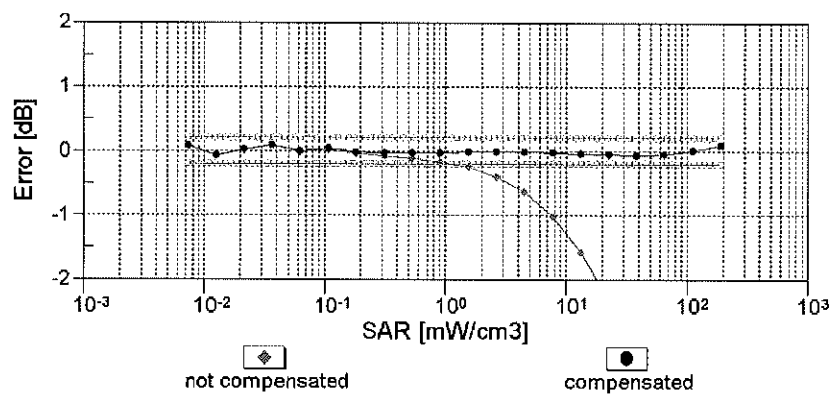
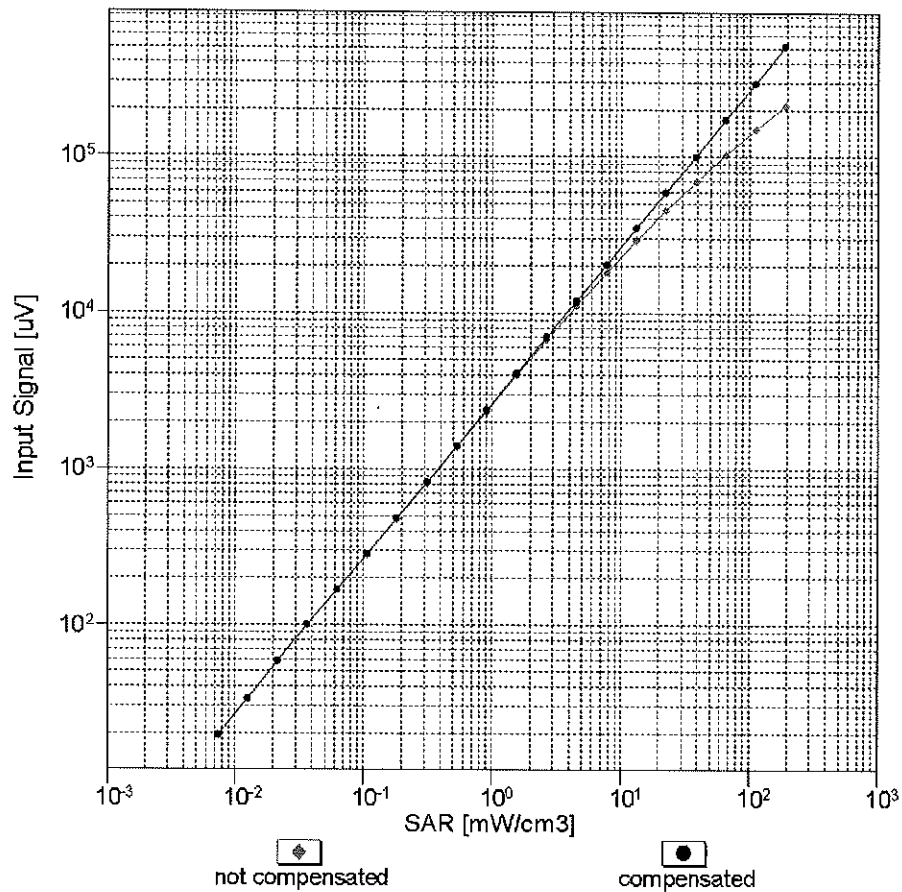


f=1800 MHz,R22



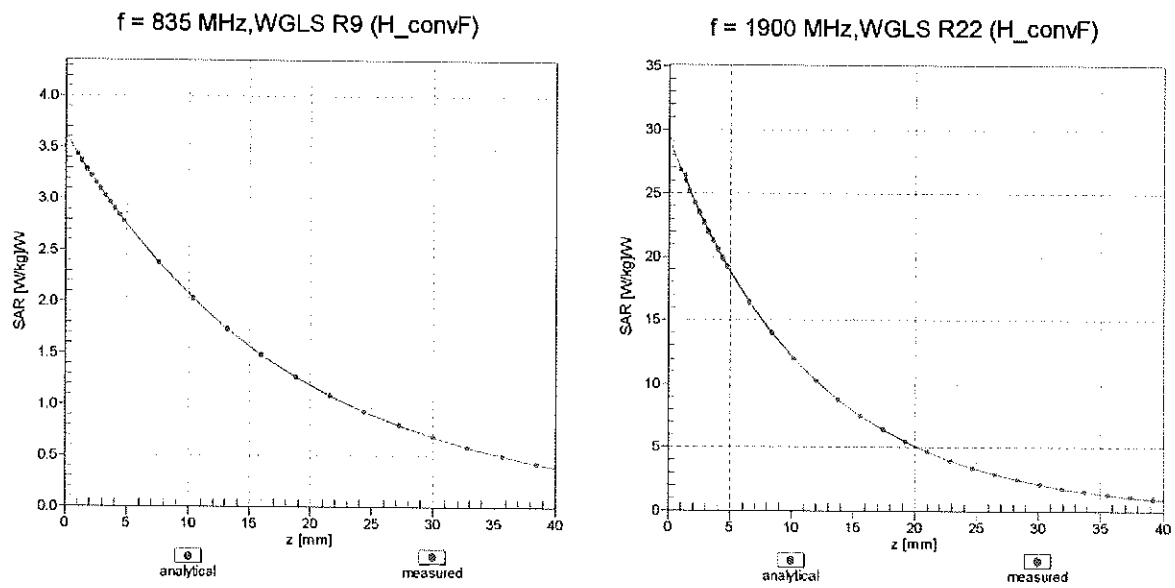
Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  (k=2)

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



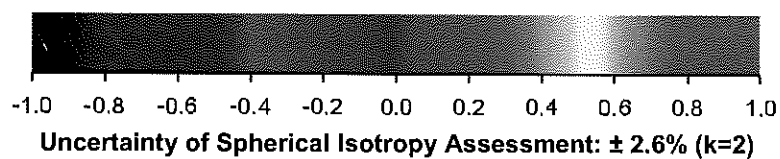
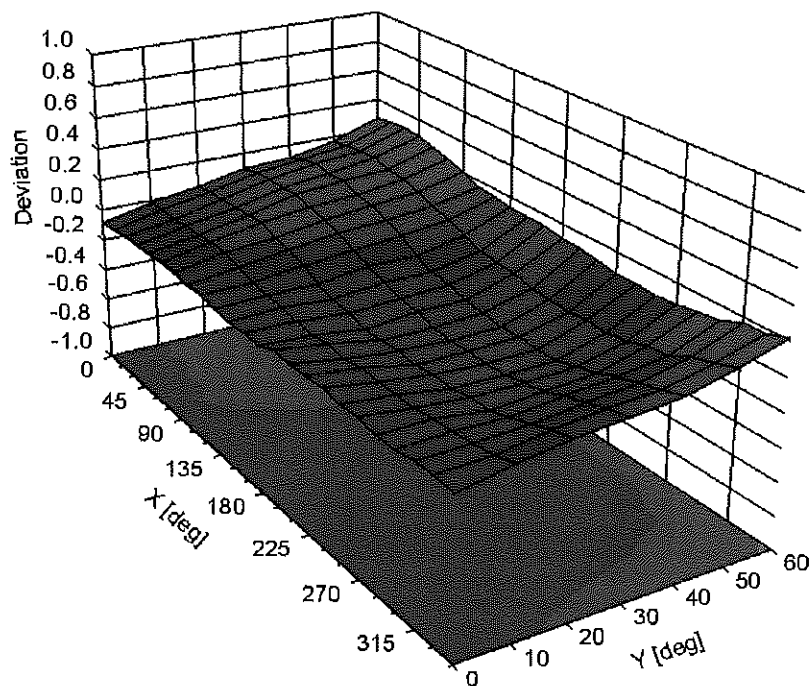
Uncertainty of Linearity Assessment:  $\pm 0.6\%$  ( $k=2$ )

## Conversion Factor Assessment



## Deviation from Isotropy in Liquid

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



## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7410

### Other Probe Parameters

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle (°)                           | 1.8        |
| Mechanical Surface Detection Mode             | enabled    |
| Optical Surface Detection Mode                | disabled   |
| Probe Overall Length                          | 337 mm     |
| Probe Body Diameter                           | 10 mm      |
| Tip Length                                    | 9 mm       |
| Tip Diameter                                  | 2.5 mm     |
| Probe Tip to Sensor X Calibration Point       | 1 mm       |
| Probe Tip to Sensor Y Calibration Point       | 1 mm       |
| Probe Tip to Sensor Z Calibration Point       | 1 mm       |
| Recommended Measurement Distance from Surface | 1.4 mm     |

**Appendix: Modulation Calibration Parameters**

| UID           | Communication System Name                     |   | A<br>dB | B<br>dB $\mu$ V | C     | D<br>dB | VR<br>mV | Max<br>Unc <sup>E</sup><br>(k=2) |
|---------------|-----------------------------------------------|---|---------|-----------------|-------|---------|----------|----------------------------------|
| 0             | CW                                            | X | 0.00    | 0.00            | 1.00  | 0.00    | 142.1    | $\pm 2.5\%$                      |
|               |                                               | Y | 0.00    | 0.00            | 1.00  |         | 157.1    |                                  |
|               |                                               | Z | 0.00    | 0.00            | 1.00  |         | 143.0    |                                  |
| 10010-<br>CAA | SAR Validation (Square, 100ms, 10ms)          | X | 1.62    | 62.34           | 7.74  | 10.00   | 20.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 1.47    | 62.51           | 7.58  |         | 20.0     |                                  |
|               |                                               | Z | 1.74    | 63.23           | 8.42  |         | 20.0     |                                  |
| 10011-<br>CAB | UMTS-FDD (WCDMA)                              | X | 0.82    | 65.36           | 13.43 | 0.00    | 150.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 1.01    | 68.19           | 15.53 |         | 150.0    |                                  |
|               |                                               | Z | 0.83    | 64.89           | 13.22 |         | 150.0    |                                  |
| 10012-<br>CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)      | X | 1.03    | 62.67           | 14.19 | 0.41    | 150.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 1.12    | 63.85           | 15.21 |         | 150.0    |                                  |
|               |                                               | Z | 1.03    | 62.50           | 14.16 |         | 150.0    |                                  |
| 10013-<br>CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | X | 4.54    | 66.46           | 16.76 | 1.46    | 150.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 4.63    | 66.78           | 17.00 |         | 150.0    |                                  |
|               |                                               | Z | 4.66    | 66.40           | 16.88 |         | 150.0    |                                  |
| 10021-<br>DAC | GSM-FDD (TDMA, GMSK)                          | X | 13.15   | 84.51           | 17.52 | 9.39    | 50.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 105.54          | 22.55 |         | 50.0     |                                  |
|               |                                               | Z | 100.00  | 109.08          | 24.59 |         | 50.0     |                                  |
| 10023-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0)                   | X | 7.05    | 77.63           | 15.35 | 9.57    | 50.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 104.89          | 22.31 |         | 50.0     |                                  |
|               |                                               | Z | 100.00  | 108.55          | 24.42 |         | 50.0     |                                  |
| 10024-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1)                 | X | 100.00  | 103.12          | 20.53 | 6.56    | 60.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 106.39          | 21.86 |         | 60.0     |                                  |
|               |                                               | Z | 100.00  | 108.56          | 23.07 |         | 60.0     |                                  |
| 10025-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0)                   | X | 3.34    | 64.62           | 22.65 | 12.57   | 50.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 5.12    | 80.55           | 32.48 |         | 50.0     |                                  |
|               |                                               | Z | 3.40    | 65.03           | 23.22 |         | 50.0     |                                  |
| 10026-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1)                 | X | 5.08    | 79.74           | 27.91 | 9.56    | 60.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 6.12    | 86.23           | 31.42 |         | 60.0     |                                  |
|               |                                               | Z | 5.62    | 82.16           | 29.24 |         | 60.0     |                                  |
| 10027-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2)               | X | 100.00  | 101.64          | 19.06 | 4.80    | 80.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 109.60          | 22.50 |         | 80.0     |                                  |
|               |                                               | Z | 100.00  | 108.56          | 22.18 |         | 80.0     |                                  |
| 10028-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)             | X | 100.00  | 99.62           | 17.55 | 3.55    | 100.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 115.32          | 24.21 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 107.61          | 21.03 |         | 100.0    |                                  |
| 10029-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2)               | X | 3.55    | 72.28           | 23.51 | 7.80    | 80.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 3.97    | 75.71           | 25.59 |         | 80.0     |                                  |
|               |                                               | Z | 3.84    | 73.87           | 24.49 |         | 80.0     |                                  |
| 10030-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1)           | X | 2.93    | 72.58           | 11.67 | 5.30    | 70.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 104.73          | 20.69 |         | 70.0     |                                  |
|               |                                               | Z | 100.00  | 105.98          | 21.40 |         | 70.0     |                                  |
| 10031-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3)           | X | 0.19    | 60.00           | 3.86  | 1.88    | 100.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 108.46          | 20.17 |         | 100.0    |                                  |
|               |                                               | Z | 0.20    | 60.00           | 4.39  |         | 100.0    |                                  |

|           |                                                     |   |        |        |       |       |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|-------|-------|---------|
| 10032-CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5)                 | X | 8.28   | 60.36  | 1.45  | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 100.00 | 125.60 | 25.79 |       | 100.0 |         |
|           |                                                     | Z | 9.15   | 64.10  | 3.12  |       | 100.0 |         |
| 10033-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)           | X | 3.18   | 74.95  | 16.76 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 16.17  | 99.83  | 25.75 |       | 70.0  |         |
|           |                                                     | Z | 6.70   | 87.29  | 22.45 |       | 70.0  |         |
| 10034-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)           | X | 1.10   | 65.34  | 10.90 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 2.67   | 76.50  | 16.58 |       | 100.0 |         |
|           |                                                     | Z | 1.54   | 69.44  | 13.90 |       | 100.0 |         |
| 10035-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)           | X | 0.87   | 63.89  | 9.87  | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 1.73   | 72.02  | 14.58 |       | 100.0 |         |
|           |                                                     | Z | 1.13   | 66.49  | 12.17 |       | 100.0 |         |
| 10036-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1)               | X | 3.74   | 77.33  | 17.73 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 34.06  | 110.90 | 28.74 |       | 70.0  |         |
|           |                                                     | Z | 9.80   | 93.25  | 24.40 |       | 70.0  |         |
| 10037-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3)               | X | 1.04   | 64.82  | 10.64 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 2.27   | 74.65  | 15.89 |       | 100.0 |         |
|           |                                                     | Z | 1.43   | 68.68  | 13.56 |       | 100.0 |         |
| 10038-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5)               | X | 0.88   | 64.05  | 10.08 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 1.75   | 72.43  | 14.90 |       | 100.0 |         |
|           |                                                     | Z | 1.13   | 66.71  | 12.40 |       | 100.0 |         |
| 10039-CAB | CDMA2000 (1xRTT, RC1)                               | X | 0.74   | 62.99  | 8.94  | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.38   | 69.75  | 13.20 |       | 150.0 |         |
|           |                                                     | Z | 0.98   | 64.89  | 10.73 |       | 150.0 |         |
| 10042-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | X | 2.54   | 68.84  | 11.04 | 7.78  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 102.42 | 20.46 |       | 50.0  |         |
|           |                                                     | Z | 100.00 | 104.71 | 21.76 |       | 50.0  |         |
| 10044-CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM)                    | X | 0.06   | 120.88 | 5.44  | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.00   | 104.37 | 4.38  |       | 150.0 |         |
|           |                                                     | Z | 0.08   | 121.43 | 6.73  |       | 150.0 |         |
| 10048-CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)           | X | 4.91   | 69.00  | 13.47 | 13.80 | 25.0  | ± 9.6 % |
|           |                                                     | Y | 7.93   | 75.14  | 15.14 |       | 25.0  |         |
|           |                                                     | Z | 10.77  | 79.26  | 17.66 |       | 25.0  |         |
| 10049-CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)         | X | 4.71   | 71.69  | 13.37 | 10.79 | 40.0  | ± 9.6 % |
|           |                                                     | Y | 12.12  | 82.16  | 16.51 |       | 40.0  |         |
|           |                                                     | Z | 15.08  | 85.95  | 18.75 |       | 40.0  |         |
| 10056-CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps)                      | X | 9.20   | 83.60  | 20.05 | 9.03  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 119.47 | 30.42 |       | 50.0  |         |
|           |                                                     | Z | 26.92  | 101.32 | 26.50 |       | 50.0  |         |
| 10058-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)                   | X | 2.97   | 69.27  | 21.35 | 6.55  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 3.27   | 71.77  | 22.91 |       | 100.0 |         |
|           |                                                     | Z | 3.17   | 70.45  | 22.11 |       | 100.0 |         |
| 10059-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)            | X | 1.02   | 63.20  | 14.50 | 0.61  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 1.12   | 64.64  | 15.70 |       | 110.0 |         |
|           |                                                     | Z | 1.03   | 63.16  | 14.59 |       | 110.0 |         |
| 10060-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)          | X | 1.55   | 78.45  | 19.20 | 1.30  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 11.63  | 111.29 | 30.45 |       | 110.0 |         |
|           |                                                     | Z | 2.11   | 82.91  | 21.03 |       | 110.0 |         |

|           |                                                |   |      |       |       |      |       |         |
|-----------|------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10061-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)      | X | 1.39 | 70.50 | 17.86 | 2.04 | 110.0 | ± 9.6 % |
|           |                                                | Y | 1.94 | 76.74 | 21.24 |      | 110.0 |         |
|           |                                                | Z | 1.58 | 72.59 | 19.16 |      | 110.0 |         |
| 10062-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)       | X | 4.34 | 66.44 | 16.20 | 0.49 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.45 | 66.80 | 16.45 |      | 100.0 |         |
|           |                                                | Z | 4.46 | 66.35 | 16.27 |      | 100.0 |         |
| 10063-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)       | X | 4.35 | 66.52 | 16.28 | 0.72 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.46 | 66.88 | 16.54 |      | 100.0 |         |
|           |                                                | Z | 4.47 | 66.44 | 16.36 |      | 100.0 |         |
| 10064-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)      | X | 4.58 | 66.71 | 16.48 | 0.86 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.69 | 67.07 | 16.73 |      | 100.0 |         |
|           |                                                | Z | 4.73 | 66.68 | 16.59 |      | 100.0 |         |
| 10065-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)      | X | 4.45 | 66.52 | 16.53 | 1.21 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.56 | 66.89 | 16.79 |      | 100.0 |         |
|           |                                                | Z | 4.60 | 66.53 | 16.67 |      | 100.0 |         |
| 10066-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)      | X | 4.45 | 66.48 | 16.65 | 1.46 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.56 | 66.86 | 16.93 |      | 100.0 |         |
|           |                                                | Z | 4.61 | 66.54 | 16.84 |      | 100.0 |         |
| 10067-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)      | X | 4.73 | 66.77 | 17.13 | 2.04 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.84 | 67.12 | 17.40 |      | 100.0 |         |
|           |                                                | Z | 4.90 | 66.81 | 17.33 |      | 100.0 |         |
| 10068-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)      | X | 4.76 | 66.66 | 17.29 | 2.55 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.86 | 67.00 | 17.55 |      | 100.0 |         |
|           |                                                | Z | 4.92 | 66.73 | 17.50 |      | 100.0 |         |
| 10069-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)      | X | 4.81 | 66.68 | 17.46 | 2.67 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.92 | 67.01 | 17.74 |      | 100.0 |         |
|           |                                                | Z | 5.00 | 66.78 | 17.71 |      | 100.0 |         |
| 10071-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)  | X | 4.62 | 66.50 | 17.03 | 1.99 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.72 | 66.82 | 17.28 |      | 100.0 |         |
|           |                                                | Z | 4.75 | 66.47 | 17.18 |      | 100.0 |         |
| 10072-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | X | 4.56 | 66.67 | 17.18 | 2.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.66 | 67.03 | 17.45 |      | 100.0 |         |
|           |                                                | Z | 4.70 | 66.70 | 17.36 |      | 100.0 |         |
| 10073-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | X | 4.61 | 66.83 | 17.49 | 2.83 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.71 | 67.17 | 17.77 |      | 100.0 |         |
|           |                                                | Z | 4.75 | 66.85 | 17.68 |      | 100.0 |         |
| 10074-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | X | 4.62 | 66.77 | 17.64 | 3.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.70 | 67.09 | 17.92 |      | 100.0 |         |
|           |                                                | Z | 4.74 | 66.75 | 17.83 |      | 100.0 |         |
| 10075-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | X | 4.63 | 66.75 | 17.86 | 3.82 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.71 | 67.06 | 18.15 |      | 90.0  |         |
|           |                                                | Z | 4.76 | 66.76 | 18.09 |      | 90.0  |         |
| 10076-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | X | 4.68 | 66.63 | 18.04 | 4.15 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.74 | 66.91 | 18.31 |      | 90.0  |         |
|           |                                                | Z | 4.79 | 66.61 | 18.24 |      | 90.0  |         |
| 10077-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | X | 4.71 | 66.72 | 18.15 | 4.30 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.77 | 66.99 | 18.42 |      | 90.0  |         |
|           |                                                | Z | 4.82 | 66.69 | 18.35 |      | 90.0  |         |

|           |                                                     |   |        |        |       |      |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10081-CAB | CDMA2000 (1xRTT, RC3)                               | X | 0.41   | 60.41  | 6.86  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.64   | 64.39  | 10.26 |      | 150.0 |         |
|           |                                                     | Z | 0.51   | 61.51  | 8.28  |      | 150.0 |         |
| 10082-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | X | 6.37   | 60.67  | 1.90  | 4.77 | 80.0  | ± 9.6 % |
|           |                                                     | Y | 0.58   | 60.00  | 3.05  |      | 80.0  |         |
|           |                                                     | Z | 0.60   | 60.00  | 3.10  |      | 80.0  |         |
| 10090-DAC | GPRS-FDD (TDMA, GMSK, TN 0-4)                       | X | 100.00 | 103.19 | 20.57 | 6.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 106.40 | 21.88 |      | 60.0  |         |
|           |                                                     | Z | 100.00 | 108.67 | 23.14 |      | 60.0  |         |
| 10097-CAB | UMTS-FDD (HSDPA)                                    | X | 1.61   | 66.98  | 14.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.83   | 68.94  | 15.87 |      | 150.0 |         |
|           |                                                     | Z | 1.61   | 66.33  | 14.36 |      | 150.0 |         |
| 10098-CAB | UMTS-FDD (HSUPA, Subtest 2)                         | X | 1.57   | 66.91  | 14.41 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.80   | 68.88  | 15.85 |      | 150.0 |         |
|           |                                                     | Z | 1.57   | 66.26  | 14.32 |      | 150.0 |         |
| 10099-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4)                       | X | 5.11   | 79.85  | 27.95 | 9.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 6.18   | 86.42  | 31.49 |      | 60.0  |         |
|           |                                                     | Z | 5.66   | 82.29  | 29.29 |      | 60.0  |         |
| 10100-CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 2.72   | 68.86  | 15.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.98   | 70.42  | 16.85 |      | 150.0 |         |
|           |                                                     | Z | 2.77   | 68.66  | 15.78 |      | 150.0 |         |
| 10101-CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 2.94   | 66.71  | 15.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.09   | 67.54  | 15.94 |      | 150.0 |         |
|           |                                                     | Z | 3.00   | 66.60  | 15.35 |      | 150.0 |         |
| 10102-CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 3.05   | 66.78  | 15.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.19   | 67.54  | 16.04 |      | 150.0 |         |
|           |                                                     | Z | 3.11   | 66.65  | 15.49 |      | 150.0 |         |
| 10103-CAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 4.63   | 72.33  | 19.10 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 5.31   | 74.95  | 20.40 |      | 65.0  |         |
|           |                                                     | Z | 5.01   | 73.33  | 19.72 |      | 65.0  |         |
| 10104-CAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 4.71   | 70.15  | 18.78 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 5.12   | 71.87  | 19.74 |      | 65.0  |         |
|           |                                                     | Z | 4.99   | 70.84  | 19.32 |      | 65.0  |         |
| 10105-CAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 4.62   | 69.52  | 18.79 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 4.98   | 71.08  | 19.67 |      | 65.0  |         |
|           |                                                     | Z | 4.89   | 70.18  | 19.31 |      | 65.0  |         |
| 10108-CAF | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)            | X | 2.32   | 68.23  | 15.74 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.56   | 69.77  | 16.68 |      | 150.0 |         |
|           |                                                     | Z | 2.39   | 67.99  | 15.57 |      | 150.0 |         |
| 10109-CAF | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)          | X | 2.57   | 66.62  | 15.17 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.73   | 67.56  | 15.82 |      | 150.0 |         |
|           |                                                     | Z | 2.64   | 66.42  | 15.13 |      | 150.0 |         |
| 10110-CAF | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)             | X | 1.82   | 67.31  | 15.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.06   | 69.08  | 16.19 |      | 150.0 |         |
|           |                                                     | Z | 1.89   | 67.03  | 14.94 |      | 150.0 |         |
| 10111-CAF | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)           | X | 2.27   | 67.56  | 15.11 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.50   | 68.95  | 16.11 |      | 150.0 |         |
|           |                                                     | Z | 2.32   | 67.14  | 15.12 |      | 150.0 |         |

|           |                                                |   |      |       |       |      |       |         |
|-----------|------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10112-CAF | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)     | X | 2.70 | 66.75 | 15.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.86 | 67.62 | 15.89 |      | 150.0 |         |
|           |                                                | Z | 2.77 | 66.52 | 15.24 |      | 150.0 |         |
| 10113-CAF | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)      | X | 2.41 | 67.80 | 15.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.64 | 69.12 | 16.24 |      | 150.0 |         |
|           |                                                | Z | 2.47 | 67.38 | 15.32 |      | 150.0 |         |
| 10114-CAC | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)  | X | 4.85 | 66.91 | 16.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.92 | 67.20 | 16.42 |      | 150.0 |         |
|           |                                                | Z | 4.93 | 66.80 | 16.23 |      | 150.0 |         |
| 10115-CAC | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)  | X | 5.08 | 66.97 | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.16 | 67.24 | 16.44 |      | 150.0 |         |
|           |                                                | Z | 5.19 | 66.91 | 16.30 |      | 150.0 |         |
| 10116-CAC | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | X | 4.91 | 67.06 | 16.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.00 | 67.37 | 16.44 |      | 150.0 |         |
|           |                                                | Z | 5.02 | 67.01 | 16.26 |      | 150.0 |         |
| 10117-CAC | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)       | X | 4.82 | 66.80 | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.91 | 67.14 | 16.41 |      | 150.0 |         |
|           |                                                | Z | 4.92 | 66.75 | 16.22 |      | 150.0 |         |
| 10118-CAC | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)       | X | 5.15 | 67.18 | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.23 | 67.42 | 16.54 |      | 150.0 |         |
|           |                                                | Z | 5.28 | 67.15 | 16.43 |      | 150.0 |         |
| 10119-CAC | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)      | X | 4.92 | 67.09 | 16.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.00 | 67.37 | 16.45 |      | 150.0 |         |
|           |                                                | Z | 5.02 | 67.00 | 16.27 |      | 150.0 |         |
| 10140-CAE | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)     | X | 3.06 | 66.79 | 15.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.21 | 67.57 | 15.95 |      | 150.0 |         |
|           |                                                | Z | 3.13 | 66.66 | 15.40 |      | 150.0 |         |
| 10141-CAE | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)     | X | 3.19 | 67.01 | 15.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.34 | 67.73 | 16.14 |      | 150.0 |         |
|           |                                                | Z | 3.26 | 66.83 | 15.61 |      | 150.0 |         |
| 10142-CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)        | X | 1.53 | 66.71 | 13.85 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.82 | 69.13 | 15.54 |      | 150.0 |         |
|           |                                                | Z | 1.62 | 66.60 | 14.09 |      | 150.0 |         |
| 10143-CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)      | X | 1.93 | 66.97 | 13.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.31 | 69.49 | 15.29 |      | 150.0 |         |
|           |                                                | Z | 2.06 | 67.05 | 14.07 |      | 150.0 |         |
| 10144-CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)      | X | 1.68 | 64.38 | 11.67 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.94 | 66.13 | 13.09 |      | 150.0 |         |
|           |                                                | Z | 1.85 | 64.82 | 12.42 |      | 150.0 |         |
| 10145-CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)      | X | 0.61 | 60.00 | 6.25  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 0.75 | 61.41 | 7.98  |      | 150.0 |         |
|           |                                                | Z | 0.75 | 60.75 | 7.63  |      | 150.0 |         |
| 10146-CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)    | X | 0.82 | 60.00 | 5.83  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 0.92 | 60.25 | 6.35  |      | 150.0 |         |
|           |                                                | Z | 1.12 | 61.59 | 7.98  |      | 150.0 |         |
| 10147-CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)    | X | 0.84 | 60.00 | 5.89  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 0.96 | 60.55 | 6.61  |      | 150.0 |         |
|           |                                                | Z | 1.20 | 62.21 | 8.43  |      | 150.0 |         |

|           |                                            |   |      |       |       |      |       |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10149-CAE | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 2.58 | 66.69 | 15.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.74 | 67.63 | 15.87 |      | 150.0 |         |
|           |                                            | Z | 2.65 | 66.49 | 15.18 |      | 150.0 |         |
| 10150-CAE | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 2.71 | 66.82 | 15.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.87 | 67.69 | 15.94 |      | 150.0 |         |
|           |                                            | Z | 2.78 | 66.58 | 15.28 |      | 150.0 |         |
| 10151-CAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)    | X | 4.58 | 74.10 | 19.83 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 5.45 | 77.40 | 21.46 |      | 65.0  |         |
|           |                                            | Z | 5.00 | 75.19 | 20.56 |      | 65.0  |         |
| 10152-CAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 4.21 | 69.89 | 18.16 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 4.65 | 71.84 | 19.30 |      | 65.0  |         |
|           |                                            | Z | 4.51 | 70.68 | 18.85 |      | 65.0  |         |
| 10153-CAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 4.55 | 71.06 | 19.09 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 5.01 | 72.96 | 20.18 |      | 65.0  |         |
|           |                                            | Z | 4.85 | 71.76 | 19.74 |      | 65.0  |         |
| 10154-CAF | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 1.85 | 67.65 | 15.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.10 | 69.48 | 16.44 |      | 150.0 |         |
|           |                                            | Z | 1.92 | 67.37 | 15.16 |      | 150.0 |         |
| 10155-CAF | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 2.27 | 67.61 | 15.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.50 | 69.00 | 16.15 |      | 150.0 |         |
|           |                                            | Z | 2.33 | 67.17 | 15.15 |      | 150.0 |         |
| 10156-CAF | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 1.31 | 65.90 | 12.85 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.64 | 68.88 | 14.94 |      | 150.0 |         |
|           |                                            | Z | 1.43 | 66.11 | 13.38 |      | 150.0 |         |
| 10157-CAF | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 1.43 | 63.96 | 10.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.74 | 66.31 | 12.74 |      | 150.0 |         |
|           |                                            | Z | 1.63 | 64.73 | 11.94 |      | 150.0 |         |
| 10158-CAF | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 2.42 | 67.89 | 15.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.65 | 69.22 | 16.31 |      | 150.0 |         |
|           |                                            | Z | 2.48 | 67.46 | 15.37 |      | 150.0 |         |
| 10159-CAF | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 1.49 | 64.13 | 11.04 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.82 | 66.66 | 12.95 |      | 150.0 |         |
|           |                                            | Z | 1.70 | 65.00 | 12.13 |      | 150.0 |         |
| 10160-CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)    | X | 2.41 | 67.89 | 15.65 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.60 | 69.05 | 16.44 |      | 150.0 |         |
|           |                                            | Z | 2.48 | 67.64 | 15.56 |      | 150.0 |         |
| 10161-CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 2.59 | 66.74 | 15.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.76 | 67.68 | 15.82 |      | 150.0 |         |
|           |                                            | Z | 2.66 | 66.50 | 15.14 |      | 150.0 |         |
| 10162-CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 2.70 | 67.00 | 15.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.87 | 67.91 | 15.97 |      | 150.0 |         |
|           |                                            | Z | 2.77 | 66.73 | 15.29 |      | 150.0 |         |
| 10166-CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 2.91 | 67.87 | 18.41 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.09 | 68.81 | 18.75 |      | 150.0 |         |
|           |                                            | Z | 3.17 | 68.75 | 19.02 |      | 150.0 |         |
| 10167-CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 3.24 | 69.92 | 18.52 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.65 | 71.74 | 19.22 |      | 150.0 |         |
|           |                                            | Z | 3.63 | 71.08 | 19.26 |      | 150.0 |         |

|           |                                            |   |      |       |       |      |       |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10168-CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 3.66 | 72.66 | 20.22 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.14 | 74.51 | 20.83 |      | 150.0 |         |
|           |                                            | Z | 4.11 | 73.91 | 20.95 |      | 150.0 |         |
| 10169-CAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 2.32 | 65.83 | 17.44 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.49 | 67.28 | 18.07 |      | 150.0 |         |
|           |                                            | Z | 2.46 | 66.70 | 18.14 |      | 150.0 |         |
| 10170-CAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 2.74 | 70.01 | 19.35 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.21 | 72.95 | 20.48 |      | 150.0 |         |
|           |                                            | Z | 3.00 | 71.51 | 20.32 |      | 150.0 |         |
| 10171-AAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 2.31 | 66.53 | 16.58 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.63 | 68.93 | 17.60 |      | 150.0 |         |
|           |                                            | Z | 2.50 | 67.67 | 17.42 |      | 150.0 |         |
| 10172-CAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 2.90 | 74.23 | 22.35 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 3.68 | 79.90 | 24.98 |      | 65.0  |         |
|           |                                            | Z | 3.91 | 80.19 | 25.56 |      | 65.0  |         |
| 10173-CAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 3.92 | 78.79 | 22.40 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 6.85 | 89.50 | 26.38 |      | 65.0  |         |
|           |                                            | Z | 6.70 | 89.11 | 27.06 |      | 65.0  |         |
| 10174-CAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 2.90 | 73.28 | 19.67 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 5.51 | 84.77 | 24.11 |      | 65.0  |         |
|           |                                            | Z | 4.93 | 82.66 | 24.17 |      | 65.0  |         |
| 10175-CAF | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)      | X | 2.30 | 65.58 | 17.20 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.47 | 67.02 | 17.83 |      | 150.0 |         |
|           |                                            | Z | 2.44 | 66.43 | 17.89 |      | 150.0 |         |
| 10176-CAF | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)    | X | 2.74 | 70.03 | 19.36 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.21 | 72.97 | 20.49 |      | 150.0 |         |
|           |                                            | Z | 3.00 | 71.53 | 20.33 |      | 150.0 |         |
| 10177-CAH | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)       | X | 2.31 | 65.68 | 17.27 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.48 | 67.13 | 17.91 |      | 150.0 |         |
|           |                                            | Z | 2.45 | 66.56 | 17.98 |      | 150.0 |         |
| 10178-CAF | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)     | X | 2.73 | 69.91 | 19.28 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.19 | 72.83 | 20.41 |      | 150.0 |         |
|           |                                            | Z | 2.98 | 71.36 | 20.23 |      | 150.0 |         |
| 10179-CAF | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)    | X | 2.50 | 68.14 | 17.82 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.89 | 70.84 | 18.91 |      | 150.0 |         |
|           |                                            | Z | 2.72 | 69.48 | 18.74 |      | 150.0 |         |
| 10180-CAF | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)     | X | 2.31 | 66.50 | 16.56 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.63 | 68.90 | 17.57 |      | 150.0 |         |
|           |                                            | Z | 2.50 | 67.63 | 17.39 |      | 150.0 |         |
| 10181-CAE | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 2.31 | 65.67 | 17.27 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.48 | 67.11 | 17.90 |      | 150.0 |         |
|           |                                            | Z | 2.45 | 66.54 | 17.97 |      | 150.0 |         |
| 10182-CAE | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)    | X | 2.73 | 69.88 | 19.27 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.19 | 72.81 | 20.40 |      | 150.0 |         |
|           |                                            | Z | 2.98 | 71.34 | 20.21 |      | 150.0 |         |
| 10183-AAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 2.31 | 66.48 | 16.55 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.63 | 68.87 | 17.56 |      | 150.0 |         |
|           |                                            | Z | 2.49 | 67.61 | 17.37 |      | 150.0 |         |

|           |                                               |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10184-CAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)          | X | 2.32 | 65.70 | 17.29 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.49 | 67.15 | 17.92 |      | 150.0 |         |
|           |                                               | Z | 2.46 | 66.58 | 17.99 |      | 150.0 |         |
| 10185-CAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)        | X | 2.74 | 69.95 | 19.31 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.20 | 72.88 | 20.43 |      | 150.0 |         |
|           |                                               | Z | 2.99 | 71.41 | 20.26 |      | 150.0 |         |
| 10186-AAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)        | X | 2.32 | 66.53 | 16.58 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.64 | 68.94 | 17.60 |      | 150.0 |         |
|           |                                               | Z | 2.51 | 67.67 | 17.41 |      | 150.0 |         |
| 10187-CAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)        | X | 2.33 | 65.78 | 17.37 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.50 | 67.22 | 18.00 |      | 150.0 |         |
|           |                                               | Z | 2.47 | 66.64 | 18.07 |      | 150.0 |         |
| 10188-CAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)      | X | 2.80 | 70.47 | 19.65 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.29 | 73.46 | 20.79 |      | 150.0 |         |
|           |                                               | Z | 3.07 | 72.01 | 20.64 |      | 150.0 |         |
| 10189-AAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)      | X | 2.35 | 66.85 | 16.82 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.69 | 69.31 | 17.86 |      | 150.0 |         |
|           |                                               | Z | 2.55 | 68.03 | 17.68 |      | 150.0 |         |
| 10193-CAC | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)  | X | 4.23 | 66.54 | 15.90 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.33 | 66.90 | 16.14 |      | 150.0 |         |
|           |                                               | Z | 4.32 | 66.32 | 15.87 |      | 150.0 |         |
| 10194-CAC | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | X | 4.36 | 66.75 | 16.04 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.47 | 67.12 | 16.27 |      | 150.0 |         |
|           |                                               | Z | 4.47 | 66.58 | 16.01 |      | 150.0 |         |
| 10195-CAC | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | X | 4.39 | 66.76 | 16.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.50 | 67.13 | 16.28 |      | 150.0 |         |
|           |                                               | Z | 4.50 | 66.61 | 16.03 |      | 150.0 |         |
| 10196-CAC | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)       | X | 4.21 | 66.52 | 15.87 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.32 | 66.89 | 16.12 |      | 150.0 |         |
|           |                                               | Z | 4.31 | 66.33 | 15.87 |      | 150.0 |         |
| 10197-CAC | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)      | X | 4.37 | 66.75 | 16.04 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.48 | 67.12 | 16.28 |      | 150.0 |         |
|           |                                               | Z | 4.48 | 66.59 | 16.02 |      | 150.0 |         |
| 10198-CAC | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)      | X | 4.38 | 66.75 | 16.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.50 | 67.13 | 16.28 |      | 150.0 |         |
|           |                                               | Z | 4.50 | 66.62 | 16.04 |      | 150.0 |         |
| 10219-CAC | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)       | X | 4.16 | 66.56 | 15.85 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.27 | 66.93 | 16.10 |      | 150.0 |         |
|           |                                               | Z | 4.26 | 66.35 | 15.83 |      | 150.0 |         |
| 10220-CAC | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)    | X | 4.36 | 66.72 | 16.03 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.47 | 67.08 | 16.26 |      | 150.0 |         |
|           |                                               | Z | 4.47 | 66.56 | 16.01 |      | 150.0 |         |
| 10221-CAC | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)    | X | 4.40 | 66.71 | 16.04 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.51 | 67.07 | 16.27 |      | 150.0 |         |
|           |                                               | Z | 4.51 | 66.56 | 16.03 |      | 150.0 |         |
| 10222-CAC | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)        | X | 4.80 | 66.80 | 16.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.88 | 67.12 | 16.39 |      | 150.0 |         |
|           |                                               | Z | 4.89 | 66.72 | 16.20 |      | 150.0 |         |

|           |                                           |   |      |       |       |      |       |         |
|-----------|-------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10223-CAC | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)  | X | 5.04 | 66.95 | 16.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.14 | 67.29 | 16.49 |      | 150.0 |         |
|           |                                           | Z | 5.18 | 66.99 | 16.36 |      | 150.0 |         |
| 10224-CAC | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | X | 4.84 | 66.92 | 16.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 4.92 | 67.24 | 16.38 |      | 150.0 |         |
|           |                                           | Z | 4.93 | 66.82 | 16.18 |      | 150.0 |         |
| 10225-CAB | UMTS-FDD (HSPA+)                          | X | 2.46 | 65.56 | 14.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 2.62 | 66.44 | 14.96 |      | 150.0 |         |
|           |                                           | Z | 2.55 | 65.41 | 14.45 |      | 150.0 |         |
| 10226-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)  | X | 4.12 | 79.74 | 22.87 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 7.38 | 90.96 | 26.97 |      | 65.0  |         |
|           |                                           | Z | 7.19 | 90.56 | 27.66 |      | 65.0  |         |
| 10227-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)  | X | 4.10 | 78.95 | 21.90 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 7.43 | 89.71 | 25.78 |      | 65.0  |         |
|           |                                           | Z | 7.75 | 90.70 | 26.99 |      | 65.0  |         |
| 10228-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)    | X | 3.12 | 75.94 | 23.15 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.06 | 82.01 | 25.85 |      | 65.0  |         |
|           |                                           | Z | 4.25 | 82.24 | 26.47 |      | 65.0  |         |
| 10229-CAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)    | X | 3.94 | 78.88 | 22.44 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.91 | 89.62 | 26.42 |      | 65.0  |         |
|           |                                           | Z | 6.76 | 89.24 | 27.11 |      | 65.0  |         |
| 10230-CAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)    | X | 3.89 | 78.03 | 21.47 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.86 | 88.27 | 25.23 |      | 65.0  |         |
|           |                                           | Z | 7.16 | 89.19 | 26.40 |      | 65.0  |         |
| 10231-CAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)      | X | 3.03 | 75.32 | 22.81 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 3.92 | 81.25 | 25.48 |      | 65.0  |         |
|           |                                           | Z | 4.10 | 81.44 | 26.07 |      | 65.0  |         |
| 10232-CAE | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)    | X | 3.94 | 78.86 | 22.44 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.89 | 89.60 | 26.42 |      | 65.0  |         |
|           |                                           | Z | 6.74 | 89.21 | 27.10 |      | 65.0  |         |
| 10233-CAE | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)    | X | 3.88 | 77.99 | 21.46 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.83 | 88.22 | 25.21 |      | 65.0  |         |
|           |                                           | Z | 7.13 | 89.13 | 26.38 |      | 65.0  |         |
| 10234-CAE | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)      | X | 2.96 | 74.84 | 22.48 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 3.82 | 80.66 | 25.12 |      | 65.0  |         |
|           |                                           | Z | 4.00 | 80.82 | 25.70 |      | 65.0  |         |
| 10235-CAE | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)   | X | 3.94 | 78.87 | 22.44 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.90 | 89.63 | 26.43 |      | 65.0  |         |
|           |                                           | Z | 6.75 | 89.23 | 27.11 |      | 65.0  |         |
| 10236-CAE | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)   | X | 3.92 | 78.11 | 21.50 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.93 | 88.43 | 25.27 |      | 65.0  |         |
|           |                                           | Z | 7.23 | 89.34 | 26.44 |      | 65.0  |         |
| 10237-CAE | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)     | X | 3.03 | 75.32 | 22.81 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 3.92 | 81.27 | 25.49 |      | 65.0  |         |
|           |                                           | Z | 4.10 | 81.45 | 26.08 |      | 65.0  |         |
| 10238-CAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)   | X | 3.93 | 78.83 | 22.43 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.87 | 89.57 | 26.41 |      | 65.0  |         |
|           |                                           | Z | 6.72 | 89.17 | 27.08 |      | 65.0  |         |

|           |                                            |   |      |       |       |      |      |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|------|---------|
| 10239-CAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 3.87 | 77.95 | 21.45 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.80 | 88.17 | 25.20 |      | 65.0 |         |
|           |                                            | Z | 7.10 | 89.08 | 26.37 |      | 65.0 |         |
| 10240-CAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 3.02 | 75.30 | 22.81 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.91 | 81.25 | 25.48 |      | 65.0 |         |
|           |                                            | Z | 4.09 | 81.42 | 26.07 |      | 65.0 |         |
| 10241-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 5.47 | 76.60 | 23.52 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.28 | 79.70 | 24.95 |      | 65.0 |         |
|           |                                            | Z | 6.08 | 77.98 | 24.56 |      | 65.0 |         |
| 10242-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 5.17 | 75.55 | 22.99 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.96 | 78.71 | 24.47 |      | 65.0 |         |
|           |                                            | Z | 5.82 | 77.10 | 24.09 |      | 65.0 |         |
| 10243-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 4.47 | 72.66 | 22.57 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.85 | 74.66 | 23.64 |      | 65.0 |         |
|           |                                            | Z | 4.89 | 73.70 | 23.43 |      | 65.0 |         |
| 10244-CAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)   | X | 2.59 | 65.60 | 11.95 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.16 | 68.30 | 13.59 |      | 65.0 |         |
|           |                                            | Z | 3.94 | 71.58 | 16.14 |      | 65.0 |         |
| 10245-CAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)   | X | 2.56 | 65.23 | 11.69 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.08 | 67.71 | 13.25 |      | 65.0 |         |
|           |                                            | Z | 3.80 | 70.75 | 15.70 |      | 65.0 |         |
| 10246-CAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)     | X | 2.30 | 67.33 | 13.29 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.40 | 73.14 | 16.55 |      | 65.0 |         |
|           |                                            | Z | 3.20 | 71.92 | 16.41 |      | 65.0 |         |
| 10247-CAE | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 2.93 | 67.28 | 14.07 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.57 | 70.51 | 16.14 |      | 65.0 |         |
|           |                                            | Z | 3.50 | 69.72 | 16.15 |      | 65.0 |         |
| 10248-CAE | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 2.93 | 66.83 | 13.84 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.51 | 69.74 | 15.76 |      | 65.0 |         |
|           |                                            | Z | 3.49 | 69.17 | 15.87 |      | 65.0 |         |
| 10249-CAE | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 3.40 | 72.89 | 17.31 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.05 | 79.62 | 20.60 |      | 65.0 |         |
|           |                                            | Z | 4.35 | 76.73 | 19.72 |      | 65.0 |         |
| 10250-CAE | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 4.07 | 71.77 | 18.68 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.65 | 74.35 | 20.17 |      | 65.0 |         |
|           |                                            | Z | 4.43 | 72.91 | 19.73 |      | 65.0 |         |
| 10251-CAE | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 3.86 | 69.66 | 17.25 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.37 | 71.98 | 18.68 |      | 65.0 |         |
|           |                                            | Z | 4.24 | 70.85 | 18.35 |      | 65.0 |         |
| 10252-CAE | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 4.28 | 75.56 | 20.13 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.50 | 80.28 | 22.41 |      | 65.0 |         |
|           |                                            | Z | 4.84 | 77.34 | 21.32 |      | 65.0 |         |
| 10253-CAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 4.17 | 69.62 | 17.88 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.59 | 71.50 | 19.03 |      | 65.0 |         |
|           |                                            | Z | 4.46 | 70.34 | 18.61 |      | 65.0 |         |
| 10254-CAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 4.46 | 70.60 | 18.66 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.90 | 72.45 | 19.77 |      | 65.0 |         |
|           |                                            | Z | 4.75 | 71.28 | 19.37 |      | 65.0 |         |

|           |                                             |   |      |       |       |      |      |         |
|-----------|---------------------------------------------|---|------|-------|-------|------|------|---------|
| 10255-CAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)     | X | 4.40 | 73.51 | 19.69 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.16 | 76.59 | 21.27 |      | 65.0 |         |
|           |                                             | Z | 4.77 | 74.49 | 20.43 |      | 65.0 |         |
| 10256-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | X | 1.88 | 62.21 | 8.80  | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 2.16 | 63.72 | 9.95  |      | 65.0 |         |
|           |                                             | Z | 2.68 | 66.18 | 12.27 |      | 65.0 |         |
| 10257-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | X | 1.87 | 61.92 | 8.53  | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 2.13 | 63.28 | 9.61  |      | 65.0 |         |
|           |                                             | Z | 2.60 | 65.47 | 11.78 |      | 65.0 |         |
| 10258-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)   | X | 1.63 | 62.98 | 9.76  | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 2.11 | 66.24 | 12.11 |      | 65.0 |         |
|           |                                             | Z | 2.20 | 66.42 | 12.68 |      | 65.0 |         |
| 10259-CAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)   | X | 3.37 | 69.09 | 15.81 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.03 | 72.21 | 17.73 |      | 65.0 |         |
|           |                                             | Z | 3.88 | 71.08 | 17.53 |      | 65.0 |         |
| 10260-CAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)   | X | 3.41 | 68.89 | 15.70 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.05 | 71.86 | 17.55 |      | 65.0 |         |
|           |                                             | Z | 3.92 | 70.83 | 17.40 |      | 65.0 |         |
| 10261-CAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)     | X | 3.65 | 73.54 | 18.24 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.99 | 79.08 | 21.01 |      | 65.0 |         |
|           |                                             | Z | 4.36 | 76.25 | 20.08 |      | 65.0 |         |
| 10262-CAE | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)   | X | 4.05 | 71.68 | 18.62 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.63 | 74.27 | 20.11 |      | 65.0 |         |
|           |                                             | Z | 4.42 | 72.84 | 19.67 |      | 65.0 |         |
| 10263-CAE | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)   | X | 3.85 | 69.65 | 17.25 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.36 | 71.96 | 18.67 |      | 65.0 |         |
|           |                                             | Z | 4.23 | 70.83 | 18.35 |      | 65.0 |         |
| 10264-CAE | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)     | X | 4.23 | 75.35 | 20.01 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.43 | 80.04 | 22.29 |      | 65.0 |         |
|           |                                             | Z | 4.79 | 77.13 | 21.21 |      | 65.0 |         |
| 10265-CAE | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)  | X | 4.21 | 69.90 | 18.16 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.65 | 71.84 | 19.30 |      | 65.0 |         |
|           |                                             | Z | 4.51 | 70.68 | 18.86 |      | 65.0 |         |
| 10266-CAE | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)  | X | 4.55 | 71.05 | 19.08 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.00 | 72.95 | 20.16 |      | 65.0 |         |
|           |                                             | Z | 4.85 | 71.75 | 19.72 |      | 65.0 |         |
| 10267-CAE | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)    | X | 4.57 | 74.06 | 19.81 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.43 | 77.35 | 21.43 |      | 65.0 |         |
|           |                                             | Z | 4.99 | 75.14 | 20.54 |      | 65.0 |         |
| 10268-CAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)  | X | 4.89 | 70.28 | 18.92 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.29 | 71.90 | 19.82 |      | 65.0 |         |
|           |                                             | Z | 5.16 | 70.86 | 19.41 |      | 65.0 |         |
| 10269-CAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)  | X | 4.93 | 70.03 | 18.82 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.31 | 71.54 | 19.69 |      | 65.0 |         |
|           |                                             | Z | 5.18 | 70.53 | 19.29 |      | 65.0 |         |
| 10270-CAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)    | X | 4.82 | 72.26 | 19.25 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.40 | 74.50 | 20.39 |      | 65.0 |         |
|           |                                             | Z | 5.12 | 72.93 | 19.74 |      | 65.0 |         |

|           |                                                                    |   |       |       |       |      |       |         |
|-----------|--------------------------------------------------------------------|---|-------|-------|-------|------|-------|---------|
| 10274-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)                          | X | 2.30  | 66.08 | 14.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.48  | 67.13 | 15.07 |      | 150.0 |         |
|           |                                                                    | Z | 2.37  | 65.78 | 14.35 |      | 150.0 |         |
| 10275-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)                           | X | 1.33  | 66.42 | 14.09 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.55  | 68.66 | 15.67 |      | 150.0 |         |
|           |                                                                    | Z | 1.35  | 65.99 | 13.99 |      | 150.0 |         |
| 10277-CAA | PHS (QPSK)                                                         | X | 1.44  | 58.96 | 4.35  | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 1.29  | 58.94 | 4.16  |      | 50.0  |         |
|           |                                                                    | Z | 1.60  | 59.77 | 5.29  |      | 50.0  |         |
| 10278-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5)                                 | X | 2.42  | 63.55 | 9.32  | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 2.50  | 65.00 | 10.23 |      | 50.0  |         |
|           |                                                                    | Z | 3.00  | 66.61 | 11.73 |      | 50.0  |         |
| 10279-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38)                                | X | 2.47  | 63.72 | 9.48  | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 2.58  | 65.28 | 10.45 |      | 50.0  |         |
|           |                                                                    | Z | 3.09  | 66.89 | 11.94 |      | 50.0  |         |
| 10290-AAB | CDMA2000, RC1, SO55, Full Rate                                     | X | 0.64  | 61.56 | 7.87  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.98  | 65.79 | 11.09 |      | 150.0 |         |
|           |                                                                    | Z | 0.84  | 63.19 | 9.57  |      | 150.0 |         |
| 10291-AAB | CDMA2000, RC3, SO55, Full Rate                                     | X | 0.41  | 60.33 | 6.79  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.62  | 64.18 | 10.12 |      | 150.0 |         |
|           |                                                                    | Z | 0.50  | 61.40 | 8.20  |      | 150.0 |         |
| 10292-AAB | CDMA2000, RC3, SO32, Full Rate                                     | X | 0.46  | 61.89 | 7.99  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.01  | 70.37 | 13.40 |      | 150.0 |         |
|           |                                                                    | Z | 0.57  | 63.19 | 9.51  |      | 150.0 |         |
| 10293-AAB | CDMA2000, RC3, SO3, Full Rate                                      | X | 0.64  | 65.03 | 10.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 4.97  | 89.66 | 20.54 |      | 150.0 |         |
|           |                                                                    | Z | 0.76  | 66.38 | 11.57 |      | 150.0 |         |
| 10295-AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr.                              | X | 14.73 | 88.54 | 22.30 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 21.95 | 97.75 | 26.07 |      | 50.0  |         |
|           |                                                                    | Z | 14.97 | 91.80 | 24.79 |      | 50.0  |         |
| 10297-AAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)                            | X | 2.34  | 68.34 | 15.82 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.58  | 69.89 | 16.76 |      | 150.0 |         |
|           |                                                                    | Z | 2.40  | 68.08 | 15.64 |      | 150.0 |         |
| 10298-AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)                             | X | 0.86  | 62.29 | 9.16  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.16  | 65.45 | 11.69 |      | 150.0 |         |
|           |                                                                    | Z | 1.05  | 63.56 | 10.60 |      | 150.0 |         |
| 10299-AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)                           | X | 1.14  | 61.76 | 8.21  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.41  | 63.51 | 9.50  |      | 150.0 |         |
|           |                                                                    | Z | 1.73  | 65.72 | 11.49 |      | 150.0 |         |
| 10300-AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)                           | X | 0.97  | 60.07 | 6.55  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.14  | 61.11 | 7.49  |      | 150.0 |         |
|           |                                                                    | Z | 1.33  | 62.21 | 8.89  |      | 150.0 |         |
| 10301-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)                 | X | 4.13  | 64.55 | 16.56 | 4.17 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.26  | 65.00 | 16.97 |      | 50.0  |         |
|           |                                                                    | Z | 4.39  | 64.86 | 16.90 |      | 50.0  |         |
| 10302-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols) | X | 4.66  | 65.38 | 17.39 | 4.96 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.76  | 65.70 | 17.72 |      | 50.0  |         |
|           |                                                                    | Z | 4.88  | 65.46 | 17.59 |      | 50.0  |         |

|           |                                                                     |   |      |       |       |       |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|-------|-------|---------|
| 10303-AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)                 | X | 4.45 | 65.36 | 17.40 | 4.96  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.51 | 65.30 | 17.48 |       | 50.0  |         |
|           |                                                                     | Z | 4.62 | 65.06 | 17.37 |       | 50.0  |         |
| 10304-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)                 | X | 4.25 | 64.98 | 16.73 | 4.17  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.36 | 65.33 | 17.07 |       | 50.0  |         |
|           |                                                                     | Z | 4.45 | 64.98 | 16.90 |       | 50.0  |         |
| 10305-AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)    | X | 3.81 | 66.28 | 17.81 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 3.76 | 65.91 | 18.03 |       | 35.0  |         |
|           |                                                                     | Z | 4.04 | 66.66 | 18.48 |       | 35.0  |         |
| 10306-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)    | X | 4.18 | 65.73 | 17.92 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.17 | 65.55 | 18.11 |       | 35.0  |         |
|           |                                                                     | Z | 4.39 | 65.94 | 18.38 |       | 35.0  |         |
| 10307-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)     | X | 4.05 | 65.69 | 17.78 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.04 | 65.48 | 17.96 |       | 35.0  |         |
|           |                                                                     | Z | 4.27 | 65.96 | 18.27 |       | 35.0  |         |
| 10308-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)                | X | 4.03 | 65.87 | 17.91 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.01 | 65.64 | 18.09 |       | 35.0  |         |
|           |                                                                     | Z | 4.25 | 66.15 | 18.40 |       | 35.0  |         |
| 10309-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols) | X | 4.18 | 65.77 | 18.00 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.19 | 65.61 | 18.20 |       | 35.0  |         |
|           |                                                                     | Z | 4.42 | 66.06 | 18.49 |       | 35.0  |         |
| 10310-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)  | X | 4.13 | 65.78 | 17.90 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.12 | 65.57 | 18.08 |       | 35.0  |         |
|           |                                                                     | Z | 4.34 | 65.98 | 18.35 |       | 35.0  |         |
| 10311-AAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)                            | X | 2.69 | 67.62 | 15.56 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 2.94 | 69.08 | 16.39 |       | 150.0 |         |
|           |                                                                     | Z | 2.75 | 67.40 | 15.38 |       | 150.0 |         |
| 10313-AAA | IDEN 1:3                                                            | X | 1.80 | 67.21 | 13.40 | 6.99  | 70.0  | ± 9.6 % |
|           |                                                                     | Y | 2.78 | 73.35 | 16.36 |       | 70.0  |         |
|           |                                                                     | Z | 2.09 | 69.09 | 14.51 |       | 70.0  |         |
| 10314-AAA | IDEN 1:6                                                            | X | 3.26 | 75.39 | 19.57 | 10.00 | 30.0  | ± 9.6 % |
|           |                                                                     | Y | 5.56 | 85.97 | 24.05 |       | 30.0  |         |
|           |                                                                     | Z | 4.04 | 79.23 | 21.39 |       | 30.0  |         |
| 10315-AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)           | X | 0.96 | 62.72 | 14.16 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.05 | 63.94 | 15.22 |       | 150.0 |         |
|           |                                                                     | Z | 0.96 | 62.45 | 14.04 |       | 150.0 |         |
| 10316-AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)       | X | 4.24 | 66.42 | 15.96 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.35 | 66.80 | 16.22 |       | 150.0 |         |
|           |                                                                     | Z | 4.36 | 66.32 | 16.01 |       | 150.0 |         |
| 10317-AAC | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)             | X | 4.24 | 66.42 | 15.96 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.35 | 66.80 | 16.22 |       | 150.0 |         |
|           |                                                                     | Z | 4.36 | 66.32 | 16.01 |       | 150.0 |         |
| 10400-AAD | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)                 | X | 4.31 | 66.71 | 15.99 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.43 | 67.11 | 16.24 |       | 150.0 |         |
|           |                                                                     | Z | 4.43 | 66.60 | 15.99 |       | 150.0 |         |
| 10401-AAD | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)                 | X | 4.98 | 66.52 | 16.05 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 5.08 | 66.87 | 16.24 |       | 150.0 |         |
|           |                                                                     | Z | 5.16 | 66.70 | 16.18 |       | 150.0 |         |

|           |                                                                                 |   |        |        |       |      |       |         |
|-----------|---------------------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10402-AAD | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)                             | X | 5.36   | 67.14  | 16.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.44   | 67.45  | 16.42 |      | 150.0 |         |
|           |                                                                                 | Z | 5.45   | 67.07  | 16.25 |      | 150.0 |         |
| 10403-AAB | CDMA2000 (1xEV-DO, Rev. 0)                                                      | X | 0.64   | 61.56  | 7.87  | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                 | Y | 0.98   | 65.79  | 11.09 |      | 115.0 |         |
|           |                                                                                 | Z | 0.84   | 63.19  | 9.57  |      | 115.0 |         |
| 10404-AAB | CDMA2000 (1xEV-DO, Rev. A)                                                      | X | 0.64   | 61.56  | 7.87  | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                 | Y | 0.98   | 65.79  | 11.09 |      | 115.0 |         |
|           |                                                                                 | Z | 0.84   | 63.19  | 9.57  |      | 115.0 |         |
| 10406-AAB | CDMA2000, RC3, SO32, SCH0, Full Rate                                            | X | 100.00 | 119.53 | 28.08 | 0.00 | 100.0 | ± 9.6 % |
|           |                                                                                 | Y | 100.00 | 115.68 | 26.57 |      | 100.0 |         |
|           |                                                                                 | Z | 100.00 | 126.19 | 31.47 |      | 100.0 |         |
| 10410-AAE | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4) | X | 2.86   | 79.80  | 18.70 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                                 | Y | 25.09  | 107.33 | 26.44 |      | 80.0  |         |
|           |                                                                                 | Z | 100.00 | 133.23 | 34.42 |      | 80.0  |         |
| 10415-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)                       | X | 0.92   | 62.32  | 13.80 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 1.00   | 63.42  | 14.80 |      | 150.0 |         |
|           |                                                                                 | Z | 0.91   | 61.96  | 13.60 |      | 150.0 |         |
| 10416-AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)                   | X | 4.22   | 66.50  | 15.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.32   | 66.87  | 16.21 |      | 150.0 |         |
|           |                                                                                 | Z | 4.32   | 66.33  | 15.95 |      | 150.0 |         |
| 10417-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)                       | X | 4.22   | 66.50  | 15.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.32   | 66.87  | 16.21 |      | 150.0 |         |
|           |                                                                                 | Z | 4.32   | 66.33  | 15.95 |      | 150.0 |         |
| 10418-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)   | X | 4.21   | 66.71  | 16.02 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.32   | 67.09  | 16.27 |      | 150.0 |         |
|           |                                                                                 | Z | 4.31   | 66.51  | 15.99 |      | 150.0 |         |
| 10419-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble)  | X | 4.23   | 66.64  | 16.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.34   | 67.01  | 16.25 |      | 150.0 |         |
|           |                                                                                 | Z | 4.33   | 66.45  | 15.98 |      | 150.0 |         |
| 10422-AAB | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)                                    | X | 4.33   | 66.62  | 16.03 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.44   | 66.98  | 16.26 |      | 150.0 |         |
|           |                                                                                 | Z | 4.44   | 66.45  | 16.00 |      | 150.0 |         |
| 10423-AAB | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)                                 | X | 4.45   | 66.86  | 16.11 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.56   | 67.23  | 16.34 |      | 150.0 |         |
|           |                                                                                 | Z | 4.57   | 66.72  | 16.10 |      | 150.0 |         |
| 10424-AAB | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)                                 | X | 4.38   | 66.81  | 16.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.50   | 67.18  | 16.32 |      | 150.0 |         |
|           |                                                                                 | Z | 4.50   | 66.66  | 16.07 |      | 150.0 |         |
| 10425-AAB | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)                                     | X | 5.03   | 67.03  | 16.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.11   | 67.32  | 16.49 |      | 150.0 |         |
|           |                                                                                 | Z | 5.14   | 66.98  | 16.33 |      | 150.0 |         |
| 10426-AAB | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)                                   | X | 5.06   | 67.16  | 16.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.13   | 67.40  | 16.52 |      | 150.0 |         |
|           |                                                                                 | Z | 5.17   | 67.10  | 16.39 |      | 150.0 |         |

|           |                                                                |   |        |        |       |      |       |         |
|-----------|----------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10427-AAB | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)                 | X | 5.01   | 66.91  | 16.27 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.09   | 67.19  | 16.41 |      | 150.0 |         |
|           |                                                                | Z | 5.13   | 66.90  | 16.28 |      | 150.0 |         |
| 10430-AAC | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)                               | X | 4.07   | 72.07  | 17.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.24   | 72.56  | 18.40 |      | 150.0 |         |
|           |                                                                | Z | 4.04   | 71.02  | 17.78 |      | 150.0 |         |
| 10431-AAC | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)                              | X | 3.79   | 66.99  | 15.69 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.94   | 67.49  | 16.09 |      | 150.0 |         |
|           |                                                                | Z | 3.92   | 66.79  | 15.76 |      | 150.0 |         |
| 10432-AAC | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)                              | X | 4.13   | 66.89  | 15.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.26   | 67.30  | 16.25 |      | 150.0 |         |
|           |                                                                | Z | 4.25   | 66.71  | 15.96 |      | 150.0 |         |
| 10433-AAC | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)                              | X | 4.40   | 66.85  | 16.11 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.51   | 67.22  | 16.34 |      | 150.0 |         |
|           |                                                                | Z | 4.51   | 66.70  | 16.09 |      | 150.0 |         |
| 10434-AAA | W-CDMA (BS Test Model 1, 64 DPCH)                              | X | 4.05   | 72.38  | 17.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.37   | 73.48  | 18.19 |      | 150.0 |         |
|           |                                                                | Z | 4.07   | 71.60  | 17.46 |      | 150.0 |         |
| 10435-AAE | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 2.72   | 79.05  | 18.38 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                | Y | 21.44  | 105.07 | 25.81 |      | 80.0  |         |
|           |                                                                | Z | 100.00 | 132.91 | 34.27 |      | 80.0  |         |
| 10447-AAC | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)                 | X | 2.96   | 66.34  | 14.12 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.18   | 67.31  | 14.92 |      | 150.0 |         |
|           |                                                                | Z | 3.13   | 66.39  | 14.53 |      | 150.0 |         |
| 10448-AAC | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)                | X | 3.67   | 66.79  | 15.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.81   | 67.30  | 15.97 |      | 150.0 |         |
|           |                                                                | Z | 3.78   | 66.58  | 15.62 |      | 150.0 |         |
| 10449-AAC | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)                | X | 3.98   | 66.71  | 15.86 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.10   | 67.14  | 16.16 |      | 150.0 |         |
|           |                                                                | Z | 4.09   | 66.52  | 15.85 |      | 150.0 |         |
| 10450-AAC | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)                | X | 4.21   | 66.62  | 15.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.32   | 67.01  | 16.21 |      | 150.0 |         |
|           |                                                                | Z | 4.30   | 66.46  | 15.93 |      | 150.0 |         |
| 10451-AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)                | X | 2.70   | 65.75  | 13.11 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 2.96   | 67.00  | 14.12 |      | 150.0 |         |
|           |                                                                | Z | 2.94   | 66.14  | 13.79 |      | 150.0 |         |
| 10456-AAB | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)           | X | 5.99   | 67.61  | 16.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 6.02   | 67.80  | 16.61 |      | 150.0 |         |
|           |                                                                | Z | 6.11   | 67.72  | 16.61 |      | 150.0 |         |
| 10457-AAA | UMTS-FDD (DC-HSDPA)                                            | X | 3.61   | 65.32  | 15.70 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.69   | 65.64  | 15.94 |      | 150.0 |         |
|           |                                                                | Z | 3.65   | 65.04  | 15.66 |      | 150.0 |         |
| 10458-AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers)                         | X | 3.19   | 69.07  | 15.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.69   | 71.30  | 16.62 |      | 150.0 |         |
|           |                                                                | Z | 3.53   | 69.92  | 16.16 |      | 150.0 |         |
| 10459-AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers)                         | X | 4.69   | 69.03  | 17.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.79   | 69.11  | 17.75 |      | 150.0 |         |
|           |                                                                | Z | 4.84   | 68.73  | 17.83 |      | 150.0 |         |

|           |                                                                   |   |        |        |       |      |       |         |
|-----------|-------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10460-AAA | UMTS-FDD (WCDMA, AMR)                                             | X | 0.72   | 66.02  | 14.12 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                   | Y | 0.91   | 69.57  | 16.66 |      | 150.0 |         |
|           |                                                                   | Z | 0.71   | 65.26  | 13.72 |      | 150.0 |         |
| 10461-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 1.93   | 75.92  | 18.31 | 3.29 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 6.83   | 93.43  | 24.06 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 137.66 | 36.58 |      | 80.0  |         |
| 10462-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 0.63   | 60.00  | 7.27  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.63   | 60.00  | 7.19  |      | 80.0  |         |
|           |                                                                   | Z | 1.15   | 65.31  | 10.99 |      | 80.0  |         |
| 10463-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 0.65   | 60.00  | 6.55  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.66   | 60.00  | 6.45  |      | 80.0  |         |
|           |                                                                   | Z | 0.67   | 60.00  | 7.76  |      | 80.0  |         |
| 10464-AAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 1.38   | 71.32  | 15.83 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 4.54   | 86.66  | 21.20 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 134.26 | 34.80 |      | 80.0  |         |
| 10465-AAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.63   | 60.00  | 7.20  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.63   | 60.00  | 7.11  |      | 80.0  |         |
|           |                                                                   | Z | 0.94   | 63.37  | 10.05 |      | 80.0  |         |
| 10466-AAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.65   | 60.00  | 6.50  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.66   | 60.00  | 6.41  |      | 80.0  |         |
|           |                                                                   | Z | 0.68   | 60.00  | 7.70  |      | 80.0  |         |
| 10467-AAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 1.47   | 72.19  | 16.22 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 5.30   | 88.83  | 21.91 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 134.76 | 35.02 |      | 80.0  |         |
| 10468-AAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.63   | 60.00  | 7.22  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.63   | 60.00  | 7.14  |      | 80.0  |         |
|           |                                                                   | Z | 0.99   | 63.90  | 10.32 |      | 80.0  |         |
| 10469-AAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.65   | 60.00  | 6.51  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.66   | 60.00  | 6.41  |      | 80.0  |         |
|           |                                                                   | Z | 0.68   | 60.00  | 7.70  |      | 80.0  |         |
| 10470-AAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 1.46   | 72.21  | 16.22 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 5.35   | 88.98  | 21.94 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 134.82 | 35.03 |      | 80.0  |         |
| 10471-AAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.63   | 60.00  | 7.21  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.63   | 60.00  | 7.12  |      | 80.0  |         |
|           |                                                                   | Z | 0.98   | 63.79  | 10.26 |      | 80.0  |         |
| 10472-AAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.65   | 60.00  | 6.49  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.66   | 60.00  | 6.39  |      | 80.0  |         |
|           |                                                                   | Z | 0.67   | 60.00  | 7.68  |      | 80.0  |         |
| 10473-AAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 1.46   | 72.15  | 16.20 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 5.31   | 88.87  | 21.90 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 134.77 | 35.01 |      | 80.0  |         |
| 10474-AAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.63   | 60.00  | 7.20  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.63   | 60.00  | 7.12  |      | 80.0  |         |
|           |                                                                   | Z | 0.97   | 63.74  | 10.23 |      | 80.0  |         |
| 10475-AAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.65   | 60.00  | 6.49  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.66   | 60.00  | 6.39  |      | 80.0  |         |
|           |                                                                   | Z | 0.67   | 60.00  | 7.69  |      | 80.0  |         |

|           |                                                                     |   |       |        |       |      |      |         |
|-----------|---------------------------------------------------------------------|---|-------|--------|-------|------|------|---------|
| 10477-AAE | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)    | X | 0.63  | 60.00  | 7.17  | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 0.63  | 60.00  | 7.08  |      | 80.0 |         |
|           |                                                                     | Z | 0.93  | 63.31  | 10.01 |      | 80.0 |         |
| 10478-AAE | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)    | X | 0.65  | 60.00  | 6.47  | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 0.66  | 60.00  | 6.37  |      | 80.0 |         |
|           |                                                                     | Z | 0.67  | 60.00  | 7.67  |      | 80.0 |         |
| 10479-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 4.26  | 80.69  | 20.19 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 7.01  | 87.70  | 22.71 |      | 80.0 |         |
|           |                                                                     | Z | 21.27 | 105.57 | 28.88 |      | 80.0 |         |
| 10480-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.88  | 66.39  | 12.32 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.13  | 71.95  | 14.74 |      | 80.0 |         |
|           |                                                                     | Z | 13.52 | 90.52  | 21.87 |      | 80.0 |         |
| 10481-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.43  | 63.16  | 10.40 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.06  | 66.80  | 12.23 |      | 80.0 |         |
|           |                                                                     | Z | 6.11  | 79.62  | 18.02 |      | 80.0 |         |
| 10482-AAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 1.06  | 61.11  | 9.78  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.73  | 66.89  | 13.39 |      | 80.0 |         |
|           |                                                                     | Z | 1.53  | 64.78  | 12.61 |      | 80.0 |         |
| 10483-AAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.23  | 60.00  | 8.50  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.57  | 62.45  | 10.22 |      | 80.0 |         |
|           |                                                                     | Z | 2.78  | 68.98  | 14.19 |      | 80.0 |         |
| 10484-AAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.26  | 60.00  | 8.49  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.54  | 61.98  | 9.97  |      | 80.0 |         |
|           |                                                                     | Z | 2.53  | 67.57  | 13.58 |      | 80.0 |         |
| 10485-AAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 1.66  | 65.74  | 13.74 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.52  | 71.78  | 17.06 |      | 80.0 |         |
|           |                                                                     | Z | 2.10  | 68.47  | 15.70 |      | 80.0 |         |
| 10486-AAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.66  | 62.56  | 11.27 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.26  | 66.58  | 13.85 |      | 80.0 |         |
|           |                                                                     | Z | 2.12  | 65.12  | 13.38 |      | 80.0 |         |
| 10487-AAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.67  | 62.33  | 11.12 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.24  | 66.10  | 13.59 |      | 80.0 |         |
|           |                                                                     | Z | 2.14  | 64.83  | 13.21 |      | 80.0 |         |
| 10488-AAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 2.26  | 67.65  | 16.13 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.82  | 71.24  | 18.12 |      | 80.0 |         |
|           |                                                                     | Z | 2.57  | 69.00  | 17.08 |      | 80.0 |         |
| 10489-AAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 2.49  | 65.85  | 15.07 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.90  | 68.21  | 16.54 |      | 80.0 |         |
|           |                                                                     | Z | 2.74  | 66.70  | 15.91 |      | 80.0 |         |
| 10490-AAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 2.57  | 65.79  | 15.03 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.97  | 68.04  | 16.46 |      | 80.0 |         |
|           |                                                                     | Z | 2.83  | 66.63  | 15.88 |      | 80.0 |         |
| 10491-AAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 2.64  | 67.24  | 16.30 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.09  | 69.79  | 17.74 |      | 80.0 |         |
|           |                                                                     | Z | 2.92  | 68.21  | 16.96 |      | 80.0 |         |
| 10492-AAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 2.93  | 65.80  | 15.66 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.24  | 67.45  | 16.69 |      | 80.0 |         |
|           |                                                                     | Z | 3.14  | 66.35  | 16.22 |      | 80.0 |         |

|           |                                                                      |   |      |       |       |      |      |         |
|-----------|----------------------------------------------------------------------|---|------|-------|-------|------|------|---------|
| 10493-AAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.99 | 65.74 | 15.62 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.29 | 67.32 | 16.63 |      | 80.0 |         |
|           |                                                                      | Z | 3.21 | 66.28 | 16.18 |      | 80.0 |         |
| 10494-AAE | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.77 | 68.16 | 16.65 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.31 | 71.10 | 18.21 |      | 80.0 |         |
|           |                                                                      | Z | 3.09 | 69.31 | 17.33 |      | 80.0 |         |
| 10495-AAE | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.95 | 66.01 | 15.89 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.25 | 67.67 | 16.91 |      | 80.0 |         |
|           |                                                                      | Z | 3.16 | 66.59 | 16.41 |      | 80.0 |         |
| 10496-AAE | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.04 | 65.92 | 15.89 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.34 | 67.48 | 16.84 |      | 80.0 |         |
|           |                                                                      | Z | 3.25 | 66.45 | 16.38 |      | 80.0 |         |
| 10497-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 0.90 | 60.00 | 7.56  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 0.94 | 60.22 | 8.59  |      | 80.0 |         |
|           |                                                                      | Z | 0.98 | 60.00 | 8.77  |      | 80.0 |         |
| 10498-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.09 | 60.00 | 6.33  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.09 | 60.00 | 7.12  |      | 80.0 |         |
|           |                                                                      | Z | 1.16 | 60.00 | 7.58  |      | 80.0 |         |
| 10499-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.11 | 60.00 | 6.17  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.11 | 60.00 | 6.94  |      | 80.0 |         |
|           |                                                                      | Z | 1.17 | 60.00 | 7.42  |      | 80.0 |         |
| 10500-AAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 1.91 | 66.68 | 14.78 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.64 | 71.54 | 17.49 |      | 80.0 |         |
|           |                                                                      | Z | 2.29 | 68.68 | 16.26 |      | 80.0 |         |
| 10501-AAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.02 | 64.23 | 12.91 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.60 | 67.75 | 15.11 |      | 80.0 |         |
|           |                                                                      | Z | 2.42 | 66.09 | 14.51 |      | 80.0 |         |
| 10502-AAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.05 | 64.07 | 12.75 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.63 | 67.51 | 14.92 |      | 80.0 |         |
|           |                                                                      | Z | 2.46 | 65.95 | 14.37 |      | 80.0 |         |
| 10503-AAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.23 | 67.47 | 16.03 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.79 | 71.03 | 18.01 |      | 80.0 |         |
|           |                                                                      | Z | 2.54 | 68.82 | 16.98 |      | 80.0 |         |
| 10504-AAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.48 | 65.75 | 15.00 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.88 | 68.10 | 16.48 |      | 80.0 |         |
|           |                                                                      | Z | 2.73 | 66.60 | 15.85 |      | 80.0 |         |
| 10505-AAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.55 | 65.70 | 14.97 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.95 | 67.94 | 16.40 |      | 80.0 |         |
|           |                                                                      | Z | 2.81 | 66.54 | 15.82 |      | 80.0 |         |
| 10506-AAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 2.76 | 68.04 | 16.58 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.29 | 70.96 | 18.14 |      | 80.0 |         |
|           |                                                                      | Z | 3.07 | 69.18 | 17.26 |      | 80.0 |         |
| 10507-AAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 2.93 | 65.95 | 15.85 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.24 | 67.61 | 16.87 |      | 80.0 |         |
|           |                                                                      | Z | 3.14 | 66.53 | 16.37 |      | 80.0 |         |

|           |                                                                     |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10508-AAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.03 | 65.86 | 15.84 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.33 | 67.40 | 16.79 |      | 80.0  |         |
|           |                                                                     | Z | 3.24 | 66.38 | 16.33 |      | 80.0  |         |
| 10509-AAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 3.24 | 67.72 | 16.53 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.69 | 69.96 | 17.72 |      | 80.0  |         |
|           |                                                                     | Z | 3.51 | 68.56 | 17.03 |      | 80.0  |         |
| 10510-AAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.43 | 65.97 | 16.12 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.71 | 67.32 | 16.91 |      | 80.0  |         |
|           |                                                                     | Z | 3.64 | 66.47 | 16.52 |      | 80.0  |         |
| 10511-AAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.52 | 65.89 | 16.12 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.78 | 67.15 | 16.86 |      | 80.0  |         |
|           |                                                                     | Z | 3.71 | 66.32 | 16.49 |      | 80.0  |         |
| 10512-AAE | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 3.22 | 68.47 | 16.72 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.79 | 71.22 | 18.12 |      | 80.0  |         |
|           |                                                                     | Z | 3.54 | 69.57 | 17.32 |      | 80.0  |         |
| 10513-AAE | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.32 | 66.00 | 16.15 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.60 | 67.43 | 16.98 |      | 80.0  |         |
|           |                                                                     | Z | 3.52 | 66.56 | 16.56 |      | 80.0  |         |
| 10514-AAE | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.39 | 65.79 | 16.10 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.64 | 67.11 | 16.88 |      | 80.0  |         |
|           |                                                                     | Z | 3.57 | 66.28 | 16.49 |      | 80.0  |         |
| 10515-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)           | X | 0.88 | 62.44 | 13.81 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.96 | 63.62 | 14.88 |      | 150.0 |         |
|           |                                                                     | Z | 0.87 | 62.07 | 13.59 |      | 150.0 |         |
| 10516-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         | X | 0.45 | 66.98 | 14.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.65 | 72.72 | 18.47 |      | 150.0 |         |
|           |                                                                     | Z | 0.42 | 65.95 | 13.66 |      | 150.0 |         |
| 10517-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)          | X | 0.70 | 63.68 | 13.97 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.81 | 65.65 | 15.62 |      | 150.0 |         |
|           |                                                                     | Z | 0.69 | 63.23 | 13.65 |      | 150.0 |         |
| 10518-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)           | X | 4.21 | 66.61 | 15.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.32 | 66.98 | 16.20 |      | 150.0 |         |
|           |                                                                     | Z | 4.31 | 66.42 | 15.93 |      | 150.0 |         |
| 10519-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)          | X | 4.34 | 66.77 | 16.04 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.46 | 67.14 | 16.28 |      | 150.0 |         |
|           |                                                                     | Z | 4.46 | 66.61 | 16.03 |      | 150.0 |         |
| 10520-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)          | X | 4.20 | 66.68 | 15.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.32 | 67.07 | 16.20 |      | 150.0 |         |
|           |                                                                     | Z | 4.31 | 66.53 | 15.94 |      | 150.0 |         |
| 10521-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)          | X | 4.13 | 66.63 | 15.92 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.25 | 67.04 | 16.18 |      | 150.0 |         |
|           |                                                                     | Z | 4.24 | 66.49 | 15.91 |      | 150.0 |         |
| 10522-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)          | X | 4.17 | 66.72 | 15.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.29 | 67.14 | 16.26 |      | 150.0 |         |
|           |                                                                     | Z | 4.30 | 66.63 | 16.02 |      | 150.0 |         |

|           |                                                            |   |      |       |       |      |       |         |
|-----------|------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10523-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) | X | 4.12 | 66.80 | 15.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.24 | 67.19 | 16.22 |      | 150.0 |         |
|           |                                                            | Z | 4.21 | 66.57 | 15.90 |      | 150.0 |         |
| 10524-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) | X | 4.13 | 66.73 | 16.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.25 | 67.13 | 16.27 |      | 150.0 |         |
|           |                                                            | Z | 4.25 | 66.57 | 15.99 |      | 150.0 |         |
| 10525-AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)          | X | 4.18 | 65.86 | 15.65 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.29 | 66.26 | 15.91 |      | 150.0 |         |
|           |                                                            | Z | 4.27 | 65.65 | 15.61 |      | 150.0 |         |
| 10526-AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)          | X | 4.28 | 66.10 | 15.76 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.41 | 66.52 | 16.01 |      | 150.0 |         |
|           |                                                            | Z | 4.40 | 65.94 | 15.73 |      | 150.0 |         |
| 10527-AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)          | X | 4.22 | 66.07 | 15.69 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.34 | 66.49 | 15.96 |      | 150.0 |         |
|           |                                                            | Z | 4.33 | 65.90 | 15.66 |      | 150.0 |         |
| 10528-AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)          | X | 4.23 | 66.08 | 15.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.36 | 66.51 | 15.99 |      | 150.0 |         |
|           |                                                            | Z | 4.34 | 65.91 | 15.70 |      | 150.0 |         |
| 10529-AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)          | X | 4.23 | 66.08 | 15.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.36 | 66.51 | 15.99 |      | 150.0 |         |
|           |                                                            | Z | 4.34 | 65.91 | 15.70 |      | 150.0 |         |
| 10531-AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)          | X | 4.19 | 66.07 | 15.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.32 | 66.52 | 15.96 |      | 150.0 |         |
|           |                                                            | Z | 4.31 | 65.94 | 15.68 |      | 150.0 |         |
| 10532-AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)          | X | 4.08 | 65.93 | 15.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.20 | 66.39 | 15.90 |      | 150.0 |         |
|           |                                                            | Z | 4.19 | 65.79 | 15.60 |      | 150.0 |         |
| 10533-AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)          | X | 4.23 | 66.16 | 15.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.36 | 66.60 | 16.00 |      | 150.0 |         |
|           |                                                            | Z | 4.35 | 65.98 | 15.69 |      | 150.0 |         |
| 10534-AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)          | X | 4.82 | 66.10 | 15.85 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.91 | 66.46 | 16.04 |      | 150.0 |         |
|           |                                                            | Z | 4.91 | 66.02 | 15.83 |      | 150.0 |         |
| 10535-AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)          | X | 4.85 | 66.20 | 15.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.94 | 66.56 | 16.09 |      | 150.0 |         |
|           |                                                            | Z | 4.97 | 66.17 | 15.90 |      | 150.0 |         |
| 10536-AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)          | X | 4.74 | 66.19 | 15.87 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.84 | 66.58 | 16.08 |      | 150.0 |         |
|           |                                                            | Z | 4.85 | 66.14 | 15.86 |      | 150.0 |         |
| 10537-AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)          | X | 4.82 | 66.26 | 15.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.91 | 66.59 | 16.08 |      | 150.0 |         |
|           |                                                            | Z | 4.91 | 66.13 | 15.86 |      | 150.0 |         |
| 10538-AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)          | X | 4.87 | 66.17 | 15.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.97 | 66.52 | 16.09 |      | 150.0 |         |
|           |                                                            | Z | 4.98 | 66.12 | 15.90 |      | 150.0 |         |
| 10540-AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)          | X | 4.80 | 66.12 | 15.90 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.90 | 66.49 | 16.09 |      | 150.0 |         |
|           |                                                            | Z | 4.91 | 66.07 | 15.89 |      | 150.0 |         |

|           |                                                    |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10541-AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)  | X | 4.79 | 66.06 | 15.85 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 4.89 | 66.43 | 16.04 |      | 150.0 |         |
|           |                                                    | Z | 4.89 | 65.96 | 15.82 |      | 150.0 |         |
| 10542-AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)  | X | 4.94 | 66.17 | 15.92 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.04 | 66.51 | 16.10 |      | 150.0 |         |
|           |                                                    | Z | 5.05 | 66.09 | 15.90 |      | 150.0 |         |
| 10543-AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)  | X | 5.03 | 66.31 | 16.03 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.11 | 66.60 | 16.17 |      | 150.0 |         |
|           |                                                    | Z | 5.12 | 66.17 | 15.97 |      | 150.0 |         |
| 10544-AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)  | X | 5.18 | 66.16 | 15.86 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.26 | 66.52 | 16.02 |      | 150.0 |         |
|           |                                                    | Z | 5.26 | 66.12 | 15.84 |      | 150.0 |         |
| 10545-AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)  | X | 5.36 | 66.65 | 16.06 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.42 | 66.93 | 16.19 |      | 150.0 |         |
|           |                                                    | Z | 5.45 | 66.61 | 16.04 |      | 150.0 |         |
| 10546-AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)  | X | 5.20 | 66.27 | 15.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.29 | 66.63 | 16.05 |      | 150.0 |         |
|           |                                                    | Z | 5.29 | 66.25 | 15.87 |      | 150.0 |         |
| 10547-AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)  | X | 5.31 | 66.50 | 15.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.37 | 66.75 | 16.11 |      | 150.0 |         |
|           |                                                    | Z | 5.38 | 66.37 | 15.93 |      | 150.0 |         |
| 10548-AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)  | X | 5.41 | 66.98 | 16.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.49 | 67.30 | 16.36 |      | 150.0 |         |
|           |                                                    | Z | 5.57 | 67.13 | 16.28 |      | 150.0 |         |
| 10550-AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)  | X | 5.30 | 66.60 | 16.06 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.35 | 66.83 | 16.16 |      | 150.0 |         |
|           |                                                    | Z | 5.37 | 66.46 | 15.99 |      | 150.0 |         |
| 10551-AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)  | X | 5.19 | 66.21 | 15.83 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.28 | 66.60 | 16.01 |      | 150.0 |         |
|           |                                                    | Z | 5.30 | 66.24 | 15.84 |      | 150.0 |         |
| 10552-AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)  | X | 5.18 | 66.29 | 15.86 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.27 | 66.65 | 16.04 |      | 150.0 |         |
|           |                                                    | Z | 5.26 | 66.20 | 15.82 |      | 150.0 |         |
| 10553-AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)  | X | 5.23 | 66.22 | 15.86 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.32 | 66.58 | 16.03 |      | 150.0 |         |
|           |                                                    | Z | 5.32 | 66.18 | 15.85 |      | 150.0 |         |
| 10554-AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle) | X | 5.62 | 66.51 | 15.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.68 | 66.84 | 16.09 |      | 150.0 |         |
|           |                                                    | Z | 5.69 | 66.48 | 15.94 |      | 150.0 |         |
| 10555-AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle) | X | 5.69 | 66.71 | 16.04 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.76 | 67.04 | 16.18 |      | 150.0 |         |
|           |                                                    | Z | 5.79 | 66.75 | 16.05 |      | 150.0 |         |
| 10556-AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle) | X | 5.75 | 66.88 | 16.11 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.80 | 67.16 | 16.23 |      | 150.0 |         |
|           |                                                    | Z | 5.83 | 66.85 | 16.10 |      | 150.0 |         |
| 10557-AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle) | X | 5.69 | 66.70 | 16.04 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.76 | 67.04 | 16.19 |      | 150.0 |         |
|           |                                                    | Z | 5.77 | 66.69 | 16.03 |      | 150.0 |         |

|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10558-AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)              | X | 5.67 | 66.68 | 16.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.76 | 67.07 | 16.22 |      | 150.0 |         |
|           |                                                                 | Z | 5.80 | 66.79 | 16.10 |      | 150.0 |         |
| 10560-AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)              | X | 5.71 | 66.66 | 16.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.79 | 67.02 | 16.23 |      | 150.0 |         |
|           |                                                                 | Z | 5.81 | 66.69 | 16.09 |      | 150.0 |         |
| 10561-AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle)              | X | 5.65 | 66.65 | 16.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.72 | 67.00 | 16.25 |      | 150.0 |         |
|           |                                                                 | Z | 5.75 | 66.69 | 16.12 |      | 150.0 |         |
| 10562-AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)              | X | 5.68 | 66.77 | 16.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.77 | 67.15 | 16.33 |      | 150.0 |         |
|           |                                                                 | Z | 5.80 | 66.87 | 16.21 |      | 150.0 |         |
| 10563-AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)              | X | 5.80 | 66.82 | 16.15 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.88 | 67.15 | 16.29 |      | 150.0 |         |
|           |                                                                 | Z | 5.91 | 66.85 | 16.17 |      | 150.0 |         |
| 10564-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)  | X | 4.52 | 66.62 | 16.09 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.63 | 66.97 | 16.32 |      | 150.0 |         |
|           |                                                                 | Z | 4.63 | 66.48 | 16.09 |      | 150.0 |         |
| 10565-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle) | X | 4.71 | 67.05 | 16.42 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.82 | 67.38 | 16.63 |      | 150.0 |         |
|           |                                                                 | Z | 4.83 | 66.91 | 16.42 |      | 150.0 |         |
| 10566-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle) | X | 4.54 | 66.82 | 16.20 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.65 | 67.19 | 16.43 |      | 150.0 |         |
|           |                                                                 | Z | 4.66 | 66.71 | 16.22 |      | 150.0 |         |
| 10567-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle) | X | 4.58 | 67.25 | 16.61 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.69 | 67.60 | 16.82 |      | 150.0 |         |
|           |                                                                 | Z | 4.69 | 67.12 | 16.60 |      | 150.0 |         |
| 10568-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle) | X | 4.42 | 66.46 | 15.88 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.54 | 66.88 | 16.15 |      | 150.0 |         |
|           |                                                                 | Z | 4.56 | 66.45 | 15.95 |      | 150.0 |         |
| 10569-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle) | X | 4.58 | 67.53 | 16.78 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.68 | 67.86 | 16.97 |      | 150.0 |         |
|           |                                                                 | Z | 4.68 | 67.31 | 16.72 |      | 150.0 |         |
| 10570-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle) | X | 4.57 | 67.27 | 16.64 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.68 | 67.61 | 16.85 |      | 150.0 |         |
|           |                                                                 | Z | 4.69 | 67.12 | 16.62 |      | 150.0 |         |
| 10571-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)       | X | 0.99 | 62.81 | 14.23 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.09 | 64.12 | 15.35 |      | 130.0 |         |
|           |                                                                 | Z | 1.00 | 62.69 | 14.25 |      | 130.0 |         |
| 10572-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)       | X | 1.00 | 63.25 | 14.53 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.10 | 64.66 | 15.71 |      | 130.0 |         |
|           |                                                                 | Z | 1.00 | 63.12 | 14.54 |      | 130.0 |         |
| 10573-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)     | X | 0.77 | 71.94 | 17.18 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.53 | 83.79 | 23.08 |      | 130.0 |         |
|           |                                                                 | Z | 0.78 | 71.84 | 17.05 |      | 130.0 |         |
| 10574-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)      | X | 0.97 | 67.27 | 16.73 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.16 | 70.12 | 18.67 |      | 130.0 |         |
|           |                                                                 | Z | 0.98 | 67.08 | 16.66 |      | 130.0 |         |

|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10575-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)  | X | 4.29 | 66.33 | 16.06 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.40 | 66.70 | 16.31 |      | 130.0 |         |
|           |                                                                 | Z | 4.41 | 66.24 | 16.12 |      | 130.0 |         |
| 10576-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)  | X | 4.32 | 66.56 | 16.16 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.43 | 66.92 | 16.41 |      | 130.0 |         |
|           |                                                                 | Z | 4.43 | 66.43 | 16.20 |      | 130.0 |         |
| 10577-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) | X | 4.47 | 66.78 | 16.31 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.58 | 67.14 | 16.55 |      | 130.0 |         |
|           |                                                                 | Z | 4.60 | 66.69 | 16.36 |      | 130.0 |         |
| 10578-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) | X | 4.38 | 66.93 | 16.42 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.49 | 67.29 | 16.66 |      | 130.0 |         |
|           |                                                                 | Z | 4.50 | 66.83 | 16.46 |      | 130.0 |         |
| 10579-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) | X | 4.12 | 66.01 | 15.59 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.24 | 66.44 | 15.89 |      | 130.0 |         |
|           |                                                                 | Z | 4.26 | 65.99 | 15.69 |      | 130.0 |         |
| 10580-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) | X | 4.14 | 66.03 | 15.59 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.27 | 66.48 | 15.90 |      | 130.0 |         |
|           |                                                                 | Z | 4.30 | 66.06 | 15.72 |      | 130.0 |         |
| 10581-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) | X | 4.29 | 67.01 | 16.39 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.41 | 67.39 | 16.65 |      | 130.0 |         |
|           |                                                                 | Z | 4.41 | 66.87 | 16.41 |      | 130.0 |         |
| 10582-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) | X | 4.04 | 65.76 | 15.35 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.17 | 66.20 | 15.67 |      | 130.0 |         |
|           |                                                                 | Z | 4.19 | 65.76 | 15.46 |      | 130.0 |         |
| 10583-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)       | X | 4.29 | 66.33 | 16.06 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.40 | 66.70 | 16.31 |      | 130.0 |         |
|           |                                                                 | Z | 4.41 | 66.24 | 16.12 |      | 130.0 |         |
| 10584-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)       | X | 4.32 | 66.56 | 16.16 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.43 | 66.92 | 16.41 |      | 130.0 |         |
|           |                                                                 | Z | 4.43 | 66.43 | 16.20 |      | 130.0 |         |
| 10585-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)      | X | 4.47 | 66.78 | 16.31 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.58 | 67.14 | 16.55 |      | 130.0 |         |
|           |                                                                 | Z | 4.60 | 66.69 | 16.36 |      | 130.0 |         |
| 10586-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)      | X | 4.38 | 66.93 | 16.42 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.49 | 67.29 | 16.66 |      | 130.0 |         |
|           |                                                                 | Z | 4.50 | 66.83 | 16.46 |      | 130.0 |         |
| 10587-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)      | X | 4.12 | 66.01 | 15.59 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.24 | 66.44 | 15.89 |      | 130.0 |         |
|           |                                                                 | Z | 4.26 | 65.99 | 15.69 |      | 130.0 |         |
| 10588-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)      | X | 4.14 | 66.03 | 15.59 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.27 | 66.48 | 15.90 |      | 130.0 |         |
|           |                                                                 | Z | 4.30 | 66.06 | 15.72 |      | 130.0 |         |
| 10589-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)      | X | 4.29 | 67.01 | 16.39 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.41 | 67.39 | 16.65 |      | 130.0 |         |
|           |                                                                 | Z | 4.41 | 66.87 | 16.41 |      | 130.0 |         |
| 10590-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)      | X | 4.04 | 65.76 | 15.35 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.17 | 66.20 | 15.67 |      | 130.0 |         |
|           |                                                                 | Z | 4.19 | 65.76 | 15.46 |      | 130.0 |         |

|           |                                                       |   |      |       |       |      |       |         |
|-----------|-------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10591-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle) | X | 4.45 | 66.46 | 16.22 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.56 | 66.80 | 16.44 |      | 130.0 |         |
|           |                                                       | Z | 4.57 | 66.34 | 16.25 |      | 130.0 |         |
| 10592-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle) | X | 4.56 | 66.73 | 16.33 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.67 | 67.08 | 16.56 |      | 130.0 |         |
|           |                                                       | Z | 4.69 | 66.64 | 16.38 |      | 130.0 |         |
| 10593-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle) | X | 4.47 | 66.59 | 16.17 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.59 | 66.95 | 16.42 |      | 130.0 |         |
|           |                                                       | Z | 4.60 | 66.51 | 16.23 |      | 130.0 |         |
| 10594-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle) | X | 4.53 | 66.78 | 16.36 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.64 | 67.13 | 16.59 |      | 130.0 |         |
|           |                                                       | Z | 4.66 | 66.69 | 16.40 |      | 130.0 |         |
| 10595-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle) | X | 4.49 | 66.75 | 16.26 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.61 | 67.12 | 16.50 |      | 130.0 |         |
|           |                                                       | Z | 4.62 | 66.66 | 16.30 |      | 130.0 |         |
| 10596-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle) | X | 4.42 | 66.68 | 16.23 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.53 | 67.07 | 16.49 |      | 130.0 |         |
|           |                                                       | Z | 4.55 | 66.62 | 16.29 |      | 130.0 |         |
| 10597-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle) | X | 4.37 | 66.54 | 16.07 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.49 | 66.93 | 16.34 |      | 130.0 |         |
|           |                                                       | Z | 4.51 | 66.49 | 16.14 |      | 130.0 |         |
| 10598-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle) | X | 4.38 | 66.81 | 16.37 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.49 | 67.18 | 16.61 |      | 130.0 |         |
|           |                                                       | Z | 4.50 | 66.72 | 16.41 |      | 130.0 |         |
| 10599-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle) | X | 5.17 | 67.00 | 16.56 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.23 | 67.23 | 16.68 |      | 130.0 |         |
|           |                                                       | Z | 5.27 | 66.93 | 16.57 |      | 130.0 |         |
| 10600-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle) | X | 5.26 | 67.35 | 16.71 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.31 | 67.52 | 16.80 |      | 130.0 |         |
|           |                                                       | Z | 5.40 | 67.37 | 16.76 |      | 130.0 |         |
| 10601-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle) | X | 5.19 | 67.20 | 16.65 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.24 | 67.37 | 16.74 |      | 130.0 |         |
|           |                                                       | Z | 5.28 | 67.08 | 16.63 |      | 130.0 |         |
| 10602-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle) | X | 5.24 | 67.11 | 16.52 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.31 | 67.34 | 16.64 |      | 130.0 |         |
|           |                                                       | Z | 5.41 | 67.24 | 16.63 |      | 130.0 |         |
| 10603-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle) | X | 5.29 | 67.35 | 16.79 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.38 | 67.63 | 16.93 |      | 130.0 |         |
|           |                                                       | Z | 5.49 | 67.59 | 16.94 |      | 130.0 |         |
| 10604-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle) | X | 5.15 | 66.85 | 16.51 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.25 | 67.21 | 16.70 |      | 130.0 |         |
|           |                                                       | Z | 5.37 | 67.21 | 16.74 |      | 130.0 |         |
| 10605-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle) | X | 5.23 | 67.14 | 16.65 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.30 | 67.39 | 16.79 |      | 130.0 |         |
|           |                                                       | Z | 5.38 | 67.23 | 16.74 |      | 130.0 |         |
| 10606-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle) | X | 5.05 | 66.67 | 16.26 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.11 | 66.89 | 16.39 |      | 130.0 |         |
|           |                                                       | Z | 5.14 | 66.57 | 16.26 |      | 130.0 |         |

|           |                                                   |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10607-AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle) | X | 4.30 | 65.79 | 15.85 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.41 | 66.18 | 16.11 |      | 130.0 |         |
|           |                                                   | Z | 4.41 | 65.65 | 15.87 |      | 130.0 |         |
| 10608-AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | X | 4.42 | 66.08 | 15.98 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.54 | 66.48 | 16.24 |      | 130.0 |         |
|           |                                                   | Z | 4.55 | 65.99 | 16.03 |      | 130.0 |         |
| 10609-AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle) | X | 4.32 | 65.89 | 15.79 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.44 | 66.32 | 16.07 |      | 130.0 |         |
|           |                                                   | Z | 4.44 | 65.81 | 15.84 |      | 130.0 |         |
| 10610-AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | X | 4.37 | 66.08 | 15.98 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.49 | 66.49 | 16.24 |      | 130.0 |         |
|           |                                                   | Z | 4.49 | 65.99 | 16.01 |      | 130.0 |         |
| 10611-AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) | X | 4.28 | 65.85 | 15.80 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.40 | 66.28 | 16.08 |      | 130.0 |         |
|           |                                                   | Z | 4.41 | 65.78 | 15.85 |      | 130.0 |         |
| 10612-AAB | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) | X | 4.26 | 65.94 | 15.82 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.39 | 66.39 | 16.11 |      | 130.0 |         |
|           |                                                   | Z | 4.40 | 65.90 | 15.88 |      | 130.0 |         |
| 10613-AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) | X | 4.25 | 65.75 | 15.65 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.38 | 66.20 | 15.95 |      | 130.0 |         |
|           |                                                   | Z | 4.40 | 65.73 | 15.73 |      | 130.0 |         |
| 10614-AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) | X | 4.24 | 66.02 | 15.94 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.36 | 66.46 | 16.22 |      | 130.0 |         |
|           |                                                   | Z | 4.36 | 65.95 | 15.99 |      | 130.0 |         |
| 10615-AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) | X | 4.26 | 65.66 | 15.54 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.39 | 66.11 | 15.84 |      | 130.0 |         |
|           |                                                   | Z | 4.40 | 65.60 | 15.61 |      | 130.0 |         |
| 10616-AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) | X | 4.95 | 66.09 | 16.09 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.04 | 66.42 | 16.27 |      | 130.0 |         |
|           |                                                   | Z | 5.06 | 66.06 | 16.12 |      | 130.0 |         |
| 10617-AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) | X | 4.98 | 66.18 | 16.11 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.07 | 66.52 | 16.29 |      | 130.0 |         |
|           |                                                   | Z | 5.13 | 66.25 | 16.19 |      | 130.0 |         |
| 10618-AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) | X | 4.89 | 66.22 | 16.14 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.99 | 66.61 | 16.35 |      | 130.0 |         |
|           |                                                   | Z | 5.02 | 66.28 | 16.21 |      | 130.0 |         |
| 10619-AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) | X | 4.94 | 66.16 | 16.04 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.01 | 66.45 | 16.21 |      | 130.0 |         |
|           |                                                   | Z | 5.04 | 66.09 | 16.05 |      | 130.0 |         |
| 10620-AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) | X | 4.98 | 66.07 | 16.05 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.08 | 66.42 | 16.24 |      | 130.0 |         |
|           |                                                   | Z | 5.12 | 66.10 | 16.11 |      | 130.0 |         |
| 10621-AAB | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) | X | 5.00 | 66.21 | 16.25 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.09 | 66.55 | 16.43 |      | 130.0 |         |
|           |                                                   | Z | 5.12 | 66.22 | 16.29 |      | 130.0 |         |
| 10622-AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) | X | 4.98 | 66.29 | 16.29 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.08 | 66.63 | 16.46 |      | 130.0 |         |
|           |                                                   | Z | 5.11 | 66.32 | 16.34 |      | 130.0 |         |

|           |                                                    |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10623-AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)  | X | 4.88 | 65.86 | 15.92 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 4.97 | 66.20 | 16.11 |      | 130.0 |         |
|           |                                                    | Z | 4.99 | 65.82 | 15.95 |      | 130.0 |         |
| 10624-AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)  | X | 5.07 | 66.13 | 16.12 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.16 | 66.45 | 16.30 |      | 130.0 |         |
|           |                                                    | Z | 5.20 | 66.12 | 16.17 |      | 130.0 |         |
| 10625-AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)  | X | 5.18 | 66.36 | 16.31 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.24 | 66.57 | 16.42 |      | 130.0 |         |
|           |                                                    | Z | 5.32 | 66.38 | 16.36 |      | 130.0 |         |
| 10626-AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)  | X | 5.30 | 66.10 | 16.05 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.38 | 66.44 | 16.22 |      | 130.0 |         |
|           |                                                    | Z | 5.40 | 66.12 | 16.09 |      | 130.0 |         |
| 10627-AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)  | X | 5.53 | 66.77 | 16.36 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.59 | 67.01 | 16.48 |      | 130.0 |         |
|           |                                                    | Z | 5.65 | 66.81 | 16.41 |      | 130.0 |         |
| 10628-AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)  | X | 5.29 | 66.06 | 15.93 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.37 | 66.41 | 16.10 |      | 130.0 |         |
|           |                                                    | Z | 5.40 | 66.11 | 15.98 |      | 130.0 |         |
| 10629-AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)  | X | 5.43 | 66.42 | 16.11 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.47 | 66.61 | 16.20 |      | 130.0 |         |
|           |                                                    | Z | 5.50 | 66.31 | 16.08 |      | 130.0 |         |
| 10630-AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)  | X | 5.59 | 67.09 | 16.45 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.66 | 67.38 | 16.59 |      | 130.0 |         |
|           |                                                    | Z | 5.82 | 67.46 | 16.66 |      | 130.0 |         |
| 10631-AAB | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)  | X | 5.58 | 67.18 | 16.70 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.66 | 67.50 | 16.84 |      | 130.0 |         |
|           |                                                    | Z | 5.74 | 67.33 | 16.79 |      | 130.0 |         |
| 10632-AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)  | X | 5.57 | 67.09 | 16.67 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.60 | 67.22 | 16.72 |      | 130.0 |         |
|           |                                                    | Z | 5.64 | 66.96 | 16.63 |      | 130.0 |         |
| 10633-AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)  | X | 5.30 | 66.12 | 16.00 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.39 | 66.49 | 16.18 |      | 130.0 |         |
|           |                                                    | Z | 5.45 | 66.28 | 16.11 |      | 130.0 |         |
| 10634-AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)  | X | 5.34 | 66.35 | 16.17 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.43 | 66.70 | 16.34 |      | 130.0 |         |
|           |                                                    | Z | 5.44 | 66.35 | 16.20 |      | 130.0 |         |
| 10635-AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)  | X | 5.19 | 65.54 | 15.47 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.28 | 65.93 | 15.68 |      | 130.0 |         |
|           |                                                    | Z | 5.31 | 65.62 | 15.55 |      | 130.0 |         |
| 10636-AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle) | X | 5.75 | 66.48 | 16.16 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.81 | 66.78 | 16.30 |      | 130.0 |         |
|           |                                                    | Z | 5.84 | 66.50 | 16.20 |      | 130.0 |         |
| 10637-AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle) | X | 5.86 | 66.76 | 16.29 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.91 | 67.05 | 16.42 |      | 130.0 |         |
|           |                                                    | Z | 5.98 | 66.87 | 16.37 |      | 130.0 |         |
| 10638-AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle) | X | 5.90 | 66.89 | 16.33 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.95 | 67.16 | 16.45 |      | 130.0 |         |
|           |                                                    | Z | 5.98 | 66.88 | 16.35 |      | 130.0 |         |

|           |                                                        |   |        |        |       |       |       |         |
|-----------|--------------------------------------------------------|---|--------|--------|-------|-------|-------|---------|
| 10639-AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)     | X | 5.83   | 66.70  | 16.28 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.90   | 67.02  | 16.42 |       | 130.0 |         |
|           |                                                        | Z | 5.94   | 66.76  | 16.33 |       | 130.0 |         |
| 10640-AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)     | X | 5.77   | 66.49  | 16.12 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.85   | 66.88  | 16.30 |       | 130.0 |         |
|           |                                                        | Z | 5.92   | 66.69  | 16.24 |       | 130.0 |         |
| 10641-AAC | IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)     | X | 5.90   | 66.70  | 16.24 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.96   | 66.97  | 16.37 |       | 130.0 |         |
|           |                                                        | Z | 6.02   | 66.77  | 16.30 |       | 130.0 |         |
| 10642-AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)     | X | 5.91   | 66.85  | 16.49 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.98   | 67.18  | 16.64 |       | 130.0 |         |
|           |                                                        | Z | 6.03   | 66.94  | 16.56 |       | 130.0 |         |
| 10643-AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)     | X | 5.75   | 66.52  | 16.20 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.83   | 66.86  | 16.37 |       | 130.0 |         |
|           |                                                        | Z | 5.88   | 66.65  | 16.30 |       | 130.0 |         |
| 10644-AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)     | X | 5.80   | 66.66  | 16.30 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.88   | 67.03  | 16.47 |       | 130.0 |         |
|           |                                                        | Z | 5.94   | 66.85  | 16.42 |       | 130.0 |         |
| 10645-AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)     | X | 5.94   | 66.78  | 16.33 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.00   | 67.06  | 16.46 |       | 130.0 |         |
|           |                                                        | Z | 6.15   | 67.15  | 16.54 |       | 130.0 |         |
| 10646-AAE | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)  | X | 5.05   | 83.78  | 28.65 | 9.30  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 6.98   | 93.27  | 32.89 |       | 60.0  |         |
|           |                                                        | Z | 7.15   | 91.85  | 32.42 |       | 60.0  |         |
| 10647-AAE | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) | X | 4.54   | 81.82  | 27.99 | 9.30  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 5.99   | 90.07  | 31.84 |       | 60.0  |         |
|           |                                                        | Z | 6.33   | 89.46  | 31.67 |       | 60.0  |         |
| 10648-AAA | CDMA2000 (1x Advanced)                                 | X | 0.37   | 60.00  | 6.05  | 0.00  | 150.0 | ± 9.6 % |
|           |                                                        | Y | 0.48   | 61.63  | 8.16  |       | 150.0 |         |
|           |                                                        | Z | 0.43   | 60.11  | 6.90  |       | 150.0 |         |
| 10652-AAC | LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)         | X | 2.93   | 65.21  | 15.11 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 3.20   | 66.58  | 16.05 |       | 80.0  |         |
|           |                                                        | Z | 3.10   | 65.44  | 15.57 |       | 80.0  |         |
| 10653-AAC | LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)        | X | 3.55   | 64.93  | 15.73 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 3.74   | 65.80  | 16.31 |       | 80.0  |         |
|           |                                                        | Z | 3.68   | 65.02  | 15.99 |       | 80.0  |         |
| 10654-AAC | LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)        | X | 3.60   | 64.60  | 15.83 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 3.76   | 65.39  | 16.34 |       | 80.0  |         |
|           |                                                        | Z | 3.70   | 64.69  | 16.04 |       | 80.0  |         |
| 10655-AAD | LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)        | X | 3.69   | 64.52  | 15.89 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 3.83   | 65.30  | 16.38 |       | 80.0  |         |
|           |                                                        | Z | 3.78   | 64.64  | 16.09 |       | 80.0  |         |
| 10658-AAA | Pulse Waveform (200Hz, 10%)                            | X | 3.48   | 68.63  | 11.85 | 10.00 | 50.0  | ± 9.6 % |
|           |                                                        | Y | 5.65   | 74.45  | 13.80 |       | 50.0  |         |
|           |                                                        | Z | 7.21   | 77.53  | 15.77 |       | 50.0  |         |
| 10659-AAA | Pulse Waveform (200Hz, 20%)                            | X | 2.03   | 66.95  | 10.03 | 6.99  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 100.00 | 101.12 | 19.79 |       | 60.0  |         |
|           |                                                        | Z | 100.00 | 104.10 | 21.38 |       | 60.0  |         |

|           |                             |   |        |        |       |      |       |         |
|-----------|-----------------------------|---|--------|--------|-------|------|-------|---------|
| 10660-AAA | Pulse Waveform (200Hz, 40%) | X | 0.68   | 62.61  | 6.79  | 3.98 | 80.0  | ± 9.6 % |
|           |                             | Y | 100.00 | 101.16 | 18.64 |      | 80.0  |         |
|           |                             | Z | 100.00 | 99.78  | 18.10 |      | 80.0  |         |
| 10661-AAA | Pulse Waveform (200Hz, 60%) | X | 0.25   | 60.00  | 4.25  | 2.22 | 100.0 | ± 9.6 % |
|           |                             | Y | 100.00 | 102.31 | 18.13 |      | 100.0 |         |
|           |                             | Z | 0.28   | 60.39  | 4.93  |      | 100.0 |         |
| 10662-AAA | Pulse Waveform (200Hz, 80%) | X | 6.06   | 60.21  | 1.38  | 0.97 | 120.0 | ± 9.6 % |
|           |                             | Y | 100.00 | 96.37  | 14.68 |      | 120.0 |         |
|           |                             | Z | 9.95   | 60.38  | 1.42  |      | 120.0 |         |

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



Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 0108**

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

Client **PC Test**

Certificate No: **EX3-7488\_Jan19**

## CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:7488**

Calibration procedure(s) **QA CAL-01 v9, QA CAL-14 v5, QA CAL-23 v5, QA CAL-25 v7**  
**Calibration procedure for dielectric E-field probes**

11/06/2019

Calibration date: **January 24, 2019**

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-18 (No. 217-02672/02673)   | Apr-19                 |
| Power sensor NRP-Z91       | SN: 103244       | 04-Apr-18 (No. 217-02672)         | Apr-19                 |
| Power sensor NRP-Z91       | SN: 103245       | 04-Apr-18 (No. 217-02673)         | Apr-19                 |
| Reference 20 dB Attenuator | SN: S5277 (20x)  | 04-Apr-18 (No. 217-02682)         | Apr-19                 |
| DAE4                       | SN: 660          | 19-Dec-18 (No. DAE4-660_Dec18)    | Dec-19                 |
| Reference Probe ES3DV2     | SN: 3013         | 31-Dec-18 (No. ES3-3013_Dec18)    | Dec-19                 |
| Secondary Standards        | ID               | Check Date (in house)             | Scheduled Check        |
| Power meter E4419B         | SN: GB41293874   | 06-Apr-16 (in house check Jun-18) | In house check: Jun-20 |
| Power sensor E4412A        | SN: MY41498087   | 06-Apr-16 (in house check Jun-18) | In house check: Jun-20 |
| Power sensor E4412A        | SN: 000110210    | 06-Apr-16 (in house check Jun-18) | In house check: Jun-20 |
| RF generator HP 8648C      | SN: US3642U01700 | 04-Aug-99 (in house check Jun-18) | In house check: Jun-20 |
| Network Analyzer E8358A    | SN: US41080477   | 31-Mar-14 (in house check Oct-18) | In house check: Oct-19 |

|                                                                                                                 |                        |                                   |                          |
|-----------------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------|--------------------------|
| Calibrated by:                                                                                                  | Name<br>Jeton Kastrati | Function<br>Laboratory Technician | Signature<br>            |
| Approved by:                                                                                                    | Name<br>Katja Pokovic  | Function<br>Technical Manager     | Signature<br>            |
|                                                                                                                 |                        |                                   | Issued: January 29, 2019 |
| This calibration certificate shall not be reproduced except in full without written approval of the laboratory. |                        |                                   |                          |



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Accreditation No.: **SCS 0108**

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 Multilateral Agreement for the recognition of calibration certificates

### Glossary:

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

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

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

### Methods Applied and Interpretation of Parameters:

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

# DASY/EASY - Parameters of Probe: EX3DV4 - SN:7488

## Basic Calibration Parameters

|                                                           | Sensor X | Sensor Y | Sensor Z | Unc (k=2) |
|-----------------------------------------------------------|----------|----------|----------|-----------|
| Norm ( $\mu\text{V}/(\text{V}/\text{m})^2$ ) <sup>A</sup> | 0.45     | 0.49     | 0.50     | ± 10.1 %  |
| DCP (mV) <sup>B</sup>                                     | 98.9     | 102.3    | 99.6     |           |

## Calibration Results for Modulation Response

| UID           | Communication System Name   |   | A<br>dB | B<br>dB/μV | C     | D<br>dB | VR<br>mV | Max<br>dev. | Max<br>Unc <sup>E</sup><br>(k=2) |
|---------------|-----------------------------|---|---------|------------|-------|---------|----------|-------------|----------------------------------|
| 0             | CW                          | X | 0.00    | 0.00       | 1.00  | 0.00    | 149.5    | ± 2.7 %     | ± 4.7 %                          |
|               |                             | Y | 0.00    | 0.00       | 1.00  |         | 140.8    |             |                                  |
|               |                             | Z | 0.00    | 0.00       | 1.00  |         | 138.2    |             |                                  |
| 10352-<br>AAA | Pulse Waveform (200Hz, 10%) | X | 10.21   | 80.63      | 15.98 | 10.00   | 60.0     | ± 3.1 %     | ± 9.6 %                          |
|               |                             | Y | 5.90    | 74.67      | 14.18 |         | 60.0     |             |                                  |
|               |                             | Z | 15.00   | 89.30      | 20.53 |         | 60.0     |             |                                  |
| 10353-<br>AAA | Pulse Waveform (200Hz, 20%) | X | 15.00   | 85.88      | 16.55 | 6.99    | 80.0     | ± 2.1 %     | ± 9.6 %                          |
|               |                             | Y | 15.00   | 84.35      | 15.79 |         | 80.0     |             |                                  |
|               |                             | Z | 15.00   | 92.51      | 21.01 |         | 80.0     |             |                                  |
| 10354-<br>AAA | Pulse Waveform (200Hz, 40%) | X | 15.00   | 90.08      | 17.19 | 3.98    | 95.0     | ± 1.3 %     | ± 9.6 %                          |
|               |                             | Y | 15.00   | 83.37      | 13.66 |         | 95.0     |             |                                  |
|               |                             | Z | 15.00   | 104.27     | 25.33 |         | 95.0     |             |                                  |
| 10355-<br>AAA | Pulse Waveform (200Hz, 60%) | X | 15.00   | 97.36      | 19.30 | 2.22    | 120.0    | ± 1.2 %     | ± 9.6 %                          |
|               |                             | Y | 0.26    | 60.00      | 4.43  |         | 120.0    |             |                                  |
|               |                             | Z | 15.00   | 117.38     | 29.81 |         | 120.0    |             |                                  |
| 10387-<br>AAA | QPSK Waveform, 1 MHz        | X | 0.51    | 60.28      | 7.04  | 0.00    | 150.0    | ± 3.3 %     | ± 9.6 %                          |
|               |                             | Y | 0.47    | 60.00      | 5.79  |         | 150.0    |             |                                  |
|               |                             | Z | 0.61    | 61.09      | 8.42  |         | 150.0    |             |                                  |
| 10388-<br>AAA | QPSK Waveform, 10 MHz       | X | 2.29    | 69.54      | 16.64 | 0.00    | 150.0    | ± 1.1 %     | ± 9.6 %                          |
|               |                             | Y | 1.90    | 66.64      | 14.97 |         | 150.0    |             |                                  |
|               |                             | Z | 2.23    | 68.54      | 16.09 |         | 150.0    |             |                                  |
| 10396-<br>AAA | 64-QAM Waveform, 100 kHz    | X | 2.94    | 72.04      | 19.55 | 3.01    | 150.0    | ± 0.7 %     | ± 9.6 %                          |
|               |                             | Y | 2.49    | 68.13      | 17.71 |         | 150.0    |             |                                  |
|               |                             | Z | 3.35    | 73.33      | 20.07 |         | 150.0    |             |                                  |
| 10399-<br>AAA | 64-QAM Waveform, 40 MHz     | X | 3.54    | 67.80      | 16.20 | 0.00    | 150.0    | ± 2.2 %     | ± 9.6 %                          |
|               |                             | Y | 3.42    | 67.12      | 15.74 |         | 150.0    |             |                                  |
|               |                             | Z | 3.49    | 67.32      | 15.92 |         | 150.0    |             |                                  |
| 10414-<br>AAA | WLAN CCDF, 64-QAM, 40MHz    | X | 4.65    | 65.56      | 15.55 | 0.00    | 150.0    | ± 4.0 %     | ± 9.6 %                          |
|               |                             | Y | 4.74    | 65.87      | 15.68 |         | 150.0    |             |                                  |
|               |                             | Z | 4.80    | 65.75      | 15.62 |         | 150.0    |             |                                  |

Note: For details on UID parameters see Appendix

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

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

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

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

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7488

### Sensor Model Parameters

|   | C1<br>fF | C2<br>fF | $\alpha$<br>$V^{-1}$ | T1<br>$ms.V^{-2}$ | T2<br>$ms.V^{-1}$ | T3<br>ms | T4<br>$V^{-2}$ | T5<br>$V^{-1}$ | T6   |
|---|----------|----------|----------------------|-------------------|-------------------|----------|----------------|----------------|------|
| X | 35.2     | 259.64   | 34.83                | 7.55              | 0.00              | 5.04     | 1.52           | 0.11           | 1.01 |
| Y | 34.3     | 261.80   | 36.90                | 6.01              | 0.21              | 5.06     | 0.00           | 0.41           | 1.01 |
| Z | 40.7     | 301.53   | 35.10                | 11.37             | 0.14              | 5.09     | 1.94           | 0.15           | 1.01 |

### Other Probe Parameters

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle (°)                           | -129.2     |
| Mechanical Surface Detection Mode             | enabled    |
| Optical Surface Detection Mode                | disabled   |
| Probe Overall Length                          | 337 mm     |
| Probe Body Diameter                           | 10 mm      |
| Tip Length                                    | 9 mm       |
| Tip Diameter                                  | 2.5 mm     |
| Probe Tip to Sensor X Calibration Point       | 1 mm       |
| Probe Tip to Sensor Y Calibration Point       | 1 mm       |
| Probe Tip to Sensor Z Calibration Point       | 1 mm       |
| Recommended Measurement Distance from Surface | 1.4 mm     |

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7488

### Calibration Parameter Determined in Head Tissue Simulating Media

| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 750                  | 41.9                               | 0.89                            | 10.77   | 10.77   | 10.77   | 0.56               | 0.80                    | ± 12.0 %  |
| 835                  | 41.5                               | 0.90                            | 10.37   | 10.37   | 10.37   | 0.40               | 0.93                    | ± 12.0 %  |
| 1750                 | 40.1                               | 1.37                            | 8.87    | 8.87    | 8.87    | 0.33               | 0.84                    | ± 12.0 %  |
| 1900                 | 40.0                               | 1.40                            | 8.53    | 8.53    | 8.53    | 0.27               | 0.84                    | ± 12.0 %  |
| 2300                 | 39.5                               | 1.67                            | 8.25    | 8.25    | 8.25    | 0.33               | 0.85                    | ± 12.0 %  |
| 2450                 | 39.2                               | 1.80                            | 7.86    | 7.86    | 7.86    | 0.34               | 0.90                    | ± 12.0 %  |
| 2600                 | 39.0                               | 1.96                            | 7.69    | 7.69    | 7.69    | 0.35               | 0.86                    | ± 12.0 %  |
| 5250                 | 35.9                               | 4.71                            | 5.35    | 5.35    | 5.35    | 0.40               | 1.80                    | ± 13.1 %  |
| 5600                 | 35.5                               | 5.07                            | 4.70    | 4.70    | 4.70    | 0.40               | 1.80                    | ± 13.1 %  |
| 5750                 | 35.4                               | 5.22                            | 5.03    | 5.03    | 5.03    | 0.40               | 1.80                    | ± 13.1 %  |

<sup>C</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

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

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

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7488

### Calibration Parameter Determined in Body Tissue Simulating Media

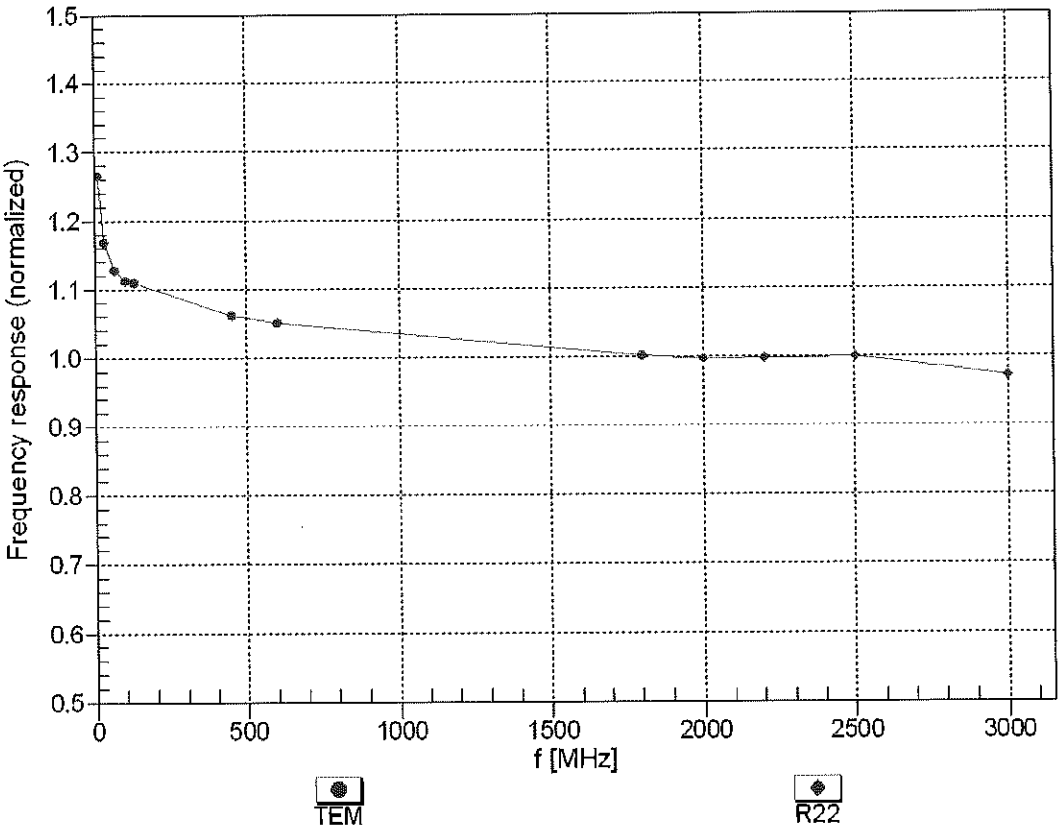
| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 750                  | 55.5                               | 0.96                            | 11.28   | 11.28   | 11.28   | 0.46               | 0.80                    | ± 12.0 %  |
| 835                  | 55.2                               | 0.97                            | 11.03   | 11.03   | 11.03   | 0.46               | 0.81                    | ± 12.0 %  |
| 1750                 | 53.4                               | 1.49                            | 8.68    | 8.68    | 8.68    | 0.38               | 0.88                    | ± 12.0 %  |
| 1900                 | 53.3                               | 1.52                            | 8.37    | 8.37    | 8.37    | 0.38               | 0.88                    | ± 12.0 %  |
| 2300                 | 52.9                               | 1.81                            | 8.21    | 8.21    | 8.21    | 0.42               | 0.84                    | ± 12.0 %  |
| 2450                 | 52.7                               | 1.95                            | 8.07    | 8.07    | 8.07    | 0.35               | 0.98                    | ± 12.0 %  |
| 2600                 | 52.5                               | 2.16                            | 7.94    | 7.94    | 7.94    | 0.25               | 0.95                    | ± 12.0 %  |
| 5250                 | 48.9                               | 5.36                            | 4.82    | 4.82    | 4.82    | 0.50               | 1.90                    | ± 13.1 %  |
| 5600                 | 48.5                               | 5.77                            | 4.09    | 4.09    | 4.09    | 0.50               | 1.90                    | ± 13.1 %  |
| 5750                 | 48.3                               | 5.94                            | 4.32    | 4.32    | 4.32    | 0.50               | 1.90                    | ± 13.1 %  |

<sup>C</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

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

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

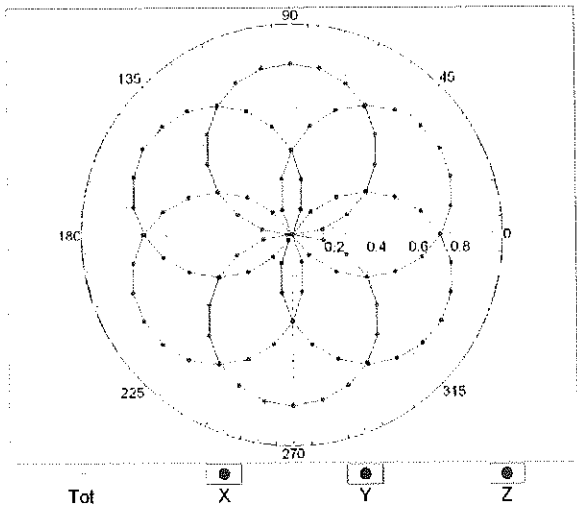
**Frequency Response of E-Field**  
(TEM-Cell:ifi110 EXX, Waveguide: R22)



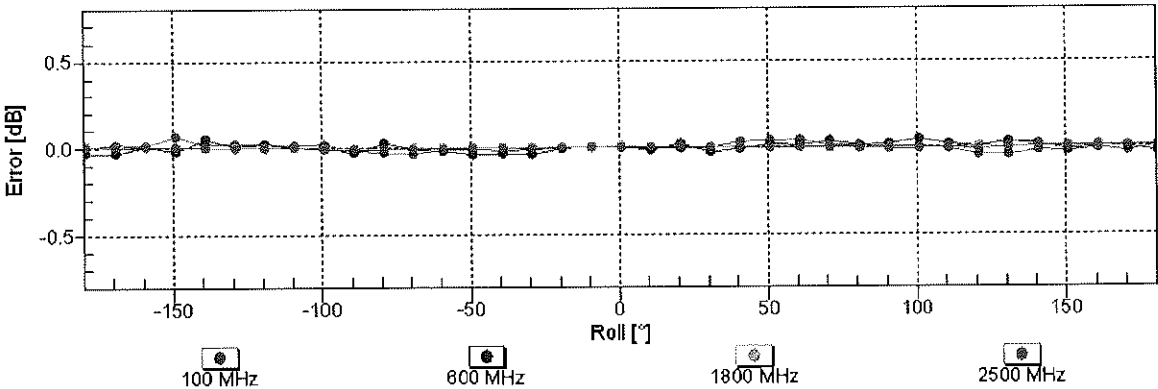
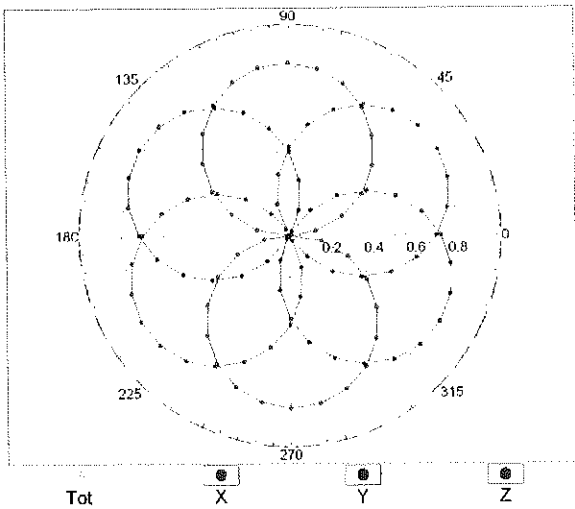
Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  (k=2)

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

f=600 MHz,TEM

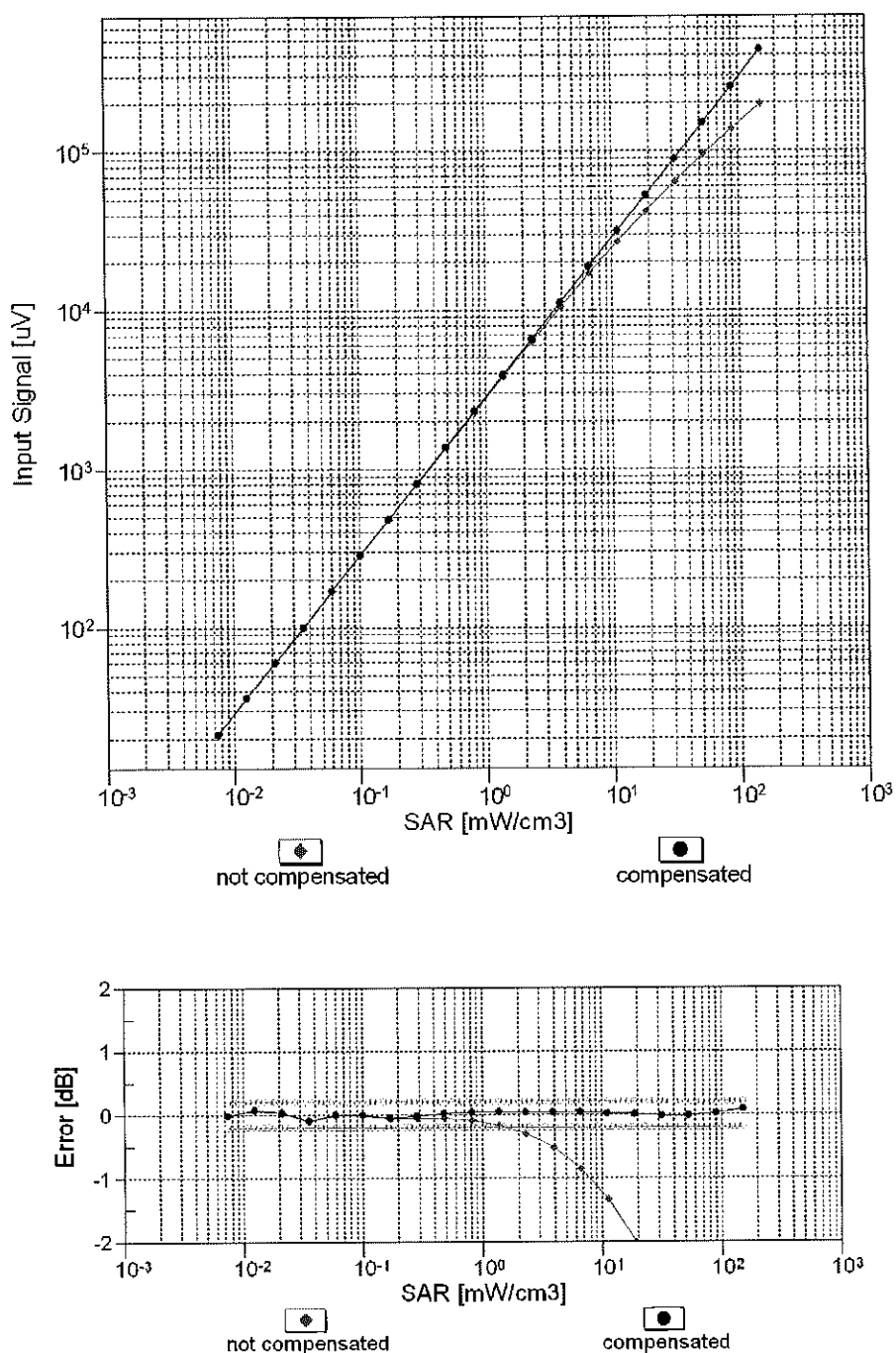


f=1800 MHz,R22



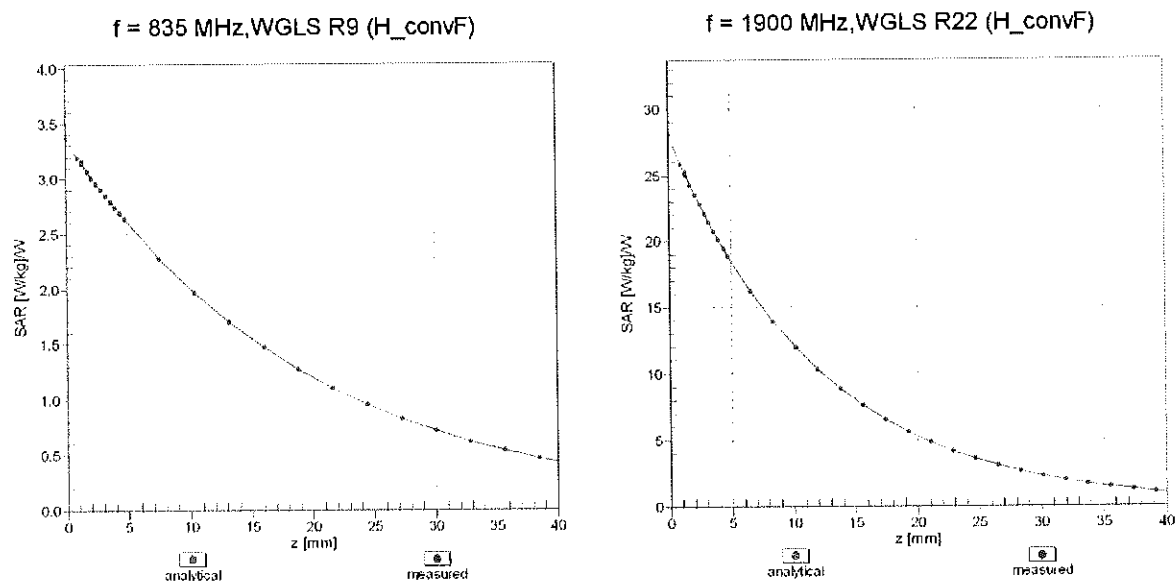
Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  (k=2)

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



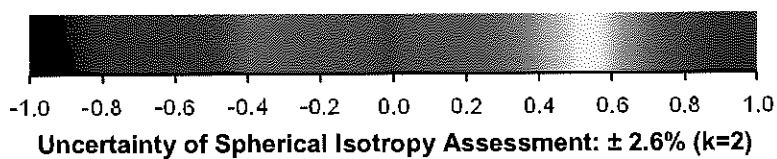
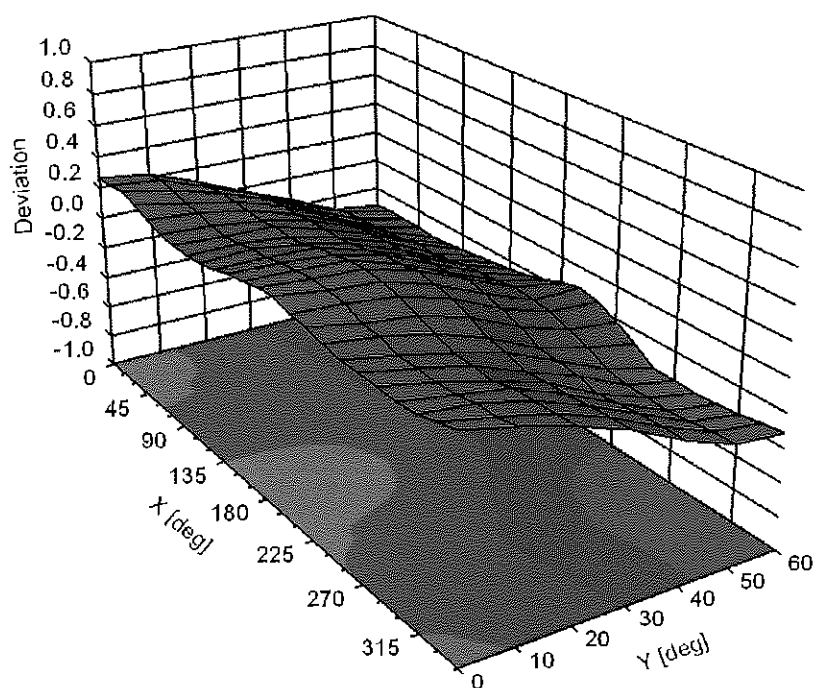
Uncertainty of Linearity Assessment:  $\pm 0.6\%$  ( $k=2$ )

## Conversion Factor Assessment



## Deviation from Isotropy in Liquid

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



**Appendix: Modulation Calibration Parameters**

| UID   | Rev | Communication System Name                           | Group     | PAR (dB) | Unc <sup>F</sup> (k=2) |
|-------|-----|-----------------------------------------------------|-----------|----------|------------------------|
| 0     |     | CW                                                  | CW        | 0.00     | ± 4.7 %                |
| 10010 | CAA | SAR Validation (Square, 100ms, 10ms)                | Test      | 10.00    | ± 9.6 %                |
| 10011 | CAB | UMTS-FDD (WCDMA)                                    | WCDMA     | 2.91     | ± 9.6 %                |
| 10012 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)            | WLAN      | 1.87     | ± 9.6 %                |
| 10013 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)       | WLAN      | 9.46     | ± 9.6 %                |
| 10021 | DAC | GSM-FDD (TDMA, GMSK)                                | GSM       | 9.39     | ± 9.6 %                |
| 10023 | DAC | GPRS-FDD (TDMA, GMSK, TN 0)                         | GSM       | 9.57     | ± 9.6 %                |
| 10024 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1)                       | GSM       | 6.56     | ± 9.6 %                |
| 10025 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0)                         | GSM       | 12.62    | ± 9.6 %                |
| 10026 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1)                       | GSM       | 9.55     | ± 9.6 %                |
| 10027 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2)                     | GSM       | 4.80     | ± 9.6 %                |
| 10028 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)                   | GSM       | 3.55     | ± 9.6 %                |
| 10029 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2)                     | GSM       | 7.78     | ± 9.6 %                |
| 10030 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1)                 | Bluetooth | 5.30     | ± 9.6 %                |
| 10031 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3)                 | Bluetooth | 1.87     | ± 9.6 %                |
| 10032 | CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5)                 | Bluetooth | 1.16     | ± 9.6 %                |
| 10033 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)           | Bluetooth | 7.74     | ± 9.6 %                |
| 10034 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)           | Bluetooth | 4.53     | ± 9.6 %                |
| 10035 | CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)           | Bluetooth | 3.83     | ± 9.6 %                |
| 10036 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1)               | Bluetooth | 8.01     | ± 9.6 %                |
| 10037 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3)               | Bluetooth | 4.77     | ± 9.6 %                |
| 10038 | CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5)               | Bluetooth | 4.10     | ± 9.6 %                |
| 10039 | CAB | CDMA2000 (1xRTT, RC1)                               | CDMA2000  | 4.57     | ± 9.6 %                |
| 10042 | CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | AMPS      | 7.78     | ± 9.6 %                |
| 10044 | CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM)                    | AMPS      | 0.00     | ± 9.6 %                |
| 10048 | CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)           | DECT      | 13.80    | ± 9.6 %                |
| 10049 | CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)         | DECT      | 10.79    | ± 9.6 %                |
| 10056 | CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps)                      | TD-SCDMA  | 11.01    | ± 9.6 %                |
| 10058 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)                   | GSM       | 6.52     | ± 9.6 %                |
| 10059 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)            | WLAN      | 2.12     | ± 9.6 %                |
| 10060 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)          | WLAN      | 2.83     | ± 9.6 %                |
| 10061 | CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)           | WLAN      | 3.60     | ± 9.6 %                |
| 10062 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)            | WLAN      | 8.68     | ± 9.6 %                |
| 10063 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)            | WLAN      | 8.63     | ± 9.6 %                |
| 10064 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)           | WLAN      | 9.09     | ± 9.6 %                |
| 10065 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)           | WLAN      | 9.00     | ± 9.6 %                |
| 10066 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)           | WLAN      | 9.38     | ± 9.6 %                |
| 10067 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)           | WLAN      | 10.12    | ± 9.6 %                |
| 10068 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)           | WLAN      | 10.24    | ± 9.6 %                |
| 10069 | CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)           | WLAN      | 10.56    | ± 9.6 %                |
| 10071 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)       | WLAN      | 9.83     | ± 9.6 %                |
| 10072 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)      | WLAN      | 9.62     | ± 9.6 %                |
| 10073 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)      | WLAN      | 9.94     | ± 9.6 %                |
| 10074 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)      | WLAN      | 10.30    | ± 9.6 %                |
| 10075 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)      | WLAN      | 10.77    | ± 9.6 %                |
| 10076 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps)      | WLAN      | 10.94    | ± 9.6 %                |
| 10077 | CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)      | WLAN      | 11.00    | ± 9.6 %                |
| 10081 | CAB | CDMA2000 (1xRTT, RC3)                               | CDMA2000  | 3.97     | ± 9.6 %                |
| 10082 | CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | AMPS      | 4.77     | ± 9.6 %                |
| 10090 | DAC | GPRS-FDD (TDMA, GMSK, TN 0-4)                       | GSM       | 6.56     | ± 9.6 %                |
| 10097 | CAB | UMTS-FDD (HSDPA)                                    | WCDMA     | 3.98     | ± 9.6 %                |
| 10098 | CAB | UMTS-FDD (HSUPA, Subtest 2)                         | WCDMA     | 3.98     | ± 9.6 %                |
| 10099 | DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4)                       | GSM       | 9.55     | ± 9.6 %                |
| 10100 | CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | LTE-FDD   | 5.67     | ± 9.6 %                |
| 10101 | CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | LTE-FDD   | 6.42     | ± 9.6 %                |
| 10102 | CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | LTE-FDD   | 6.60     | ± 9.6 %                |
| 10103 | CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | LTE-TDD   | 9.29     | ± 9.6 %                |
| 10104 | CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | LTE-TDD   | 9.97     | ± 9.6 %                |
| 10105 | CAG | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | LTE-TDD   | 10.01    | ± 9.6 %                |
| 10108 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)            | LTE-FDD   | 5.80     | ± 9.6 %                |

|       |     |                                                |         |       |         |
|-------|-----|------------------------------------------------|---------|-------|---------|
| 10109 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)     | LTE-FDD | 6.43  | ± 9.6 % |
| 10110 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)        | LTE-FDD | 5.75  | ± 9.6 % |
| 10111 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)      | LTE-FDD | 6.44  | ± 9.6 % |
| 10112 | CAG | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)     | LTE-FDD | 6.59  | ± 9.6 % |
| 10113 | CAG | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)      | LTE-FDD | 6.62  | ± 9.6 % |
| 10114 | CAC | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)  | WLAN    | 8.10  | ± 9.6 % |
| 10115 | CAC | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)  | WLAN    | 8.46  | ± 9.6 % |
| 10116 | CAC | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | WLAN    | 8.15  | ± 9.6 % |
| 10117 | CAC | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)       | WLAN    | 8.07  | ± 9.6 % |
| 10118 | CAC | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)       | WLAN    | 8.59  | ± 9.6 % |
| 10119 | CAC | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)      | WLAN    | 8.13  | ± 9.6 % |
| 10140 | CAE | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)     | LTE-FDD | 6.49  | ± 9.6 % |
| 10141 | CAE | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)     | LTE-FDD | 6.53  | ± 9.6 % |
| 10142 | CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)        | LTE-FDD | 5.73  | ± 9.6 % |
| 10143 | CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)      | LTE-FDD | 6.35  | ± 9.6 % |
| 10144 | CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)      | LTE-FDD | 6.65  | ± 9.6 % |
| 10145 | CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)      | LTE-FDD | 5.76  | ± 9.6 % |
| 10146 | CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)    | LTE-FDD | 6.41  | ± 9.6 % |
| 10147 | CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)    | LTE-FDD | 6.72  | ± 9.6 % |
| 10149 | CAE | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)      | LTE-FDD | 6.42  | ± 9.6 % |
| 10150 | CAE | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)      | LTE-FDD | 6.60  | ± 9.6 % |
| 10151 | CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)        | LTE-TDD | 9.28  | ± 9.6 % |
| 10152 | CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)      | LTE-TDD | 9.92  | ± 9.6 % |
| 10153 | CAG | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)      | LTE-TDD | 10.05 | ± 9.6 % |
| 10154 | CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)        | LTE-FDD | 5.75  | ± 9.6 % |
| 10155 | CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)      | LTE-FDD | 6.43  | ± 9.6 % |
| 10156 | CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)         | LTE-FDD | 5.79  | ± 9.6 % |
| 10157 | CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)       | LTE-FDD | 6.49  | ± 9.6 % |
| 10158 | CAG | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)      | LTE-FDD | 6.62  | ± 9.6 % |
| 10159 | CAG | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)       | LTE-FDD | 6.56  | ± 9.6 % |
| 10160 | CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)        | LTE-FDD | 5.82  | ± 9.6 % |
| 10161 | CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)      | LTE-FDD | 6.43  | ± 9.6 % |
| 10162 | CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)      | LTE-FDD | 6.58  | ± 9.6 % |
| 10166 | CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)       | LTE-FDD | 5.46  | ± 9.6 % |
| 10167 | CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)     | LTE-FDD | 6.21  | ± 9.6 % |
| 10168 | CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)     | LTE-FDD | 6.79  | ± 9.6 % |
| 10169 | CAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)          | LTE-FDD | 5.73  | ± 9.6 % |
| 10170 | CAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)        | LTE-FDD | 6.52  | ± 9.6 % |
| 10171 | AAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)        | LTE-FDD | 6.49  | ± 9.6 % |
| 10172 | CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)          | LTE-TDD | 9.21  | ± 9.6 % |
| 10173 | CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)        | LTE-TDD | 9.48  | ± 9.6 % |
| 10174 | CAG | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)        | LTE-TDD | 10.25 | ± 9.6 % |
| 10175 | CAG | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)          | LTE-FDD | 5.72  | ± 9.6 % |
| 10176 | CAG | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)        | LTE-FDD | 6.52  | ± 9.6 % |
| 10177 | CAI | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)           | LTE-FDD | 5.73  | ± 9.6 % |
| 10178 | CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)         | LTE-FDD | 6.52  | ± 9.6 % |
| 10179 | CAG | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)        | LTE-FDD | 6.50  | ± 9.6 % |
| 10180 | CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)         | LTE-FDD | 6.50  | ± 9.6 % |
| 10181 | CAE | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)          | LTE-FDD | 5.72  | ± 9.6 % |
| 10182 | CAE | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)        | LTE-FDD | 6.52  | ± 9.6 % |
| 10183 | AAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)        | LTE-FDD | 6.50  | ± 9.6 % |
| 10184 | CAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)           | LTE-FDD | 5.73  | ± 9.6 % |
| 10185 | CAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)         | LTE-FDD | 6.51  | ± 9.6 % |
| 10186 | AAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)         | LTE-FDD | 6.50  | ± 9.6 % |
| 10187 | CAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)         | LTE-FDD | 5.73  | ± 9.6 % |
| 10188 | CAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)       | LTE-FDD | 6.52  | ± 9.6 % |
| 10189 | AAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)       | LTE-FDD | 6.50  | ± 9.6 % |
| 10193 | CAC | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)   | WLAN    | 8.09  | ± 9.6 % |
| 10194 | CAC | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)  | WLAN    | 8.12  | ± 9.6 % |
| 10195 | CAC | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)  | WLAN    | 8.21  | ± 9.6 % |
| 10196 | CAC | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)        | WLAN    | 8.10  | ± 9.6 % |
| 10197 | CAC | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)       | WLAN    | 8.13  | ± 9.6 % |
| 10198 | CAC | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)       | WLAN    | 8.27  | ± 9.6 % |
| 10219 | CAC | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)        | WLAN    | 8.03  | ± 9.6 % |

|       |     |                                             |          |       |         |
|-------|-----|---------------------------------------------|----------|-------|---------|
| 10220 | CAC | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)  | WLAN     | 8.13  | ± 9.6 % |
| 10221 | CAC | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)  | WLAN     | 8.27  | ± 9.6 % |
| 10222 | CAC | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)      | WLAN     | 8.06  | ± 9.6 % |
| 10223 | CAC | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)    | WLAN     | 8.48  | ± 9.6 % |
| 10224 | CAC | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)   | WLAN     | 8.08  | ± 9.6 % |
| 10225 | CAB | UMTS-FDD (HSPA+)                            | WCDMA    | 5.97  | ± 9.6 % |
| 10226 | CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)    | LTE-TDD  | 9.49  | ± 9.6 % |
| 10227 | CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)    | LTE-TDD  | 10.26 | ± 9.6 % |
| 10228 | CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)      | LTE-TDD  | 9.22  | ± 9.6 % |
| 10229 | CAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)      | LTE-TDD  | 9.48  | ± 9.6 % |
| 10230 | CAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)      | LTE-TDD  | 10.25 | ± 9.6 % |
| 10231 | CAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)        | LTE-TDD  | 9.19  | ± 9.6 % |
| 10232 | CAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)      | LTE-TDD  | 9.48  | ± 9.6 % |
| 10233 | CAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)      | LTE-TDD  | 10.25 | ± 9.6 % |
| 10234 | CAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)        | LTE-TDD  | 9.21  | ± 9.6 % |
| 10235 | CAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)     | LTE-TDD  | 9.48  | ± 9.6 % |
| 10236 | CAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)     | LTE-TDD  | 10.25 | ± 9.6 % |
| 10237 | CAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)       | LTE-TDD  | 9.21  | ± 9.6 % |
| 10238 | CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)     | LTE-TDD  | 9.48  | ± 9.6 % |
| 10239 | CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)     | LTE-TDD  | 10.25 | ± 9.6 % |
| 10240 | CAF | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)       | LTE-TDD  | 9.21  | ± 9.6 % |
| 10241 | CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)  | LTE-TDD  | 9.82  | ± 9.6 % |
| 10242 | CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)  | LTE-TDD  | 9.86  | ± 9.6 % |
| 10243 | CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)    | LTE-TDD  | 9.46  | ± 9.6 % |
| 10244 | CAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)    | LTE-TDD  | 10.06 | ± 9.6 % |
| 10245 | CAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)    | LTE-TDD  | 10.06 | ± 9.6 % |
| 10246 | CAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)      | LTE-TDD  | 9.30  | ± 9.6 % |
| 10247 | CAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)    | LTE-TDD  | 9.91  | ± 9.6 % |
| 10248 | CAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)    | LTE-TDD  | 10.09 | ± 9.6 % |
| 10249 | CAF | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)      | LTE-TDD  | 9.29  | ± 9.6 % |
| 10250 | CAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)   | LTE-TDD  | 9.81  | ± 9.6 % |
| 10251 | CAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)   | LTE-TDD  | 10.17 | ± 9.6 % |
| 10252 | CAF | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)     | LTE-TDD  | 9.24  | ± 9.6 % |
| 10253 | CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)   | LTE-TDD  | 9.90  | ± 9.6 % |
| 10254 | CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)   | LTE-TDD  | 10.14 | ± 9.6 % |
| 10255 | CAF | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)     | LTE-TDD  | 9.20  | ± 9.6 % |
| 10256 | CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | LTE-TDD  | 9.96  | ± 9.6 % |
| 10257 | CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | LTE-TDD  | 10.08 | ± 9.6 % |
| 10258 | CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)   | LTE-TDD  | 9.34  | ± 9.6 % |
| 10259 | CAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)   | LTE-TDD  | 9.98  | ± 9.6 % |
| 10260 | CAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)   | LTE-TDD  | 9.97  | ± 9.6 % |
| 10261 | CAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)     | LTE-TDD  | 9.24  | ± 9.6 % |
| 10262 | CAF | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)   | LTE-TDD  | 9.83  | ± 9.6 % |
| 10263 | CAF | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)   | LTE-TDD  | 10.16 | ± 9.6 % |
| 10264 | CAF | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)     | LTE-TDD  | 9.23  | ± 9.6 % |
| 10265 | CAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)  | LTE-TDD  | 9.92  | ± 9.6 % |
| 10266 | CAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)  | LTE-TDD  | 10.07 | ± 9.6 % |
| 10267 | CAF | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)    | LTE-TDD  | 9.30  | ± 9.6 % |
| 10268 | CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)  | LTE-TDD  | 10.06 | ± 9.6 % |
| 10269 | CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)  | LTE-TDD  | 10.13 | ± 9.6 % |
| 10270 | CAF | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)    | LTE-TDD  | 9.58  | ± 9.6 % |
| 10274 | CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)   | WCDMA    | 4.87  | ± 9.6 % |
| 10275 | CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)    | WCDMA    | 3.96  | ± 9.6 % |
| 10277 | CAA | PHS (QPSK)                                  | PHS      | 11.81 | ± 9.6 % |
| 10278 | CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5)          | PHS      | 11.81 | ± 9.6 % |
| 10279 | CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38)         | PHS      | 12.18 | ± 9.6 % |
| 10290 | AAB | CDMA2000, RC1, SO55, Full Rate              | CDMA2000 | 3.91  | ± 9.6 % |
| 10291 | AAB | CDMA2000, RC3, SO55, Full Rate              | CDMA2000 | 3.46  | ± 9.6 % |
| 10292 | AAB | CDMA2000, RC3, SO32, Full Rate              | CDMA2000 | 3.39  | ± 9.6 % |
| 10293 | AAB | CDMA2000, RC3, SO3, Full Rate               | CDMA2000 | 3.50  | ± 9.6 % |
| 10295 | AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr.       | CDMA2000 | 12.49 | ± 9.6 % |
| 10297 | AAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)     | LTE-FDD  | 5.81  | ± 9.6 % |
| 10298 | AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)      | LTE-FDD  | 5.72  | ± 9.6 % |
| 10299 | AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)    | LTE-FDD  | 6.39  | ± 9.6 % |

|       |     |                                                                                |          |       |         |
|-------|-----|--------------------------------------------------------------------------------|----------|-------|---------|
| 10300 | AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)                                       | LTE-FDD  | 6.60  | ± 9.6 % |
| 10301 | AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)                             | WiMAX    | 12.03 | ± 9.6 % |
| 10302 | AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols)             | WiMAX    | 12.57 | ± 9.6 % |
| 10303 | AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)                            | WiMAX    | 12.52 | ± 9.6 % |
| 10304 | AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)                            | WiMAX    | 11.86 | ± 9.6 % |
| 10305 | AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)               | WiMAX    | 15.24 | ± 9.6 % |
| 10306 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)               | WiMAX    | 14.67 | ± 9.6 % |
| 10307 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)                | WiMAX    | 14.49 | ± 9.6 % |
| 10308 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)                           | WiMAX    | 14.46 | ± 9.6 % |
| 10309 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols)            | WiMAX    | 14.58 | ± 9.6 % |
| 10310 | AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)             | WiMAX    | 14.57 | ± 9.6 % |
| 10311 | AAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)                                       | LTE-FDD  | 6.06  | ± 9.6 % |
| 10313 | AAA | IDEN 1:3                                                                       | iDEN     | 10.51 | ± 9.6 % |
| 10314 | AAA | IDEN 1:6                                                                       | iDEN     | 13.48 | ± 9.6 % |
| 10315 | AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)                      | WLAN     | 1.71  | ± 9.6 % |
| 10316 | AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)                  | WLAN     | 8.36  | ± 9.6 % |
| 10317 | AAC | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)                        | WLAN     | 8.36  | ± 9.6 % |
| 10352 | AAA | Pulse Waveform (200Hz, 10%)                                                    | Generic  | 10.00 | ± 9.6 % |
| 10353 | AAA | Pulse Waveform (200Hz, 20%)                                                    | Generic  | 6.99  | ± 9.6 % |
| 10354 | AAA | Pulse Waveform (200Hz, 40%)                                                    | Generic  | 3.98  | ± 9.6 % |
| 10355 | AAA | Pulse Waveform (200Hz, 60%)                                                    | Generic  | 2.22  | ± 9.6 % |
| 10356 | AAA | Pulse Waveform (200Hz, 80%)                                                    | Generic  | 0.97  | ± 9.6 % |
| 10387 | AAA | QPSK Waveform, 1 MHz                                                           | Generic  | 5.10  | ± 9.6 % |
| 10388 | AAA | QPSK Waveform, 10 MHz                                                          | Generic  | 5.22  | ± 9.6 % |
| 10396 | AAA | 64-QAM Waveform, 100 kHz                                                       | Generic  | 6.27  | ± 9.6 % |
| 10399 | AAA | 64-QAM Waveform, 40 MHz                                                        | Generic  | 6.27  | ± 9.6 % |
| 10400 | AAD | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)                            | WLAN     | 8.37  | ± 9.6 % |
| 10401 | AAD | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)                            | WLAN     | 8.60  | ± 9.6 % |
| 10402 | AAD | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)                            | WLAN     | 8.53  | ± 9.6 % |
| 10403 | AAB | CDMA2000 (1xEV-DO, Rev. 0)                                                     | CDMA2000 | 3.76  | ± 9.6 % |
| 10404 | AAB | CDMA2000 (1xEV-DO, Rev. A)                                                     | CDMA2000 | 3.77  | ± 9.6 % |
| 10406 | AAB | CDMA2000, RC3, SO32, SCH0, Full Rate                                           | CDMA2000 | 5.22  | ± 9.6 % |
| 10410 | AAF | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)                 | LTE-TDD  | 7.82  | ± 9.6 % |
| 10414 | AAA | WLAN CCDF, 64-QAM, 40MHz                                                       | Generic  | 8.54  | ± 9.6 % |
| 10415 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)                      | WLAN     | 1.54  | ± 9.6 % |
| 10416 | AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)                  | WLAN     | 8.23  | ± 9.6 % |
| 10417 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)                      | WLAN     | 8.23  | ± 9.6 % |
| 10418 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)  | WLAN     | 8.14  | ± 9.6 % |
| 10419 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble) | WLAN     | 8.19  | ± 9.6 % |
| 10422 | AAB | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)                                   | WLAN     | 8.32  | ± 9.6 % |
| 10423 | AAB | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)                                | WLAN     | 8.47  | ± 9.6 % |
| 10424 | AAB | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)                                | WLAN     | 8.40  | ± 9.6 % |
| 10425 | AAB | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)                                    | WLAN     | 8.41  | ± 9.6 % |
| 10426 | AAB | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)                                  | WLAN     | 8.45  | ± 9.6 % |
| 10427 | AAB | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)                                 | WLAN     | 8.41  | ± 9.6 % |
| 10430 | AAD | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)                                               | LTE-FDD  | 8.28  | ± 9.6 % |
| 10431 | AAD | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)                                              | LTE-FDD  | 8.38  | ± 9.6 % |
| 10432 | AAC | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)                                              | LTE-FDD  | 8.34  | ± 9.6 % |
| 10433 | AAC | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)                                              | LTE-FDD  | 8.34  | ± 9.6 % |
| 10434 | AAA | W-CDMA (BS Test Model 1, 64 DPCH)                                              | WCDMA    | 8.60  | ± 9.6 % |
| 10435 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)                 | LTE-TDD  | 7.82  | ± 9.6 % |
| 10447 | AAD | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)                                 | LTE-FDD  | 7.56  | ± 9.6 % |
| 10448 | AAD | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)                                | LTE-FDD  | 7.53  | ± 9.6 % |
| 10449 | AAC | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)                                | LTE-FDD  | 7.51  | ± 9.6 % |
| 10450 | AAC | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)                                | LTE-FDD  | 7.48  | ± 9.6 % |

|       |     |                                                                        |          |      |         |
|-------|-----|------------------------------------------------------------------------|----------|------|---------|
| 10451 | AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)                        | WCDMA    | 7.59 | ± 9.6 % |
| 10456 | AAB | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)                   | WLAN     | 8.63 | ± 9.6 % |
| 10457 | AAA | UMTS-FDD (DC-HSDPA)                                                    | WCDMA    | 6.62 | ± 9.6 % |
| 10458 | AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers)                                 | CDMA2000 | 6.55 | ± 9.6 % |
| 10459 | AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers)                                 | CDMA2000 | 8.25 | ± 9.6 % |
| 10460 | AAA | UMTS-FDD (WCDMA, AMR)                                                  | WCDMA    | 2.39 | ± 9.6 % |
| 10461 | AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL<br>Subframe=2,3,4,7,8,9)     | LTE-TDD  | 7.82 | ± 9.6 % |
| 10462 | AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL<br>Subframe=2,3,4,7,8,9)   | LTE-TDD  | 8.30 | ± 9.6 % |
| 10463 | AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL<br>Subframe=2,3,4,7,8,9)   | LTE-TDD  | 8.56 | ± 9.6 % |
| 10464 | AAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL<br>Subframe=2,3,4,7,8,9)       | LTE-TDD  | 7.82 | ± 9.6 % |
| 10465 | AAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL<br>Subframe=2,3,4,7,8,9)     | LTE-TDD  | 8.32 | ± 9.6 % |
| 10466 | AAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL<br>Subframe=2,3,4,7,8,9)     | LTE-TDD  | 8.57 | ± 9.6 % |
| 10467 | AAE | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL<br>Subframe=2,3,4,7,8,9)       | LTE-TDD  | 7.82 | ± 9.6 % |
| 10468 | AAE | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL<br>Subframe=2,3,4,7,8,9)     | LTE-TDD  | 8.32 | ± 9.6 % |
| 10469 | AAE | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL<br>Subframe=2,3,4,7,8,9)     | LTE-TDD  | 8.56 | ± 9.6 % |
| 10470 | AAE | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL<br>Subframe=2,3,4,7,8,9)      | LTE-TDD  | 7.82 | ± 9.6 % |
| 10471 | AAE | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL<br>Subframe=2,3,4,7,8,9)    | LTE-TDD  | 8.32 | ± 9.6 % |
| 10472 | AAE | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL<br>Subframe=2,3,4,7,8,9)    | LTE-TDD  | 8.57 | ± 9.6 % |
| 10473 | AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL<br>Subframe=2,3,4,7,8,9)      | LTE-TDD  | 7.82 | ± 9.6 % |
| 10474 | AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL<br>Subframe=2,3,4,7,8,9)    | LTE-TDD  | 8.32 | ± 9.6 % |
| 10475 | AAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL<br>Subframe=2,3,4,7,8,9)    | LTE-TDD  | 8.57 | ± 9.6 % |
| 10477 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL<br>Subframe=2,3,4,7,8,9)    | LTE-TDD  | 8.32 | ± 9.6 % |
| 10478 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL<br>Subframe=2,3,4,7,8,9)    | LTE-TDD  | 8.57 | ± 9.6 % |
| 10479 | AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL<br>Subframe=2,3,4,7,8,9)   | LTE-TDD  | 7.74 | ± 9.6 % |
| 10480 | AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL<br>Subframe=2,3,4,7,8,9) | LTE-TDD  | 8.18 | ± 9.6 % |
| 10481 | AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL<br>Subframe=2,3,4,7,8,9) | LTE-TDD  | 8.45 | ± 9.6 % |
| 10482 | AAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL<br>Subframe=2,3,4,7,8,9)     | LTE-TDD  | 7.71 | ± 9.6 % |
| 10483 | AAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL<br>Subframe=2,3,4,7,8,9)   | LTE-TDD  | 8.39 | ± 9.6 % |
| 10484 | AAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL<br>Subframe=2,3,4,7,8,9)   | LTE-TDD  | 8.47 | ± 9.6 % |
| 10485 | AAE | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL<br>Subframe=2,3,4,7,8,9)     | LTE-TDD  | 7.59 | ± 9.6 % |
| 10486 | AAE | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL<br>Subframe=2,3,4,7,8,9)   | LTE-TDD  | 8.38 | ± 9.6 % |
| 10487 | AAE | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL<br>Subframe=2,3,4,7,8,9)   | LTE-TDD  | 8.60 | ± 9.6 % |
| 10488 | AAE | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL<br>Subframe=2,3,4,7,8,9)    | LTE-TDD  | 7.70 | ± 9.6 % |
| 10489 | AAE | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL<br>Subframe=2,3,4,7,8,9)  | LTE-TDD  | 8.31 | ± 9.6 % |
| 10490 | AAE | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL<br>Subframe=2,3,4,7,8,9)  | LTE-TDD  | 8.54 | ± 9.6 % |
| 10491 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL<br>Subframe=2,3,4,7,8,9)    | LTE-TDD  | 7.74 | ± 9.6 % |

|       |     |                                                                      |         |      |         |
|-------|-----|----------------------------------------------------------------------|---------|------|---------|
| 10492 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | LTE-TDD | 8.41 | ± 9.6 % |
| 10493 | AAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | LTE-TDD | 8.55 | ± 9.6 % |
| 10494 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | LTE-TDD | 7.74 | ± 9.6 % |
| 10495 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | LTE-TDD | 8.37 | ± 9.6 % |
| 10496 | AAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | LTE-TDD | 8.54 | ± 9.6 % |
| 10497 | AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | LTE-TDD | 7.67 | ± 9.6 % |
| 10498 | AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.40 | ± 9.6 % |
| 10499 | AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | LTE-TDD | 8.68 | ± 9.6 % |
| 10500 | AAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | LTE-TDD | 7.67 | ± 9.6 % |
| 10501 | AAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | LTE-TDD | 8.44 | ± 9.6 % |
| 10502 | AAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | LTE-TDD | 8.52 | ± 9.6 % |
| 10503 | AAE | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | LTE-TDD | 7.72 | ± 9.6 % |
| 10504 | AAE | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | LTE-TDD | 8.31 | ± 9.6 % |
| 10505 | AAE | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | LTE-TDD | 8.54 | ± 9.6 % |
| 10506 | AAE | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | LTE-TDD | 7.74 | ± 9.6 % |
| 10507 | AAE | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | LTE-TDD | 8.36 | ± 9.6 % |
| 10508 | AAE | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | LTE-TDD | 8.55 | ± 9.6 % |
| 10509 | AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | LTE-TDD | 7.99 | ± 9.6 % |
| 10510 | AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | LTE-TDD | 8.49 | ± 9.6 % |
| 10511 | AAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | LTE-TDD | 8.51 | ± 9.6 % |
| 10512 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | LTE-TDD | 7.74 | ± 9.6 % |
| 10513 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | LTE-TDD | 8.42 | ± 9.6 % |
| 10514 | AAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | LTE-TDD | 8.45 | ± 9.6 % |
| 10515 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)            | WLAN    | 1.58 | ± 9.6 % |
| 10516 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)          | WLAN    | 1.57 | ± 9.6 % |
| 10517 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)           | WLAN    | 1.58 | ± 9.6 % |
| 10518 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)            | WLAN    | 8.23 | ± 9.6 % |
| 10519 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)           | WLAN    | 8.39 | ± 9.6 % |
| 10520 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)           | WLAN    | 8.12 | ± 9.6 % |
| 10521 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)           | WLAN    | 7.97 | ± 9.6 % |
| 10522 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)           | WLAN    | 8.45 | ± 9.6 % |
| 10523 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)           | WLAN    | 8.08 | ± 9.6 % |
| 10524 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)           | WLAN    | 8.27 | ± 9.6 % |
| 10525 | AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)                    | WLAN    | 8.36 | ± 9.6 % |
| 10526 | AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)                    | WLAN    | 8.42 | ± 9.6 % |
| 10527 | AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)                    | WLAN    | 8.21 | ± 9.6 % |
| 10528 | AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)                    | WLAN    | 8.36 | ± 9.6 % |
| 10529 | AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)                    | WLAN    | 8.36 | ± 9.6 % |
| 10531 | AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)                    | WLAN    | 8.43 | ± 9.6 % |
| 10532 | AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)                    | WLAN    | 8.29 | ± 9.6 % |
| 10533 | AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)                    | WLAN    | 8.38 | ± 9.6 % |
| 10534 | AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)                    | WLAN    | 8.45 | ± 9.6 % |

|       |     |                                                                 |      |      |         |
|-------|-----|-----------------------------------------------------------------|------|------|---------|
| 10535 | AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)               | WLAN | 8.45 | ± 9.6 % |
| 10536 | AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)               | WLAN | 8.32 | ± 9.6 % |
| 10537 | AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)               | WLAN | 8.44 | ± 9.6 % |
| 10538 | AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)               | WLAN | 8.54 | ± 9.6 % |
| 10540 | AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)               | WLAN | 8.39 | ± 9.6 % |
| 10541 | AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)               | WLAN | 8.46 | ± 9.6 % |
| 10542 | AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)               | WLAN | 8.65 | ± 9.6 % |
| 10543 | AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)               | WLAN | 8.65 | ± 9.6 % |
| 10544 | AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)               | WLAN | 8.47 | ± 9.6 % |
| 10545 | AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)               | WLAN | 8.55 | ± 9.6 % |
| 10546 | AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)               | WLAN | 8.35 | ± 9.6 % |
| 10547 | AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)               | WLAN | 8.49 | ± 9.6 % |
| 10548 | AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)               | WLAN | 8.37 | ± 9.6 % |
| 10550 | AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)               | WLAN | 8.38 | ± 9.6 % |
| 10551 | AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)               | WLAN | 8.50 | ± 9.6 % |
| 10552 | AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)               | WLAN | 8.42 | ± 9.6 % |
| 10553 | AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)               | WLAN | 8.45 | ± 9.6 % |
| 10554 | AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle)              | WLAN | 8.48 | ± 9.6 % |
| 10555 | AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle)              | WLAN | 8.47 | ± 9.6 % |
| 10556 | AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle)              | WLAN | 8.50 | ± 9.6 % |
| 10557 | AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle)              | WLAN | 8.52 | ± 9.6 % |
| 10558 | AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)              | WLAN | 8.61 | ± 9.6 % |
| 10560 | AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)              | WLAN | 8.73 | ± 9.6 % |
| 10561 | AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle)              | WLAN | 8.56 | ± 9.6 % |
| 10562 | AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)              | WLAN | 8.69 | ± 9.6 % |
| 10563 | AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)              | WLAN | 8.77 | ± 9.6 % |
| 10564 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)  | WLAN | 8.25 | ± 9.6 % |
| 10565 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle) | WLAN | 8.45 | ± 9.6 % |
| 10566 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle) | WLAN | 8.13 | ± 9.6 % |
| 10567 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle) | WLAN | 8.00 | ± 9.6 % |
| 10568 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle) | WLAN | 8.37 | ± 9.6 % |
| 10569 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle) | WLAN | 8.10 | ± 9.6 % |
| 10570 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle) | WLAN | 8.30 | ± 9.6 % |
| 10571 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)       | WLAN | 1.99 | ± 9.6 % |
| 10572 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)       | WLAN | 1.99 | ± 9.6 % |
| 10573 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)     | WLAN | 1.98 | ± 9.6 % |
| 10574 | AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)      | WLAN | 1.98 | ± 9.6 % |
| 10575 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)  | WLAN | 8.59 | ± 9.6 % |
| 10576 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)  | WLAN | 8.60 | ± 9.6 % |
| 10577 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) | WLAN | 8.70 | ± 9.6 % |
| 10578 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) | WLAN | 8.49 | ± 9.6 % |
| 10579 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) | WLAN | 8.36 | ± 9.6 % |
| 10580 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) | WLAN | 8.76 | ± 9.6 % |
| 10581 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) | WLAN | 8.35 | ± 9.6 % |
| 10582 | AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) | WLAN | 8.67 | ± 9.6 % |
| 10583 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)       | WLAN | 8.59 | ± 9.6 % |
| 10584 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)       | WLAN | 8.60 | ± 9.6 % |
| 10585 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)      | WLAN | 8.70 | ± 9.6 % |
| 10586 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)      | WLAN | 8.49 | ± 9.6 % |
| 10587 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)      | WLAN | 8.36 | ± 9.6 % |

|       |     |                                                            |          |       |         |
|-------|-----|------------------------------------------------------------|----------|-------|---------|
| 10588 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle) | WLAN     | 8.76  | ± 9.6 % |
| 10589 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle) | WLAN     | 8.35  | ± 9.6 % |
| 10590 | AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle) | WLAN     | 8.67  | ± 9.6 % |
| 10591 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle)      | WLAN     | 8.63  | ± 9.6 % |
| 10592 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle)      | WLAN     | 8.79  | ± 9.6 % |
| 10593 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle)      | WLAN     | 8.64  | ± 9.6 % |
| 10594 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle)      | WLAN     | 8.74  | ± 9.6 % |
| 10595 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle)      | WLAN     | 8.74  | ± 9.6 % |
| 10596 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle)      | WLAN     | 8.71  | ± 9.6 % |
| 10597 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle)      | WLAN     | 8.72  | ± 9.6 % |
| 10598 | AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle)      | WLAN     | 8.50  | ± 9.6 % |
| 10599 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle)      | WLAN     | 8.79  | ± 9.6 % |
| 10600 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle)      | WLAN     | 8.88  | ± 9.6 % |
| 10601 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle)      | WLAN     | 8.82  | ± 9.6 % |
| 10602 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle)      | WLAN     | 8.94  | ± 9.6 % |
| 10603 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle)      | WLAN     | 9.03  | ± 9.6 % |
| 10604 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle)      | WLAN     | 8.76  | ± 9.6 % |
| 10605 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle)      | WLAN     | 8.97  | ± 9.6 % |
| 10606 | AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle)      | WLAN     | 8.82  | ± 9.6 % |
| 10607 | AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle)          | WLAN     | 8.64  | ± 9.6 % |
| 10608 | AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle)          | WLAN     | 8.77  | ± 9.6 % |
| 10609 | AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle)          | WLAN     | 8.57  | ± 9.6 % |
| 10610 | AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle)          | WLAN     | 8.78  | ± 9.6 % |
| 10611 | AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle)          | WLAN     | 8.70  | ± 9.6 % |
| 10612 | AAB | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle)          | WLAN     | 8.77  | ± 9.6 % |
| 10613 | AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle)          | WLAN     | 8.94  | ± 9.6 % |
| 10614 | AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle)          | WLAN     | 8.59  | ± 9.6 % |
| 10615 | AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle)          | WLAN     | 8.82  | ± 9.6 % |
| 10616 | AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle)          | WLAN     | 8.82  | ± 9.6 % |
| 10617 | AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle)          | WLAN     | 8.81  | ± 9.6 % |
| 10618 | AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle)          | WLAN     | 8.58  | ± 9.6 % |
| 10619 | AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle)          | WLAN     | 8.86  | ± 9.6 % |
| 10620 | AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle)          | WLAN     | 8.87  | ± 9.6 % |
| 10621 | AAB | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle)          | WLAN     | 8.77  | ± 9.6 % |
| 10622 | AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle)          | WLAN     | 8.68  | ± 9.6 % |
| 10623 | AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)          | WLAN     | 8.82  | ± 9.6 % |
| 10624 | AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)          | WLAN     | 8.96  | ± 9.6 % |
| 10625 | AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)          | WLAN     | 8.96  | ± 9.6 % |
| 10626 | AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)          | WLAN     | 8.83  | ± 9.6 % |
| 10627 | AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)          | WLAN     | 8.88  | ± 9.6 % |
| 10628 | AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)          | WLAN     | 8.71  | ± 9.6 % |
| 10629 | AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)          | WLAN     | 8.85  | ± 9.6 % |
| 10630 | AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)          | WLAN     | 8.72  | ± 9.6 % |
| 10631 | AAB | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)          | WLAN     | 8.81  | ± 9.6 % |
| 10632 | AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)          | WLAN     | 8.74  | ± 9.6 % |
| 10633 | AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)          | WLAN     | 8.83  | ± 9.6 % |
| 10634 | AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)          | WLAN     | 8.80  | ± 9.6 % |
| 10635 | AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)          | WLAN     | 8.81  | ± 9.6 % |
| 10636 | AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle)         | WLAN     | 8.83  | ± 9.6 % |
| 10637 | AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle)         | WLAN     | 8.79  | ± 9.6 % |
| 10638 | AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle)         | WLAN     | 8.86  | ± 9.6 % |
| 10639 | AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)         | WLAN     | 8.85  | ± 9.6 % |
| 10640 | AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)         | WLAN     | 8.98  | ± 9.6 % |
| 10641 | AAC | IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)         | WLAN     | 9.06  | ± 9.6 % |
| 10642 | AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)         | WLAN     | 9.06  | ± 9.6 % |
| 10643 | AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)         | WLAN     | 8.89  | ± 9.6 % |
| 10644 | AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)         | WLAN     | 9.05  | ± 9.6 % |
| 10645 | AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)         | WLAN     | 9.11  | ± 9.6 % |
| 10646 | AAF | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)      | LTE-TDD  | 11.96 | ± 9.6 % |
| 10647 | AAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7)     | LTE-TDD  | 11.96 | ± 9.6 % |
| 10648 | AAA | CDMA2000 (1x Advanced)                                     | CDMA2000 | 3.45  | ± 9.6 % |
| 10652 | AAD | LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)             | LTE-TDD  | 6.91  | ± 9.6 % |
| 10653 | AAD | LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)            | LTE-TDD  | 7.42  | ± 9.6 % |
| 10654 | AAD | LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)            | LTE-TDD  | 6.96  | ± 9.6 % |

|       |     |                                                 |           |       |         |
|-------|-----|-------------------------------------------------|-----------|-------|---------|
| 10655 | AAE | LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%) | LTE-TDD   | 7.21  | ± 9.6 % |
| 10658 | AAA | Pulse Waveform (200Hz, 10%)                     | Test      | 10.00 | ± 9.6 % |
| 10659 | AAA | Pulse Waveform (200Hz, 20%)                     | Test      | 6.99  | ± 9.6 % |
| 10660 | AAA | Pulse Waveform (200Hz, 40%)                     | Test      | 3.98  | ± 9.6 % |
| 10661 | AAA | Pulse Waveform (200Hz, 60%)                     | Test      | 2.22  | ± 9.6 % |
| 10662 | AAA | Pulse Waveform (200Hz, 80%)                     | Test      | 0.97  | ± 9.6 % |
| 10670 | AAA | Bluetooth Low Energy                            | Bluetooth | 2.19  | ± 9.6 % |

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



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Accreditation No.: **SCS 0108**

Client **PC-Test**

Certificate No: **EX3-7308\_Aug18**

## CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:7308**

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

Calibration date: **August 23, 2018**

*BN ✓*  
*09-06-2018*

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

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

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards          | ID               | Cal Date (Certificate No.)        | Scheduled Calibration  |
|----------------------------|------------------|-----------------------------------|------------------------|
| Power meter NRP            | SN: 104778       | 04-Apr-18 (No. 217-02672/02673)   | Apr-19                 |
| Power sensor NRP-Z91       | SN: 103244       | 04-Apr-18 (No. 217-02672)         | Apr-19                 |
| Power sensor NRP-Z91       | SN: 103245       | 04-Apr-18 (No. 217-02673)         | Apr-19                 |
| Reference 20 dB Attenuator | SN: S5277 (20x)  | 04-Apr-18 (No. 217-02682)         | Apr-19                 |
| Reference Probe ES3DV2     | SN: 3013         | 30-Dec-17 (No. ES3-3013_Dec17)    | Dec-18                 |
| DAE4                       | SN: 660          | 21-Dec-17 (No. DAE4-660_Dec17)    | Dec-18                 |
| Secondary Standards        | ID               | Check Date (in house)             | Scheduled Check        |
| Power meter E4419B         | SN: GB41293874   | 06-Apr-16 (in house check Jun-18) | In house check: Jun-20 |
| Power sensor E4412A        | SN: MY41498087   | 06-Apr-16 (in house check Jun-18) | In house check: Jun-20 |
| Power sensor E4412A        | SN: 000110210    | 06-Apr-16 (in house check Jun-18) | In house check: Jun-20 |
| RF generator HP 8648C      | SN: US3642U01700 | 04-Aug-99 (in house check Jun-18) | In house check: Jun-20 |
| Network Analyzer E8358A    | SN: US41080477   | 31-Mar-14 (in house check Oct-17) | In house check: Oct-18 |

|                |                               |                                          |               |
|----------------|-------------------------------|------------------------------------------|---------------|
| Calibrated by: | Name<br><b>Jeton Kastrati</b> | Function<br><b>Laboratory Technician</b> | Signature<br> |
| Approved by:   | Name<br><b>Katja Pokovic</b>  | Function<br><b>Technical Manager</b>     | Signature<br> |

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

Issued: August 24, 2018



Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 0108**

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

### Glossary:

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

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

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

### Methods Applied and Interpretation of Parameters:

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

# Probe EX3DV4

## SN:7308

Manufactured: March 11, 2014  
Calibrated: August 23, 2018

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

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7308

### Basic Calibration Parameters

|                                       | Sensor X | Sensor Y | Sensor Z | Unc (k=2)     |
|---------------------------------------|----------|----------|----------|---------------|
| Norm ( $\mu V/(V/m)^2$ ) <sup>A</sup> | 0.49     | 0.60     | 0.44     | $\pm 10.1 \%$ |
| DCP (mV) <sup>B</sup>                 | 99.6     | 97.1     | 102.5    |               |

### Modulation Calibration Parameters

| UID | Communication System Name |   | A<br>dB | B<br>dB $\sqrt{\mu V}$ | C   | D<br>dB | VR<br>mV | Unc <sup>E</sup><br>(k=2) |
|-----|---------------------------|---|---------|------------------------|-----|---------|----------|---------------------------|
| 0   | CW                        | X | 0.0     | 0.0                    | 1.0 | 0.00    | 177.2    | $\pm 3.5 \%$              |
|     |                           | Y | 0.0     | 0.0                    | 1.0 |         | 165.4    |                           |
|     |                           | Z | 0.0     | 0.0                    | 1.0 |         | 159.6    |                           |

Note: For details on UID parameters see Appendix.

### Sensor Model Parameters

|   | C1<br>fF | C2<br>fF | $\alpha$<br>$V^{-1}$ | T1<br>$ms.V^{-2}$ | T2<br>$ms.V^{-1}$ | T3<br>ms | T4<br>$V^{-2}$ | T5<br>$V^{-1}$ | T6    |
|---|----------|----------|----------------------|-------------------|-------------------|----------|----------------|----------------|-------|
| X | 53.71    | 401.2    | 35.76                | 12.80             | 0.351             | 5.077    | 0.717          | 0.413          | 1.005 |
| Y | 56.67    | 439.8    | 38.08                | 13.44             | 0.524             | 5.100    | 0.000          | 0.597          | 1.012 |
| Z | 40.98    | 304.1    | 35.29                | 8.573             | 0.334             | 5.045    | 1.531          | 0.174          | 1.005 |

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

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

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

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

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7308

### Calibration Parameter Determined in Head Tissue Simulating Media

| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 750                  | 41.9                               | 0.89                            | 10.23   | 10.23   | 10.23   | 0.57               | 0.81                    | ± 12.0 %  |
| 835                  | 41.5                               | 0.90                            | 9.96    | 9.96    | 9.96    | 0.58               | 0.81                    | ± 12.0 %  |
| 1750                 | 40.1                               | 1.37                            | 8.66    | 8.66    | 8.66    | 0.36               | 0.80                    | ± 12.0 %  |
| 1900                 | 40.0                               | 1.40                            | 8.26    | 8.26    | 8.26    | 0.29               | 0.85                    | ± 12.0 %  |
| 2300                 | 39.5                               | 1.67                            | 7.81    | 7.81    | 7.81    | 0.29               | 0.85                    | ± 12.0 %  |
| 2450                 | 39.2                               | 1.80                            | 7.45    | 7.45    | 7.45    | 0.35               | 0.91                    | ± 12.0 %  |
| 2600                 | 39.0                               | 1.96                            | 7.30    | 7.30    | 7.30    | 0.35               | 0.87                    | ± 12.0 %  |
| 5250                 | 35.9                               | 4.71                            | 5.10    | 5.10    | 5.10    | 0.40               | 1.80                    | ± 13.1 %  |
| 5600                 | 35.5                               | 5.07                            | 4.85    | 4.85    | 4.85    | 0.40               | 1.80                    | ± 13.1 %  |
| 5750                 | 35.4                               | 5.22                            | 5.04    | 5.04    | 5.04    | 0.40               | 1.80                    | ± 13.1 %  |

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

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

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

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7308

### Calibration Parameter Determined in Body Tissue Simulating Media

| f (MHz) <sup>c</sup> | Relative Permittivity <sup>f</sup> | Conductivity (S/m) <sup>f</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>g</sup> | Depth <sup>g</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 750                  | 55.5                               | 0.96                            | 10.38   | 10.38   | 10.38   | 0.36               | 0.99                    | ± 12.0 %  |
| 835                  | 55.2                               | 0.97                            | 10.19   | 10.19   | 10.19   | 0.50               | 0.82                    | ± 12.0 %  |
| 1750                 | 53.4                               | 1.49                            | 8.13    | 8.13    | 8.13    | 0.27               | 1.04                    | ± 12.0 %  |
| 1900                 | 53.3                               | 1.52                            | 7.79    | 7.79    | 7.79    | 0.38               | 0.85                    | ± 12.0 %  |
| 2300                 | 52.9                               | 1.81                            | 7.73    | 7.73    | 7.73    | 0.37               | 0.80                    | ± 12.0 %  |
| 2450                 | 52.7                               | 1.95                            | 7.57    | 7.57    | 7.57    | 0.34               | 0.88                    | ± 12.0 %  |
| 2600                 | 52.5                               | 2.16                            | 7.40    | 7.40    | 7.40    | 0.29               | 0.95                    | ± 12.0 %  |
| 5250                 | 48.9                               | 5.36                            | 4.48    | 4.48    | 4.48    | 0.50               | 1.90                    | ± 13.1 %  |
| 5600                 | 48.5                               | 5.77                            | 4.00    | 4.00    | 4.00    | 0.50               | 1.90                    | ± 13.1 %  |
| 5750                 | 48.3                               | 5.94                            | 4.18    | 4.18    | 4.18    | 0.50               | 1.90                    | ± 13.1 %  |

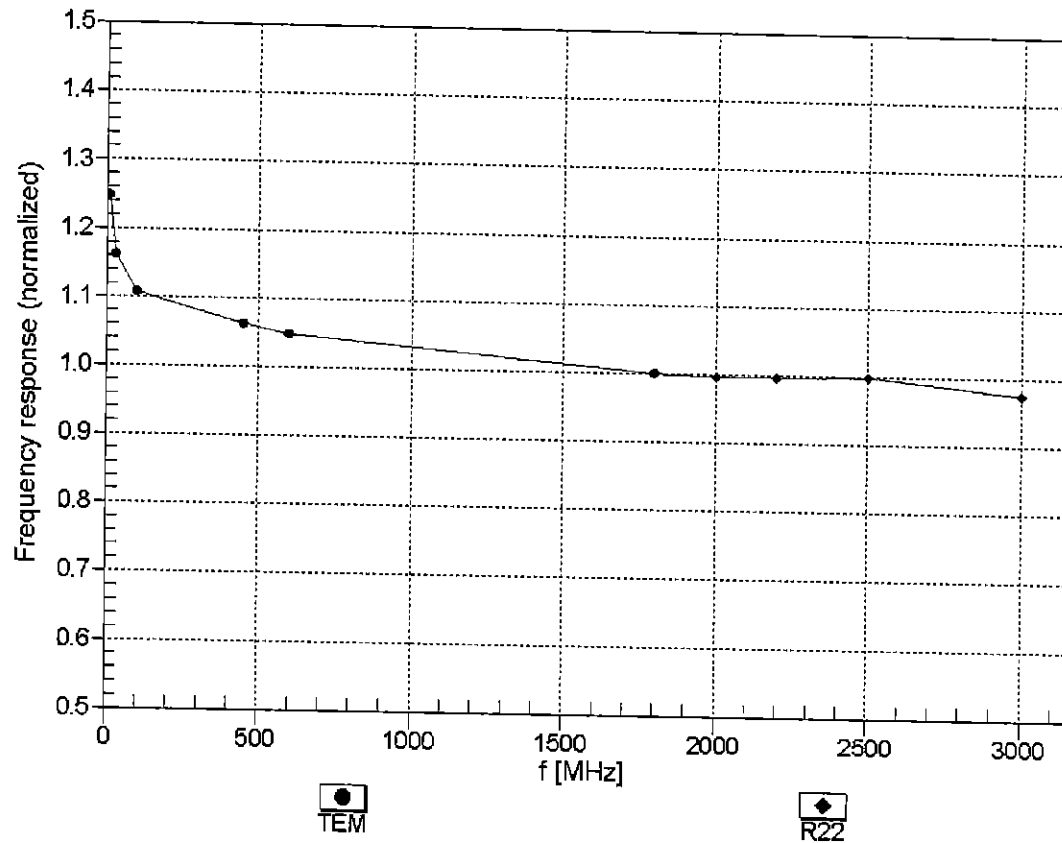
<sup>c</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below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

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

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

## Frequency Response of E-Field

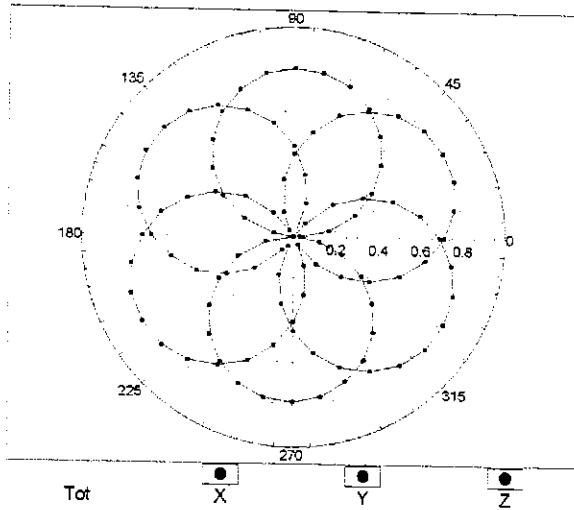
(TEM-Cell:ifi110 EXX, Waveguide: R22)



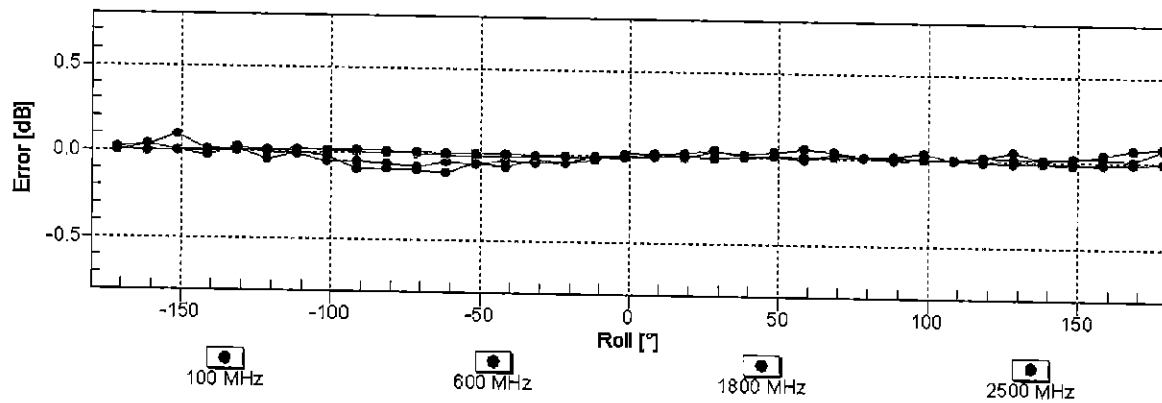
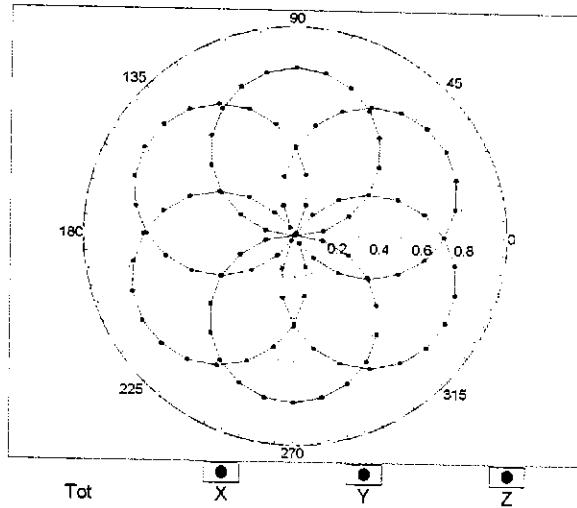
Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  ( $k=2$ )

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

f=600 MHz,TEM

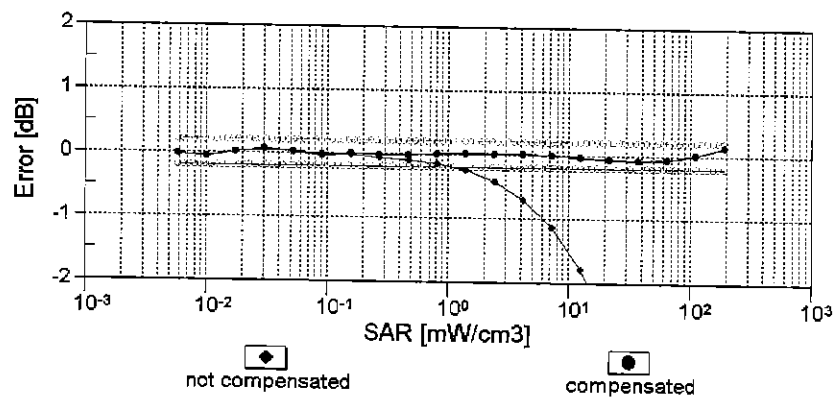
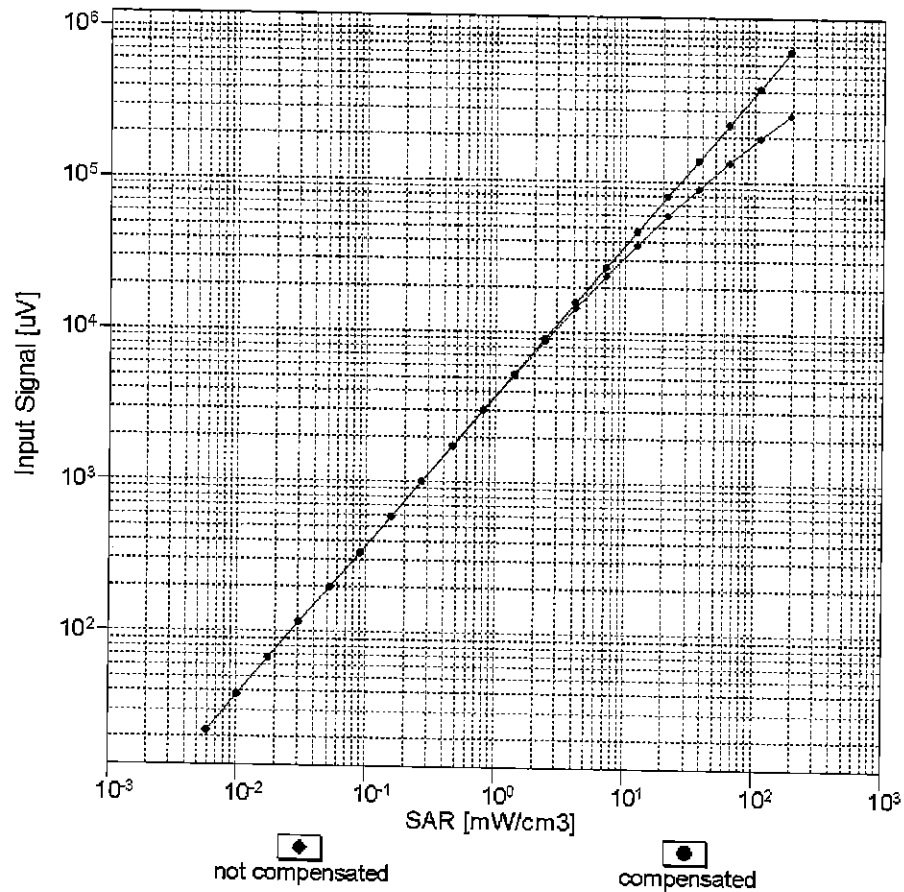


f=1800 MHz,R22



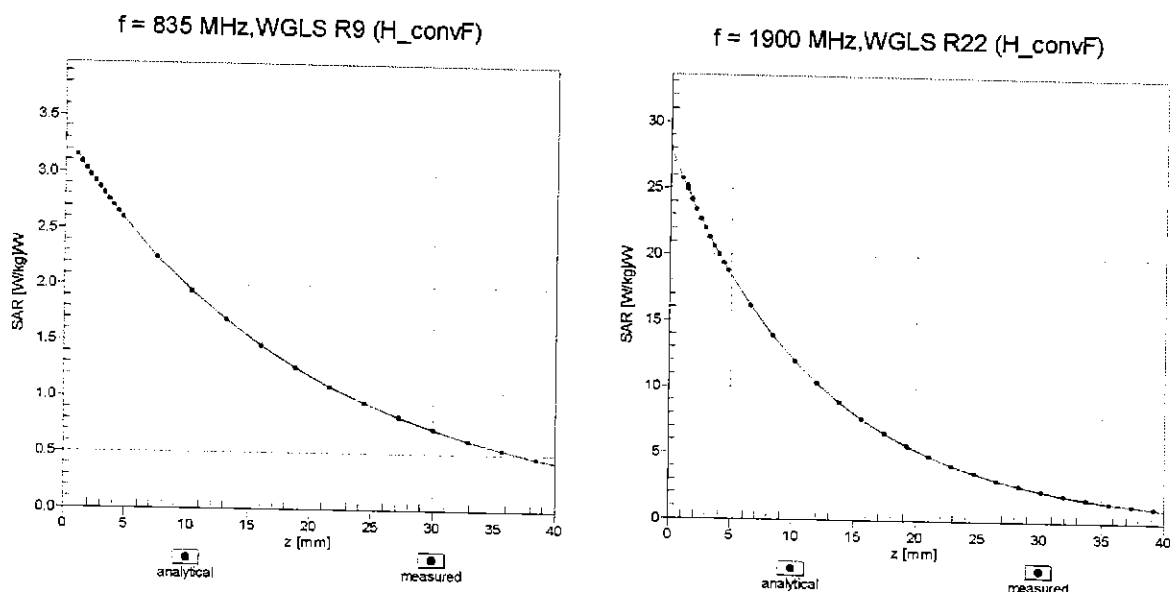
Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  (k=2)

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



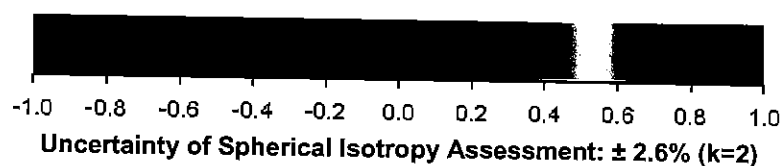
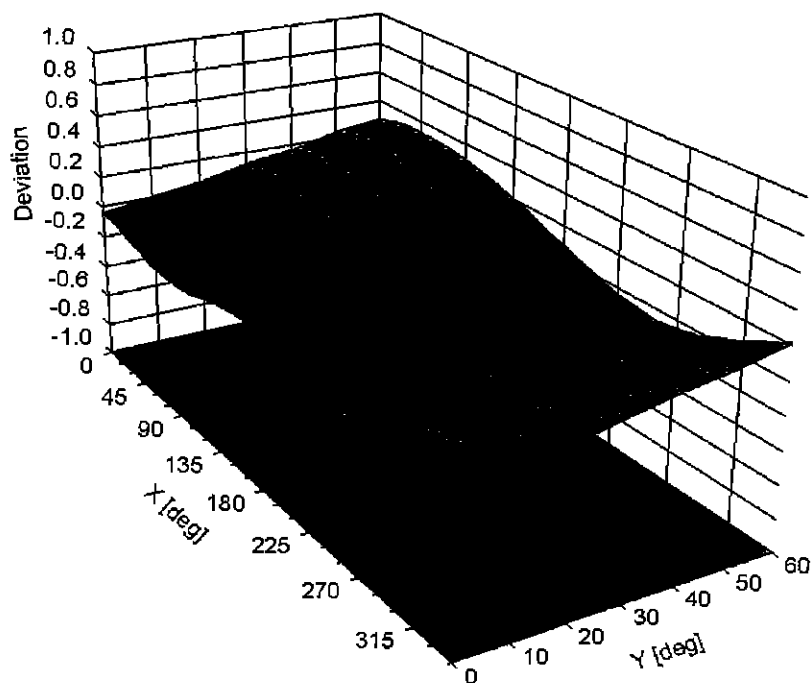
Uncertainty of Linearity Assessment:  $\pm 0.6\%$  ( $k=2$ )

## Conversion Factor Assessment



## Deviation from Isotropy in Liquid

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



## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7308

### Other Probe Parameters

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle (°)                           | 108.5      |
| Mechanical Surface Detection Mode             | enabled    |
| Optical Surface Detection Mode                | disabled   |
| Probe Overall Length                          | 337 mm     |
| Probe Body Diameter                           | 10 mm      |
| Tip Length                                    | 9 mm       |
| Tip Diameter                                  | 2.5 mm     |
| Probe Tip to Sensor X Calibration Point       | 1 mm       |
| Probe Tip to Sensor Y Calibration Point       | 1 mm       |
| Probe Tip to Sensor Z Calibration Point       | 1 mm       |
| Recommended Measurement Distance from Surface | 1.4 mm     |

**Appendix: Modulation Calibration Parameters**

| UID           | Communication System Name                     |   | A<br>dB | B<br>dB $\sqrt{\mu V}$ | C     | D<br>dB | VR<br>mV | Max<br>Unc <sup>E</sup><br>(k=2) |
|---------------|-----------------------------------------------|---|---------|------------------------|-------|---------|----------|----------------------------------|
| 0             | CW                                            | X | 0.00    | 0.00                   | 1.00  | 0.00    | 177.2    | $\pm 3.5\%$                      |
|               |                                               | Y | 0.00    | 0.00                   | 1.00  |         | 165.4    |                                  |
|               |                                               | Z | 0.00    | 0.00                   | 1.00  |         | 159.6    |                                  |
| 10010-<br>CAA | SAR Validation (Square, 100ms, 10ms)          | X | 2.71    | 68.17                  | 11.26 | 10.00   | 20.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 2.39    | 66.64                  | 10.67 |         | 20.0     |                                  |
|               |                                               | Z | 1.90    | 64.26                  | 9.03  |         | 20.0     |                                  |
| 10011-<br>CAB | UMTS-FDD (WCDMA)                              | X | 1.19    | 70.37                  | 17.06 | 0.00    | 150.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 0.96    | 66.50                  | 14.51 |         | 150.0    |                                  |
|               |                                               | Z | 1.05    | 68.92                  | 16.00 |         | 150.0    |                                  |
| 10012-<br>CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)      | X | 1.18    | 64.67                  | 16.08 | 0.41    | 150.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 1.11    | 63.43                  | 15.04 |         | 150.0    |                                  |
|               |                                               | Z | 1.13    | 64.11                  | 15.48 |         | 150.0    |                                  |
| 10013-<br>CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | X | 4.93    | 66.75                  | 17.26 | 1.46    | 150.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 4.92    | 66.47                  | 17.15 |         | 150.0    |                                  |
|               |                                               | Z | 4.74    | 66.75                  | 17.08 |         | 150.0    |                                  |
| 10021-<br>DAC | GSM-FDD (TDMA, GMSK)                          | X | 100.00  | 114.38                 | 27.28 | 9.39    | 50.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 114.83                 | 27.64 |         | 50.0     |                                  |
|               |                                               | Z | 100.00  | 109.69                 | 24.90 |         | 50.0     |                                  |
| 10023-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0)                   | X | 100.00  | 113.94                 | 27.13 | 9.57    | 50.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 114.49                 | 27.54 |         | 50.0     |                                  |
|               |                                               | Z | 100.00  | 109.21                 | 24.74 |         | 50.0     |                                  |
| 10024-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1)                 | X | 100.00  | 115.48                 | 26.77 | 6.56    | 60.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 114.18                 | 26.29 |         | 60.0     |                                  |
|               |                                               | Z | 100.00  | 109.85                 | 23.86 |         | 60.0     |                                  |
| 10025-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0)                   | X | 6.22    | 84.66                  | 34.29 | 12.57   | 50.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 4.94    | 76.24                  | 29.94 |         | 50.0     |                                  |
|               |                                               | Z | 5.36    | 79.88                  | 31.57 |         | 50.0     |                                  |
| 10026-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1)                 | X | 11.81   | 100.22                 | 36.35 | 9.56    | 60.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 11.10   | 97.75                  | 35.30 |         | 60.0     |                                  |
|               |                                               | Z | 7.89    | 90.81                  | 32.78 |         | 60.0     |                                  |
| 10027-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2)               | X | 100.00  | 118.27                 | 27.22 | 4.80    | 80.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 114.44                 | 25.61 |         | 80.0     |                                  |
|               |                                               | Z | 100.00  | 111.67                 | 23.86 |         | 80.0     |                                  |
| 10028-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)             | X | 100.00  | 122.72                 | 28.40 | 3.55    | 100.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 114.80                 | 25.04 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 114.83                 | 24.49 |         | 100.0    |                                  |
| 10029-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2)               | X | 6.56    | 85.50                  | 29.56 | 7.80    | 80.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 6.53    | 84.80                  | 29.16 |         | 80.0     |                                  |
|               |                                               | Z | 4.80    | 79.03                  | 26.78 |         | 80.0     |                                  |
| 10030-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1)           | X | 100.00  | 114.96                 | 26.10 | 5.30    | 70.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 112.69                 | 25.18 |         | 70.0     |                                  |
|               |                                               | Z | 100.00  | 108.37                 | 22.73 |         | 70.0     |                                  |
| 10031-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3)           | X | 100.00  | 126.84                 | 28.53 | 1.88    | 100.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 105.21                 | 19.68 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 108.61                 | 20.59 |         | 100.0    |                                  |

|           |                                                     |   |        |        |       |       |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|-------|-------|---------|
| 10032-CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5)                 | X | 100.00 | 146.53 | 35.02 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 100.00 | 95.65  | 15.05 |       | 100.0 |         |
|           |                                                     | Z | 100.00 | 112.23 | 21.08 |       | 100.0 |         |
| 10033-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)           | X | 100.00 | 133.98 | 36.90 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 94.91  | 132.14 | 36.35 |       | 70.0  |         |
|           |                                                     | Z | 24.70  | 106.96 | 28.52 |       | 70.0  |         |
| 10034-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)           | X | 8.70   | 95.28  | 25.33 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 4.18   | 83.23  | 21.11 |       | 100.0 |         |
|           |                                                     | Z | 3.97   | 82.01  | 19.44 |       | 100.0 |         |
| 10035-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)           | X | 3.83   | 83.82  | 21.38 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 2.23   | 74.99  | 17.69 |       | 100.0 |         |
|           |                                                     | Z | 2.33   | 75.94  | 16.98 |       | 100.0 |         |
| 10036-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1)               | X | 100.00 | 134.50 | 37.14 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 133.48 | 36.76 |       | 70.0  |         |
|           |                                                     | Z | 56.60  | 119.91 | 31.85 |       | 70.0  |         |
| 10037-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3)               | X | 7.69   | 93.53  | 24.78 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 3.89   | 82.31  | 20.76 |       | 100.0 |         |
|           |                                                     | Z | 3.40   | 80.12  | 18.77 |       | 100.0 |         |
| 10038-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5)               | X | 3.93   | 84.59  | 21.78 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 2.28   | 75.57  | 18.03 |       | 100.0 |         |
|           |                                                     | Z | 2.38   | 76.51  | 17.34 |       | 100.0 |         |
| 10039-CAB | CDMA2000 (1xRTT, RC1)                               | X | 2.78   | 78.14  | 18.71 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.67   | 70.12  | 14.94 |       | 150.0 |         |
|           |                                                     | Z | 2.00   | 74.01  | 15.76 |       | 150.0 |         |
| 10042-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | X | 100.00 | 110.92 | 24.96 | 7.78  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 110.22 | 24.75 |       | 50.0  |         |
|           |                                                     | Z | 100.00 | 106.01 | 22.46 |       | 50.0  |         |
| 10044-CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM)                    | X | 0.00   | 112.58 | 4.43  | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.07   | 121.95 | 9.84  |       | 150.0 |         |
|           |                                                     | Z | 0.01   | 118.94 | 9.83  |       | 150.0 |         |
| 10048-CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)           | X | 100.00 | 111.48 | 27.44 | 13.80 | 25.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 112.85 | 28.28 |       | 25.0  |         |
|           |                                                     | Z | 18.65  | 86.54  | 19.90 |       | 25.0  |         |
| 10049-CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)         | X | 100.00 | 112.40 | 26.75 | 10.79 | 40.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 113.42 | 27.38 |       | 40.0  |         |
|           |                                                     | Z | 46.23  | 99.19  | 22.45 |       | 40.0  |         |
| 10056-CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps)                      | X | 100.00 | 126.85 | 34.82 | 9.03  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 126.84 | 34.96 |       | 50.0  |         |
|           |                                                     | Z | 73.14  | 116.99 | 30.84 |       | 50.0  |         |
| 10058-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)                   | X | 4.87   | 79.06  | 26.07 | 6.55  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 4.89   | 78.72  | 25.82 |       | 100.0 |         |
|           |                                                     | Z | 3.78   | 74.24  | 23.87 |       | 100.0 |         |
| 10059-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)            | X | 1.24   | 66.08  | 16.89 | 0.61  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 1.15   | 64.70  | 15.80 |       | 110.0 |         |
|           |                                                     | Z | 1.15   | 65.12  | 16.08 |       | 110.0 |         |
| 10060-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)          | X | 100.00 | 145.11 | 38.67 | 1.30  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 100.00 | 138.14 | 35.54 |       | 110.0 |         |
|           |                                                     | Z | 100.00 | 143.13 | 37.45 |       | 110.0 |         |

|           |                                                |   |      |       |       |      |       |         |
|-----------|------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10061-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)      | X | 5.01 | 92.44 | 27.34 | 2.04 | 110.0 | ± 9.6 % |
|           |                                                | Y | 3.88 | 86.79 | 24.94 |      | 110.0 |         |
|           |                                                | Z | 2.64 | 81.37 | 23.02 |      | 110.0 |         |
| 10062-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)       | X | 4.74 | 66.80 | 16.70 | 0.49 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.72 | 66.44 | 16.52 |      | 100.0 |         |
|           |                                                | Z | 4.55 | 66.78 | 16.53 |      | 100.0 |         |
| 10063-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)       | X | 4.76 | 66.90 | 16.81 | 0.72 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.74 | 66.55 | 16.64 |      | 100.0 |         |
|           |                                                | Z | 4.57 | 66.86 | 16.62 |      | 100.0 |         |
| 10064-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)      | X | 5.07 | 67.18 | 17.05 | 0.86 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.06 | 66.88 | 16.91 |      | 100.0 |         |
|           |                                                | Z | 4.83 | 67.08 | 16.83 |      | 100.0 |         |
| 10065-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)      | X | 4.93 | 67.08 | 17.15 | 1.21 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.92 | 66.80 | 17.03 |      | 100.0 |         |
|           |                                                | Z | 4.69 | 66.95 | 16.91 |      | 100.0 |         |
| 10066-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)      | X | 4.95 | 67.11 | 17.33 | 1.46 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.94 | 66.84 | 17.22 |      | 100.0 |         |
|           |                                                | Z | 4.70 | 66.94 | 17.07 |      | 100.0 |         |
| 10067-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)      | X | 5.22 | 67.17 | 17.72 | 2.04 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.23 | 66.94 | 17.65 |      | 100.0 |         |
|           |                                                | Z | 4.99 | 67.15 | 17.52 |      | 100.0 |         |
| 10068-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)      | X | 5.28 | 67.31 | 17.99 | 2.55 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.30 | 67.12 | 17.95 |      | 100.0 |         |
|           |                                                | Z | 5.01 | 67.08 | 17.69 |      | 100.0 |         |
| 10069-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)      | X | 5.36 | 67.24 | 18.15 | 2.67 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.38 | 67.05 | 18.11 |      | 100.0 |         |
|           |                                                | Z | 5.09 | 67.11 | 17.88 |      | 100.0 |         |
| 10071-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)  | X | 5.01 | 66.83 | 17.56 | 1.99 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.01 | 66.58 | 17.48 |      | 100.0 |         |
|           |                                                | Z | 4.83 | 66.80 | 17.36 |      | 100.0 |         |
| 10072-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | X | 5.00 | 67.20 | 17.81 | 2.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.01 | 66.96 | 17.73 |      | 100.0 |         |
|           |                                                | Z | 4.79 | 67.07 | 17.56 |      | 100.0 |         |
| 10073-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | X | 5.05 | 67.32 | 18.13 | 2.83 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.06 | 67.11 | 18.07 |      | 100.0 |         |
|           |                                                | Z | 4.84 | 67.21 | 17.87 |      | 100.0 |         |
| 10074-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | X | 5.01 | 67.17 | 18.27 | 3.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.03 | 66.98 | 18.23 |      | 100.0 |         |
|           |                                                | Z | 4.82 | 67.10 | 18.01 |      | 100.0 |         |
| 10075-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | X | 5.05 | 67.33 | 18.61 | 3.82 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.08 | 67.18 | 18.60 |      | 90.0  |         |
|           |                                                | Z | 4.84 | 67.13 | 18.28 |      | 90.0  |         |
| 10076-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | X | 5.04 | 67.01 | 18.67 | 4.15 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.06 | 66.85 | 18.66 |      | 90.0  |         |
|           |                                                | Z | 4.86 | 66.95 | 18.41 |      | 90.0  |         |
| 10077-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | X | 5.05 | 67.06 | 18.76 | 4.30 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.07 | 66.89 | 18.74 |      | 90.0  |         |
|           |                                                | Z | 4.89 | 67.03 | 18.52 |      | 90.0  |         |

|           |                                                     |   |        |        |       |      |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10081-CAB | CDMA2000 (1xRTT, RC3)                               | X | 1.10   | 69.87  | 14.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.78   | 64.74  | 11.83 |      | 150.0 |         |
|           |                                                     | Z | 0.78   | 66.34  | 11.97 |      | 150.0 |         |
| 10082-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | X | 0.69   | 60.00  | 4.39  | 4.77 | 80.0  | ± 9.6 % |
|           |                                                     | Y | 0.71   | 60.00  | 4.39  |      | 80.0  |         |
|           |                                                     | Z | 7.97   | 68.50  | 6.36  |      | 80.0  |         |
| 10090-DAC | GPRS-FDD (TDMA, GMSK, TN 0-4)                       | X | 100.00 | 115.53 | 26.81 | 6.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 114.29 | 26.36 |      | 60.0  |         |
|           |                                                     | Z | 100.00 | 109.90 | 23.90 |      | 60.0  |         |
| 10097-CAB | UMTS-FDD (HSDPA)                                    | X | 1.95   | 68.97  | 16.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.75   | 66.81  | 15.24 |      | 150.0 |         |
|           |                                                     | Z | 1.87   | 68.90  | 16.13 |      | 150.0 |         |
| 10098-CAB | UMTS-FDD (HSUPA, Subtest 2)                         | X | 1.91   | 68.95  | 16.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.71   | 66.77  | 15.20 |      | 150.0 |         |
|           |                                                     | Z | 1.83   | 68.86  | 16.11 |      | 150.0 |         |
| 10099-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4)                       | X | 11.93  | 100.45 | 36.42 | 9.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 11.20  | 97.95  | 35.37 |      | 60.0  |         |
|           |                                                     | Z | 7.96   | 90.99  | 32.84 |      | 60.0  |         |
| 10100-CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 3.40   | 71.76  | 17.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.10   | 69.82  | 16.33 |      | 150.0 |         |
|           |                                                     | Z | 3.12   | 70.91  | 17.03 |      | 150.0 |         |
| 10101-CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 3.36   | 68.15  | 16.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.24   | 67.23  | 15.77 |      | 150.0 |         |
|           |                                                     | Z | 3.17   | 67.74  | 16.07 |      | 150.0 |         |
| 10102-CAE | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 3.45   | 68.05  | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.34   | 67.19  | 15.87 |      | 150.0 |         |
|           |                                                     | Z | 3.28   | 67.71  | 16.16 |      | 150.0 |         |
| 10103-CAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 6.86   | 77.75  | 21.56 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 6.56   | 76.62  | 21.10 |      | 65.0  |         |
|           |                                                     | Z | 5.69   | 75.27  | 20.45 |      | 65.0  |         |
| 10104-CAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 6.41   | 74.58  | 21.07 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 6.33   | 74.04  | 20.86 |      | 65.0  |         |
|           |                                                     | Z | 5.58   | 72.74  | 20.11 |      | 65.0  |         |
| 10105-CAF | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 6.09   | 73.43  | 20.88 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 6.03   | 72.95  | 20.69 |      | 65.0  |         |
|           |                                                     | Z | 5.24   | 71.29  | 19.75 |      | 65.0  |         |
| 10108-CAF | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)            | X | 2.97   | 70.94  | 17.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.72   | 69.08  | 16.17 |      | 150.0 |         |
|           |                                                     | Z | 2.70   | 70.20  | 16.88 |      | 150.0 |         |
| 10109-CAF | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)          | X | 3.02   | 68.05  | 16.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.90   | 67.02  | 15.66 |      | 150.0 |         |
|           |                                                     | Z | 2.83   | 67.71  | 15.99 |      | 150.0 |         |
| 10110-CAF | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)             | X | 2.42   | 70.09  | 17.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.21   | 68.14  | 15.78 |      | 150.0 |         |
|           |                                                     | Z | 2.18   | 69.46  | 16.49 |      | 150.0 |         |
| 10111-CAF | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)           | X | 2.76   | 69.06  | 16.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.59   | 67.59  | 15.88 |      | 150.0 |         |
|           |                                                     | Z | 2.59   | 68.99  | 16.39 |      | 150.0 |         |

|           |                                                |   |      |       |       |      |       |         |
|-----------|------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10112-CAF | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)     | X | 3.14 | 67.97 | 16.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.03 | 67.00 | 15.72 |      | 150.0 |         |
|           |                                                | Z | 2.95 | 67.72 | 16.05 |      | 150.0 |         |
| 10113-CAF | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)      | X | 2.92 | 69.11 | 16.87 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.75 | 67.72 | 16.02 |      | 150.0 |         |
|           |                                                | Z | 2.74 | 69.14 | 16.51 |      | 150.0 |         |
| 10114-CAC | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)  | X | 5.18 | 67.31 | 16.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.14 | 66.93 | 16.36 |      | 150.0 |         |
|           |                                                | Z | 5.02 | 67.26 | 16.48 |      | 150.0 |         |
| 10115-CAC | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)  | X | 5.52 | 67.57 | 16.70 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.51 | 67.29 | 16.56 |      | 150.0 |         |
|           |                                                | Z | 5.27 | 67.30 | 16.50 |      | 150.0 |         |
| 10116-CAC | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | X | 5.29 | 67.56 | 16.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.27 | 67.21 | 16.43 |      | 150.0 |         |
|           |                                                | Z | 5.10 | 67.44 | 16.50 |      | 150.0 |         |
| 10117-CAC | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)       | X | 5.16 | 67.25 | 16.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.13 | 66.89 | 16.36 |      | 150.0 |         |
|           |                                                | Z | 4.99 | 67.15 | 16.44 |      | 150.0 |         |
| 10118-CAC | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)       | X | 5.59 | 67.74 | 16.79 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.60 | 67.49 | 16.67 |      | 150.0 |         |
|           |                                                | Z | 5.34 | 67.49 | 16.60 |      | 150.0 |         |
| 10119-CAC | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)      | X | 5.26 | 67.49 | 16.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.24 | 67.15 | 16.41 |      | 150.0 |         |
|           |                                                | Z | 5.09 | 67.40 | 16.49 |      | 150.0 |         |
| 10140-CAE | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)     | X | 3.50 | 68.05 | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.39 | 67.19 | 15.79 |      | 150.0 |         |
|           |                                                | Z | 3.30 | 67.72 | 16.07 |      | 150.0 |         |
| 10141-CAE | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)     | X | 3.62 | 68.10 | 16.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.51 | 67.27 | 15.96 |      | 150.0 |         |
|           |                                                | Z | 3.43 | 67.85 | 16.25 |      | 150.0 |         |
| 10142-CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)        | X | 2.22 | 70.35 | 16.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.98 | 67.98 | 15.45 |      | 150.0 |         |
|           |                                                | Z | 1.97 | 69.67 | 16.10 |      | 150.0 |         |
| 10143-CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)      | X | 2.70 | 70.21 | 16.79 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.44 | 68.12 | 15.58 |      | 150.0 |         |
|           |                                                | Z | 2.48 | 69.97 | 16.00 |      | 150.0 |         |
| 10144-CAE | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)      | X | 2.42 | 67.64 | 15.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.26 | 66.15 | 14.15 |      | 150.0 |         |
|           |                                                | Z | 2.13 | 66.86 | 13.96 |      | 150.0 |         |
| 10145-CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)      | X | 1.54 | 68.23 | 14.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.25 | 64.93 | 12.03 |      | 150.0 |         |
|           |                                                | Z | 1.00 | 63.72 | 10.21 |      | 150.0 |         |
| 10146-CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)    | X | 2.38 | 68.67 | 13.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.63 | 70.03 | 14.41 |      | 150.0 |         |
|           |                                                | Z | 1.37 | 62.94 | 8.80  |      | 150.0 |         |
| 10147-CAF | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)    | X | 3.01 | 71.74 | 14.81 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.44 | 73.73 | 16.16 |      | 150.0 |         |
|           |                                                | Z | 1.50 | 63.86 | 9.38  |      | 150.0 |         |

|           |                                            |   |      |       |       |      |       |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10149-CAE | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 3.03 | 68.12 | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.91 | 67.08 | 15.71 |      | 150.0 |         |
|           |                                            | Z | 2.84 | 67.78 | 16.04 |      | 150.0 |         |
| 10150-CAE | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 3.15 | 68.03 | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.03 | 67.05 | 15.76 |      | 150.0 |         |
|           |                                            | Z | 2.96 | 67.78 | 16.09 |      | 150.0 |         |
| 10151-CAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)    | X | 7.33 | 80.62 | 22.85 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 6.93 | 79.21 | 22.28 |      | 65.0  |         |
|           |                                            | Z | 6.07 | 78.22 | 21.74 |      | 65.0  |         |
| 10152-CAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 5.98 | 74.73 | 20.92 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 5.89 | 74.12 | 20.68 |      | 65.0  |         |
|           |                                            | Z | 5.12 | 72.74 | 19.78 |      | 65.0  |         |
| 10153-CAF | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 6.33 | 75.57 | 21.65 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 6.23 | 74.94 | 21.41 |      | 65.0  |         |
|           |                                            | Z | 5.49 | 73.78 | 20.61 |      | 65.0  |         |
| 10154-CAF | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 2.49 | 70.63 | 17.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.26 | 68.57 | 16.06 |      | 150.0 |         |
|           |                                            | Z | 2.24 | 69.92 | 16.77 |      | 150.0 |         |
| 10155-CAF | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 2.77 | 69.07 | 16.79 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.59 | 67.59 | 15.89 |      | 150.0 |         |
|           |                                            | Z | 2.59 | 69.02 | 16.41 |      | 150.0 |         |
| 10156-CAF | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 2.11 | 70.85 | 16.93 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.83 | 68.04 | 15.26 |      | 150.0 |         |
|           |                                            | Z | 1.82 | 69.80 | 15.80 |      | 150.0 |         |
| 10157-CAF | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 2.31 | 68.61 | 15.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.08 | 66.62 | 14.16 |      | 150.0 |         |
|           |                                            | Z | 1.98 | 67.47 | 13.92 |      | 150.0 |         |
| 10158-CAF | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 2.92 | 69.17 | 16.92 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.75 | 67.77 | 16.06 |      | 150.0 |         |
|           |                                            | Z | 2.75 | 69.22 | 16.57 |      | 150.0 |         |
| 10159-CAF | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 2.44 | 69.17 | 15.69 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.19 | 67.06 | 14.45 |      | 150.0 |         |
|           |                                            | Z | 2.09 | 67.96 | 14.21 |      | 150.0 |         |
| 10160-CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)    | X | 2.90 | 69.57 | 16.90 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.74 | 68.24 | 16.05 |      | 150.0 |         |
|           |                                            | Z | 2.70 | 69.25 | 16.60 |      | 150.0 |         |
| 10161-CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 3.05 | 67.98 | 16.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.93 | 66.95 | 15.69 |      | 150.0 |         |
|           |                                            | Z | 2.86 | 67.77 | 16.01 |      | 150.0 |         |
| 10162-CAE | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 3.15 | 68.06 | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.03 | 67.06 | 15.79 |      | 150.0 |         |
|           |                                            | Z | 2.97 | 67.96 | 16.14 |      | 150.0 |         |
| 10166-CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 3.67 | 69.77 | 19.22 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.71 | 69.61 | 19.37 |      | 150.0 |         |
|           |                                            | Z | 3.45 | 70.11 | 19.35 |      | 150.0 |         |
| 10167-CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 4.61 | 72.92 | 19.78 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.57 | 72.37 | 19.78 |      | 150.0 |         |
|           |                                            | Z | 4.42 | 74.02 | 20.14 |      | 150.0 |         |

|           |                                            |   |       |        |       |      |       |         |
|-----------|--------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10168-CAF | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 5.13  | 75.25  | 21.12 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 5.05  | 74.54  | 21.07 |      | 150.0 |         |
|           |                                            | Z | 5.13  | 77.22  | 21.87 |      | 150.0 |         |
| 10169-CAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 3.12  | 70.03  | 19.37 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.15  | 69.73  | 19.46 |      | 150.0 |         |
|           |                                            | Z | 2.86  | 69.57  | 19.15 |      | 150.0 |         |
| 10170-CAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 4.58  | 77.10  | 22.08 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.39  | 75.79  | 21.81 |      | 150.0 |         |
|           |                                            | Z | 4.44  | 78.23  | 22.53 |      | 150.0 |         |
| 10171-AAE | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 3.64  | 72.24  | 19.05 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.59  | 71.47  | 18.98 |      | 150.0 |         |
|           |                                            | Z | 3.36  | 72.39  | 19.02 |      | 150.0 |         |
| 10172-CAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 12.64 | 100.34 | 31.84 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 12.97 | 100.68 | 32.37 |      | 65.0  |         |
|           |                                            | Z | 5.77  | 87.24  | 27.51 |      | 65.0  |         |
| 10173-CAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 36.96 | 114.71 | 33.67 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 30.92 | 112.16 | 33.64 |      | 65.0  |         |
|           |                                            | Z | 22.36 | 108.00 | 31.61 |      | 65.0  |         |
| 10174-CAF | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 22.92 | 104.35 | 30.17 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 21.96 | 104.04 | 30.70 |      | 65.0  |         |
|           |                                            | Z | 11.65 | 95.24  | 27.25 |      | 65.0  |         |
| 10175-CAF | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)      | X | 3.08  | 69.68  | 19.10 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.11  | 69.39  | 19.20 |      | 150.0 |         |
|           |                                            | Z | 2.82  | 69.22  | 18.88 |      | 150.0 |         |
| 10176-CAF | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)    | X | 4.59  | 77.13  | 22.09 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.40  | 75.82  | 21.82 |      | 150.0 |         |
|           |                                            | Z | 4.45  | 78.26  | 22.55 |      | 150.0 |         |
| 10177-CAH | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)       | X | 3.11  | 69.85  | 19.21 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.14  | 69.56  | 19.30 |      | 150.0 |         |
|           |                                            | Z | 2.84  | 69.38  | 18.97 |      | 150.0 |         |
| 10178-CAF | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)     | X | 4.53  | 76.83  | 21.94 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.34  | 75.53  | 21.68 |      | 150.0 |         |
|           |                                            | Z | 4.39  | 77.99  | 22.42 |      | 150.0 |         |
| 10179-CAF | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)    | X | 4.06  | 74.50  | 20.40 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.95  | 73.49  | 20.26 |      | 150.0 |         |
|           |                                            | Z | 3.83  | 75.09  | 20.61 |      | 150.0 |         |
| 10180-CAF | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)     | X | 3.62  | 72.15  | 18.99 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.58  | 71.38  | 18.93 |      | 150.0 |         |
|           |                                            | Z | 3.35  | 72.32  | 18.97 |      | 150.0 |         |
| 10181-CAE | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 3.10  | 69.83  | 19.20 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.13  | 69.54  | 19.29 |      | 150.0 |         |
|           |                                            | Z | 2.84  | 69.36  | 18.97 |      | 150.0 |         |
| 10182-CAE | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)    | X | 4.52  | 76.80  | 21.93 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.33  | 75.51  | 21.66 |      | 150.0 |         |
|           |                                            | Z | 4.38  | 77.96  | 22.40 |      | 150.0 |         |
| 10183-AAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 3.62  | 72.12  | 18.97 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.57  | 71.35  | 18.91 |      | 150.0 |         |
|           |                                            | Z | 3.34  | 72.29  | 18.96 |      | 150.0 |         |

|           |                                               |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10184-CAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)          | X | 3.11 | 69.88 | 19.22 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.14 | 69.58 | 19.32 |      | 150.0 |         |
|           |                                               | Z | 2.85 | 69.41 | 18.99 |      | 150.0 |         |
| 10185-CAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)        | X | 4.54 | 76.88 | 21.97 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.35 | 75.59 | 21.70 |      | 150.0 |         |
|           |                                               | Z | 4.41 | 78.06 | 22.45 |      | 150.0 |         |
| 10186-AAE | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)        | X | 3.64 | 72.20 | 19.01 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.59 | 71.42 | 18.95 |      | 150.0 |         |
|           |                                               | Z | 3.36 | 72.37 | 19.00 |      | 150.0 |         |
| 10187-CAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)        | X | 3.12 | 69.93 | 19.28 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.15 | 69.63 | 19.37 |      | 150.0 |         |
|           |                                               | Z | 2.86 | 69.48 | 19.07 |      | 150.0 |         |
| 10188-CAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)      | X | 4.72 | 77.70 | 22.40 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.51 | 76.33 | 22.11 |      | 150.0 |         |
|           |                                               | Z | 4.61 | 78.98 | 22.92 |      | 150.0 |         |
| 10189-AAF | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)      | X | 3.73 | 72.70 | 19.32 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.67 | 71.88 | 19.24 |      | 150.0 |         |
|           |                                               | Z | 3.46 | 72.92 | 19.33 |      | 150.0 |         |
| 10193-CAC | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)  | X | 4.59 | 66.76 | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.55 | 66.31 | 16.09 |      | 150.0 |         |
|           |                                               | Z | 4.42 | 66.80 | 16.19 |      | 150.0 |         |
| 10194-CAC | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | X | 4.77 | 67.10 | 16.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.74 | 66.66 | 16.21 |      | 150.0 |         |
|           |                                               | Z | 4.58 | 67.08 | 16.32 |      | 150.0 |         |
| 10195-CAC | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | X | 4.82 | 67.12 | 16.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.78 | 66.69 | 16.22 |      | 150.0 |         |
|           |                                               | Z | 4.62 | 67.10 | 16.34 |      | 150.0 |         |
| 10196-CAC | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)       | X | 4.60 | 66.84 | 16.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.56 | 66.40 | 16.12 |      | 150.0 |         |
|           |                                               | Z | 4.41 | 66.83 | 16.20 |      | 150.0 |         |
| 10197-CAC | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)      | X | 4.79 | 67.12 | 16.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.75 | 66.69 | 16.22 |      | 150.0 |         |
|           |                                               | Z | 4.59 | 67.09 | 16.33 |      | 150.0 |         |
| 10198-CAC | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)      | X | 4.82 | 67.14 | 16.47 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.78 | 66.71 | 16.24 |      | 150.0 |         |
|           |                                               | Z | 4.61 | 67.11 | 16.35 |      | 150.0 |         |
| 10219-CAC | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)       | X | 4.55 | 66.86 | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.51 | 66.41 | 16.08 |      | 150.0 |         |
|           |                                               | Z | 4.37 | 66.86 | 16.17 |      | 150.0 |         |
| 10220-CAC | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)    | X | 4.79 | 67.10 | 16.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.75 | 66.67 | 16.22 |      | 150.0 |         |
|           |                                               | Z | 4.58 | 67.05 | 16.32 |      | 150.0 |         |
| 10221-CAC | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)    | X | 4.83 | 67.06 | 16.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.79 | 66.64 | 16.23 |      | 150.0 |         |
|           |                                               | Z | 4.62 | 67.04 | 16.33 |      | 150.0 |         |
| 10222-CAC | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)        | X | 5.14 | 67.26 | 16.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 5.11 | 66.90 | 16.36 |      | 150.0 |         |
|           |                                               | Z | 4.97 | 67.15 | 16.43 |      | 150.0 |         |

|           |                                           |   |       |        |       |      |       |         |
|-----------|-------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10223-CAC | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)  | X | 5.45  | 67.43  | 16.65 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.45  | 67.18  | 16.52 |      | 150.0 |         |
|           |                                           | Z | 5.25  | 67.35  | 16.55 |      | 150.0 |         |
| 10224-CAC | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | X | 5.19  | 67.37  | 16.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.15  | 66.99  | 16.33 |      | 150.0 |         |
|           |                                           | Z | 5.01  | 67.26  | 16.42 |      | 150.0 |         |
| 10225-CAB | UMTS-FDD (HSPA+)                          | X | 2.89  | 66.55  | 15.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 2.80  | 65.71  | 15.24 |      | 150.0 |         |
|           |                                           | Z | 2.72  | 66.49  | 15.32 |      | 150.0 |         |
| 10226-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)  | X | 42.12 | 117.30 | 34.47 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 34.39 | 114.35 | 34.35 |      | 65.0  |         |
|           |                                           | Z | 25.78 | 110.75 | 32.49 |      | 65.0  |         |
| 10227-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)  | X | 33.34 | 110.83 | 32.01 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 29.14 | 109.23 | 32.25 |      | 65.0  |         |
|           |                                           | Z | 23.91 | 107.08 | 30.63 |      | 65.0  |         |
| 10228-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)    | X | 15.66 | 105.06 | 33.38 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 15.84 | 105.37 | 33.95 |      | 65.0  |         |
|           |                                           | Z | 7.75  | 93.33  | 29.68 |      | 65.0  |         |
| 10229-CAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)    | X | 37.28 | 114.84 | 33.72 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 31.13 | 112.26 | 33.67 |      | 65.0  |         |
|           |                                           | Z | 22.62 | 108.17 | 31.67 |      | 65.0  |         |
| 10230-CAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)    | X | 29.88 | 108.76 | 31.36 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 26.58 | 107.43 | 31.66 |      | 65.0  |         |
|           |                                           | Z | 20.85 | 104.61 | 29.86 |      | 65.0  |         |
| 10231-CAC | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)      | X | 14.65 | 103.59 | 32.85 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 14.88 | 103.95 | 33.43 |      | 65.0  |         |
|           |                                           | Z | 7.34  | 92.15  | 29.19 |      | 65.0  |         |
| 10232-CAE | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)    | X | 37.25 | 114.84 | 33.71 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 31.10 | 112.26 | 33.67 |      | 65.0  |         |
|           |                                           | Z | 22.58 | 108.16 | 31.67 |      | 65.0  |         |
| 10233-CAE | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)    | X | 29.82 | 108.74 | 31.35 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 26.53 | 107.41 | 31.66 |      | 65.0  |         |
|           |                                           | Z | 20.76 | 104.56 | 29.85 |      | 65.0  |         |
| 10234-CAE | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)      | X | 13.83 | 102.21 | 32.30 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 14.10 | 102.64 | 32.91 |      | 65.0  |         |
|           |                                           | Z | 7.03  | 91.14  | 28.71 |      | 65.0  |         |
| 10235-CAE | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)   | X | 37.39 | 114.93 | 33.74 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 31.21 | 112.34 | 33.70 |      | 65.0  |         |
|           |                                           | Z | 22.65 | 108.24 | 31.69 |      | 65.0  |         |
| 10236-CAE | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)   | X | 30.43 | 109.05 | 31.43 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 27.03 | 107.71 | 31.73 |      | 65.0  |         |
|           |                                           | Z | 21.22 | 104.87 | 29.93 |      | 65.0  |         |
| 10237-CAE | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)     | X | 14.73 | 103.74 | 32.90 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 14.96 | 104.11 | 33.48 |      | 65.0  |         |
|           |                                           | Z | 7.35  | 92.21  | 29.22 |      | 65.0  |         |
| 10238-CAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)   | X | 37.20 | 114.83 | 33.71 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 31.07 | 112.26 | 33.67 |      | 65.0  |         |
|           |                                           | Z | 22.51 | 108.13 | 31.66 |      | 65.0  |         |

|           |                                            |   |       |        |       |      |      |         |
|-----------|--------------------------------------------|---|-------|--------|-------|------|------|---------|
| 10239-CAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 29.73 | 108.72 | 31.35 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 26.48 | 107.40 | 31.66 |      | 65.0 |         |
|           |                                            | Z | 20.66 | 104.50 | 29.83 |      | 65.0 |         |
| 10240-CAE | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 14.67 | 103.66 | 32.88 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 14.89 | 104.03 | 33.46 |      | 65.0 |         |
|           |                                            | Z | 7.33  | 92.17  | 29.20 |      | 65.0 |         |
| 10241-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 8.22  | 81.62  | 25.84 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.21  | 81.11  | 25.93 |      | 65.0 |         |
|           |                                            | Z | 7.55  | 81.89  | 25.74 |      | 65.0 |         |
| 10242-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 7.60  | 79.92  | 25.06 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.70  | 79.68  | 25.24 |      | 65.0 |         |
|           |                                            | Z | 6.63  | 79.21  | 24.57 |      | 65.0 |         |
| 10243-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 6.06  | 76.28  | 24.43 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.20  | 76.29  | 24.69 |      | 65.0 |         |
|           |                                            | Z | 5.27  | 75.02  | 23.70 |      | 65.0 |         |
| 10244-CAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)   | X | 6.94  | 79.13  | 20.40 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.61  | 80.93  | 21.65 |      | 65.0 |         |
|           |                                            | Z | 4.63  | 73.01  | 16.54 |      | 65.0 |         |
| 10245-CAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)   | X | 6.74  | 78.35  | 20.03 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.38  | 80.11  | 21.28 |      | 65.0 |         |
|           |                                            | Z | 4.46  | 72.20  | 16.14 |      | 65.0 |         |
| 10246-CAC | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)     | X | 8.26  | 86.16  | 23.38 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.07  | 83.23  | 22.34 |      | 65.0 |         |
|           |                                            | Z | 4.76  | 77.46  | 19.00 |      | 65.0 |         |
| 10247-CAE | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 5.60  | 76.50  | 20.35 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.37  | 75.45  | 19.96 |      | 65.0 |         |
|           |                                            | Z | 4.29  | 72.64  | 17.71 |      | 65.0 |         |
| 10248-CAE | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 5.54  | 75.70  | 19.98 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.35  | 74.79  | 19.65 |      | 65.0 |         |
|           |                                            | Z | 4.24  | 71.91  | 17.36 |      | 65.0 |         |
| 10249-CAE | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 9.19  | 88.24  | 24.95 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.96  | 85.32  | 23.90 |      | 65.0 |         |
|           |                                            | Z | 6.28  | 82.28  | 22.02 |      | 65.0 |         |
| 10250-CAE | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 6.20  | 77.76  | 22.32 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.01  | 76.85  | 21.97 |      | 65.0 |         |
|           |                                            | Z | 5.20  | 75.42  | 20.86 |      | 65.0 |         |
| 10251-CAE | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 5.85  | 75.32  | 20.92 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.73  | 74.58  | 20.63 |      | 65.0 |         |
|           |                                            | Z | 4.92  | 73.12  | 19.45 |      | 65.0 |         |
| 10252-CAE | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 8.09  | 84.95  | 24.58 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.42  | 82.94  | 23.81 |      | 65.0 |         |
|           |                                            | Z | 6.31  | 81.52  | 22.96 |      | 65.0 |         |
| 10253-CAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 5.80  | 74.00  | 20.63 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.72  | 73.40  | 20.39 |      | 65.0 |         |
|           |                                            | Z | 5.04  | 72.28  | 19.52 |      | 65.0 |         |
| 10254-CAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 6.14  | 74.84  | 21.30 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.05  | 74.22  | 21.07 |      | 65.0 |         |
|           |                                            | Z | 5.36  | 73.21  | 20.25 |      | 65.0 |         |

|           |                                             |   |      |       |       |      |      |         |
|-----------|---------------------------------------------|---|------|-------|-------|------|------|---------|
| 10255-CAE | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)     | X | 6.81 | 79.50 | 22.67 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.50 | 78.25 | 22.16 |      | 65.0 |         |
|           |                                             | Z | 5.72 | 77.37 | 21.59 |      | 65.0 |         |
| 10256-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | X | 5.54 | 75.38 | 17.88 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.45 | 78.02 | 19.55 |      | 65.0 |         |
|           |                                             | Z | 3.15 | 67.52 | 12.83 |      | 65.0 |         |
| 10257-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | X | 5.31 | 74.31 | 17.34 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.14 | 76.80 | 18.96 |      | 65.0 |         |
|           |                                             | Z | 3.05 | 66.79 | 12.37 |      | 65.0 |         |
| 10258-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)   | X | 6.24 | 81.13 | 20.76 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.52 | 78.91 | 19.97 |      | 65.0 |         |
|           |                                             | Z | 3.09 | 70.62 | 15.05 |      | 65.0 |         |
| 10259-CAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)   | X | 5.84 | 76.93 | 21.04 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.63 | 75.94 | 20.66 |      | 65.0 |         |
|           |                                             | Z | 4.68 | 73.82 | 18.92 |      | 65.0 |         |
| 10260-CAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)   | X | 5.84 | 76.54 | 20.88 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.65 | 75.62 | 20.54 |      | 65.0 |         |
|           |                                             | Z | 4.68 | 73.47 | 18.76 |      | 65.0 |         |
| 10261-CAC | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)     | X | 7.94 | 85.32 | 24.30 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 7.17 | 83.07 | 23.45 |      | 65.0 |         |
|           |                                             | Z | 5.90 | 80.89 | 22.01 |      | 65.0 |         |
| 10262-CAE | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)   | X | 6.19 | 77.72 | 22.28 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.00 | 76.81 | 21.93 |      | 65.0 |         |
|           |                                             | Z | 5.19 | 75.36 | 20.81 |      | 65.0 |         |
| 10263-CAE | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)   | X | 5.84 | 75.30 | 20.91 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.72 | 74.57 | 20.63 |      | 65.0 |         |
|           |                                             | Z | 4.91 | 73.09 | 19.44 |      | 65.0 |         |
| 10264-CAE | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)     | X | 8.00 | 84.72 | 24.48 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 7.34 | 82.73 | 23.71 |      | 65.0 |         |
|           |                                             | Z | 6.24 | 81.28 | 22.84 |      | 65.0 |         |
| 10265-CAE | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)  | X | 5.98 | 74.73 | 20.93 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.89 | 74.12 | 20.69 |      | 65.0 |         |
|           |                                             | Z | 5.12 | 72.74 | 19.78 |      | 65.0 |         |
| 10266-CAE | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)  | X | 6.33 | 75.56 | 21.64 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.22 | 74.93 | 21.40 |      | 65.0 |         |
|           |                                             | Z | 5.49 | 73.76 | 20.60 |      | 65.0 |         |
| 10267-CAE | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)    | X | 7.32 | 80.56 | 22.82 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.92 | 79.16 | 22.26 |      | 65.0 |         |
|           |                                             | Z | 6.05 | 78.17 | 21.72 |      | 65.0 |         |
| 10268-CAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)  | X | 6.52 | 74.24 | 21.04 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.45 | 73.73 | 20.85 |      | 65.0 |         |
|           |                                             | Z | 5.74 | 72.63 | 20.16 |      | 65.0 |         |
| 10269-CAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)  | X | 6.46 | 73.71 | 20.87 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.39 | 73.22 | 20.69 |      | 65.0 |         |
|           |                                             | Z | 5.73 | 72.22 | 20.02 |      | 65.0 |         |
| 10270-CAE | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)    | X | 6.79 | 76.82 | 21.42 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.57 | 75.90 | 21.04 |      | 65.0 |         |
|           |                                             | Z | 5.88 | 75.11 | 20.59 |      | 65.0 |         |

|           |                                                                    |   |       |       |       |      |       |         |
|-----------|--------------------------------------------------------------------|---|-------|-------|-------|------|-------|---------|
| 10274-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)                          | X | 2.66  | 66.98 | 15.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.54  | 65.90 | 15.04 |      | 150.0 |         |
|           |                                                                    | Z | 2.55  | 67.07 | 15.35 |      | 150.0 |         |
| 10275-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)                           | X | 1.78  | 69.77 | 16.72 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.55  | 67.13 | 15.03 |      | 150.0 |         |
|           |                                                                    | Z | 1.62  | 69.04 | 16.02 |      | 150.0 |         |
| 10277-CAA | PHS (QPSK)                                                         | X | 2.12  | 61.97 | 7.55  | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 2.25  | 62.30 | 7.96  |      | 50.0  |         |
|           |                                                                    | Z | 1.72  | 60.31 | 5.78  |      | 50.0  |         |
| 10278-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5)                                 | X | 10.93 | 86.19 | 21.29 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 9.64  | 84.41 | 20.95 |      | 50.0  |         |
|           |                                                                    | Z | 3.57  | 69.00 | 13.15 |      | 50.0  |         |
| 10279-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38)                                | X | 11.22 | 86.49 | 21.46 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 9.91  | 84.71 | 21.11 |      | 50.0  |         |
|           |                                                                    | Z | 3.69  | 69.35 | 13.38 |      | 50.0  |         |
| 10290-AAB | CDMA2000, RC1, SO55, Full Rate                                     | X | 1.95  | 72.86 | 16.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.38  | 67.46 | 13.46 |      | 150.0 |         |
|           |                                                                    | Z | 1.34  | 68.81 | 13.27 |      | 150.0 |         |
| 10291-AAB | CDMA2000, RC3, SO55, Full Rate                                     | X | 1.06  | 69.47 | 14.79 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.76  | 64.53 | 11.71 |      | 150.0 |         |
|           |                                                                    | Z | 0.76  | 66.05 | 11.81 |      | 150.0 |         |
| 10292-AAB | CDMA2000, RC3, SO32, Full Rate                                     | X | 1.83  | 78.35 | 18.94 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.91  | 67.73 | 13.68 |      | 150.0 |         |
|           |                                                                    | Z | 1.34  | 73.93 | 15.68 |      | 150.0 |         |
| 10293-AAB | CDMA2000, RC3, SO3, Full Rate                                      | X | 4.73  | 93.04 | 24.47 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.31  | 72.72 | 16.40 |      | 150.0 |         |
|           |                                                                    | Z | 6.43  | 94.81 | 23.11 |      | 150.0 |         |
| 10295-AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr.                              | X | 10.60 | 89.87 | 26.40 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 10.25 | 88.78 | 26.08 |      | 50.0  |         |
|           |                                                                    | Z | 12.25 | 89.80 | 24.68 |      | 50.0  |         |
| 10297-AAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)                            | X | 2.99  | 71.06 | 17.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.73  | 69.18 | 16.24 |      | 150.0 |         |
|           |                                                                    | Z | 2.72  | 70.32 | 16.96 |      | 150.0 |         |
| 10298-AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)                             | X | 1.90  | 70.47 | 15.90 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.56  | 67.01 | 13.91 |      | 150.0 |         |
|           |                                                                    | Z | 1.44  | 67.67 | 13.50 |      | 150.0 |         |
| 10299-AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)                           | X | 3.07  | 71.64 | 15.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 3.23  | 72.42 | 16.33 |      | 150.0 |         |
|           |                                                                    | Z | 2.17  | 67.61 | 12.32 |      | 150.0 |         |
| 10300-AAD | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)                           | X | 2.19  | 66.26 | 12.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.31  | 66.80 | 13.02 |      | 150.0 |         |
|           |                                                                    | Z | 1.57  | 63.33 | 9.50  |      | 150.0 |         |
| 10301-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)                 | X | 4.82  | 65.43 | 17.57 | 4.17 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.87  | 65.32 | 17.50 |      | 50.0  |         |
|           |                                                                    | Z | 4.60  | 65.72 | 17.49 |      | 50.0  |         |
| 10302-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols) | X | 5.31  | 66.17 | 18.35 | 4.96 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 5.36  | 66.00 | 18.25 |      | 50.0  |         |
|           |                                                                    | Z | 5.00  | 66.00 | 18.02 |      | 50.0  |         |

|           |                                                                     |   |       |       |       |       |       |         |
|-----------|---------------------------------------------------------------------|---|-------|-------|-------|-------|-------|---------|
| 10303-AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)                 | X | 5.06  | 65.83 | 18.21 | 4.96  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 5.11  | 65.70 | 18.12 |       | 50.0  |         |
|           |                                                                     | Z | 4.75  | 65.61 | 17.82 |       | 50.0  |         |
| 10304-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)                 | X | 4.87  | 65.69 | 17.69 | 4.17  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.90  | 65.47 | 17.55 |       | 50.0  |         |
|           |                                                                     | Z | 4.58  | 65.56 | 17.35 |       | 50.0  |         |
| 10305-AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)    | X | 4.43  | 67.35 | 19.83 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.56  | 67.70 | 19.98 |       | 35.0  |         |
|           |                                                                     | Z | 4.15  | 67.17 | 19.10 |       | 35.0  |         |
| 10306-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)    | X | 4.77  | 66.43 | 19.36 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.86  | 66.61 | 19.45 |       | 35.0  |         |
|           |                                                                     | Z | 4.49  | 66.31 | 18.82 |       | 35.0  |         |
| 10307-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)     | X | 4.67  | 66.65 | 19.36 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.78  | 66.88 | 19.46 |       | 35.0  |         |
|           |                                                                     | Z | 4.37  | 66.39 | 18.75 |       | 35.0  |         |
| 10308-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)                | X | 4.64  | 66.81 | 19.48 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.74  | 67.03 | 19.58 |       | 35.0  |         |
|           |                                                                     | Z | 4.35  | 66.60 | 18.90 |       | 35.0  |         |
| 10309-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols) | X | 4.84  | 66.72 | 19.54 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.94  | 66.92 | 19.63 |       | 35.0  |         |
|           |                                                                     | Z | 4.52  | 66.47 | 18.95 |       | 35.0  |         |
| 10310-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)  | X | 4.71  | 66.49 | 19.33 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.81  | 66.68 | 19.42 |       | 35.0  |         |
|           |                                                                     | Z | 4.43  | 66.37 | 18.80 |       | 35.0  |         |
| 10311-AAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)                            | X | 3.36  | 70.26 | 16.95 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 3.08  | 68.46 | 15.91 |       | 150.0 |         |
|           |                                                                     | Z | 3.08  | 69.51 | 16.57 |       | 150.0 |         |
| 10313-AAA | IDEN 1:3                                                            | X | 5.95  | 81.40 | 19.48 | 6.99  | 70.0  | ± 9.6 % |
|           |                                                                     | Y | 4.30  | 76.35 | 17.48 |       | 70.0  |         |
|           |                                                                     | Z | 3.21  | 73.80 | 16.43 |       | 70.0  |         |
| 10314-AAA | IDEN 1:6                                                            | X | 12.17 | 97.07 | 27.72 | 10.00 | 30.0  | ± 9.6 % |
|           |                                                                     | Y | 7.44  | 87.94 | 24.60 |       | 30.0  |         |
|           |                                                                     | Z | 6.18  | 85.76 | 23.72 |       | 30.0  |         |
| 10315-AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)           | X | 1.10  | 64.61 | 16.02 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.01  | 63.21 | 14.85 |       | 150.0 |         |
|           |                                                                     | Z | 1.05  | 64.14 | 15.48 |       | 150.0 |         |
| 10316-AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)       | X | 4.65  | 66.81 | 16.47 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.62  | 66.42 | 16.27 |       | 150.0 |         |
|           |                                                                     | Z | 4.46  | 66.78 | 16.31 |       | 150.0 |         |
| 10317-AAC | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)             | X | 4.65  | 66.81 | 16.47 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.62  | 66.42 | 16.27 |       | 150.0 |         |
|           |                                                                     | Z | 4.46  | 66.78 | 16.31 |       | 150.0 |         |
| 10400-AAD | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)                 | X | 4.78  | 67.16 | 16.44 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.74  | 66.73 | 16.21 |       | 150.0 |         |
|           |                                                                     | Z | 4.55  | 67.11 | 16.31 |       | 150.0 |         |
| 10401-AAD | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)                 | X | 5.43  | 67.23 | 16.53 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 5.42  | 66.92 | 16.38 |       | 150.0 |         |
|           |                                                                     | Z | 5.24  | 67.11 | 16.40 |       | 150.0 |         |

|           |                                                                                 |   |        |        |       |      |       |         |
|-----------|---------------------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10402-AAD | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)                             | X | 5.71   | 67.66  | 16.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.70   | 67.34  | 16.43 |      | 150.0 |         |
|           |                                                                                 | Z | 5.52   | 67.48  | 16.45 |      | 150.0 |         |
| 10403-AAB | CDMA2000 (1xEV-DO, Rev. 0)                                                      | X | 1.95   | 72.86  | 16.32 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                 | Y | 1.38   | 67.46  | 13.46 |      | 115.0 |         |
|           |                                                                                 | Z | 1.34   | 68.81  | 13.27 |      | 115.0 |         |
| 10404-AAB | CDMA2000 (1xEV-DO, Rev. A)                                                      | X | 1.95   | 72.86  | 16.32 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                 | Y | 1.38   | 67.46  | 13.46 |      | 115.0 |         |
|           |                                                                                 | Z | 1.34   | 68.81  | 13.27 |      | 115.0 |         |
| 10406-AAB | CDMA2000, RC3, SO32, SCH0, Full Rate                                            | X | 100.00 | 122.38 | 30.73 | 0.00 | 100.0 | ± 9.6 % |
|           |                                                                                 | Y | 81.48  | 123.67 | 32.28 |      | 100.0 |         |
|           |                                                                                 | Z | 100.00 | 114.83 | 26.66 |      | 100.0 |         |
| 10410-AAE | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4) | X | 100.00 | 123.65 | 31.04 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                                 | Y | 100.00 | 127.30 | 33.02 |      | 80.0  |         |
|           |                                                                                 | Z | 100.00 | 122.18 | 29.60 |      | 80.0  |         |
| 10415-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)                       | X | 1.02   | 63.74  | 15.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 0.94   | 62.36  | 14.20 |      | 150.0 |         |
|           |                                                                                 | Z | 0.99   | 63.49  | 14.99 |      | 150.0 |         |
| 10416-AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)                   | X | 4.59   | 66.79  | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.55   | 66.36  | 16.15 |      | 150.0 |         |
|           |                                                                                 | Z | 4.42   | 66.82  | 16.27 |      | 150.0 |         |
| 10417-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)                       | X | 4.59   | 66.79  | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.55   | 66.36  | 16.15 |      | 150.0 |         |
|           |                                                                                 | Z | 4.42   | 66.82  | 16.27 |      | 150.0 |         |
| 10418-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)   | X | 4.58   | 66.96  | 16.41 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.54   | 66.49  | 16.15 |      | 150.0 |         |
|           |                                                                                 | Z | 4.42   | 67.01  | 16.31 |      | 150.0 |         |
| 10419-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble)  | X | 4.61   | 66.90  | 16.41 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.56   | 66.45  | 16.16 |      | 150.0 |         |
|           |                                                                                 | Z | 4.43   | 66.95  | 16.30 |      | 150.0 |         |
| 10422-AAB | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)                                    | X | 4.73   | 66.90  | 16.41 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.69   | 66.47  | 16.18 |      | 150.0 |         |
|           |                                                                                 | Z | 4.54   | 66.92  | 16.31 |      | 150.0 |         |
| 10423-AAB | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)                                 | X | 4.91   | 67.24  | 16.54 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.87   | 66.82  | 16.31 |      | 150.0 |         |
|           |                                                                                 | Z | 4.68   | 67.21  | 16.40 |      | 150.0 |         |
| 10424-AAB | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)                                 | X | 4.82   | 67.19  | 16.51 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.79   | 66.76  | 16.28 |      | 150.0 |         |
|           |                                                                                 | Z | 4.61   | 67.16  | 16.38 |      | 150.0 |         |
| 10425-AAB | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)                                     | X | 5.41   | 67.47  | 16.65 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.40   | 67.17  | 16.50 |      | 150.0 |         |
|           |                                                                                 | Z | 5.21   | 67.35  | 16.53 |      | 150.0 |         |
| 10426-AAB | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)                                   | X | 5.41   | 67.47  | 16.65 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.40   | 67.19  | 16.50 |      | 150.0 |         |
|           |                                                                                 | Z | 5.23   | 67.42  | 16.56 |      | 150.0 |         |

|           |                                                                |   |        |        |       |      |       |         |
|-----------|----------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10427-AAB | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)                 | X | 5.42   | 67.47  | 16.64 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.41   | 67.16  | 16.48 |      | 150.0 |         |
|           |                                                                | Z | 5.22   | 67.32  | 16.51 |      | 150.0 |         |
| 10430-AAC | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)                               | X | 4.40   | 71.17  | 18.58 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.23   | 70.08  | 17.99 |      | 150.0 |         |
|           |                                                                | Z | 4.30   | 72.10  | 18.56 |      | 150.0 |         |
| 10431-AAC | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)                              | X | 4.31   | 67.42  | 16.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.26   | 66.88  | 16.15 |      | 150.0 |         |
|           |                                                                | Z | 4.07   | 67.45  | 16.24 |      | 150.0 |         |
| 10432-AAC | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)                              | X | 4.60   | 67.26  | 16.49 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.56   | 66.79  | 16.22 |      | 150.0 |         |
|           |                                                                | Z | 4.38   | 67.26  | 16.33 |      | 150.0 |         |
| 10433-AAC | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)                              | X | 4.84   | 67.23  | 16.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.80   | 66.80  | 16.30 |      | 150.0 |         |
|           |                                                                | Z | 4.63   | 67.20  | 16.40 |      | 150.0 |         |
| 10434-AAA | W-CDMA (BS Test Model 1, 64 DPCH)                              | X | 4.54   | 72.17  | 18.64 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.31   | 70.81  | 17.94 |      | 150.0 |         |
|           |                                                                | Z | 4.47   | 73.20  | 18.53 |      | 150.0 |         |
| 10435-AAE | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 100.00 | 123.43 | 30.93 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                | Y | 100.00 | 127.09 | 32.93 |      | 80.0  |         |
|           |                                                                | Z | 100.00 | 121.88 | 29.46 |      | 80.0  |         |
| 10447-AAC | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)                 | X | 3.63   | 67.60  | 15.97 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.55   | 66.82  | 15.51 |      | 150.0 |         |
|           |                                                                | Z | 3.36   | 67.49  | 15.39 |      | 150.0 |         |
| 10448-AAC | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)                | X | 4.14   | 67.21  | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.08   | 66.64  | 16.00 |      | 150.0 |         |
|           |                                                                | Z | 3.93   | 67.24  | 16.11 |      | 150.0 |         |
| 10449-AAC | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)                | X | 4.40   | 67.10  | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.35   | 66.60  | 16.11 |      | 150.0 |         |
|           |                                                                | Z | 4.21   | 67.10  | 16.24 |      | 150.0 |         |
| 10450-AAC | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)                | X | 4.59   | 67.00  | 16.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.54   | 66.54  | 16.14 |      | 150.0 |         |
|           |                                                                | Z | 4.41   | 66.98  | 16.27 |      | 150.0 |         |
| 10451-AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)                | X | 3.56   | 67.91  | 15.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.45   | 67.01  | 15.16 |      | 150.0 |         |
|           |                                                                | Z | 3.21   | 67.51  | 14.85 |      | 150.0 |         |
| 10456-AAB | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)           | X | 6.26   | 68.01  | 16.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 6.26   | 67.75  | 16.66 |      | 150.0 |         |
|           |                                                                | Z | 6.13   | 67.97  | 16.72 |      | 150.0 |         |
| 10457-AAA | UMTS-FDD (DC-HSDPA)                                            | X | 3.81   | 65.42  | 16.11 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.77   | 64.98  | 15.86 |      | 150.0 |         |
|           |                                                                | Z | 3.73   | 65.50  | 15.98 |      | 150.0 |         |
| 10458-AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers)                         | X | 4.16   | 71.37  | 18.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.92   | 69.91  | 17.32 |      | 150.0 |         |
|           |                                                                | Z | 4.02   | 72.11  | 17.63 |      | 150.0 |         |
| 10459-AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers)                         | X | 5.19   | 68.40  | 18.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.10   | 67.75  | 18.06 |      | 150.0 |         |
|           |                                                                | Z | 5.01   | 69.18  | 18.25 |      | 150.0 |         |

|           |                                                                   |   |        |        |       |      |       |         |
|-----------|-------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10460-AAA | UMTS-FDD (WCDMA, AMR)                                             | X | 1.07   | 72.05  | 18.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                   | Y | 0.81   | 67.05  | 15.17 |      | 150.0 |         |
|           |                                                                   | Z | 0.95   | 70.49  | 17.24 |      | 150.0 |         |
| 10461-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 129.11 | 33.59 | 3.29 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 132.68 | 35.56 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 128.17 | 32.38 |      | 80.0  |         |
| 10462-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 29.76  | 94.39  | 20.32 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 112.07 | 25.94 |      | 80.0  |         |
|           |                                                                   | Z | 0.79   | 60.49  | 7.76  |      | 80.0  |         |
| 10463-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 2.50   | 68.97  | 12.20 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 107.58 | 23.85 |      | 80.0  |         |
|           |                                                                   | Z | 0.77   | 60.00  | 6.89  |      | 80.0  |         |
| 10464-AAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 100.00 | 126.29 | 32.12 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 130.29 | 34.26 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 124.25 | 30.42 |      | 80.0  |         |
| 10465-AAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 9.13   | 82.53  | 17.12 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 111.30 | 25.58 |      | 80.0  |         |
|           |                                                                   | Z | 0.75   | 60.00  | 7.44  |      | 80.0  |         |
| 10466-AAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.98   | 66.71  | 11.27 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 99.88  | 106.88 | 23.53 |      | 80.0  |         |
|           |                                                                   | Z | 0.78   | 60.00  | 6.83  |      | 80.0  |         |
| 10467-AAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 100.00 | 126.60 | 32.25 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 130.59 | 34.40 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 124.67 | 30.60 |      | 80.0  |         |
| 10468-AAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 11.66  | 85.00  | 17.83 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 111.53 | 25.68 |      | 80.0  |         |
|           |                                                                   | Z | 0.75   | 60.09  | 7.51  |      | 80.0  |         |
| 10469-AAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.98   | 66.75  | 11.28 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 106.90 | 23.54 |      | 80.0  |         |
|           |                                                                   | Z | 0.77   | 60.00  | 6.83  |      | 80.0  |         |
| 10470-AAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 126.64 | 32.26 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 130.65 | 34.41 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 124.69 | 30.60 |      | 80.0  |         |
| 10471-AAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 11.32  | 84.67  | 17.72 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 111.46 | 25.64 |      | 80.0  |         |
|           |                                                                   | Z | 0.75   | 60.04  | 7.47  |      | 80.0  |         |
| 10472-AAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 1.96   | 66.63  | 11.22 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 106.82 | 23.49 |      | 80.0  |         |
|           |                                                                   | Z | 0.77   | 60.00  | 6.81  |      | 80.0  |         |
| 10473-AAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 126.60 | 32.24 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 130.61 | 34.39 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 124.64 | 30.58 |      | 80.0  |         |
| 10474-AAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 11.06  | 84.45  | 17.66 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 111.47 | 25.64 |      | 80.0  |         |
|           |                                                                   | Z | 0.74   | 60.02  | 7.45  |      | 80.0  |         |
| 10475-AAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 1.95   | 66.59  | 11.20 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 99.99  | 106.84 | 23.50 |      | 80.0  |         |
|           |                                                                   | Z | 0.77   | 60.00  | 6.81  |      | 80.0  |         |

|           |                                                                     |   |        |        |       |      |      |         |
|-----------|---------------------------------------------------------------------|---|--------|--------|-------|------|------|---------|
| 10477-AAE | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)    | X | 9.10   | 82.47  | 17.07 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 100.00 | 111.24 | 25.54 |      | 80.0 |         |
|           |                                                                     | Z | 0.74   | 60.00  | 7.42  |      | 80.0 |         |
| 10478-AAE | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)    | X | 1.93   | 66.47  | 11.14 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 96.81  | 106.44 | 23.40 |      | 80.0 |         |
|           |                                                                     | Z | 0.77   | 60.00  | 6.80  |      | 80.0 |         |
| 10479-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 9.68   | 90.97  | 25.10 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 13.83  | 97.37  | 27.65 |      | 80.0 |         |
|           |                                                                     | Z | 12.23  | 94.71  | 25.17 |      | 80.0 |         |
| 10480-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 11.91  | 88.02  | 22.17 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 19.25  | 95.65  | 25.10 |      | 80.0 |         |
|           |                                                                     | Z | 7.50   | 81.30  | 18.54 |      | 80.0 |         |
| 10481-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 9.15   | 83.59  | 20.38 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 15.12  | 91.18  | 23.39 |      | 80.0 |         |
|           |                                                                     | Z | 4.40   | 74.24  | 15.71 |      | 80.0 |         |
| 10482-AAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 4.76   | 79.70  | 20.44 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.53   | 74.74  | 18.45 |      | 80.0 |         |
|           |                                                                     | Z | 2.62   | 71.60  | 16.13 |      | 80.0 |         |
| 10483-AAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.87   | 78.17  | 19.16 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 8.24   | 83.44  | 21.55 |      | 80.0 |         |
|           |                                                                     | Z | 2.93   | 69.04  | 14.15 |      | 80.0 |         |
| 10484-AAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.35   | 76.61  | 18.60 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 7.24   | 81.28  | 20.83 |      | 80.0 |         |
|           |                                                                     | Z | 2.73   | 67.94  | 13.69 |      | 80.0 |         |
| 10485-AAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 4.47   | 78.87  | 21.04 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.68   | 75.23  | 19.49 |      | 80.0 |         |
|           |                                                                     | Z | 3.15   | 74.27  | 18.50 |      | 80.0 |         |
| 10486-AAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.79   | 72.50  | 18.04 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.38   | 70.29  | 17.05 |      | 80.0 |         |
|           |                                                                     | Z | 2.84   | 69.02  | 15.57 |      | 80.0 |         |
| 10487-AAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.74   | 71.89  | 17.77 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.37   | 69.86  | 16.85 |      | 80.0 |         |
|           |                                                                     | Z | 2.81   | 68.50  | 15.32 |      | 80.0 |         |
| 10488-AAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 4.24   | 75.86  | 20.43 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.83   | 73.65  | 19.40 |      | 80.0 |         |
|           |                                                                     | Z | 3.28   | 72.72  | 18.85 |      | 80.0 |         |
| 10489-AAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.72   | 70.49  | 18.27 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.53   | 69.26  | 17.66 |      | 80.0 |         |
|           |                                                                     | Z | 3.19   | 68.97  | 17.14 |      | 80.0 |         |
| 10490-AAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.79   | 70.18  | 18.14 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.62   | 69.04  | 17.58 |      | 80.0 |         |
|           |                                                                     | Z | 3.27   | 68.77  | 17.05 |      | 80.0 |         |
| 10491-AAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 4.23   | 73.19  | 19.42 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.95   | 71.65  | 18.67 |      | 80.0 |         |
|           |                                                                     | Z | 3.47   | 70.90  | 18.25 |      | 80.0 |         |
| 10492-AAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.97   | 69.24  | 17.95 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.85   | 68.36  | 17.51 |      | 80.0 |         |
|           |                                                                     | Z | 3.50   | 68.04  | 17.11 |      | 80.0 |         |

|           |                                                                      |   |      |       |       |      |      |         |
|-----------|----------------------------------------------------------------------|---|------|-------|-------|------|------|---------|
| 10493-AAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.03 | 69.04 | 17.87 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.92 | 68.21 | 17.46 |      | 80.0 |         |
|           |                                                                      | Z | 3.56 | 67.90 | 17.04 |      | 80.0 |         |
| 10494-AAE | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 4.79 | 75.46 | 20.14 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.38 | 73.53 | 19.24 |      | 80.0 |         |
|           |                                                                      | Z | 3.78 | 72.48 | 18.78 |      | 80.0 |         |
| 10495-AAE | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.03 | 69.76 | 18.19 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.90 | 68.85 | 17.73 |      | 80.0 |         |
|           |                                                                      | Z | 3.53 | 68.35 | 17.31 |      | 80.0 |         |
| 10496-AAE | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.08 | 69.35 | 18.04 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.97 | 68.51 | 17.62 |      | 80.0 |         |
|           |                                                                      | Z | 3.60 | 68.09 | 17.22 |      | 80.0 |         |
| 10497-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 3.72 | 75.87 | 18.08 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.64 | 70.76 | 15.98 |      | 80.0 |         |
|           |                                                                      | Z | 1.51 | 64.60 | 11.77 |      | 80.0 |         |
| 10498-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 2.30 | 66.27 | 12.99 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.02 | 64.31 | 12.06 |      | 80.0 |         |
|           |                                                                      | Z | 1.20 | 60.00 | 8.21  |      | 80.0 |         |
| 10499-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 2.18 | 65.35 | 12.41 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.97 | 63.70 | 11.62 |      | 80.0 |         |
|           |                                                                      | Z | 1.22 | 60.00 | 8.05  |      | 80.0 |         |
| 10500-AAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 4.19 | 76.87 | 20.53 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.63 | 74.04 | 19.27 |      | 80.0 |         |
|           |                                                                      | Z | 3.15 | 73.35 | 18.54 |      | 80.0 |         |
| 10501-AAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.74 | 71.57 | 18.07 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.44 | 69.83 | 17.26 |      | 80.0 |         |
|           |                                                                      | Z | 3.03 | 69.25 | 16.29 |      | 80.0 |         |
| 10502-AAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.79 | 71.34 | 17.92 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.50 | 69.66 | 17.14 |      | 80.0 |         |
|           |                                                                      | Z | 3.07 | 69.05 | 16.12 |      | 80.0 |         |
| 10503-AAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 4.18 | 75.62 | 20.32 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.77 | 73.43 | 19.30 |      | 80.0 |         |
|           |                                                                      | Z | 3.23 | 72.50 | 18.74 |      | 80.0 |         |
| 10504-AAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.70 | 70.40 | 18.21 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.52 | 69.18 | 17.61 |      | 80.0 |         |
|           |                                                                      | Z | 3.17 | 68.86 | 17.07 |      | 80.0 |         |
| 10505-AAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.77 | 70.08 | 18.09 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.60 | 68.95 | 17.53 |      | 80.0 |         |
|           |                                                                      | Z | 3.25 | 68.67 | 16.99 |      | 80.0 |         |
| 10506-AAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 4.74 | 75.29 | 20.06 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.34 | 73.37 | 19.17 |      | 80.0 |         |
|           |                                                                      | Z | 3.74 | 72.32 | 18.70 |      | 80.0 |         |
| 10507-AAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 4.01 | 69.69 | 18.15 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.88 | 68.79 | 17.69 |      | 80.0 |         |
|           |                                                                      | Z | 3.51 | 68.29 | 17.27 |      | 80.0 |         |

|           |                                                                     |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10508-AAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.07 | 69.28 | 18.00 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.96 | 68.45 | 17.58 |      | 80.0  |         |
|           |                                                                     | Z | 3.59 | 68.02 | 17.17 |      | 80.0  |         |
| 10509-AAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 4.87 | 73.12 | 19.15 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.57 | 71.69 | 18.46 |      | 80.0  |         |
|           |                                                                     | Z | 4.08 | 70.95 | 18.12 |      | 80.0  |         |
| 10510-AAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.46 | 69.19 | 17.97 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.36 | 68.46 | 17.61 |      | 80.0  |         |
|           |                                                                     | Z | 3.98 | 67.93 | 17.23 |      | 80.0  |         |
| 10511-AAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.49 | 68.83 | 17.85 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.40 | 68.15 | 17.52 |      | 80.0  |         |
|           |                                                                     | Z | 4.03 | 67.70 | 17.16 |      | 80.0  |         |
| 10512-AAE | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 5.35 | 75.53 | 19.95 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.89 | 73.64 | 19.09 |      | 80.0  |         |
|           |                                                                     | Z | 4.27 | 72.56 | 18.64 |      | 80.0  |         |
| 10513-AAE | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.37 | 69.62 | 18.15 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.26 | 68.83 | 17.75 |      | 80.0  |         |
|           |                                                                     | Z | 3.86 | 68.15 | 17.33 |      | 80.0  |         |
| 10514-AAE | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.36 | 69.04 | 17.95 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.26 | 68.32 | 17.60 |      | 80.0  |         |
|           |                                                                     | Z | 3.89 | 67.75 | 17.20 |      | 80.0  |         |
| 10515-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)           | X | 0.98 | 64.01 | 15.52 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.90 | 62.52 | 14.23 |      | 150.0 |         |
|           |                                                                     | Z | 0.95 | 63.71 | 15.08 |      | 150.0 |         |
| 10516-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         | X | 0.96 | 80.43 | 22.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.52 | 69.16 | 15.73 |      | 150.0 |         |
|           |                                                                     | Z | 0.74 | 75.71 | 19.80 |      | 150.0 |         |
| 10517-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)          | X | 0.87 | 66.95 | 16.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.75 | 64.30 | 14.64 |      | 150.0 |         |
|           |                                                                     | Z | 0.81 | 66.10 | 15.98 |      | 150.0 |         |
| 10518-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)           | X | 4.59 | 66.88 | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.55 | 66.43 | 16.12 |      | 150.0 |         |
|           |                                                                     | Z | 4.41 | 66.91 | 16.25 |      | 150.0 |         |
| 10519-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)          | X | 4.79 | 67.13 | 16.49 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.75 | 66.71 | 16.26 |      | 150.0 |         |
|           |                                                                     | Z | 4.57 | 67.10 | 16.35 |      | 150.0 |         |
| 10520-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)          | X | 4.64 | 67.11 | 16.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.60 | 66.67 | 16.18 |      | 150.0 |         |
|           |                                                                     | Z | 4.43 | 67.05 | 16.27 |      | 150.0 |         |
| 10521-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)          | X | 4.57 | 67.12 | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.53 | 66.66 | 16.16 |      | 150.0 |         |
|           |                                                                     | Z | 4.36 | 67.04 | 16.26 |      | 150.0 |         |
| 10522-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)          | X | 4.63 | 67.16 | 16.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.59 | 66.70 | 16.22 |      | 150.0 |         |
|           |                                                                     | Z | 4.42 | 67.17 | 16.36 |      | 150.0 |         |

|           |                                                            |   |      |       |       |      |       |         |
|-----------|------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10523-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) | X | 4.51 | 67.05 | 16.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.46 | 66.56 | 16.06 |      | 150.0 |         |
|           |                                                            | Z | 4.33 | 67.10 | 16.24 |      | 150.0 |         |
| 10524-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) | X | 4.58 | 67.09 | 16.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.53 | 66.64 | 16.20 |      | 150.0 |         |
|           |                                                            | Z | 4.37 | 67.10 | 16.33 |      | 150.0 |         |
| 10525-AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)          | X | 4.55 | 66.14 | 16.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.50 | 65.66 | 15.78 |      | 150.0 |         |
|           |                                                            | Z | 4.38 | 66.18 | 15.95 |      | 150.0 |         |
| 10526-AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)          | X | 4.74 | 66.53 | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.69 | 66.05 | 15.93 |      | 150.0 |         |
|           |                                                            | Z | 4.52 | 66.50 | 16.07 |      | 150.0 |         |
| 10527-AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)          | X | 4.66 | 66.50 | 16.15 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.61 | 66.01 | 15.87 |      | 150.0 |         |
|           |                                                            | Z | 4.45 | 66.47 | 16.02 |      | 150.0 |         |
| 10528-AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)          | X | 4.67 | 66.52 | 16.18 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.62 | 66.03 | 15.91 |      | 150.0 |         |
|           |                                                            | Z | 4.47 | 66.48 | 16.05 |      | 150.0 |         |
| 10529-AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)          | X | 4.67 | 66.52 | 16.18 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.62 | 66.03 | 15.91 |      | 150.0 |         |
|           |                                                            | Z | 4.47 | 66.48 | 16.05 |      | 150.0 |         |
| 10531-AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)          | X | 4.67 | 66.65 | 16.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.63 | 66.16 | 15.93 |      | 150.0 |         |
|           |                                                            | Z | 4.44 | 66.54 | 16.04 |      | 150.0 |         |
| 10532-AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)          | X | 4.53 | 66.51 | 16.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.48 | 66.01 | 15.86 |      | 150.0 |         |
|           |                                                            | Z | 4.32 | 66.41 | 15.98 |      | 150.0 |         |
| 10533-AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)          | X | 4.68 | 66.56 | 16.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.63 | 66.06 | 15.89 |      | 150.0 |         |
|           |                                                            | Z | 4.48 | 66.56 | 16.05 |      | 150.0 |         |
| 10534-AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)          | X | 5.19 | 66.60 | 16.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.16 | 66.20 | 15.99 |      | 150.0 |         |
|           |                                                            | Z | 5.01 | 66.50 | 16.09 |      | 150.0 |         |
| 10535-AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)          | X | 5.26 | 66.75 | 16.27 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.22 | 66.35 | 16.06 |      | 150.0 |         |
|           |                                                            | Z | 5.06 | 66.65 | 16.16 |      | 150.0 |         |
| 10536-AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)          | X | 5.13 | 66.73 | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.09 | 66.32 | 16.02 |      | 150.0 |         |
|           |                                                            | Z | 4.95 | 66.64 | 16.13 |      | 150.0 |         |
| 10537-AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)          | X | 5.19 | 66.69 | 16.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.15 | 66.30 | 16.01 |      | 150.0 |         |
|           |                                                            | Z | 5.00 | 66.59 | 16.11 |      | 150.0 |         |
| 10538-AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)          | X | 5.28 | 66.73 | 16.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.26 | 66.36 | 16.08 |      | 150.0 |         |
|           |                                                            | Z | 5.08 | 66.58 | 16.14 |      | 150.0 |         |
| 10540-AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)          | X | 5.21 | 66.72 | 16.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.17 | 66.33 | 16.08 |      | 150.0 |         |
|           |                                                            | Z | 5.01 | 66.56 | 16.15 |      | 150.0 |         |

|           |                                                    |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10541-AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)  | X | 5.18 | 66.60 | 16.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.14 | 66.20 | 16.01 |      | 150.0 |         |
|           |                                                    | Z | 4.99 | 66.47 | 16.09 |      | 150.0 |         |
| 10542-AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)  | X | 5.33 | 66.65 | 16.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.31 | 66.28 | 16.07 |      | 150.0 |         |
|           |                                                    | Z | 5.14 | 66.55 | 16.15 |      | 150.0 |         |
| 10543-AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)  | X | 5.41 | 66.68 | 16.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.39 | 66.31 | 16.11 |      | 150.0 |         |
|           |                                                    | Z | 5.20 | 66.56 | 16.18 |      | 150.0 |         |
| 10544-AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)  | X | 5.49 | 66.70 | 16.18 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.45 | 66.31 | 15.98 |      | 150.0 |         |
|           |                                                    | Z | 5.34 | 66.58 | 16.07 |      | 150.0 |         |
| 10545-AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)  | X | 5.68 | 67.09 | 16.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.66 | 66.76 | 16.15 |      | 150.0 |         |
|           |                                                    | Z | 5.51 | 66.98 | 16.23 |      | 150.0 |         |
| 10546-AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)  | X | 5.57 | 66.94 | 16.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.54 | 66.57 | 16.08 |      | 150.0 |         |
|           |                                                    | Z | 5.38 | 66.73 | 16.11 |      | 150.0 |         |
| 10547-AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)  | X | 5.64 | 66.98 | 16.27 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.63 | 66.66 | 16.11 |      | 150.0 |         |
|           |                                                    | Z | 5.45 | 66.79 | 16.14 |      | 150.0 |         |
| 10548-AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)  | X | 5.90 | 67.92 | 16.71 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.97 | 67.87 | 16.68 |      | 150.0 |         |
|           |                                                    | Z | 5.63 | 67.50 | 16.47 |      | 150.0 |         |
| 10550-AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)  | X | 5.59 | 66.92 | 16.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.55 | 66.54 | 16.07 |      | 150.0 |         |
|           |                                                    | Z | 5.42 | 66.82 | 16.17 |      | 150.0 |         |
| 10551-AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)  | X | 5.60 | 66.98 | 16.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.56 | 66.60 | 16.06 |      | 150.0 |         |
|           |                                                    | Z | 5.40 | 66.75 | 16.10 |      | 150.0 |         |
| 10552-AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)  | X | 5.51 | 66.77 | 16.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.47 | 66.37 | 15.96 |      | 150.0 |         |
|           |                                                    | Z | 5.35 | 66.67 | 16.06 |      | 150.0 |         |
| 10553-AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)  | X | 5.60 | 66.81 | 16.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.56 | 66.43 | 16.01 |      | 150.0 |         |
|           |                                                    | Z | 5.41 | 66.65 | 16.08 |      | 150.0 |         |
| 10554-AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle) | X | 5.89 | 67.05 | 16.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.86 | 66.69 | 16.08 |      | 150.0 |         |
|           |                                                    | Z | 5.75 | 66.91 | 16.14 |      | 150.0 |         |
| 10555-AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle) | X | 6.02 | 67.35 | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 6.00 | 67.02 | 16.22 |      | 150.0 |         |
|           |                                                    | Z | 5.86 | 67.17 | 16.25 |      | 150.0 |         |
| 10556-AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle) | X | 6.04 | 67.39 | 16.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 6.02 | 67.06 | 16.23 |      | 150.0 |         |
|           |                                                    | Z | 5.88 | 67.24 | 16.28 |      | 150.0 |         |
| 10557-AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle) | X | 6.01 | 67.32 | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.99 | 66.98 | 16.22 |      | 150.0 |         |
|           |                                                    | Z | 5.85 | 67.13 | 16.24 |      | 150.0 |         |

|           |                                                                 |   |       |        |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10558-AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)              | X | 6.07  | 67.49  | 16.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.05  | 67.17  | 16.33 |      | 150.0 |         |
|           |                                                                 | Z | 5.88  | 67.26  | 16.33 |      | 150.0 |         |
| 10560-AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)              | X | 6.06  | 67.34  | 16.44 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.04  | 66.99  | 16.28 |      | 150.0 |         |
|           |                                                                 | Z | 5.88  | 67.13  | 16.30 |      | 150.0 |         |
| 10561-AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle)              | X | 5.98  | 67.30  | 16.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.96  | 66.96  | 16.30 |      | 150.0 |         |
|           |                                                                 | Z | 5.81  | 67.11  | 16.32 |      | 150.0 |         |
| 10562-AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)              | X | 6.11  | 67.72  | 16.67 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.12  | 67.46  | 16.55 |      | 150.0 |         |
|           |                                                                 | Z | 5.89  | 67.37  | 16.45 |      | 150.0 |         |
| 10563-AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)              | X | 6.43  | 68.23  | 16.87 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.50  | 68.16  | 16.85 |      | 150.0 |         |
|           |                                                                 | Z | 5.96  | 67.23  | 16.35 |      | 150.0 |         |
| 10564-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)  | X | 4.91  | 66.93  | 16.51 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.88  | 66.54  | 16.31 |      | 150.0 |         |
|           |                                                                 | Z | 4.73  | 66.93  | 16.37 |      | 150.0 |         |
| 10565-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle) | X | 5.16  | 67.40  | 16.83 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.13  | 67.02  | 16.64 |      | 150.0 |         |
|           |                                                                 | Z | 4.93  | 67.35  | 16.69 |      | 150.0 |         |
| 10566-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle) | X | 4.99  | 67.26  | 16.66 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.96  | 66.87  | 16.45 |      | 150.0 |         |
|           |                                                                 | Z | 4.77  | 67.18  | 16.50 |      | 150.0 |         |
| 10567-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle) | X | 5.02  | 67.67  | 17.02 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.98  | 67.25  | 16.79 |      | 150.0 |         |
|           |                                                                 | Z | 4.81  | 67.60  | 16.88 |      | 150.0 |         |
| 10568-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle) | X | 4.90  | 67.00  | 16.42 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.87  | 66.62  | 16.22 |      | 150.0 |         |
|           |                                                                 | Z | 4.67  | 66.94  | 16.26 |      | 150.0 |         |
| 10569-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle) | X | 4.97  | 67.73  | 17.07 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.93  | 67.29  | 16.83 |      | 150.0 |         |
|           |                                                                 | Z | 4.78  | 67.78  | 16.99 |      | 150.0 |         |
| 10570-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle) | X | 5.01  | 67.57  | 17.00 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.97  | 67.15  | 16.77 |      | 150.0 |         |
|           |                                                                 | Z | 4.80  | 67.57  | 16.89 |      | 150.0 |         |
| 10571-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)       | X | 1.17  | 65.22  | 16.39 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.09  | 63.89  | 15.30 |      | 130.0 |         |
|           |                                                                 | Z | 1.10  | 64.48  | 15.68 |      | 130.0 |         |
| 10572-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)       | X | 1.19  | 65.91  | 16.81 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.10  | 64.45  | 15.65 |      | 130.0 |         |
|           |                                                                 | Z | 1.12  | 65.08  | 16.07 |      | 130.0 |         |
| 10573-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)     | X | 11.95 | 118.97 | 33.95 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 2.10  | 86.50  | 22.92 |      | 130.0 |         |
|           |                                                                 | Z | 2.78  | 93.83  | 26.37 |      | 130.0 |         |
| 10574-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)      | X | 1.42  | 73.69  | 20.72 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.20  | 70.19  | 18.52 |      | 130.0 |         |
|           |                                                                 | Z | 1.24  | 71.54  | 19.44 |      | 130.0 |         |

|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10575-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)  | X | 4.69 | 66.71 | 16.57 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.67 | 66.34 | 16.38 |      | 130.0 |         |
|           |                                                                 | Z | 4.50 | 66.68 | 16.40 |      | 130.0 |         |
| 10576-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)  | X | 4.72 | 66.88 | 16.64 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.69 | 66.50 | 16.44 |      | 130.0 |         |
|           |                                                                 | Z | 4.53 | 66.88 | 16.48 |      | 130.0 |         |
| 10577-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) | X | 4.94 | 67.20 | 16.81 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.91 | 66.83 | 16.62 |      | 130.0 |         |
|           |                                                                 | Z | 4.71 | 67.13 | 16.63 |      | 130.0 |         |
| 10578-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) | X | 4.83 | 67.37 | 16.92 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.81 | 66.98 | 16.72 |      | 130.0 |         |
|           |                                                                 | Z | 4.61 | 67.29 | 16.74 |      | 130.0 |         |
| 10579-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) | X | 4.60 | 66.66 | 16.24 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.57 | 66.30 | 16.05 |      | 130.0 |         |
|           |                                                                 | Z | 4.37 | 66.49 | 16.00 |      | 130.0 |         |
| 10580-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) | X | 4.64 | 66.67 | 16.25 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.62 | 66.31 | 16.06 |      | 130.0 |         |
|           |                                                                 | Z | 4.41 | 66.55 | 16.03 |      | 130.0 |         |
| 10581-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) | X | 4.73 | 67.42 | 16.87 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.70 | 67.02 | 16.65 |      | 130.0 |         |
|           |                                                                 | Z | 4.52 | 67.36 | 16.71 |      | 130.0 |         |
| 10582-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) | X | 4.54 | 66.41 | 16.03 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.53 | 66.07 | 15.85 |      | 130.0 |         |
|           |                                                                 | Z | 4.30 | 66.25 | 15.78 |      | 130.0 |         |
| 10583-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)       | X | 4.69 | 66.71 | 16.57 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.67 | 66.34 | 16.38 |      | 130.0 |         |
|           |                                                                 | Z | 4.50 | 66.68 | 16.40 |      | 130.0 |         |
| 10584-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)       | X | 4.72 | 66.88 | 16.64 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.69 | 66.50 | 16.44 |      | 130.0 |         |
|           |                                                                 | Z | 4.53 | 66.88 | 16.48 |      | 130.0 |         |
| 10585-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)      | X | 4.94 | 67.20 | 16.81 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.91 | 66.83 | 16.62 |      | 130.0 |         |
|           |                                                                 | Z | 4.71 | 67.13 | 16.63 |      | 130.0 |         |
| 10586-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)      | X | 4.83 | 67.37 | 16.92 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.81 | 66.98 | 16.72 |      | 130.0 |         |
|           |                                                                 | Z | 4.61 | 67.29 | 16.74 |      | 130.0 |         |
| 10587-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)      | X | 4.60 | 66.66 | 16.24 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.57 | 66.30 | 16.05 |      | 130.0 |         |
|           |                                                                 | Z | 4.37 | 66.49 | 16.00 |      | 130.0 |         |
| 10588-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)      | X | 4.64 | 66.67 | 16.25 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.62 | 66.31 | 16.06 |      | 130.0 |         |
|           |                                                                 | Z | 4.41 | 66.55 | 16.03 |      | 130.0 |         |
| 10589-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)      | X | 4.73 | 67.42 | 16.87 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.70 | 67.02 | 16.65 |      | 130.0 |         |
|           |                                                                 | Z | 4.52 | 67.36 | 16.71 |      | 130.0 |         |
| 10590-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)      | X | 4.54 | 66.41 | 16.03 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.53 | 66.07 | 15.85 |      | 130.0 |         |
|           |                                                                 | Z | 4.30 | 66.25 | 15.78 |      | 130.0 |         |

|           |                                                       |   |      |       |       |      |       |         |
|-----------|-------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10591-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle) | X | 4.84 | 66.77 | 16.66 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.82 | 66.41 | 16.48 |      | 130.0 |         |
|           |                                                       | Z | 4.66 | 66.76 | 16.51 |      | 130.0 |         |
| 10592-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle) | X | 5.01 | 67.12 | 16.79 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.99 | 66.76 | 16.61 |      | 130.0 |         |
|           |                                                       | Z | 4.79 | 67.07 | 16.64 |      | 130.0 |         |
| 10593-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle) | X | 4.93 | 67.04 | 16.68 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.91 | 66.69 | 16.51 |      | 130.0 |         |
|           |                                                       | Z | 4.71 | 66.95 | 16.50 |      | 130.0 |         |
| 10594-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle) | X | 4.98 | 67.20 | 16.83 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.96 | 66.84 | 16.65 |      | 130.0 |         |
|           |                                                       | Z | 4.76 | 67.13 | 16.67 |      | 130.0 |         |
| 10595-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle) | X | 4.95 | 67.16 | 16.73 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.93 | 66.80 | 16.55 |      | 130.0 |         |
|           |                                                       | Z | 4.73 | 67.10 | 16.57 |      | 130.0 |         |
| 10596-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle) | X | 4.89 | 67.16 | 16.74 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.87 | 66.79 | 16.55 |      | 130.0 |         |
|           |                                                       | Z | 4.66 | 67.08 | 16.56 |      | 130.0 |         |
| 10597-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle) | X | 4.84 | 67.08 | 16.63 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.82 | 66.71 | 16.44 |      | 130.0 |         |
|           |                                                       | Z | 4.61 | 66.96 | 16.43 |      | 130.0 |         |
| 10598-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle) | X | 4.82 | 67.33 | 16.90 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.80 | 66.95 | 16.70 |      | 130.0 |         |
|           |                                                       | Z | 4.60 | 67.20 | 16.70 |      | 130.0 |         |
| 10599-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle) | X | 5.51 | 67.30 | 16.83 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.50 | 67.04 | 16.72 |      | 130.0 |         |
|           |                                                       | Z | 5.31 | 67.18 | 16.69 |      | 130.0 |         |
| 10600-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle) | X | 5.66 | 67.75 | 17.03 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.70 | 67.66 | 17.00 |      | 130.0 |         |
|           |                                                       | Z | 5.42 | 67.55 | 16.85 |      | 130.0 |         |
| 10601-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle) | X | 5.54 | 67.49 | 16.91 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.55 | 67.29 | 16.83 |      | 130.0 |         |
|           |                                                       | Z | 5.33 | 67.34 | 16.76 |      | 130.0 |         |
| 10602-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle) | X | 5.62 | 67.47 | 16.82 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.64 | 67.27 | 16.74 |      | 130.0 |         |
|           |                                                       | Z | 5.46 | 67.51 | 16.77 |      | 130.0 |         |
| 10603-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle) | X | 5.72 | 67.83 | 17.13 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.72 | 67.56 | 17.01 |      | 130.0 |         |
|           |                                                       | Z | 5.53 | 67.80 | 17.05 |      | 130.0 |         |
| 10604-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle) | X | 5.51 | 67.26 | 16.84 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.51 | 67.00 | 16.72 |      | 130.0 |         |
|           |                                                       | Z | 5.40 | 67.44 | 16.85 |      | 130.0 |         |
| 10605-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle) | X | 5.62 | 67.58 | 16.99 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.63 | 67.37 | 16.91 |      | 130.0 |         |
|           |                                                       | Z | 5.43 | 67.48 | 16.86 |      | 130.0 |         |
| 10606-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle) | X | 5.39 | 67.04 | 16.59 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.38 | 66.75 | 16.46 |      | 130.0 |         |
|           |                                                       | Z | 5.18 | 66.82 | 16.39 |      | 130.0 |         |

|           |                                                   |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10607-AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle) | X | 4.69 | 66.11 | 16.30 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.65 | 65.70 | 16.09 |      | 130.0 |         |
|           |                                                   | Z | 4.51 | 66.12 | 16.16 |      | 130.0 |         |
| 10608-AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | X | 4.89 | 66.54 | 16.47 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.86 | 66.13 | 16.26 |      | 130.0 |         |
|           |                                                   | Z | 4.67 | 66.48 | 16.32 |      | 130.0 |         |
| 10609-AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle) | X | 4.78 | 66.40 | 16.32 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.74 | 65.99 | 16.10 |      | 130.0 |         |
|           |                                                   | Z | 4.56 | 66.32 | 16.14 |      | 130.0 |         |
| 10610-AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | X | 4.83 | 66.56 | 16.48 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.80 | 66.15 | 16.27 |      | 130.0 |         |
|           |                                                   | Z | 4.61 | 66.49 | 16.31 |      | 130.0 |         |
| 10611-AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) | X | 4.74 | 66.37 | 16.33 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.71 | 65.96 | 16.12 |      | 130.0 |         |
|           |                                                   | Z | 4.52 | 66.28 | 16.15 |      | 130.0 |         |
| 10612-AAB | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) | X | 4.76 | 66.53 | 16.38 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.73 | 66.12 | 16.16 |      | 130.0 |         |
|           |                                                   | Z | 4.52 | 66.43 | 16.20 |      | 130.0 |         |
| 10613-AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) | X | 4.76 | 66.43 | 16.27 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.74 | 66.03 | 16.06 |      | 130.0 |         |
|           |                                                   | Z | 4.52 | 66.26 | 16.05 |      | 130.0 |         |
| 10614-AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) | X | 4.70 | 66.62 | 16.50 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.67 | 66.19 | 16.28 |      | 130.0 |         |
|           |                                                   | Z | 4.48 | 66.49 | 16.31 |      | 130.0 |         |
| 10615-AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) | X | 4.74 | 66.19 | 16.10 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.72 | 65.79 | 15.90 |      | 130.0 |         |
|           |                                                   | Z | 4.52 | 66.11 | 15.92 |      | 130.0 |         |
| 10616-AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) | X | 5.34 | 66.61 | 16.47 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.32 | 66.28 | 16.32 |      | 130.0 |         |
|           |                                                   | Z | 5.14 | 66.47 | 16.32 |      | 130.0 |         |
| 10617-AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) | X | 5.40 | 66.74 | 16.51 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.38 | 66.41 | 16.35 |      | 130.0 |         |
|           |                                                   | Z | 5.21 | 66.65 | 16.39 |      | 130.0 |         |
| 10618-AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) | X | 5.29 | 66.79 | 16.56 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.27 | 66.46 | 16.39 |      | 130.0 |         |
|           |                                                   | Z | 5.11 | 66.70 | 16.43 |      | 130.0 |         |
| 10619-AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) | X | 5.31 | 66.61 | 16.40 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.30 | 66.30 | 16.25 |      | 130.0 |         |
|           |                                                   | Z | 5.11 | 66.46 | 16.24 |      | 130.0 |         |
| 10620-AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) | X | 5.41 | 66.67 | 16.47 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.41 | 66.38 | 16.34 |      | 130.0 |         |
|           |                                                   | Z | 5.19 | 66.48 | 16.30 |      | 130.0 |         |
| 10621-AAB | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) | X | 5.40 | 66.76 | 16.64 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.38 | 66.43 | 16.48 |      | 130.0 |         |
|           |                                                   | Z | 5.21 | 66.64 | 16.50 |      | 130.0 |         |
| 10622-AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) | X | 5.41 | 66.91 | 16.70 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.39 | 66.60 | 16.55 |      | 130.0 |         |
|           |                                                   | Z | 5.20 | 66.74 | 16.55 |      | 130.0 |         |

|           |                                                    |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10623-AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)  | X | 5.29 | 66.45 | 16.36 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.27 | 66.12 | 16.20 |      | 130.0 |         |
|           |                                                    | Z | 5.08 | 66.28 | 16.19 |      | 130.0 |         |
| 10624-AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)  | X | 5.48 | 66.64 | 16.51 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.47 | 66.35 | 16.38 |      | 130.0 |         |
|           |                                                    | Z | 5.28 | 66.51 | 16.36 |      | 130.0 |         |
| 10625-AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)  | X | 5.87 | 67.67 | 17.07 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.92 | 67.56 | 17.03 |      | 130.0 |         |
|           |                                                    | Z | 5.48 | 66.99 | 16.66 |      | 130.0 |         |
| 10626-AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)  | X | 5.62 | 66.65 | 16.41 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.59 | 66.32 | 16.26 |      | 130.0 |         |
|           |                                                    | Z | 5.46 | 66.52 | 16.28 |      | 130.0 |         |
| 10627-AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)  | X | 5.86 | 67.19 | 16.64 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.87 | 66.96 | 16.54 |      | 130.0 |         |
|           |                                                    | Z | 5.68 | 67.07 | 16.52 |      | 130.0 |         |
| 10628-AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)  | X | 5.67 | 66.78 | 16.37 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.65 | 66.49 | 16.24 |      | 130.0 |         |
|           |                                                    | Z | 5.47 | 66.52 | 16.18 |      | 130.0 |         |
| 10629-AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)  | X | 5.76 | 66.87 | 16.41 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.74 | 66.55 | 16.26 |      | 130.0 |         |
|           |                                                    | Z | 5.55 | 66.62 | 16.22 |      | 130.0 |         |
| 10630-AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)  | X | 6.21 | 68.41 | 17.17 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.36 | 68.57 | 17.26 |      | 130.0 |         |
|           |                                                    | Z | 5.84 | 67.72 | 16.78 |      | 130.0 |         |
| 10631-AAB | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)  | X | 6.11 | 68.22 | 17.27 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.15 | 68.07 | 17.21 |      | 130.0 |         |
|           |                                                    | Z | 5.81 | 67.73 | 16.97 |      | 130.0 |         |
| 10632-AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)  | X | 5.83 | 67.26 | 16.81 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.82 | 66.98 | 16.68 |      | 130.0 |         |
|           |                                                    | Z | 5.67 | 67.19 | 16.73 |      | 130.0 |         |
| 10633-AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)  | X | 5.73 | 66.95 | 16.48 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.72 | 66.66 | 16.35 |      | 130.0 |         |
|           |                                                    | Z | 5.54 | 66.74 | 16.32 |      | 130.0 |         |
| 10634-AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)  | X | 5.72 | 66.98 | 16.56 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.70 | 66.65 | 16.41 |      | 130.0 |         |
|           |                                                    | Z | 5.52 | 66.78 | 16.40 |      | 130.0 |         |
| 10635-AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)  | X | 5.60 | 66.32 | 15.97 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.59 | 66.03 | 15.84 |      | 130.0 |         |
|           |                                                    | Z | 5.39 | 66.04 | 15.76 |      | 130.0 |         |
| 10636-AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle) | X | 6.03 | 67.02 | 16.50 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.02 | 66.74 | 16.37 |      | 130.0 |         |
|           |                                                    | Z | 5.89 | 66.87 | 16.36 |      | 130.0 |         |
| 10637-AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle) | X | 6.19 | 67.40 | 16.66 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.19 | 67.15 | 16.56 |      | 130.0 |         |
|           |                                                    | Z | 6.02 | 67.21 | 16.51 |      | 130.0 |         |
| 10638-AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle) | X | 6.19 | 67.38 | 16.63 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.19 | 67.12 | 16.52 |      | 130.0 |         |
|           |                                                    | Z | 6.03 | 67.21 | 16.49 |      | 130.0 |         |

|           |                                                        |   |        |        |       |       |       |         |
|-----------|--------------------------------------------------------|---|--------|--------|-------|-------|-------|---------|
| 10639-AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)     | X | 6.18   | 67.36  | 16.66 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.17   | 67.09  | 16.55 |       | 130.0 |         |
|           |                                                        | Z | 6.00   | 67.13  | 16.50 |       | 130.0 |         |
| 10640-AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)     | X | 6.19   | 67.39  | 16.62 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.20   | 67.16  | 16.53 |       | 130.0 |         |
|           |                                                        | Z | 5.99   | 67.11  | 16.43 |       | 130.0 |         |
| 10641-AAC | IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)     | X | 6.21   | 67.22  | 16.56 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.20   | 66.94  | 16.44 |       | 130.0 |         |
|           |                                                        | Z | 6.05   | 67.08  | 16.43 |       | 130.0 |         |
| 10642-AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)     | X | 6.27   | 67.52  | 16.87 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.26   | 67.23  | 16.75 |       | 130.0 |         |
|           |                                                        | Z | 6.09   | 67.31  | 16.72 |       | 130.0 |         |
| 10643-AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)     | X | 6.10   | 67.19  | 16.61 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.09   | 66.93  | 16.50 |       | 130.0 |         |
|           |                                                        | Z | 5.93   | 67.00  | 16.46 |       | 130.0 |         |
| 10644-AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)     | X | 6.29   | 67.77  | 16.92 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.32   | 67.61  | 16.86 |       | 130.0 |         |
|           |                                                        | Z | 6.02   | 67.30  | 16.63 |       | 130.0 |         |
| 10645-AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)     | X | 6.72   | 68.61  | 17.29 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.81   | 68.60  | 17.31 |       | 130.0 |         |
|           |                                                        | Z | 6.13   | 67.29  | 16.58 |       | 130.0 |         |
| 10646-AAE | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)  | X | 26.22  | 119.06 | 40.53 | 9.30  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 23.98  | 116.77 | 40.23 |       | 60.0  |         |
|           |                                                        | Z | 13.39  | 105.96 | 36.68 |       | 60.0  |         |
| 10647-AAE | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) | X | 21.91  | 115.56 | 39.67 | 9.30  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 20.79  | 114.08 | 39.59 |       | 60.0  |         |
|           |                                                        | Z | 11.12  | 102.25 | 35.63 |       | 60.0  |         |
| 10648-AAA | CDMA2000 (1x Advanced)                                 | X | 0.80   | 65.60  | 12.34 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                        | Y | 0.65   | 62.69  | 10.17 |       | 150.0 |         |
|           |                                                        | Z | 0.58   | 62.96  | 9.61  |       | 150.0 |         |
| 10652-AAC | LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)         | X | 3.70   | 67.38  | 17.08 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 3.59   | 66.56  | 16.66 |       | 80.0  |         |
|           |                                                        | Z | 3.39   | 66.83  | 16.41 |       | 80.0  |         |
| 10653-AAC | LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)        | X | 4.17   | 66.50  | 17.03 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 4.11   | 65.95  | 16.76 |       | 80.0  |         |
|           |                                                        | Z | 3.90   | 66.02  | 16.55 |       | 80.0  |         |
| 10654-AAC | LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)        | X | 4.13   | 66.12  | 17.00 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 4.07   | 65.60  | 16.75 |       | 80.0  |         |
|           |                                                        | Z | 3.90   | 65.62  | 16.55 |       | 80.0  |         |
| 10655-AAD | LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)        | X | 4.19   | 66.12  | 17.04 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 4.13   | 65.62  | 16.79 |       | 80.0  |         |
|           |                                                        | Z | 3.96   | 65.57  | 16.58 |       | 80.0  |         |
| 10658-AAA | Pulse Waveform (200Hz, 10%)                            | X | 100.00 | 111.27 | 26.15 | 10.00 | 50.0  | ± 9.6 % |
|           |                                                        | Y | 100.00 | 112.15 | 26.71 |       | 50.0  |         |
|           |                                                        | Z | 14.35  | 85.50  | 18.40 |       | 50.0  |         |
| 10659-AAA | Pulse Waveform (200Hz, 20%)                            | X | 100.00 | 110.66 | 24.83 | 6.99  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 100.00 | 110.25 | 24.76 |       | 60.0  |         |
|           |                                                        | Z | 100.00 | 105.29 | 22.07 |       | 60.0  |         |

|               |                             |   |        |        |       |      |       |         |
|---------------|-----------------------------|---|--------|--------|-------|------|-------|---------|
| 10660-<br>AAA | Pulse Waveform (200Hz, 40%) | X | 100.00 | 112.93 | 24.53 | 3.98 | 80.0  | ± 9.6 % |
|               |                             | Y | 100.00 | 108.47 | 22.64 |      | 80.0  |         |
|               |                             | Z | 100.00 | 104.83 | 20.58 |      | 80.0  |         |
| 10661-<br>AAA | Pulse Waveform (200Hz, 60%) | X | 100.00 | 118.71 | 25.68 | 2.22 | 100.0 | ± 9.6 % |
|               |                             | Y | 100.00 | 104.33 | 19.70 |      | 100.0 |         |
|               |                             | Z | 100.00 | 104.48 | 19.32 |      | 100.0 |         |
| 10662-<br>AAA | Pulse Waveform (200Hz, 80%) | X | 100.00 | 138.66 | 31.49 | 0.97 | 120.0 | ± 9.6 % |
|               |                             | Y | 0.19   | 60.00  | 4.09  |      | 120.0 |         |
|               |                             | Z | 100.00 | 91.23  | 12.90 |      | 120.0 |         |

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

## APPENDIX D: SAR TISSUE SPECIFICATIONS

Measurement Procedure for Tissue verification:

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

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

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

### 3 Composition / Information on ingredients

#### 3.2 Mixtures

**Description:** Aqueous solution with surfactants and inhibitors

**Declarable, or hazardous components:**

|                                                                        |                                                                                                                        |           |
|------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-----------|
| CAS: 107-21-1<br>EINECS: 203-473-3<br>Reg.nr.: 01-2119456816-28-0000   | <b>Ethanediol</b><br>STOT RE 2, H373;<br>Acute Tox. 4, H302                                                            | >1.0-4.9% |
| CAS: 68608-26-4<br>EINECS: 271-781-5<br>Reg.nr.: 01-2119527859-22-0000 | <b>Sodium petroleum sulfonate</b><br>Eye Irrit. 2, H319                                                                | < 2.9%    |
| CAS: 107-41-5<br>EINECS: 203-489-0<br>Reg.nr.: 01-2119539582-35-0000   | <b>Hexylene Glycol / 2-Methyl-pentane-2,4-diol</b><br>Skin Irrit. 2, H315; Eye Irrit. 2, H319                          | < 2.9%    |
| CAS: 68920-66-1<br>NLP: 500-236-9<br>Reg.nr.: 01-2119489407-26-0000    | <b>Alkoxylated alcohol, &gt; C<sub>16</sub></b><br>Aquatic Chronic 2, H411;<br>Skin Irrit. 2, H315; Eye Irrit. 2, H319 | < 2.0%    |

**Additional information:**

For the wording of the listed risk phrases refer to section 16.  
Not mentioned CAS-, EINECS- or registration numbers are to be regarded as Proprietary/Confidential.  
The specific chemical identity and/or exact percentage concentration of proprietary components is withheld as a trade secret.

**Figure D-1**

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

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFX525WA                  |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>06/03/19 - 06/14/19 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX D:<br>Page 1 of 3      |

## Measurement Certificate / Material Test

Item Name **Body Tissue Simulating Liquid (MBBL600-6000V6)**  
 Product No. **SL AAM U16 BC (Batch: 181029-1)**  
 Manufacturer **SPEAG**

## Measurement Method

TSL dielectric parameters measured using calibrated DAK probe.

## Target Parameters

Target parameters as defined in the KDB 865664 compliance standard.

## Test Condition

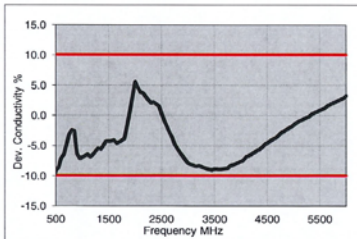
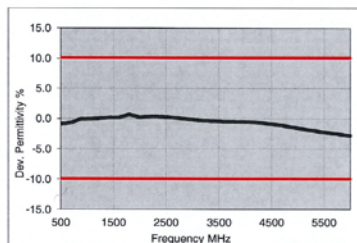
Ambient Condition **22°C ; 30% humidity**  
 TSL Temperature **22°C**  
 Test Date **30-Oct-18**  
 Operator **CL**

## Additional Information

TSL Density  
 TSL Heat-capacity

## Results

| f [MHz] | Measured |      |       | Target |       | Diff. to Target [%] |         |
|---------|----------|------|-------|--------|-------|---------------------|---------|
|         | e'       | e''  | sigma | eps    | sigma | Δ-eps               | Δ-sigma |
| 800     | 55.1     | 21.3 | 0.95  | 55.3   | 0.97  | -0.4                | -2.1    |
| 825     | 55.1     | 20.8 | 0.98  | 55.2   | 0.98  | -0.3                | -2.0    |
| 835     | 55.1     | 20.6 | 0.98  | 55.1   | 0.99  | 0.0                 | -2.5    |
| 850     | 55.1     | 20.4 | 0.98  | 55.2   | 0.99  | -0.1                | -3.0    |
| 900     | 55.0     | 19.7 | 0.98  | 55.0   | 1.05  | 0.0                 | -6.7    |
| 1400    | 54.2     | 15.6 | 1.22  | 54.1   | 1.28  | 0.2                 | -4.7    |
| 1450    | 54.1     | 15.4 | 1.24  | 54.0   | 1.30  | 0.2                 | -4.6    |
| 1500    | 54.1     | 15.3 | 1.27  | 53.9   | 1.33  | 0.3                 | -4.5    |
| 1550    | 54.0     | 15.1 | 1.30  | 53.9   | 1.36  | 0.2                 | -4.4    |
| 1600    | 53.9     | 15.0 | 1.33  | 53.8   | 1.39  | 0.2                 | -4.3    |
| 1625    | 53.9     | 14.9 | 1.35  | 53.8   | 1.41  | 0.3                 | -4.3    |
| 1640    | 53.9     | 14.9 | 1.36  | 53.7   | 1.42  | 0.3                 | -4.2    |
| 1650    | 53.8     | 14.9 | 1.36  | 53.7   | 1.43  | 0.2                 | -4.9    |
| 1700    | 53.8     | 14.8 | 1.40  | 53.6   | 1.46  | 0.4                 | -4.1    |
| 1750    | 53.7     | 14.7 | 1.43  | 53.4   | 1.49  | 0.5                 | -4.0    |
| 1800    | 53.7     | 14.6 | 1.46  | 53.3   | 1.52  | 0.8                 | -3.9    |
| 1810    | 53.7     | 14.6 | 1.47  | 53.3   | 1.52  | 0.8                 | -3.3    |
| 1825    | 53.7     | 14.6 | 1.48  | 53.3   | 1.52  | 0.8                 | -2.6    |
| 1850    | 53.6     | 14.5 | 1.50  | 53.3   | 1.52  | 0.6                 | -1.3    |
| 1900    | 53.5     | 14.5 | 1.53  | 53.3   | 1.52  | 0.4                 | 0.7     |
| 1950    | 53.5     | 14.5 | 1.57  | 53.3   | 1.52  | 0.4                 | 3.3     |
| 2000    | 53.4     | 14.4 | 1.60  | 53.3   | 1.52  | 0.2                 | 5.3     |
| 2050    | 53.4     | 14.4 | 1.64  | 53.2   | 1.57  | 0.3                 | 4.5     |
| 2100    | 53.3     | 14.4 | 1.68  | 53.2   | 1.62  | 0.2                 | 3.7     |
| 2150    | 53.3     | 14.4 | 1.72  | 53.1   | 1.66  | 0.4                 | 3.6     |
| 2200    | 53.2     | 14.4 | 1.76  | 53.0   | 1.71  | 0.3                 | 2.9     |
| 2250    | 53.1     | 14.4 | 1.81  | 53.0   | 1.76  | 0.2                 | 2.8     |
| 2300    | 53.1     | 14.4 | 1.85  | 52.9   | 1.81  | 0.4                 | 2.2     |
| 2350    | 53.0     | 14.5 | 1.89  | 52.8   | 1.85  | 0.3                 | 2.2     |
| 2400    | 52.9     | 14.5 | 1.94  | 52.8   | 1.90  | 0.2                 | 2.1     |
| 2450    | 52.9     | 14.5 | 1.98  | 52.7   | 1.95  | 0.4                 | 1.5     |
| 2500    | 52.8     | 14.6 | 2.03  | 52.6   | 2.02  | 0.3                 | 0.5     |
| 2550    | 52.7     | 14.6 | 2.07  | 52.6   | 2.09  | 0.2                 | -1.0    |
| 2600    | 52.6     | 14.7 | 2.12  | 52.5   | 2.16  | 0.2                 | -1.9    |



|      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|
| 3500 | 51.1 | 15.5 | 3.02 | 51.3 | 3.31 | -0.4 | -8.8 |
| 3700 | 50.8 | 15.7 | 3.24 | 51.1 | 3.55 | -0.5 | -8.8 |
| 5200 | 48.1 | 18.2 | 5.27 | 49.0 | 5.30 | -1.8 | -0.6 |
| 5250 | 48.0 | 18.3 | 5.34 | 49.0 | 5.36 | -1.9 | -0.4 |
| 5300 | 47.9 | 18.4 | 5.41 | 48.9 | 5.42 | -2.0 | -0.2 |
| 5500 | 47.5 | 18.6 | 5.70 | 48.6 | 5.65 | -2.2 | 0.8  |
| 5600 | 47.3 | 18.8 | 5.84 | 48.5 | 5.77 | -2.3 | 1.3  |
| 5700 | 47.1 | 18.9 | 5.99 | 48.3 | 5.88 | -2.5 | 1.8  |
| 5800 | 47.0 | 19.0 | 6.14 | 48.2 | 6.00 | -2.6 | 2.3  |

TSL Dielectric Parameters

1

Figure D-2  
 750 – 5800 MHz Body Tissue Equivalent Matter

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID ZNFX525WA                   |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>06/03/19 - 06/14/19 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX D:<br>Page 2 of 3      |

## Measurement Certificate / Material Test

Item Name **Head Tissue Simulating Liquid (HBBL600-10000V6)**  
Product No. **SL AAH U16 BC (Batch: 181031-2)**  
Manufacturer **SPEAG**

## Measurement Method

TSL dielectric parameters measured using calibrated DAK probe.

## Target Parameters

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

## Test Condition

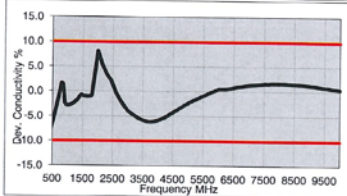
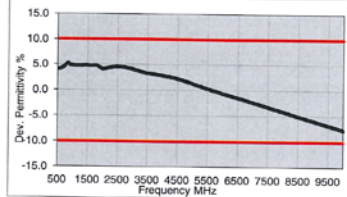
Ambient Condition 22°C ; 30% humidity  
TSL Temperature 22°C  
Test Date 31-Oct-18  
Operator CL

## Additional Information

TSL Density  
TSL Heat-capacity

## Results

| f [MHz] | Measured |      |       | Target |       | Diff.to Target [%] |         |
|---------|----------|------|-------|--------|-------|--------------------|---------|
|         | e'       | e''  | sigma | eps    | sigma | Δ-eps              | Δ-sigma |
| 800     | 43.8     | 20.5 | 0.91  | 41.7   | 0.90  | 5.1                | 1.4     |
| 825     | 43.8     | 20.1 | 0.92  | 41.6   | 0.91  | 5.3                | 1.5     |
| 835     | 43.8     | 19.9 | 0.93  | 41.5   | 0.91  | 5.4                | 2.0     |
| 850     | 43.7     | 19.7 | 0.93  | 41.5   | 0.92  | 5.3                | 1.5     |
| 900     | 43.5     | 18.9 | 0.95  | 41.5   | 0.97  | 4.8                | -2.1    |
| 1400    | 42.5     | 15.0 | 1.17  | 40.6   | 1.18  | 4.7                | -0.8    |
| 1450    | 42.5     | 14.8 | 1.19  | 40.5   | 1.20  | 4.9                | -0.8    |
| 1600    | 42.2     | 14.3 | 1.27  | 40.3   | 1.28  | 4.7                | -1.1    |
| 1625    | 42.2     | 14.2 | 1.29  | 40.3   | 1.30  | 4.8                | -0.7    |
| 1640    | 42.2     | 14.2 | 1.30  | 40.3   | 1.31  | 4.8                | -0.5    |
| 1650    | 42.1     | 14.2 | 1.30  | 40.2   | 1.31  | 4.6                | -1.0    |
| 1700    | 42.1     | 14.0 | 1.33  | 40.2   | 1.34  | 4.8                | -0.9    |
| 1750    | 42.0     | 13.9 | 1.36  | 40.1   | 1.37  | 4.8                | -0.8    |
| 1800    | 41.9     | 13.9 | 1.39  | 40.0   | 1.40  | 4.7                | -0.7    |
| 1810    | 41.9     | 13.8 | 1.40  | 40.0   | 1.40  | 4.7                | 0.0     |
| 1825    | 41.9     | 13.8 | 1.41  | 40.0   | 1.40  | 4.7                | 0.7     |
| 1850    | 41.8     | 13.8 | 1.42  | 40.0   | 1.40  | 4.5                | 1.4     |
| 1900    | 41.8     | 13.7 | 1.45  | 40.0   | 1.40  | 4.5                | 3.6     |
| 1950    | 41.7     | 13.7 | 1.48  | 40.0   | 1.40  | 4.3                | 5.7     |
| 2000    | 41.6     | 13.6 | 1.51  | 40.0   | 1.40  | 4.0                | 7.9     |
| 2050    | 41.6     | 13.6 | 1.55  | 39.9   | 1.44  | 4.2                | 7.3     |
| 2100    | 41.5     | 13.5 | 1.58  | 39.8   | 1.49  | 4.2                | 6.1     |
| 2150    | 41.4     | 13.5 | 1.62  | 39.7   | 1.53  | 4.2                | 5.7     |
| 2200    | 41.4     | 13.5 | 1.65  | 39.6   | 1.58  | 4.4                | 4.6     |
| 2250    | 41.3     | 13.5 | 1.69  | 39.6   | 1.62  | 4.4                | 4.2     |
| 2300    | 41.2     | 13.5 | 1.72  | 39.5   | 1.67  | 4.4                | 3.2     |
| 2350    | 41.1     | 13.5 | 1.76  | 39.4   | 1.71  | 4.4                | 2.9     |
| 2400    | 41.1     | 13.5 | 1.80  | 39.3   | 1.76  | 4.6                | 2.5     |
| 2450    | 41.0     | 13.5 | 1.84  | 39.2   | 1.80  | 4.6                | 2.2     |
| 2500    | 40.9     | 13.5 | 1.88  | 39.1   | 1.85  | 4.5                | 1.4     |
| 2550    | 40.8     | 13.5 | 1.92  | 39.1   | 1.91  | 4.4                | 0.6     |
| 2600    | 40.8     | 13.6 | 1.96  | 39.0   | 1.96  | 4.6                | -0.2    |
| 3500    | 39.2     | 14.1 | 2.74  | 37.9   | 2.91  | 3.3                | -5.8    |
| 3700    | 38.9     | 14.2 | 2.93  | 37.7   | 3.12  | 3.1                | -6.1    |



|       |      |      |       |      |       |      |      |
|-------|------|------|-------|------|-------|------|------|
| 5200  | 36.3 | 15.8 | 4.57  | 36.0 | 4.66  | 0.9  | -1.7 |
| 5250  | 36.2 | 15.9 | 4.63  | 35.9 | 4.71  | 0.8  | -1.6 |
| 5300  | 36.1 | 15.9 | 4.69  | 35.9 | 4.76  | 0.7  | -1.4 |
| 5500  | 35.8 | 16.1 | 4.92  | 35.6 | 4.96  | 0.3  | -0.9 |
| 5600  | 35.6 | 16.2 | 5.04  | 35.5 | 5.07  | 0.1  | -0.6 |
| 5700  | 35.4 | 16.2 | 5.15  | 35.4 | 5.17  | 0.0  | -0.3 |
| 5800  | 35.2 | 16.3 | 5.27  | 35.3 | 5.27  | -0.2 | 0.0  |
| 6000  | 34.9 | 16.5 | 5.50  | 35.1 | 5.48  | -0.6 | 0.5  |
| 6500  | 34.0 | 16.9 | 6.12  | 34.5 | 6.07  | -1.4 | 0.9  |
| 7000  | 33.1 | 17.3 | 6.74  | 33.9 | 6.65  | -2.3 | 1.3  |
| 7500  | 32.2 | 17.6 | 7.36  | 33.3 | 7.24  | -3.2 | 1.6  |
| 8000  | 31.4 | 17.9 | 7.97  | 32.7 | 7.84  | -4.1 | 1.7  |
| 8500  | 30.5 | 18.2 | 8.59  | 32.1 | 8.45  | -5.0 | 1.6  |
| 9000  | 29.7 | 18.4 | 9.20  | 31.5 | 9.08  | -5.9 | 1.3  |
| 9500  | 28.9 | 18.5 | 9.80  | 31.0 | 9.71  | -6.8 | 0.9  |
| 10000 | 28.1 | 18.7 | 10.40 | 30.4 | 10.36 | -7.6 | 0.4  |

Figure D-3  
750 – 5800 MHz Head Tissue Equivalent Matter

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFX525WA                  |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>06/03/19 - 06/14/19 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX D:<br>Page 3 of 3      |

## APPENDIX E: SAR SYSTEM VALIDATION

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

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

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

| SAR System | Freq. (MHz) | Date       | Probe SN | Probe Cal Point | Cond. ( $\sigma$ ) | Perm. ( $\epsilon_r$ ) | CW VALIDATION |                 |                | MOD. VALIDATION |             |      |
|------------|-------------|------------|----------|-----------------|--------------------|------------------------|---------------|-----------------|----------------|-----------------|-------------|------|
|            |             |            |          |                 |                    |                        | SENSITIVITY   | PROBE LINEARITY | PROBE ISOTROPY | MOD. TYPE       | DUTY FACTOR | PAR  |
| I          | 750         | 6/4/2019   | 7357     | 750             | Head               | 0.894                  | 42.979        | PASS            | PASS           | PASS            | N/A         | N/A  |
| H          | 835         | 7/13/2018  | 7409     | 835             | Head               | 0.932                  | 43.227        | PASS            | PASS           | PASS            | GMSK        | PASS |
| H          | 835         | 6/6/2019   | 7406     | 835             | Head               | 0.93                   | 43.8          | PASS            | PASS           | PASS            | GMSK        | PASS |
| I          | 1750        | 5/28/2019  | 7357     | 1750            | Head               | 1.368                  | 40.344        | PASS            | PASS           | PASS            | N/A         | N/A  |
| L          | 1900        | 5/22/2019  | 7308     | 1900            | Head               | 1.450                  | 38.200        | PASS            | PASS           | PASS            | GMSK        | PASS |
| E          | 2450        | 2/5/2019   | 3589     | 2450            | Head               | 1.825                  | 39.836        | PASS            | PASS           | PASS            | OFDM/TDD    | PASS |
| E          | 2600        | 2/7/2019   | 3589     | 2600            | Head               | 1.964                  | 40.460        | PASS            | PASS           | PASS            | TDD         | PASS |
| H          | 5250        | 7/5/2018   | 7409     | 5250            | Head               | 4.492                  | 34.994        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| H          | 5600        | 7/5/2018   | 7409     | 5600            | Head               | 4.839                  | 34.496        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| H          | 5750        | 7/5/2018   | 7409     | 5750            | Head               | 4.995                  | 34.288        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| L          | 750         | 11/6/2018  | 7308     | 750             | Body               | 0.962                  | 53.923        | PASS            | PASS           | PASS            | N/A         | N/A  |
| J          | 835         | 3/10/2019  | 7488     | 835             | Body               | 0.988                  | 53.868        | PASS            | PASS           | PASS            | GMSK        | PASS |
| D          | 1750        | 4/29/2019  | 3914     | 1750            | Body               | 1.529                  | 51.886        | PASS            | PASS           | PASS            | N/A         | N/A  |
| G          | 1900        | 8/10/2018  | 7410     | 1900            | Body               | 1.567                  | 52.239        | PASS            | PASS           | PASS            | GMSK        | PASS |
| K          | 2450        | 3/6/2019   | 7417     | 2450            | Body               | 2.039                  | 50.670        | PASS            | PASS           | PASS            | OFDM/TDD    | PASS |
| K          | 2600        | 3/6/2019   | 7417     | 2600            | Body               | 2.224                  | 50.170        | PASS            | PASS           | PASS            | TDD         | PASS |
| L          | 5250        | 10/29/2018 | 7308     | 5250            | Body               | 5.511                  | 48.770        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| L          | 5600        | 10/29/2018 | 7308     | 5600            | Body               | 5.994                  | 48.200        | PASS            | PASS           | PASS            | OFDM        | N/A  |
| L          | 5750        | 10/29/2018 | 7308     | 5750            | Body               | 6.219                  | 47.960        | PASS            | PASS           | PASS            | OFDM        | N/A  |

**Table E-2**  
**SAR System Validation Summary – 10g**

| SAR System | Freq. (MHz) | Date       | Probe SN | Probe Cal Point | Cond. ( $\sigma$ ) | Perm. ( $\epsilon_r$ ) | CW VALIDATION |                 |                | MOD. VALIDATION |             |     |
|------------|-------------|------------|----------|-----------------|--------------------|------------------------|---------------|-----------------|----------------|-----------------|-------------|-----|
|            |             |            |          |                 |                    |                        | SENSITIVITY   | PROBE LINEARITY | PROBE ISOTROPY | MOD. TYPE       | DUTY FACTOR | PAR |
| L          | 5250        | 10/29/2018 | 7308     | 5250            | Body               | 5.511                  | 48.770        | PASS            | PASS           | PASS            | OFDM        | N/A |
| L          | 5600        | 10/29/2018 | 7308     | 5600            | Body               | 5.994                  | 48.200        | PASS            | PASS           | PASS            | OFDM        | N/A |

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

|                                    |                                                                                     |                            |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|----------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFX525WA                  |  | SAR EVALUATION REPORT      |  | Approved by:<br>Quality Manager |
| Test Dates:<br>06/03/19 - 06/14/19 | DUT Type:<br>Portable Handset                                                       | APPENDIX E:<br>Page 1 of 1 |                                                                                       |                                 |

# APPENDIX G: DOWNLINK LTE CA RF CONDUCTED POWERS

## 1.1 LTE Downlink Only Carrier Aggregation Test Reduction Methodology

SAR test exclusion for LTE downlink Carrier Aggregation is determined by power measurements according to the number of component carriers (CCs) supported by the product implementation. Per April 2018 TCBC Workshop Notes, the following test reduction methodology was applied to determine the combinations required for conducted power measurements.

LTE DLCA Test Reduction Methodology:

- The supported combinations were arranged by the number of component carriers in columns.
- Any limitations on the PCC or SCC for each combination were identified alongside the combination (e.g. CA\_2A-2A-4A-12A, but B12 can only be configured as a SCC).
- Power measurements were performed for "supersets" (LTE CA combinations with multiple components carriers) and any "subsets" (LTE CA combinations with fewer component carriers) that were not completely covered by the supersets.
- Only subsets that have the exact same components as a superset were excluded for measurement.
- When there were certain restrictions on component carriers that existed in the superset that were not applied for the subset, the subset configuration was additionally evaluated.
- Both inter-band and intra-band downlink carrier aggregation scenarios were considered.

Table 1 – Example of Exclusion Table for SISO Configurations

| Index   | CC          | Supported Component Carriers (CCs) | Restrictions  | Completely Covered by Measurement Superset |
|---------|-------------|------------------------------------|---------------|--------------------------------------------|
| 001-01  | CA_2A       | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-02  | CA_2A       | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-03  | CA_2A-2A    | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-04  | CA_2A-2A    | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-05  | CA_2A-2A    | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-06  | CA_2A-2A    | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-07  | CA_2A-2A    | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-08  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-09  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-10  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-11  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-12  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-13  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-14  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-15  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-16  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-17  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-18  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-19  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-20  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-21  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-22  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-23  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-24  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-25  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-26  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-27  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-28  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-29  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-30  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-31  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-32  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-33  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-34  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-35  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-36  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-37  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-38  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-39  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-40  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-41  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-42  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-43  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-44  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-45  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-46  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-47  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-48  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-49  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-50  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-51  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-52  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-53  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-54  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-55  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-56  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-57  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-58  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-59  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-60  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-61  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-62  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-63  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-64  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-65  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-66  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-67  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-68  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-69  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-70  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-71  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-72  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-73  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-74  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-75  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-76  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-77  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-78  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-79  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-80  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-81  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-82  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-83  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-84  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-85  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-86  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-87  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-88  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-89  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-90  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-91  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-92  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-93  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-94  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-95  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-96  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-97  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-98  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-99  | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |
| 001-100 | CA_2A-2A-4A | 5, 10, 15, 20                      | 5, 10, 15, 20 | 001-01                                     |

FCC ID: ZNFX525WA



SAR EVALUATION REPORT



Reviewed by:  
Quality Manager

Test Dates:

06/03/2019 - 06/14/2019

DUT Type:

Portable Handset

APPENDIX G:  
Page 1 of 4

## 1.2 LTE Downlink Only Carrier Aggregation Test Selection and Setup

SAR test exclusion for LTE downlink Carrier Aggregation is determined by power measurements according to the number component carriers (CCs) supported by the product implementation. For those configurations required by April 2018 TCBC Workshop Notes, conducted power measurements with LTE Carrier Aggregation (CA) (downlink only) active are made in accordance to KDB Publication 941225 D05Av01r02. The RRC connection is only handled by one cell, the primary component carrier (PCC) for downlink and uplink communications. After making a data connection to the PCC, the UE device adds secondary component carrier(s) (SCC) on the downlink only. All uplink communications and acknowledgements remain identical to specifications when downlink carrier aggregation is inactive on the PCC. Additional conducted output powers are measured with the downlink carrier aggregation active for the configuration with highest measured maximum conducted power with downlink carrier aggregation inactive measured among the channel bandwidth, modulation, and RB combinations in each frequency band.

Per FCC KDB Publication 941225 D05Av01r02, no SAR measurements are required for carrier aggregation configurations when the maximum average output power with downlink only carrier aggregation active is not more than 0.25 dB higher than the average output power with downlink only carrier aggregation inactive. All bands required for SAR testing per FCC KDB procedures were considered. Based on the measured maximum powers below, no additional SAR tests were required for DLCA SAR configurations.

General PCC and SCC configuration selection procedure

- PCC uplink channel, channel bandwidth, modulation and RB configurations were selected based on section C)3)b)ii) of KDB 941225 D05 V01r02. The downlink PCC channel was paired with the selected PCC uplink channel according to normal configurations without carrier aggregation.
- To maximize aggregated bandwidth, highest channel bandwidth available for that CA combination was selected for SCC. For inter-band CA, the SCC downlink channels were selected near the middle of their transmission bands. For contiguous intra-band CA, the downlink channel spacing between the component carriers was set to multiple of 300 kHz less than the nominal channel spacing defined in section 5.4.1A of 3GPP TS 36.521. For non-contiguous intra-band CA, the downlink channel spacing between the component carriers was set to be larger than the nominal channel spacing and provided maximum separation between the component carriers.
- All selected PCC and SCC(s) remained fully within the uplink/downlink transmission band of the respective component carrier.

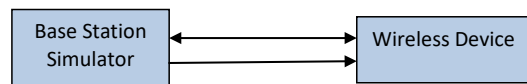


**Figure 1**  
**DL CA Power Measurement Setup**

|                                        |                                                                                                                                   |                       |                                                                                       |                                 |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFX525WA                      |  <b>PCTEST</b><br>ENGINEERING LABORATORY, INC. | SAR EVALUATION REPORT |  | Reviewed by:<br>Quality Manager |
| Test Dates:<br>06/03/2019 - 06/14/2019 | DUT Type:<br>Portable Handset                                                                                                     |                       |                                                                                       | APPENDIX G:<br>Page 2 of 4      |

## 1.3 Downlink Carrier Aggregation RF Conducted Powers

### 1.3.1 LTE Band 12 as PCC

**Table 1**  
**Maximum Output Powers**

| Combination    | PCC      |              |              |                      |      |            |                  |                  |                      | SCC 1    |              |                  |                      | Power                                 |                                   |
|----------------|----------|--------------|--------------|----------------------|------|------------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|
|                | PCC Band | PCC BW [MHz] | PCC (UL) Ch. | PCC (UL) Freq. [MHz] | Mod. | PCC UL# RB | PCC UL RB Offset | PCC (DL) Channel | PCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | LTE Tx.Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_12A-66A (1) | LTE B12  | 10           | 23095        | 707.5                | QPSK | 1          | 25               | 5095             | 737.5                | LTE B66  | 20           | 66786            | 2145                 | 24.66                                 | 24.67                             |
| CA_12A-66A (2) | LTE B12  | 10           | 23095        | 707.5                | QPSK | 1          | 25               | 5095             | 737.5                | LTE B66  | 20           | 66786            | 2145                 | 24.66                                 | 24.67                             |
| CA_2A-12A (1)  | LTE B12  | 10           | 23095        | 707.5                | QPSK | 1          | 25               | 5095             | 737.5                | LTE B2   | 20           | 900              | 1960                 | 24.67                                 | 24.67                             |
| CA_4A-12A (1)  | LTE B12  | 10           | 23095        | 707.5                | QPSK | 1          | 25               | 5095             | 737.5                | LTE B4   | 20           | 2175             | 2132.5               | 24.70                                 | 24.67                             |
| CA_4A-12A (2)  | LTE B12  | 10           | 23095        | 707.5                | QPSK | 1          | 25               | 5095             | 737.5                | LTE B4   | 20           | 2175             | 2132.5               | 24.70                                 | 24.67                             |

### 1.3.2 LTE Band 5 as PCC

**Table 2**  
**Maximum Output Powers**

| Combination  | PCC      |              |              |                      |      |            |                  |                  |                      | SCC 1    |              |                  |                      | Power                                 |                                   |
|--------------|----------|--------------|--------------|----------------------|------|------------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|
|              | PCC Band | PCC BW [MHz] | PCC (UL) Ch. | PCC (UL) Freq. [MHz] | Mod. | PCC UL# RB | PCC UL RB Offset | PCC (DL) Channel | PCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | LTE Tx.Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_2A-5A     | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 25               | 2525             | 881.5                | LTE B2   | 20           | 900              | 1960                 | 25.20                                 | 25.20                             |
| CA_4A-5A (1) | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 25               | 2525             | 881.5                | LTE B4   | 20           | 2175             | 2132.5               | 25.20                                 | 25.20                             |

### 1.3.3 LTE Band 66 as PCC

**Table 3**  
**Maximum Output Powers**

| Combination    | PCC      |              |              |                      |      |            |                  |                  |                      | SCC 1    |              |                  |                      | Power                                 |                                   |
|----------------|----------|--------------|--------------|----------------------|------|------------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|
|                | PCC Band | PCC BW [MHz] | PCC (UL) Ch. | PCC (UL) Freq. [MHz] | Mod. | PCC UL# RB | PCC UL RB Offset | PCC (DL) Channel | PCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | LTE Tx.Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_66B         | LTE B66  | 5            | 131997       | 1712.5               | QPSK | 1          | 12               | 66461            | 2112.5               | LTE B66  | 15           | 66554            | 2121.8               | 23.36                                 | 23.37                             |
| CA_66C         | LTE B66  | 5            | 131997       | 1712.5               | QPSK | 1          | 12               | 66461            | 2112.5               | LTE B66  | 20           | 66578            | 2124.2               | 23.38                                 | 23.37                             |
| CA_66A-66A     | LTE B66  | 5            | 131997       | 1712.5               | QPSK | 1          | 12               | 66461            | 2112.5               | LTE B66  | 20           | 67236            | 2190                 | 23.39                                 | 23.37                             |
| CA_12A-66A (1) | LTE B66  | 5            | 131997       | 1712.5               | QPSK | 1          | 12               | 66461            | 2112.5               | LTE B12  | 10           | 5095             | 737.5                | 23.38                                 | 23.37                             |
| CA_12A-66A (2) | LTE B66  | 5            | 131997       | 1712.5               | QPSK | 1          | 12               | 66461            | 2112.5               | LTE B12  | 10           | 5095             | 737.5                | 23.38                                 | 23.37                             |

|                                        |                                                                                                                                   |                       |                                                                                                 |                                 |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFX525WA                      |  <b>PCTEST</b><br>ENGINEERING LABORATORY, INC. | SAR EVALUATION REPORT |  <b>LG</b> | Reviewed by:<br>Quality Manager |
| Test Dates:<br>06/03/2019 - 06/14/2019 | DUT Type:<br>Portable Handset                                                                                                     |                       |                                                                                                 | APPENDIX G:<br>Page 3 of 4      |

### 1.3.4 LTE Band 2 as PCC

**Table 4**  
**Maximum Output Powers**

| Combination   | PCC      |              |              |                      |      |            |                  |                  |                      | SCC 1    |              |                  |                      | Power                                 |                                   |
|---------------|----------|--------------|--------------|----------------------|------|------------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|
|               | PCC Band | PCC BW [MHz] | PCC (UL) Ch. | PCC (UL) Freq. [MHz] | Mod. | PCC UL# RB | PCC UL RB Offset | PCC (DL) Channel | PCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | LTE Tx.Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_2A-12A (1) | LTE B2   | 20           | 18700        | 1860                 | QPSK | 1          | 50               | 700              | 1940                 | LTE B12  | 10           | 5095             | 737.5                | 23.12                                 | 23.20                             |
| CA_2A-17A     | LTE B2   | 10           | 18650        | 1855                 | QPSK | 1          | 25               | 650              | 1935                 | LTE B17  | 10           | 5790             | 740                  | 23.13                                 | 23.16                             |
| CA_2A-5A      | LTE B2   | 20           | 18700        | 1860                 | QPSK | 1          | 50               | 700              | 1940                 | LTE B5   | 10           | 2525             | 881.5                | 23.15                                 | 23.20                             |

### 1.3.5 LTE Band 7 as PCC

**Table 5**  
**Maximum Output Powers**

| Combination  | PCC      |              |              |                      |      |            |                  |                  |                      | SCC 1    |              |                  |                      | Power                                 |                                   |
|--------------|----------|--------------|--------------|----------------------|------|------------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|
|              | PCC Band | PCC BW [MHz] | PCC (UL) Ch. | PCC (UL) Freq. [MHz] | Mod. | PCC UL# RB | PCC UL RB Offset | PCC (DL) Channel | PCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | LTE Tx.Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_7B        | LTE B7   | 15           | 21375        | 2562.5               | QPSK | 1          | 36               | 3375             | 2682.5               | LTE B7   | 5            | 3282             | 2673.2               | 23.47                                 | 23.43                             |
| CA_7C (1)    | LTE B7   | 20           | 21100        | 2535                 | QPSK | 1          | 50               | 3100             | 2655                 | LTE B7   | 20           | 2902             | 2635.2               | 23.53                                 | 23.51                             |
| CA_7A-7A (1) | LTE B7   | 5            | 21425        | 2567.5               | QPSK | 1          | 12               | 3425             | 2687.5               | LTE B7   | 20           | 2850             | 2630                 | 23.60                                 | 23.53                             |

|                                        |                                                                                                                                   |                       |                                                                                       |                                 |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFX525WA                      |  <b>PCTEST</b><br>ENGINEERING LABORATORY, INC. | SAR EVALUATION REPORT |  | Reviewed by:<br>Quality Manager |
| Test Dates:<br>06/03/2019 - 06/14/2019 | DUT Type:<br>Portable Handset                                                                                                     |                       |                                                                                       | APPENDIX G:<br>Page 4 of 4      |