

|           |                                                                     |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10508-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.24 | 66.32 | 16.20 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.81 | 68.47 | 17.63 |      | 80.0  |         |
|           |                                                                     | Z | 3.35 | 67.15 | 16.71 |      | 80.0  |         |
| 10509-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 3.51 | 68.36 | 16.83 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.41 | 71.84 | 18.68 |      | 80.0  |         |
|           |                                                                     | Z | 3.72 | 69.67 | 17.51 |      | 80.0  |         |
| 10510-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.65 | 66.40 | 16.44 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.20 | 68.42 | 17.64 |      | 80.0  |         |
|           |                                                                     | Z | 3.74 | 67.11 | 16.83 |      | 80.0  |         |
| 10511-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.72 | 66.27 | 16.42 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.25 | 68.13 | 17.55 |      | 80.0  |         |
|           |                                                                     | Z | 3.81 | 66.92 | 16.79 |      | 80.0  |         |
| 10512-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 3.53 | 69.27 | 17.06 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.71 | 73.81 | 19.35 |      | 80.0  |         |
|           |                                                                     | Z | 3.83 | 70.97 | 17.89 |      | 80.0  |         |
| 10513-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.53 | 66.49 | 16.47 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.09 | 68.73 | 17.78 |      | 80.0  |         |
|           |                                                                     | Z | 3.62 | 67.27 | 16.91 |      | 80.0  |         |
| 10514-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.58 | 66.23 | 16.41 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.11 | 68.25 | 17.62 |      | 80.0  |         |
|           |                                                                     | Z | 3.67 | 66.92 | 16.81 |      | 80.0  |         |
| 10515-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)           | X | 0.86 | 62.95 | 14.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.96 | 63.14 | 14.68 |      | 150.0 |         |
|           |                                                                     | Z | 0.84 | 62.85 | 14.32 |      | 150.0 |         |
| 10516-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         | X | 0.68 | 75.09 | 17.93 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.60 | 70.79 | 17.39 |      | 150.0 |         |
|           |                                                                     | Z | 0.59 | 73.58 | 17.02 |      | 150.0 |         |
| 10517-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)          | X | 0.71 | 65.13 | 15.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.81 | 65.08 | 15.31 |      | 150.0 |         |
|           |                                                                     | Z | 0.69 | 64.87 | 14.81 |      | 150.0 |         |
| 10518-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)           | X | 4.31 | 66.61 | 16.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.51 | 66.70 | 16.19 |      | 150.0 |         |
|           |                                                                     | Z | 4.30 | 66.61 | 16.12 |      | 150.0 |         |
| 10519-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)          | X | 4.46 | 66.79 | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.69 | 66.93 | 16.31 |      | 150.0 |         |
|           |                                                                     | Z | 4.45 | 66.80 | 16.22 |      | 150.0 |         |
| 10520-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)          | X | 4.32 | 66.72 | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.55 | 66.89 | 16.23 |      | 150.0 |         |
|           |                                                                     | Z | 4.31 | 66.74 | 16.13 |      | 150.0 |         |
| 10521-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)          | X | 4.25 | 66.68 | 16.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.48 | 66.88 | 16.21 |      | 150.0 |         |
|           |                                                                     | Z | 4.24 | 66.71 | 16.11 |      | 150.0 |         |
| 10522-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)          | X | 4.30 | 66.84 | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.54 | 66.98 | 16.30 |      | 150.0 |         |
|           |                                                                     | Z | 4.30 | 66.85 | 16.22 |      | 150.0 |         |

|           |                                                            |   |      |       |       |      |       |         |
|-----------|------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10523-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) | X | 4.22 | 66.79 | 16.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.42 | 66.85 | 16.15 |      | 150.0 |         |
|           |                                                            | Z | 4.21 | 66.79 | 16.10 |      | 150.0 |         |
| 10524-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) | X | 4.25 | 66.78 | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.48 | 66.90 | 16.27 |      | 150.0 |         |
|           |                                                            | Z | 4.24 | 66.79 | 16.19 |      | 150.0 |         |
| 10525-AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)          | X | 4.28 | 65.85 | 15.93 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.47 | 65.95 | 15.86 |      | 150.0 |         |
|           |                                                            | Z | 4.27 | 65.86 | 15.81 |      | 150.0 |         |
| 10526-AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)          | X | 4.41 | 66.15 | 16.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.64 | 66.31 | 16.00 |      | 150.0 |         |
|           |                                                            | Z | 4.40 | 66.17 | 15.93 |      | 150.0 |         |
| 10527-AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)          | X | 4.34 | 66.11 | 15.98 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.56 | 66.27 | 15.95 |      | 150.0 |         |
|           |                                                            | Z | 4.33 | 66.13 | 15.87 |      | 150.0 |         |
| 10528-AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)          | X | 4.35 | 66.13 | 16.02 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.58 | 66.29 | 15.98 |      | 150.0 |         |
|           |                                                            | Z | 4.34 | 66.15 | 15.90 |      | 150.0 |         |
| 10529-AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)          | X | 4.35 | 66.13 | 16.02 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.58 | 66.29 | 15.98 |      | 150.0 |         |
|           |                                                            | Z | 4.34 | 66.15 | 15.90 |      | 150.0 |         |
| 10531-AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)          | X | 4.32 | 66.16 | 16.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.57 | 66.39 | 15.99 |      | 150.0 |         |
|           |                                                            | Z | 4.31 | 66.19 | 15.89 |      | 150.0 |         |
| 10532-AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)          | X | 4.20 | 66.01 | 15.92 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.43 | 66.24 | 15.92 |      | 150.0 |         |
|           |                                                            | Z | 4.19 | 66.04 | 15.81 |      | 150.0 |         |
| 10533-AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)          | X | 4.36 | 66.21 | 16.02 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.59 | 66.34 | 15.97 |      | 150.0 |         |
|           |                                                            | Z | 4.35 | 66.22 | 15.90 |      | 150.0 |         |
| 10534-AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)          | X | 4.94 | 66.18 | 16.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.11 | 66.38 | 16.03 |      | 150.0 |         |
|           |                                                            | Z | 4.91 | 66.20 | 15.99 |      | 150.0 |         |
| 10535-AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)          | X | 4.99 | 66.35 | 16.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.18 | 66.56 | 16.12 |      | 150.0 |         |
|           |                                                            | Z | 4.97 | 66.36 | 16.07 |      | 150.0 |         |
| 10536-AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)          | X | 4.87 | 66.32 | 16.17 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.05 | 66.51 | 16.07 |      | 150.0 |         |
|           |                                                            | Z | 4.85 | 66.34 | 16.04 |      | 150.0 |         |
| 10537-AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)          | X | 4.94 | 66.34 | 16.18 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.10 | 66.48 | 16.06 |      | 150.0 |         |
|           |                                                            | Z | 4.91 | 66.31 | 16.03 |      | 150.0 |         |
| 10538-AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)          | X | 5.01 | 66.30 | 16.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.19 | 66.49 | 16.11 |      | 150.0 |         |
|           |                                                            | Z | 4.98 | 66.30 | 16.06 |      | 150.0 |         |
| 10540-AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)          | X | 4.93 | 66.22 | 16.18 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.13 | 66.52 | 16.13 |      | 150.0 |         |
|           |                                                            | Z | 4.91 | 66.26 | 16.06 |      | 150.0 |         |

|           |                                                    |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10541-AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)  | X | 4.90 | 66.09 | 16.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.10 | 66.38 | 16.06 |      | 150.0 |         |
|           |                                                    | Z | 4.88 | 66.13 | 15.98 |      | 150.0 |         |
| 10542-AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)  | X | 5.07 | 66.24 | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.25 | 66.45 | 16.11 |      | 150.0 |         |
|           |                                                    | Z | 5.04 | 66.26 | 16.06 |      | 150.0 |         |
| 10543-AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)  | X | 5.16 | 66.37 | 16.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.33 | 66.48 | 16.14 |      | 150.0 |         |
|           |                                                    | Z | 5.12 | 66.32 | 16.12 |      | 150.0 |         |
| 10544-AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)  | X | 5.28 | 66.21 | 16.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.42 | 66.50 | 16.03 |      | 150.0 |         |
|           |                                                    | Z | 5.25 | 66.26 | 15.98 |      | 150.0 |         |
| 10545-AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)  | X | 5.51 | 66.84 | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.61 | 66.90 | 16.18 |      | 150.0 |         |
|           |                                                    | Z | 5.45 | 66.77 | 16.19 |      | 150.0 |         |
| 10546-AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)  | X | 5.32 | 66.36 | 16.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.48 | 66.70 | 16.10 |      | 150.0 |         |
|           |                                                    | Z | 5.29 | 66.40 | 16.02 |      | 150.0 |         |
| 10547-AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)  | X | 5.43 | 66.58 | 16.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.55 | 66.74 | 16.11 |      | 150.0 |         |
|           |                                                    | Z | 5.37 | 66.52 | 16.07 |      | 150.0 |         |
| 10548-AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)  | X | 5.67 | 67.49 | 16.67 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.79 | 67.62 | 16.52 |      | 150.0 |         |
|           |                                                    | Z | 5.59 | 67.37 | 16.46 |      | 150.0 |         |
| 10550-AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)  | X | 5.44 | 66.73 | 16.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.51 | 66.72 | 16.12 |      | 150.0 |         |
|           |                                                    | Z | 5.36 | 66.62 | 16.14 |      | 150.0 |         |
| 10551-AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)  | X | 5.31 | 66.31 | 16.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.52 | 66.76 | 16.10 |      | 150.0 |         |
|           |                                                    | Z | 5.30 | 66.41 | 15.99 |      | 150.0 |         |
| 10552-AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)  | X | 5.28 | 66.30 | 16.09 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.44 | 66.57 | 16.01 |      | 150.0 |         |
|           |                                                    | Z | 5.25 | 66.34 | 15.96 |      | 150.0 |         |
| 10553-AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)  | X | 5.34 | 66.26 | 16.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.52 | 66.60 | 16.06 |      | 150.0 |         |
|           |                                                    | Z | 5.31 | 66.32 | 15.98 |      | 150.0 |         |
| 10554-AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle) | X | 5.72 | 66.58 | 16.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.83 | 66.86 | 16.12 |      | 150.0 |         |
|           |                                                    | Z | 5.67 | 66.61 | 16.06 |      | 150.0 |         |
| 10555-AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle) | X | 5.84 | 66.90 | 16.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.95 | 67.15 | 16.24 |      | 150.0 |         |
|           |                                                    | Z | 5.79 | 66.90 | 16.19 |      | 150.0 |         |
| 10556-AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle) | X | 5.87 | 66.98 | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.98 | 67.20 | 16.26 |      | 150.0 |         |
|           |                                                    | Z | 5.82 | 66.99 | 16.23 |      | 150.0 |         |
| 10557-AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle) | X | 5.81 | 66.79 | 16.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.94 | 67.10 | 16.23 |      | 150.0 |         |
|           |                                                    | Z | 5.77 | 66.83 | 16.17 |      | 150.0 |         |

|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10558-AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)              | X | 5.82 | 66.86 | 16.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.99 | 67.26 | 16.33 |      | 150.0 |         |
|           |                                                                 | Z | 5.79 | 66.94 | 16.24 |      | 150.0 |         |
| 10560-AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)              | X | 5.84 | 66.78 | 16.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.98 | 67.11 | 16.29 |      | 150.0 |         |
|           |                                                                 | Z | 5.80 | 66.82 | 16.22 |      | 150.0 |         |
| 10561-AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle)              | X | 5.78 | 66.81 | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.91 | 67.08 | 16.31 |      | 150.0 |         |
|           |                                                                 | Z | 5.74 | 66.84 | 16.26 |      | 150.0 |         |
| 10562-AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)              | X | 5.83 | 66.94 | 16.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.02 | 67.44 | 16.49 |      | 150.0 |         |
|           |                                                                 | Z | 5.80 | 67.03 | 16.35 |      | 150.0 |         |
| 10563-AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)              | X | 5.98 | 67.08 | 16.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.21 | 67.62 | 16.54 |      | 150.0 |         |
|           |                                                                 | Z | 5.91 | 67.01 | 16.31 |      | 150.0 |         |
| 10564-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)  | X | 4.63 | 66.62 | 16.36 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.84 | 66.79 | 16.36 |      | 150.0 |         |
|           |                                                                 | Z | 4.61 | 66.63 | 16.24 |      | 150.0 |         |
| 10565-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle) | X | 4.83 | 67.05 | 16.69 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.06 | 67.22 | 16.67 |      | 150.0 |         |
|           |                                                                 | Z | 4.82 | 67.07 | 16.58 |      | 150.0 |         |
| 10566-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle) | X | 4.66 | 66.85 | 16.48 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.90 | 67.07 | 16.49 |      | 150.0 |         |
|           |                                                                 | Z | 4.65 | 66.88 | 16.38 |      | 150.0 |         |
| 10567-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle) | X | 4.70 | 67.27 | 16.87 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.93 | 67.45 | 16.84 |      | 150.0 |         |
|           |                                                                 | Z | 4.69 | 67.33 | 16.78 |      | 150.0 |         |
| 10568-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle) | X | 4.56 | 66.58 | 16.20 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.81 | 66.86 | 16.28 |      | 150.0 |         |
|           |                                                                 | Z | 4.55 | 66.62 | 16.10 |      | 150.0 |         |
| 10569-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle) | X | 4.68 | 67.48 | 17.00 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.88 | 67.55 | 16.91 |      | 150.0 |         |
|           |                                                                 | Z | 4.67 | 67.53 | 16.91 |      | 150.0 |         |
| 10570-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle) | X | 4.69 | 67.30 | 16.91 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.92 | 67.39 | 16.83 |      | 150.0 |         |
|           |                                                                 | Z | 4.68 | 67.31 | 16.79 |      | 150.0 |         |
| 10571-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)       | X | 1.00 | 63.45 | 14.91 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.13 | 64.20 | 15.58 |      | 130.0 |         |
|           |                                                                 | Z | 0.98 | 63.57 | 14.96 |      | 130.0 |         |
| 10572-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)       | X | 1.01 | 64.01 | 15.28 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.14 | 64.75 | 15.94 |      | 130.0 |         |
|           |                                                                 | Z | 0.99 | 64.16 | 15.34 |      | 130.0 |         |
| 10573-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)     | X | 1.87 | 85.75 | 21.98 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.92 | 86.55 | 24.04 |      | 130.0 |         |
|           |                                                                 | Z | 2.25 | 89.51 | 23.31 |      | 130.0 |         |
| 10574-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)      | X | 1.08 | 70.06 | 18.36 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.22 | 70.33 | 18.86 |      | 130.0 |         |
|           |                                                                 | Z | 1.09 | 70.58 | 18.62 |      | 130.0 |         |

|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10575-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)  | X | 4.39 | 66.32 | 16.32 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.62 | 66.58 | 16.43 |      | 130.0 |         |
|           |                                                                 | Z | 4.39 | 66.40 | 16.27 |      | 130.0 |         |
| 10576-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)  | X | 4.42 | 66.53 | 16.41 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.65 | 66.74 | 16.49 |      | 130.0 |         |
|           |                                                                 | Z | 4.42 | 66.60 | 16.36 |      | 130.0 |         |
| 10577-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) | X | 4.59 | 66.78 | 16.57 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.85 | 67.03 | 16.66 |      | 130.0 |         |
|           |                                                                 | Z | 4.59 | 66.86 | 16.52 |      | 130.0 |         |
| 10578-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) | X | 4.49 | 66.94 | 16.68 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.74 | 67.18 | 16.75 |      | 130.0 |         |
|           |                                                                 | Z | 4.50 | 67.02 | 16.64 |      | 130.0 |         |
| 10579-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) | X | 4.24 | 66.07 | 15.88 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.51 | 66.48 | 16.08 |      | 130.0 |         |
|           |                                                                 | Z | 4.24 | 66.15 | 15.83 |      | 130.0 |         |
| 10580-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) | X | 4.28 | 66.14 | 15.91 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.56 | 66.53 | 16.11 |      | 130.0 |         |
|           |                                                                 | Z | 4.29 | 66.22 | 15.86 |      | 130.0 |         |
| 10581-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) | X | 4.40 | 66.99 | 16.63 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.64 | 67.22 | 16.70 |      | 130.0 |         |
|           |                                                                 | Z | 4.40 | 67.08 | 16.59 |      | 130.0 |         |
| 10582-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) | X | 4.17 | 65.84 | 15.66 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.45 | 66.25 | 15.88 |      | 130.0 |         |
|           |                                                                 | Z | 4.18 | 65.90 | 15.60 |      | 130.0 |         |
| 10583-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)       | X | 4.39 | 66.32 | 16.32 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.62 | 66.58 | 16.43 |      | 130.0 |         |
|           |                                                                 | Z | 4.39 | 66.40 | 16.27 |      | 130.0 |         |
| 10584-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)       | X | 4.42 | 66.53 | 16.41 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.65 | 66.74 | 16.49 |      | 130.0 |         |
|           |                                                                 | Z | 4.42 | 66.60 | 16.36 |      | 130.0 |         |
| 10585-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)      | X | 4.59 | 66.78 | 16.57 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.85 | 67.03 | 16.66 |      | 130.0 |         |
|           |                                                                 | Z | 4.59 | 66.86 | 16.52 |      | 130.0 |         |
| 10586-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)      | X | 4.49 | 66.94 | 16.68 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.74 | 67.18 | 16.75 |      | 130.0 |         |
|           |                                                                 | Z | 4.50 | 67.02 | 16.64 |      | 130.0 |         |
| 10587-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)      | X | 4.24 | 66.07 | 15.88 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.51 | 66.48 | 16.08 |      | 130.0 |         |
|           |                                                                 | Z | 4.24 | 66.15 | 15.83 |      | 130.0 |         |
| 10588-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)      | X | 4.28 | 66.14 | 15.91 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.56 | 66.53 | 16.11 |      | 130.0 |         |
|           |                                                                 | Z | 4.29 | 66.22 | 15.86 |      | 130.0 |         |
| 10589-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)      | X | 4.40 | 66.99 | 16.63 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.64 | 67.22 | 16.70 |      | 130.0 |         |
|           |                                                                 | Z | 4.40 | 67.08 | 16.59 |      | 130.0 |         |
| 10590-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)      | X | 4.17 | 65.84 | 15.66 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.45 | 66.25 | 15.88 |      | 130.0 |         |
|           |                                                                 | Z | 4.18 | 65.90 | 15.60 |      | 130.0 |         |

|           |                                                       |   |      |       |       |      |       |         |
|-----------|-------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10591-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle) | X | 4.55 | 66.42 | 16.46 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.78 | 66.64 | 16.53 |      | 130.0 |         |
|           |                                                       | Z | 4.55 | 66.49 | 16.40 |      | 130.0 |         |
| 10592-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle) | X | 4.67 | 66.72 | 16.59 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.93 | 66.98 | 16.66 |      | 130.0 |         |
|           |                                                       | Z | 4.68 | 66.80 | 16.53 |      | 130.0 |         |
| 10593-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle) | X | 4.59 | 66.59 | 16.43 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.85 | 66.88 | 16.54 |      | 130.0 |         |
|           |                                                       | Z | 4.59 | 66.67 | 16.38 |      | 130.0 |         |
| 10594-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle) | X | 4.64 | 66.77 | 16.61 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.90 | 67.05 | 16.69 |      | 130.0 |         |
|           |                                                       | Z | 4.65 | 66.86 | 16.56 |      | 130.0 |         |
| 10595-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle) | X | 4.61 | 66.75 | 16.51 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.87 | 67.00 | 16.59 |      | 130.0 |         |
|           |                                                       | Z | 4.61 | 66.82 | 16.45 |      | 130.0 |         |
| 10596-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle) | X | 4.54 | 66.71 | 16.50 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.80 | 67.00 | 16.60 |      | 130.0 |         |
|           |                                                       | Z | 4.54 | 66.79 | 16.44 |      | 130.0 |         |
| 10597-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle) | X | 4.49 | 66.57 | 16.34 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.75 | 66.90 | 16.48 |      | 130.0 |         |
|           |                                                       | Z | 4.49 | 66.65 | 16.29 |      | 130.0 |         |
| 10598-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle) | X | 4.48 | 66.81 | 16.63 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.73 | 67.12 | 16.73 |      | 130.0 |         |
|           |                                                       | Z | 4.49 | 66.91 | 16.58 |      | 130.0 |         |
| 10599-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle) | X | 5.31 | 67.13 | 16.85 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.45 | 67.20 | 16.74 |      | 130.0 |         |
|           |                                                       | Z | 5.25 | 67.05 | 16.69 |      | 130.0 |         |
| 10600-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle) | X | 5.48 | 67.76 | 17.14 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.57 | 67.58 | 16.91 |      | 130.0 |         |
|           |                                                       | Z | 5.39 | 67.54 | 16.90 |      | 130.0 |         |
| 10601-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle) | X | 5.31 | 67.28 | 16.91 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.47 | 67.34 | 16.80 |      | 130.0 |         |
|           |                                                       | Z | 5.27 | 67.22 | 16.76 |      | 130.0 |         |
| 10602-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle) | X | 5.43 | 67.41 | 16.89 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.56 | 67.39 | 16.75 |      | 130.0 |         |
|           |                                                       | Z | 5.40 | 67.36 | 16.75 |      | 130.0 |         |
| 10603-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle) | X | 5.54 | 67.82 | 17.25 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.64 | 67.67 | 17.02 |      | 130.0 |         |
|           |                                                       | Z | 5.49 | 67.76 | 17.09 |      | 130.0 |         |
| 10604-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle) | X | 5.42 | 67.47 | 17.05 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.46 | 67.19 | 16.76 |      | 130.0 |         |
|           |                                                       | Z | 5.37 | 67.38 | 16.88 |      | 130.0 |         |
| 10605-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle) | X | 5.43 | 67.47 | 17.04 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.56 | 67.49 | 16.91 |      | 130.0 |         |
|           |                                                       | Z | 5.37 | 67.38 | 16.87 |      | 130.0 |         |
| 10606-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle) | X | 5.17 | 66.77 | 16.54 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.31 | 66.83 | 16.45 |      | 130.0 |         |
|           |                                                       | Z | 5.12 | 66.68 | 16.37 |      | 130.0 |         |

|           |                                                   |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10607-AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle) | X | 4.40 | 65.75 | 16.09 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.62 | 65.97 | 16.16 |      | 130.0 |         |
|           |                                                   | Z | 4.40 | 65.83 | 16.04 |      | 130.0 |         |
| 10608-AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | X | 4.54 | 66.09 | 16.24 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.80 | 66.37 | 16.32 |      | 130.0 |         |
|           |                                                   | Z | 4.55 | 66.18 | 16.20 |      | 130.0 |         |
| 10609-AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle) | X | 4.43 | 65.91 | 16.05 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.69 | 66.22 | 16.16 |      | 130.0 |         |
|           |                                                   | Z | 4.44 | 66.00 | 16.00 |      | 130.0 |         |
| 10610-AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | X | 4.49 | 66.09 | 16.23 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.74 | 66.38 | 16.32 |      | 130.0 |         |
|           |                                                   | Z | 4.49 | 66.18 | 16.19 |      | 130.0 |         |
| 10611-AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) | X | 4.40 | 65.88 | 16.06 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.66 | 66.19 | 16.17 |      | 130.0 |         |
|           |                                                   | Z | 4.40 | 65.97 | 16.02 |      | 130.0 |         |
| 10612-AAB | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) | X | 4.39 | 66.01 | 16.10 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.66 | 66.35 | 16.22 |      | 130.0 |         |
|           |                                                   | Z | 4.40 | 66.10 | 16.06 |      | 130.0 |         |
| 10613-AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) | X | 4.38 | 65.82 | 15.94 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.67 | 66.22 | 16.10 |      | 130.0 |         |
|           |                                                   | Z | 4.39 | 65.92 | 15.90 |      | 130.0 |         |
| 10614-AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) | X | 4.35 | 66.06 | 16.21 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.61 | 66.40 | 16.32 |      | 130.0 |         |
|           |                                                   | Z | 4.36 | 66.17 | 16.17 |      | 130.0 |         |
| 10615-AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) | X | 4.39 | 65.69 | 15.81 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.66 | 66.03 | 15.96 |      | 130.0 |         |
|           |                                                   | Z | 4.39 | 65.77 | 15.76 |      | 130.0 |         |
| 10616-AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) | X | 5.07 | 66.15 | 16.34 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.27 | 66.44 | 16.35 |      | 130.0 |         |
|           |                                                   | Z | 5.05 | 66.21 | 16.25 |      | 130.0 |         |
| 10617-AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) | X | 5.14 | 66.37 | 16.43 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.34 | 66.62 | 16.41 |      | 130.0 |         |
|           |                                                   | Z | 5.12 | 66.42 | 16.33 |      | 130.0 |         |
| 10618-AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) | X | 5.03 | 66.38 | 16.45 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.22 | 66.62 | 16.43 |      | 130.0 |         |
|           |                                                   | Z | 5.02 | 66.45 | 16.36 |      | 130.0 |         |
| 10619-AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) | X | 5.07 | 66.24 | 16.31 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.24 | 66.43 | 16.27 |      | 130.0 |         |
|           |                                                   | Z | 5.03 | 66.23 | 16.18 |      | 130.0 |         |
| 10620-AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) | X | 5.13 | 66.23 | 16.35 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.33 | 66.47 | 16.34 |      | 130.0 |         |
|           |                                                   | Z | 5.11 | 66.25 | 16.24 |      | 130.0 |         |
| 10621-AAB | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) | X | 5.12 | 66.28 | 16.51 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.33 | 66.60 | 16.51 |      | 130.0 |         |
|           |                                                   | Z | 5.11 | 66.38 | 16.44 |      | 130.0 |         |
| 10622-AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) | X | 5.11 | 66.38 | 16.55 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.34 | 66.76 | 16.59 |      | 130.0 |         |
|           |                                                   | Z | 5.11 | 66.50 | 16.49 |      | 130.0 |         |

|           |                                                    |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10623-AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)  | X | 4.99 | 65.86 | 16.14 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.22 | 66.30 | 16.24 |      | 130.0 |         |
|           |                                                    | Z | 4.98 | 65.96 | 16.08 |      | 130.0 |         |
| 10624-AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)  | X | 5.20 | 66.20 | 16.38 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.41 | 66.49 | 16.39 |      | 130.0 |         |
|           |                                                    | Z | 5.19 | 66.26 | 16.30 |      | 130.0 |         |
| 10625-AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)  | X | 5.30 | 66.37 | 16.54 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.75 | 67.41 | 16.90 |      | 130.0 |         |
|           |                                                    | Z | 5.33 | 66.58 | 16.52 |      | 130.0 |         |
| 10626-AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)  | X | 5.40 | 66.14 | 16.28 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.57 | 66.51 | 16.31 |      | 130.0 |         |
|           |                                                    | Z | 5.38 | 66.23 | 16.21 |      | 130.0 |         |
| 10627-AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)  | X | 5.71 | 67.03 | 16.70 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.80 | 67.06 | 16.54 |      | 130.0 |         |
|           |                                                    | Z | 5.65 | 66.96 | 16.54 |      | 130.0 |         |
| 10628-AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)  | X | 5.40 | 66.15 | 16.18 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.60 | 66.59 | 16.25 |      | 130.0 |         |
|           |                                                    | Z | 5.38 | 66.23 | 16.10 |      | 130.0 |         |
| 10629-AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)  | X | 5.55 | 66.49 | 16.35 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.67 | 66.64 | 16.26 |      | 130.0 |         |
|           |                                                    | Z | 5.49 | 66.42 | 16.19 |      | 130.0 |         |
| 10630-AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)  | X | 5.95 | 67.89 | 17.05 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.08 | 68.07 | 16.98 |      | 130.0 |         |
|           |                                                    | Z | 5.84 | 67.71 | 16.83 |      | 130.0 |         |
| 10631-AAB | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)  | X | 5.77 | 67.48 | 17.05 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.99 | 67.89 | 17.07 |      | 130.0 |         |
|           |                                                    | Z | 5.74 | 67.53 | 16.95 |      | 130.0 |         |
| 10632-AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)  | X | 5.72 | 67.25 | 16.96 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.77 | 67.11 | 16.70 |      | 130.0 |         |
|           |                                                    | Z | 5.64 | 67.12 | 16.77 |      | 130.0 |         |
| 10633-AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)  | X | 5.44 | 66.28 | 16.29 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.66 | 66.76 | 16.36 |      | 130.0 |         |
|           |                                                    | Z | 5.44 | 66.43 | 16.24 |      | 130.0 |         |
| 10634-AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)  | X | 5.44 | 66.38 | 16.39 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.64 | 66.78 | 16.43 |      | 130.0 |         |
|           |                                                    | Z | 5.43 | 66.48 | 16.32 |      | 130.0 |         |
| 10635-AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)  | X | 5.30 | 65.61 | 15.72 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.53 | 66.14 | 15.85 |      | 130.0 |         |
|           |                                                    | Z | 5.29 | 65.70 | 15.64 |      | 130.0 |         |
| 10636-AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle) | X | 5.86 | 66.55 | 16.40 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.98 | 66.87 | 16.39 |      | 130.0 |         |
|           |                                                    | Z | 5.82 | 66.61 | 16.30 |      | 130.0 |         |
| 10637-AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle) | X | 6.02 | 66.98 | 16.61 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.13 | 67.25 | 16.56 |      | 130.0 |         |
|           |                                                    | Z | 5.97 | 67.00 | 16.48 |      | 130.0 |         |
| 10638-AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle) | X | 6.03 | 67.01 | 16.60 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.13 | 67.22 | 16.53 |      | 130.0 |         |
|           |                                                    | Z | 5.97 | 67.00 | 16.46 |      | 130.0 |         |

|           |                                                        |   |        |        |       |       |       |         |
|-----------|--------------------------------------------------------|---|--------|--------|-------|-------|-------|---------|
| 10639-AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)     | X | 5.96   | 66.80  | 16.53 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.11   | 67.17  | 16.55 |       | 130.0 |         |
|           |                                                        | Z | 5.93   | 66.87  | 16.44 |       | 130.0 |         |
| 10640-AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)     | X | 5.92   | 66.70  | 16.42 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.12   | 67.19  | 16.50 |       | 130.0 |         |
|           |                                                        | Z | 5.91   | 66.82  | 16.35 |       | 130.0 |         |
| 10641-AAC | IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)     | X | 6.06   | 66.91  | 16.55 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.16   | 67.10  | 16.47 |       | 130.0 |         |
|           |                                                        | Z | 6.01   | 66.89  | 16.41 |       | 130.0 |         |
| 10642-AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)     | X | 6.04   | 66.98  | 16.76 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.20   | 67.33  | 16.75 |       | 130.0 |         |
|           |                                                        | Z | 6.02   | 67.07  | 16.68 |       | 130.0 |         |
| 10643-AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)     | X | 5.90   | 66.69  | 16.50 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.04   | 67.03  | 16.51 |       | 130.0 |         |
|           |                                                        | Z | 5.87   | 66.78  | 16.42 |       | 130.0 |         |
| 10644-AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)     | X | 5.95   | 66.86  | 16.60 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.19   | 67.50  | 16.76 |       | 130.0 |         |
|           |                                                        | Z | 5.94   | 66.99  | 16.54 |       | 130.0 |         |
| 10645-AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)     | X | 6.44   | 67.99  | 17.14 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.47   | 67.94  | 16.94 |       | 130.0 |         |
|           |                                                        | Z | 6.16   | 67.33  | 16.68 |       | 130.0 |         |
| 10646-AAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)  | X | 7.50   | 90.48  | 30.44 | 9.30  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 17.43  | 112.38 | 39.34 |       | 60.0  |         |
|           |                                                        | Z | 9.26   | 96.56  | 33.29 |       | 60.0  |         |
| 10647-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) | X | 6.74   | 88.72  | 29.93 | 9.30  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 14.54  | 108.61 | 38.31 |       | 60.0  |         |
|           |                                                        | Z | 8.10   | 94.14  | 32.60 |       | 60.0  |         |
| 10648-AAA | CDMA2000 (1x Advanced)                                 | X | 0.39   | 60.00  | 6.32  | 0.00  | 150.0 | ± 9.6 % |
|           |                                                        | Y | 0.67   | 63.31  | 10.55 |       | 150.0 |         |
|           |                                                        | Z | 0.38   | 60.00  | 6.43  |       | 150.0 |         |
| 10652-AAB | LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)         | X | 3.10   | 65.49  | 15.51 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 3.52   | 66.85  | 16.73 |       | 80.0  |         |
|           |                                                        | Z | 3.18   | 66.07  | 15.91 |       | 80.0  |         |
| 10653-AAB | LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)        | X | 3.70   | 65.11  | 16.04 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 4.03   | 66.07  | 16.78 |       | 80.0  |         |
|           |                                                        | Z | 3.73   | 65.44  | 16.24 |       | 80.0  |         |
| 10654-AAB | LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)        | X | 3.73   | 64.77  | 16.12 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 4.00   | 65.69  | 16.76 |       | 80.0  |         |
|           |                                                        | Z | 3.74   | 65.07  | 16.28 |       | 80.0  |         |
| 10655-AAB | LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)        | X | 3.81   | 64.71  | 16.17 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 4.06   | 65.68  | 16.79 |       | 80.0  |         |
|           |                                                        | Z | 3.81   | 65.01  | 16.32 |       | 80.0  |         |
| 10658-AAA | Pulse Waveform (200Hz, 10%)                            | X | 3.06   | 66.59  | 11.16 | 10.00 | 50.0  | ± 9.6 % |
|           |                                                        | Y | 100.00 | 111.68 | 26.09 |       | 50.0  |         |
|           |                                                        | Z | 3.93   | 69.81  | 12.66 |       | 50.0  |         |
| 10659-AAA | Pulse Waveform (200Hz, 20%)                            | X | 1.63   | 63.81  | 8.65  | 6.99  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 100.00 | 113.13 | 25.67 |       | 60.0  |         |
|           |                                                        | Z | 2.52   | 68.36  | 10.82 |       | 60.0  |         |

|           |                             |   |        |        |        |      |       |         |
|-----------|-----------------------------|---|--------|--------|--------|------|-------|---------|
| 10660-AAA | Pulse Waveform (200Hz, 40%) | X | 0.57   | 60.00  | 5.26   | 3.98 | 80.0  | ± 9.6 % |
|           |                             | Y | 100.00 | 118.24 | 26.52  |      | 80.0  |         |
|           |                             | Z | 0.68   | 61.70  | 6.30   |      | 80.0  |         |
| 10661-AAA | Pulse Waveform (200Hz, 60%) | X | 0.32   | 60.00  | 3.83   | 2.22 | 100.0 | ± 9.6 % |
|           |                             | Y | 100.00 | 125.46 | 28.15  |      | 100.0 |         |
|           |                             | Z | 0.29   | 60.00  | 3.83   |      | 100.0 |         |
| 10662-AAA | Pulse Waveform (200Hz, 80%) | X | 7.43   | 367.15 | 53.93  | 0.97 | 120.0 | ± 9.6 % |
|           |                             | Y | 100.00 | 135.73 | 30.13  |      | 120.0 |         |
|           |                             | Z | 0.00   | 228.51 | 107.76 |      | 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.



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Accreditation No.: **SCS 0108**

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 Multilateral Agreement for the recognition of calibration certificates

Client **PC Test**

Certificate No: **EX3-7406\_May18**

## CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:7406**

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

Calibration date: **May 22, 2018**

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

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

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards          | ID               | Cal Date (Certificate No.)        | Scheduled Calibration  |
|----------------------------|------------------|-----------------------------------|------------------------|
| Power meter NRP            | SN: 104778       | 04-Apr-18 (No. 217-02672/02673)   | Apr-19                 |
| Power sensor NRP-Z91       | SN: 103244       | 04-Apr-18 (No. 217-02672)         | Apr-19                 |
| Power sensor NRP-Z91       | SN: 103245       | 04-Apr-18 (No. 217-02673)         | Apr-19                 |
| Reference 20 dB Attenuator | SN: S5277 (20x)  | 04-Apr-18 (No. 217-02682)         | Apr-19                 |
| Reference Probe ES3DV2     | SN: 3013         | 30-Dec-17 (No. ES3-3013_Dec17)    | Dec-18                 |
| DAE4                       | SN: 660          | 21-Dec-17 (No. DAE4-660_Dec17)    | Dec-18                 |
| Secondary Standards        | ID               | Check Date (in house)             | Scheduled Check        |
| Power meter E4419B         | SN: GB41293874   | 06-Apr-16 (in house check Jun-16) | In house check: Jun-18 |
| Power sensor E4412A        | SN: MY41498087   | 06-Apr-16 (in house check Jun-16) | In house check: Jun-18 |
| Power sensor E4412A        | SN: 000110210    | 06-Apr-16 (in house check Jun-16) | In house check: Jun-18 |
| RF generator HP 8648C      | SN: US3642U01700 | 04-Aug-99 (in house check Jun-16) | In house check: Jun-18 |
| Network Analyzer HP 8753E  | SN: US37390585   | 18-Oct-01 (in house check Oct-17) | In house check: Oct-18 |

|                |                |                       |                      |
|----------------|----------------|-----------------------|----------------------|
| Calibrated by: | Name           | Function              | Signature            |
|                | Jeton Kastrati | Laboratory Technician |                      |
| Approved by:   | Name           | Function              | Signature            |
|                | Katja Pokovic  | Technical Manager     |                      |
|                |                |                       | Issued: May 22, 2018 |

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



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### Glossary:

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

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

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

### Methods Applied and Interpretation of Parameters:

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

# Probe EX3DV4

## SN:7406

Manufactured: November 24, 2015  
Calibrated: May 22, 2018

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

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

### Basic Calibration Parameters

|                                                           | Sensor X | Sensor Y | Sensor Z | Unc (k=2)     |
|-----------------------------------------------------------|----------|----------|----------|---------------|
| Norm ( $\mu\text{V}/(\text{V}/\text{m})^2$ ) <sup>A</sup> | 0.47     | 0.43     | 0.46     | $\pm 10.1 \%$ |
| DCP (mV) <sup>B</sup>                                     | 98.8     | 100.2    | 97.1     |               |

### Modulation Calibration Parameters

| UID | Communication System Name |   | A<br>dB | B<br>dB $\sqrt{\mu\text{V}}$ | C   | D<br>dB | VR<br>mV | Unc <sup>E</sup><br>(k=2) |
|-----|---------------------------|---|---------|------------------------------|-----|---------|----------|---------------------------|
| 0   | CW                        | X | 0.0     | 0.0                          | 1.0 | 0.00    | 159.0    | $\pm 3.3 \%$              |
|     |                           | Y | 0.0     | 0.0                          | 1.0 |         | 176.8    |                           |
|     |                           | Z | 0.0     | 0.0                          | 1.0 |         | 172.1    |                           |

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 | 40.51    | 308.1    | 36.65                       | 8.462                               | 0.498                               | 5.057    | 0.000                 | 0.453                 | 1.008 |
| Y | 20.79    | 155.9    | 36.07                       | 8.177                               | 0.281                               | 5.026    | 0.312                 | 0.202                 | 1.000 |
| Z | 39.96    | 308.6    | 37.72                       | 7.122                               | 0.556                               | 5.056    | 0.094                 | 0.485                 | 1.007 |

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

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

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

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

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

### Calibration Parameter Determined in Head Tissue Simulating Media

| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 30                   | 55.0                               | 0.75                            | 16.52   | 16.52   | 16.52   | 0.00               | 1.00                    | ± 13.3 %  |
| 750                  | 41.9                               | 0.89                            | 10.09   | 10.09   | 10.09   | 0.48               | 0.90                    | ± 12.0 %  |
| 835                  | 41.5                               | 0.90                            | 9.70    | 9.70    | 9.70    | 0.43               | 0.91                    | ± 12.0 %  |
| 1750                 | 40.1                               | 1.37                            | 8.58    | 8.58    | 8.58    | 0.35               | 0.80                    | ± 12.0 %  |
| 1900                 | 40.0                               | 1.40                            | 8.22    | 8.22    | 8.22    | 0.39               | 0.84                    | ± 12.0 %  |
| 2300                 | 39.5                               | 1.67                            | 7.95    | 7.95    | 7.95    | 0.30               | 0.84                    | ± 12.0 %  |
| 2450                 | 39.2                               | 1.80                            | 7.54    | 7.54    | 7.54    | 0.31               | 0.87                    | ± 12.0 %  |
| 2600                 | 39.0                               | 1.96                            | 7.40    | 7.40    | 7.40    | 0.25               | 0.95                    | ± 12.0 %  |

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

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

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

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

### Calibration Parameter Determined in Body Tissue Simulating Media

| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 750                  | 55.5                               | 0.96                            | 9.91    | 9.91    | 9.91    | 0.52               | 0.80                    | ± 12.0 %  |
| 835                  | 55.2                               | 0.97                            | 9.61    | 9.61    | 9.61    | 0.52               | 0.80                    | ± 12.0 %  |
| 1750                 | 53.4                               | 1.49                            | 8.04    | 8.04    | 8.04    | 0.43               | 0.84                    | ± 12.0 %  |
| 1900                 | 53.3                               | 1.52                            | 7.74    | 7.74    | 7.74    | 0.39               | 0.84                    | ± 12.0 %  |
| 2300                 | 52.9                               | 1.81                            | 7.46    | 7.46    | 7.46    | 0.41               | 0.86                    | ± 12.0 %  |
| 2450                 | 52.7                               | 1.95                            | 7.30    | 7.30    | 7.30    | 0.43               | 0.88                    | ± 12.0 %  |
| 2600                 | 52.5                               | 2.16                            | 7.27    | 7.27    | 7.27    | 0.33               | 0.98                    | ± 12.0 %  |

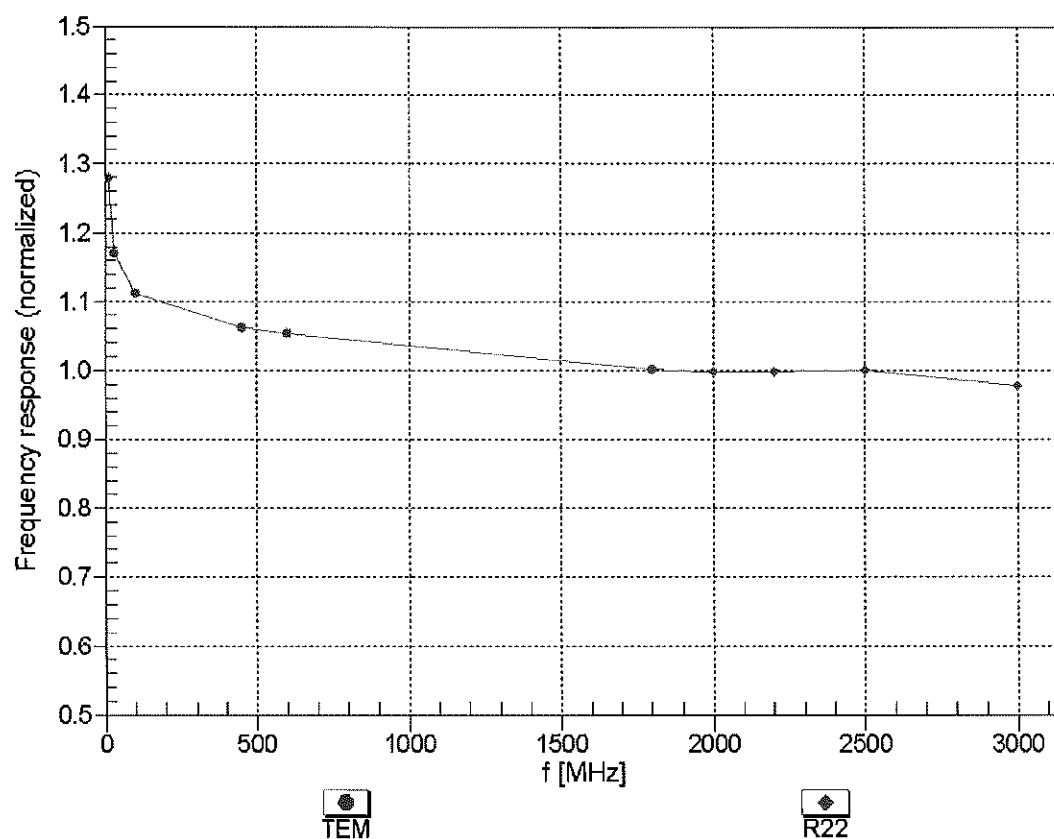
<sup>C</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below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

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

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

## Frequency Response of E-Field

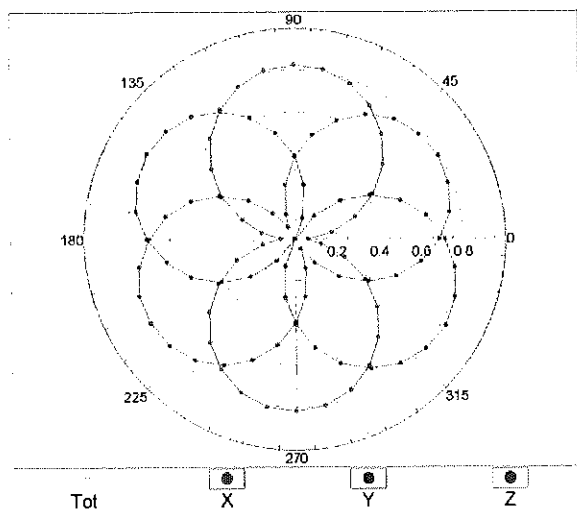
(TEM-Cell:ifi110 EXX, Waveguide: R22)



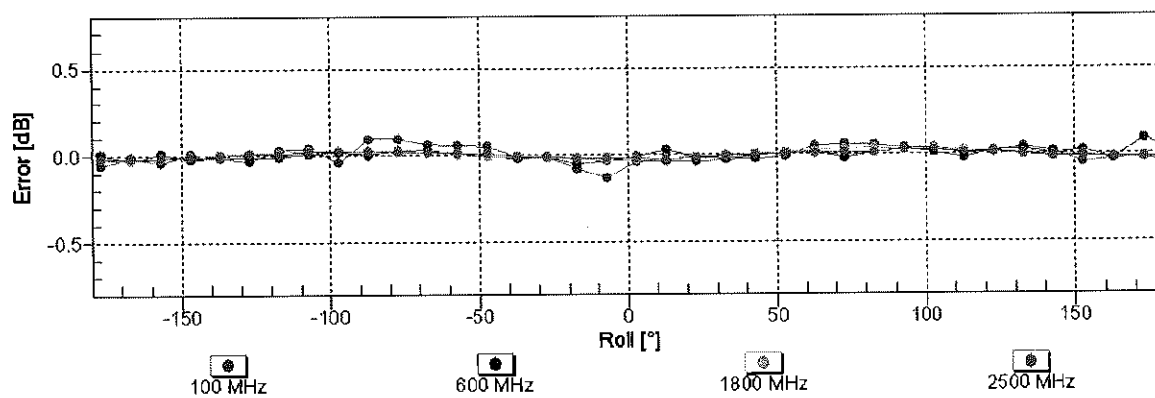
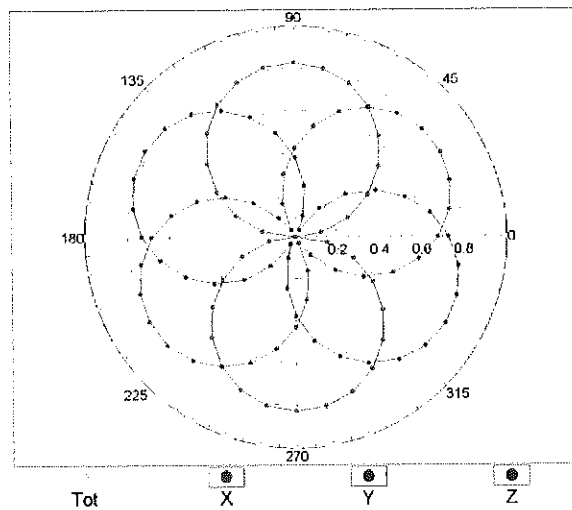
Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  (k=2)

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

f=600 MHz,TEM

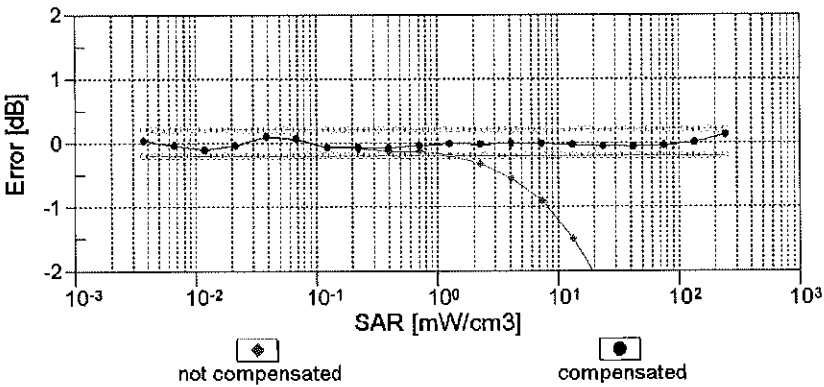
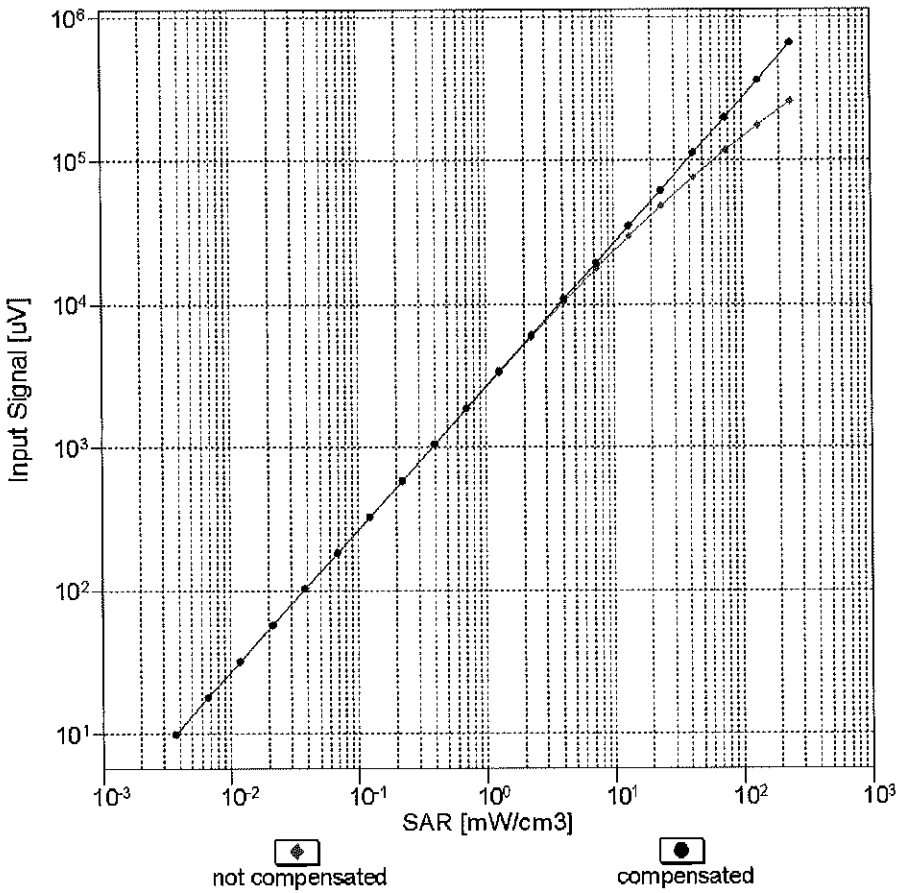


f=1800 MHz,R22



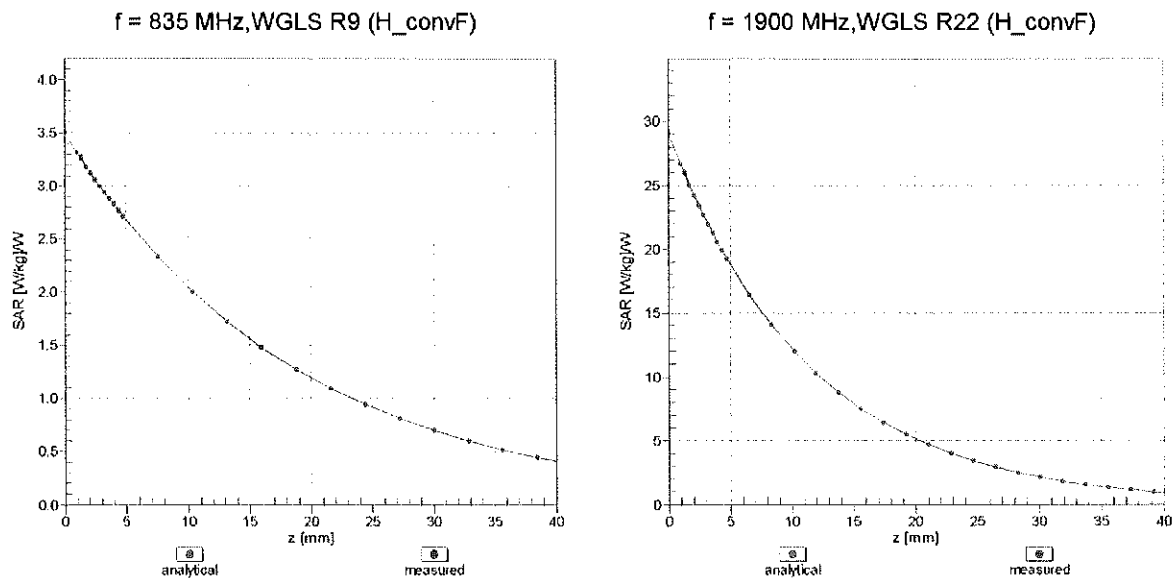
Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  ( $k=2$ )

**Dynamic Range  $f(SAR_{head})$**   
(TEM cell ,  $f_{eval}=1900\text{ MHz}$ )



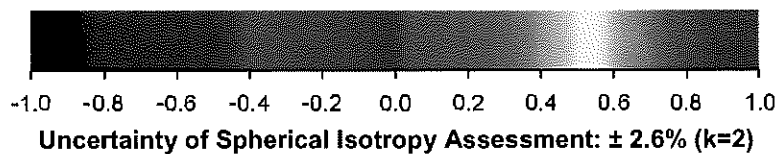
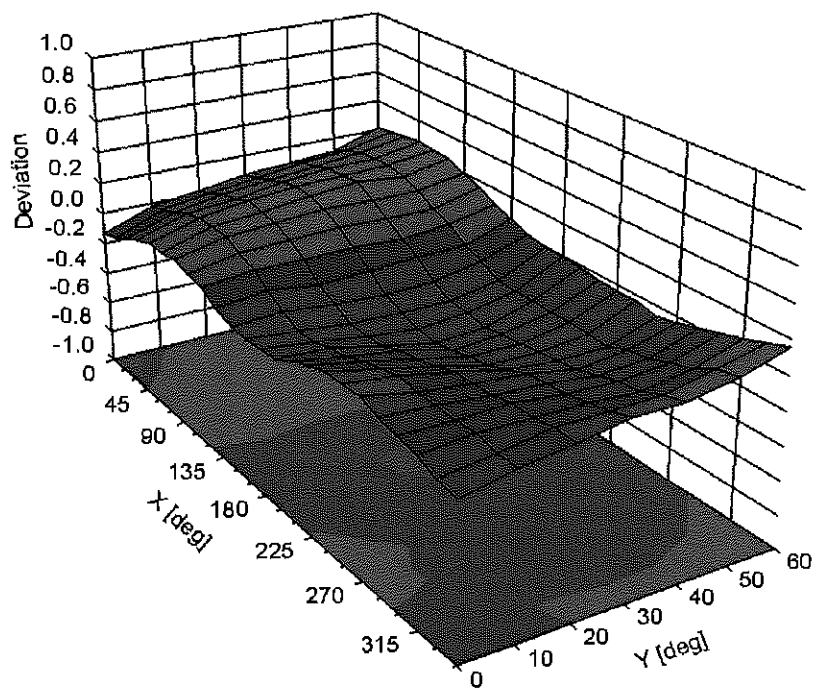
Uncertainty of Linearity Assessment:  $\pm 0.6\%$  ( $k=2$ )

## Conversion Factor Assessment



## Deviation from Isotropy in Liquid

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



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

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

### Other Probe Parameters

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle (°)                           | 2.9        |
| 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    | 159.0    | $\pm 3.3 \%$                     |
|               |                                               | Y | 0.00    | 0.00                   | 1.00  |         | 176.8    |                                  |
|               |                                               | Z | 0.00    | 0.00                   | 1.00  |         | 172.1    |                                  |
| 10010-<br>CAA | SAR Validation (Square, 100ms, 10ms)          | X | 2.08    | 64.96                  | 9.67  | 10.00   | 20.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 1.53    | 62.37                  | 7.61  |         | 20.0     |                                  |
|               |                                               | Z | 1.91    | 63.93                  | 9.02  |         | 20.0     |                                  |
| 10011-<br>CAB | UMTS-FDD (WCDMA)                              | X | 0.84    | 64.72                  | 13.20 | 0.00    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 2.29    | 84.03                  | 21.49 |         | 150.0    |                                  |
|               |                                               | Z | 0.87    | 65.77                  | 13.83 |         | 150.0    |                                  |
| 10012-<br>CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)      | X | 1.07    | 62.64                  | 14.17 | 0.41    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 1.16    | 66.58                  | 16.90 |         | 150.0    |                                  |
|               |                                               | Z | 1.05    | 62.95                  | 14.54 |         | 150.0    |                                  |
| 10013-<br>CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | X | 4.71    | 66.44                  | 16.84 | 1.46    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 4.37    | 67.68                  | 17.36 |         | 150.0    |                                  |
|               |                                               | Z | 4.70    | 66.50                  | 16.96 |         | 150.0    |                                  |
| 10021-<br>DAC | GSM-FDD (TDMA, GMSK)                          | X | 100.00  | 111.67                 | 26.02 | 9.39    | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 105.88                 | 22.91 |         | 50.0     |                                  |
|               |                                               | Z | 100.00  | 110.56                 | 25.48 |         | 50.0     |                                  |
| 10023-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0)                   | X | 100.00  | 111.18                 | 25.86 | 9.57    | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 104.93                 | 22.52 |         | 50.0     |                                  |
|               |                                               | Z | 100.00  | 110.10                 | 25.33 |         | 50.0     |                                  |
| 10024-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1)                 | X | 100.00  | 110.92                 | 24.51 | 6.56    | 60.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 104.17                 | 21.07 |         | 60.0     |                                  |
|               |                                               | Z | 100.00  | 109.40                 | 23.71 |         | 60.0     |                                  |
| 10025-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0)                   | X | 3.97    | 69.08                  | 25.47 | 12.57   | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 6.34    | 86.82                  | 35.22 |         | 50.0     |                                  |
|               |                                               | Z | 3.66    | 66.66                  | 24.05 |         | 50.0     |                                  |
| 10026-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1)                 | X | 6.82    | 85.96                  | 30.56 | 9.56    | 60.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 6.90    | 89.59                  | 32.84 |         | 60.0     |                                  |
|               |                                               | Z | 6.52    | 85.14                  | 30.29 |         | 60.0     |                                  |
| 10027-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2)               | X | 100.00  | 111.11                 | 23.76 | 4.80    | 80.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 105.05                 | 20.71 |         | 80.0     |                                  |
|               |                                               | Z | 100.00  | 108.99                 | 22.68 |         | 80.0     |                                  |
| 10028-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)             | X | 100.00  | 111.34                 | 23.14 | 3.55    | 100.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 107.81                 | 21.20 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 108.15                 | 21.58 |         | 100.0    |                                  |
| 10029-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2)               | X | 4.51    | 76.74                  | 25.54 | 7.80    | 80.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 4.44    | 78.91                  | 27.21 |         | 80.0     |                                  |
|               |                                               | Z | 4.34    | 76.19                  | 25.41 |         | 80.0     |                                  |
| 10030-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1)           | X | 100.00  | 108.75                 | 23.04 | 5.30    | 70.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 100.28                 | 18.89 |         | 70.0     |                                  |
|               |                                               | Z | 100.00  | 106.90                 | 22.09 |         | 70.0     |                                  |
| 10031-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3)           | X | 100.00  | 99.67                  | 17.08 | 1.88    | 100.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 50.08   | 84.31                  | 11.26 |         | 100.0    |                                  |
|               |                                               | Z | 0.35    | 62.17                  | 5.86  |         | 100.0    |                                  |

|           |                                                     |   |        |        |       |       |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|-------|-------|---------|
| 10032-CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5)                 | X | 28.56  | 85.45  | 12.04 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 0.15   | 60.00  | 3.24  |       | 100.0 |         |
|           |                                                     | Z | 0.16   | 60.00  | 3.46  |       | 100.0 |         |
| 10033-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)           | X | 8.12   | 89.17  | 23.19 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 5.53   | 78.60  | 16.12 |       | 70.0  |         |
|           |                                                     | Z | 8.77   | 90.41  | 23.45 |       | 70.0  |         |
| 10034-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)           | X | 1.89   | 71.18  | 14.91 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 0.70   | 61.17  | 6.54  |       | 100.0 |         |
|           |                                                     | Z | 1.94   | 71.91  | 15.07 |       | 100.0 |         |
| 10035-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)           | X | 1.33   | 67.78  | 13.07 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 0.50   | 60.00  | 5.45  |       | 100.0 |         |
|           |                                                     | Z | 1.34   | 68.27  | 13.15 |       | 100.0 |         |
| 10036-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1)               | X | 11.58  | 94.76  | 24.99 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 7.92   | 82.80  | 17.55 |       | 70.0  |         |
|           |                                                     | Z | 13.45  | 97.05  | 25.53 |       | 70.0  |         |
| 10037-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3)               | X | 1.76   | 70.41  | 14.56 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 0.67   | 60.87  | 6.38  |       | 100.0 |         |
|           |                                                     | Z | 1.78   | 71.00  | 14.68 |       | 100.0 |         |
| 10038-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5)               | X | 1.33   | 68.01  | 13.29 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 0.50   | 60.00  | 5.57  |       | 100.0 |         |
|           |                                                     | Z | 1.35   | 68.60  | 13.42 |       | 100.0 |         |
| 10039-CAB | CDMA2000 (1xRTT, RC1)                               | X | 1.09   | 65.82  | 11.60 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.33   | 60.00  | 4.54  |       | 150.0 |         |
|           |                                                     | Z | 1.10   | 66.30  | 11.64 |       | 150.0 |         |
| 10042-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | X | 100.00 | 107.41 | 23.26 | 7.78  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 57.23  | 96.27  | 18.96 |       | 50.0  |         |
|           |                                                     | Z | 100.00 | 105.97 | 22.54 |       | 50.0  |         |
| 10044-CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM)                    | X | 0.03   | 118.97 | 9.94  | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.05   | 129.23 | 11.15 |       | 150.0 |         |
|           |                                                     | Z | 0.09   | 122.00 | 10.41 |       | 150.0 |         |
| 10048-CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)           | X | 21.95  | 89.61  | 21.44 | 13.80 | 25.0  | ± 9.6 % |
|           |                                                     | Y | 5.10   | 70.47  | 13.72 |       | 25.0  |         |
|           |                                                     | Z | 12.15  | 81.59  | 18.87 |       | 25.0  |         |
| 10049-CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)         | X | 43.64  | 100.12 | 23.34 | 10.79 | 40.0  | ± 9.6 % |
|           |                                                     | Y | 5.90   | 74.58  | 14.22 |       | 40.0  |         |
|           |                                                     | Z | 17.31  | 88.39  | 19.94 |       | 40.0  |         |
| 10056-CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps)                      | X | 25.07  | 100.73 | 26.75 | 9.03  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 12.75  | 86.31  | 19.79 |       | 50.0  |         |
|           |                                                     | Z | 22.08  | 98.32  | 25.86 |       | 50.0  |         |
| 10058-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)                   | X | 3.64   | 72.69  | 22.94 | 6.55  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 3.58   | 74.51  | 24.46 |       | 100.0 |         |
|           |                                                     | Z | 3.51   | 72.30  | 22.90 |       | 100.0 |         |
| 10059-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)            | X | 1.08   | 63.42  | 14.64 | 0.61  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 1.21   | 68.14  | 17.70 |       | 110.0 |         |
|           |                                                     | Z | 1.06   | 63.79  | 15.05 |       | 110.0 |         |
| 10060-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)          | X | 2.61   | 84.17  | 21.25 | 1.30  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 100.00 | 147.02 | 38.69 |       | 110.0 |         |
|           |                                                     | Z | 5.12   | 95.07  | 24.77 |       | 110.0 |         |

|           |                                                |   |      |       |       |      |       |         |
|-----------|------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10061-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)      | X | 1.89 | 74.28 | 19.62 | 2.04 | 110.0 | ± 9.6 % |
|           |                                                | Y | 6.72 | 99.45 | 28.86 |      | 110.0 |         |
|           |                                                | Z | 1.98 | 76.00 | 20.54 |      | 110.0 |         |
| 10062-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)       | X | 4.50 | 66.38 | 16.23 | 0.49 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.17 | 67.64 | 16.77 |      | 100.0 |         |
|           |                                                | Z | 4.49 | 66.45 | 16.37 |      | 100.0 |         |
| 10063-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)       | X | 4.52 | 66.46 | 16.33 | 0.72 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.19 | 67.78 | 16.90 |      | 100.0 |         |
|           |                                                | Z | 4.51 | 66.54 | 16.46 |      | 100.0 |         |
| 10064-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)      | X | 4.78 | 66.72 | 16.56 | 0.86 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.37 | 67.91 | 17.05 |      | 100.0 |         |
|           |                                                | Z | 4.77 | 66.78 | 16.69 |      | 100.0 |         |
| 10065-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)      | X | 4.65 | 66.59 | 16.65 | 1.21 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.25 | 67.66 | 17.08 |      | 100.0 |         |
|           |                                                | Z | 4.64 | 66.65 | 16.78 |      | 100.0 |         |
| 10066-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)      | X | 4.67 | 66.60 | 16.82 | 1.46 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.25 | 67.56 | 17.16 |      | 100.0 |         |
|           |                                                | Z | 4.65 | 66.66 | 16.94 |      | 100.0 |         |
| 10067-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)      | X | 4.96 | 66.87 | 17.31 | 2.04 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.45 | 67.61 | 17.49 |      | 100.0 |         |
|           |                                                | Z | 4.95 | 66.92 | 17.43 |      | 100.0 |         |
| 10068-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)      | X | 5.00 | 66.83 | 17.50 | 2.55 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.58 | 67.92 | 17.91 |      | 100.0 |         |
|           |                                                | Z | 4.98 | 66.87 | 17.60 |      | 100.0 |         |
| 10069-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)      | X | 5.07 | 66.86 | 17.70 | 2.67 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.58 | 67.73 | 17.95 |      | 100.0 |         |
|           |                                                | Z | 5.05 | 66.90 | 17.80 |      | 100.0 |         |
| 10071-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)  | X | 4.80 | 66.52 | 17.15 | 1.99 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.47 | 67.76 | 17.67 |      | 100.0 |         |
|           |                                                | Z | 4.79 | 66.57 | 17.27 |      | 100.0 |         |
| 10072-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | X | 4.77 | 66.78 | 17.34 | 2.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.40 | 67.85 | 17.80 |      | 100.0 |         |
|           |                                                | Z | 4.75 | 66.83 | 17.46 |      | 100.0 |         |
| 10073-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | X | 4.82 | 66.94 | 17.68 | 2.83 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.48 | 68.17 | 18.22 |      | 100.0 |         |
|           |                                                | Z | 4.81 | 66.99 | 17.79 |      | 100.0 |         |
| 10074-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | X | 4.82 | 66.85 | 17.82 | 3.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.56 | 68.39 | 18.51 |      | 100.0 |         |
|           |                                                | Z | 4.80 | 66.90 | 17.93 |      | 100.0 |         |
| 10075-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | X | 4.84 | 66.90 | 18.10 | 3.82 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.62 | 68.53 | 18.81 |      | 90.0  |         |
|           |                                                | Z | 4.82 | 66.93 | 18.20 |      | 90.0  |         |
| 10076-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | X | 4.87 | 66.75 | 18.26 | 4.15 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.66 | 68.36 | 18.96 |      | 90.0  |         |
|           |                                                | Z | 4.85 | 66.78 | 18.35 |      | 90.0  |         |
| 10077-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | X | 4.90 | 66.83 | 18.36 | 4.30 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.70 | 68.52 | 19.13 |      | 90.0  |         |
|           |                                                | Z | 4.88 | 66.86 | 18.46 |      | 90.0  |         |

|           |                                                     |   |        |        |       |      |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10081-CAB | CDMA2000 (1xRTT, RC3)                               | X | 0.57   | 62.19  | 9.13  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 27.42  | 131.24 | 12.30 |      | 150.0 |         |
|           |                                                     | Z | 0.55   | 62.22  | 8.90  |      | 150.0 |         |
| 10082-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | X | 5.02   | 67.53  | 6.38  | 4.77 | 80.0  | ± 9.6 % |
|           |                                                     | Y | 1.48   | 62.15  | 3.83  |      | 80.0  |         |
|           |                                                     | Z | 0.60   | 60.00  | 3.69  |      | 80.0  |         |
| 10090-DAC | GPRS-FDD (TDMA, GMSK, TN 0-4)                       | X | 100.00 | 110.99 | 24.56 | 6.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 104.24 | 21.12 |      | 60.0  |         |
|           |                                                     | Z | 100.00 | 109.50 | 23.78 |      | 60.0  |         |
| 10097-CAB | UMTS-FDD (HSDPA)                                    | X | 1.62   | 66.19  | 14.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.77   | 77.65  | 18.43 |      | 150.0 |         |
|           |                                                     | Z | 1.66   | 66.92  | 14.80 |      | 150.0 |         |
| 10098-CAB | UMTS-FDD (HSUPA, Subtest 2)                         | X | 1.59   | 66.12  | 14.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.75   | 77.82  | 18.53 |      | 150.0 |         |
|           |                                                     | Z | 1.63   | 66.85  | 14.76 |      | 150.0 |         |
| 10099-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4)                       | X | 6.86   | 86.10  | 30.61 | 9.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 6.96   | 89.80  | 32.91 |      | 60.0  |         |
|           |                                                     | Z | 6.57   | 85.27  | 30.34 |      | 60.0  |         |
| 10100-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 2.79   | 68.67  | 15.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.01   | 72.73  | 18.31 |      | 150.0 |         |
|           |                                                     | Z | 2.85   | 69.21  | 16.10 |      | 150.0 |         |
| 10101-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 3.03   | 66.63  | 15.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.95   | 68.63  | 16.67 |      | 150.0 |         |
|           |                                                     | Z | 3.05   | 66.87  | 15.55 |      | 150.0 |         |
| 10102-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 3.14   | 66.68  | 15.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.05   | 68.65  | 16.75 |      | 150.0 |         |
|           |                                                     | Z | 3.16   | 66.90  | 15.67 |      | 150.0 |         |
| 10103-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 5.48   | 74.24  | 19.94 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 5.83   | 78.05  | 21.80 |      | 65.0  |         |
|           |                                                     | Z | 5.16   | 73.46  | 19.72 |      | 65.0  |         |
| 10104-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 5.43   | 71.87  | 19.65 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 5.15   | 73.23  | 20.29 |      | 65.0  |         |
|           |                                                     | Z | 5.30   | 71.66  | 19.65 |      | 65.0  |         |
| 10105-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 5.28   | 71.13  | 19.61 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 5.09   | 72.76  | 20.36 |      | 65.0  |         |
|           |                                                     | Z | 5.27   | 71.32  | 19.81 |      | 65.0  |         |
| 10108-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)            | X | 2.42   | 67.95  | 15.52 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.65   | 73.21  | 18.48 |      | 150.0 |         |
|           |                                                     | Z | 2.47   | 68.55  | 15.91 |      | 150.0 |         |
| 10109-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)          | X | 2.67   | 66.43  | 15.11 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.65   | 69.54  | 16.65 |      | 150.0 |         |
|           |                                                     | Z | 2.69   | 66.74  | 15.37 |      | 150.0 |         |
| 10110-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)             | X | 1.92   | 66.97  | 14.92 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.27   | 74.05  | 18.03 |      | 150.0 |         |
|           |                                                     | Z | 1.96   | 67.64  | 15.34 |      | 150.0 |         |
| 10111-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)           | X | 2.36   | 67.07  | 15.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.72   | 73.04  | 17.01 |      | 150.0 |         |
|           |                                                     | Z | 2.39   | 67.59  | 15.47 |      | 150.0 |         |

|           |                                                |   |        |        |       |      |       |         |
|-----------|------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10112-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)     | X | 2.80   | 66.52  | 15.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.78   | 69.65  | 16.71 |      | 150.0 |         |
|           |                                                | Z | 2.82   | 66.81  | 15.47 |      | 150.0 |         |
| 10113-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)      | X | 2.51   | 67.31  | 15.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.80   | 72.79  | 16.92 |      | 150.0 |         |
|           |                                                | Z | 2.54   | 67.82  | 15.65 |      | 150.0 |         |
| 10114-CAC | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)  | X | 4.96   | 66.85  | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.63   | 67.53  | 16.79 |      | 150.0 |         |
|           |                                                | Z | 4.96   | 66.92  | 16.33 |      | 150.0 |         |
| 10115-CAC | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)  | X | 5.22   | 66.93  | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.88   | 67.74  | 16.83 |      | 150.0 |         |
|           |                                                | Z | 5.22   | 67.01  | 16.38 |      | 150.0 |         |
| 10116-CAC | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | X | 5.05   | 67.03  | 16.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.70   | 67.78  | 16.83 |      | 150.0 |         |
|           |                                                | Z | 5.05   | 67.12  | 16.36 |      | 150.0 |         |
| 10117-CAC | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)       | X | 4.94   | 66.75  | 16.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.61   | 67.43  | 16.76 |      | 150.0 |         |
|           |                                                | Z | 4.95   | 66.84  | 16.31 |      | 150.0 |         |
| 10118-CAC | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)       | X | 5.30   | 67.13  | 16.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.86   | 67.63  | 16.79 |      | 150.0 |         |
|           |                                                | Z | 5.31   | 67.24  | 16.51 |      | 150.0 |         |
| 10119-CAC | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)      | X | 5.04   | 67.00  | 16.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.69   | 67.70  | 16.79 |      | 150.0 |         |
|           |                                                | Z | 5.05   | 67.10  | 16.36 |      | 150.0 |         |
| 10140-CAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)     | X | 3.17   | 66.68  | 15.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.04   | 68.72  | 16.64 |      | 150.0 |         |
|           |                                                | Z | 3.18   | 66.91  | 15.58 |      | 150.0 |         |
| 10141-CAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)     | X | 3.30   | 66.85  | 15.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.18   | 69.04  | 16.88 |      | 150.0 |         |
|           |                                                | Z | 3.31   | 67.07  | 15.79 |      | 150.0 |         |
| 10142-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)        | X | 1.67   | 66.60  | 14.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.87   | 72.33  | 15.40 |      | 150.0 |         |
|           |                                                | Z | 1.70   | 67.34  | 14.60 |      | 150.0 |         |
| 10143-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)      | X | 2.12   | 67.16  | 14.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.56   | 66.54  | 11.72 |      | 150.0 |         |
|           |                                                | Z | 2.16   | 67.74  | 14.58 |      | 150.0 |         |
| 10144-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)      | X | 1.92   | 65.03  | 12.70 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.13   | 62.33  | 8.88  |      | 150.0 |         |
|           |                                                | Z | 1.92   | 65.29  | 12.82 |      | 150.0 |         |
| 10145-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)      | X | 0.84   | 61.53  | 8.53  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 0.42   | 60.00  | 3.23  |      | 150.0 |         |
|           |                                                | Z | 0.80   | 61.27  | 8.17  |      | 150.0 |         |
| 10146-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)    | X | 1.25   | 62.09  | 8.49  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 15.63  | 136.67 | 2.52  |      | 150.0 |         |
|           |                                                | Z | 1.18   | 61.53  | 7.92  |      | 150.0 |         |
| 10147-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)    | X | 1.33   | 62.76  | 8.97  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 175.53 | 59.57  | 0.91  |      | 150.0 |         |
|           |                                                | Z | 1.25   | 62.05  | 8.31  |      | 150.0 |         |

|           |                                            |   |      |       |       |      |       |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10149-CAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 2.68 | 66.49 | 15.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.67 | 69.66 | 16.73 |      | 150.0 |         |
|           |                                            | Z | 2.70 | 66.80 | 15.42 |      | 150.0 |         |
| 10150-CAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 2.81 | 66.57 | 15.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.79 | 69.76 | 16.78 |      | 150.0 |         |
|           |                                            | Z | 2.82 | 66.87 | 15.51 |      | 150.0 |         |
| 10151-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)    | X | 5.57 | 76.26 | 20.83 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 6.54 | 82.28 | 23.19 |      | 65.0  |         |
|           |                                            | Z | 5.47 | 76.32 | 20.97 |      | 65.0  |         |
| 10152-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 4.95 | 71.73 | 19.22 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 4.69 | 73.27 | 19.41 |      | 65.0  |         |
|           |                                            | Z | 4.83 | 71.56 | 19.23 |      | 65.0  |         |
| 10153-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 5.31 | 72.79 | 20.07 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 5.16 | 74.91 | 20.53 |      | 65.0  |         |
|           |                                            | Z | 5.19 | 72.65 | 20.11 |      | 65.0  |         |
| 10154-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 1.96 | 67.30 | 15.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.37 | 74.79 | 18.39 |      | 150.0 |         |
|           |                                            | Z | 2.00 | 68.02 | 15.59 |      | 150.0 |         |
| 10155-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 2.36 | 67.10 | 15.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.75 | 73.23 | 17.11 |      | 150.0 |         |
|           |                                            | Z | 2.39 | 67.62 | 15.50 |      | 150.0 |         |
| 10156-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 1.48 | 66.22 | 13.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.17 | 67.13 | 11.92 |      | 150.0 |         |
|           |                                            | Z | 1.51 | 66.95 | 13.98 |      | 150.0 |         |
| 10157-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 1.71 | 65.06 | 12.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 0.82 | 60.69 | 7.08  |      | 150.0 |         |
|           |                                            | Z | 1.71 | 65.33 | 12.43 |      | 150.0 |         |
| 10158-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 2.51 | 67.38 | 15.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.84 | 73.04 | 17.05 |      | 150.0 |         |
|           |                                            | Z | 2.55 | 67.90 | 15.71 |      | 150.0 |         |
| 10159-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 1.79 | 65.38 | 12.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 0.84 | 60.64 | 7.05  |      | 150.0 |         |
|           |                                            | Z | 1.79 | 65.65 | 12.65 |      | 150.0 |         |
| 10160-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)    | X | 2.49 | 67.50 | 15.47 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.56 | 71.83 | 17.66 |      | 150.0 |         |
|           |                                            | Z | 2.54 | 68.10 | 15.86 |      | 150.0 |         |
| 10161-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 2.70 | 66.49 | 15.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.68 | 69.90 | 16.49 |      | 150.0 |         |
|           |                                            | Z | 2.71 | 66.81 | 15.39 |      | 150.0 |         |
| 10162-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 2.81 | 66.70 | 15.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.80 | 70.26 | 16.67 |      | 150.0 |         |
|           |                                            | Z | 2.82 | 67.03 | 15.53 |      | 150.0 |         |
| 10166-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 3.24 | 68.52 | 18.59 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.46 | 67.16 | 18.36 |      | 150.0 |         |
|           |                                            | Z | 3.27 | 68.87 | 18.81 |      | 150.0 |         |
| 10167-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 3.78 | 70.80 | 18.80 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.65 | 69.44 | 18.59 |      | 150.0 |         |
|           |                                            | Z | 3.87 | 71.35 | 19.05 |      | 150.0 |         |

|           |                                            |   |      |       |       |      |       |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10168-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 4.22 | 73.24 | 20.28 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.98 | 72.19 | 20.36 |      | 150.0 |         |
|           |                                            | Z | 4.38 | 74.05 | 20.65 |      | 150.0 |         |
| 10169-CAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 2.60 | 66.96 | 17.88 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.17 | 66.08 | 17.74 |      | 150.0 |         |
|           |                                            | Z | 2.64 | 67.39 | 18.13 |      | 150.0 |         |
| 10170-CAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 3.25 | 71.58 | 19.84 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.55 | 70.69 | 19.84 |      | 150.0 |         |
|           |                                            | Z | 3.42 | 72.54 | 20.26 |      | 150.0 |         |
| 10171-AAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 2.73 | 68.00 | 17.17 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.14 | 67.11 | 17.01 |      | 150.0 |         |
|           |                                            | Z | 2.83 | 68.55 | 17.41 |      | 150.0 |         |
| 10172-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 4.83 | 82.25 | 25.65 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 3.25 | 78.99 | 24.66 |      | 65.0  |         |
|           |                                            | Z | 4.17 | 79.62 | 24.62 |      | 65.0  |         |
| 10173-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 7.80 | 88.67 | 26.11 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 4.97 | 85.33 | 24.86 |      | 65.0  |         |
|           |                                            | Z | 8.07 | 89.25 | 26.21 |      | 65.0  |         |
| 10174-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 6.67 | 84.99 | 24.27 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 3.85 | 80.27 | 22.34 |      | 65.0  |         |
|           |                                            | Z | 5.89 | 82.90 | 23.46 |      | 65.0  |         |
| 10175-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)      | X | 2.57 | 66.69 | 17.64 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.15 | 65.85 | 17.52 |      | 150.0 |         |
|           |                                            | Z | 2.61 | 67.10 | 17.88 |      | 150.0 |         |
| 10176-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)    | X | 3.26 | 71.60 | 19.85 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.56 | 70.71 | 19.85 |      | 150.0 |         |
|           |                                            | Z | 3.43 | 72.56 | 20.27 |      | 150.0 |         |
| 10177-CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)       | X | 2.59 | 66.81 | 17.73 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.16 | 65.91 | 17.56 |      | 150.0 |         |
|           |                                            | Z | 2.63 | 67.23 | 17.97 |      | 150.0 |         |
| 10178-CAE | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)     | X | 3.23 | 71.44 | 19.75 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.55 | 70.64 | 19.81 |      | 150.0 |         |
|           |                                            | Z | 3.40 | 72.38 | 20.17 |      | 150.0 |         |
| 10179-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)    | X | 2.96 | 69.67 | 18.37 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.32 | 68.83 | 18.31 |      | 150.0 |         |
|           |                                            | Z | 3.09 | 70.38 | 18.68 |      | 150.0 |         |
| 10180-CAE | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)     | X | 2.73 | 67.95 | 17.14 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.14 | 67.11 | 17.00 |      | 150.0 |         |
|           |                                            | Z | 2.82 | 68.50 | 17.37 |      | 150.0 |         |
| 10181-CAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 2.59 | 66.80 | 17.72 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.15 | 65.90 | 17.56 |      | 150.0 |         |
|           |                                            | Z | 2.63 | 67.21 | 17.96 |      | 150.0 |         |
| 10182-CAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)    | X | 3.23 | 71.42 | 19.74 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.55 | 70.62 | 19.79 |      | 150.0 |         |
|           |                                            | Z | 3.40 | 72.36 | 20.16 |      | 150.0 |         |
| 10183-AAC | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 2.73 | 67.93 | 17.12 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.14 | 67.09 | 16.99 |      | 150.0 |         |
|           |                                            | Z | 2.82 | 68.48 | 17.36 |      | 150.0 |         |

|           |                                               |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10184-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)          | X | 2.60 | 66.84 | 17.74 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.16 | 65.93 | 17.57 |      | 150.0 |         |
|           |                                               | Z | 2.64 | 67.25 | 17.98 |      | 150.0 |         |
| 10185-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)        | X | 3.24 | 71.49 | 19.78 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.56 | 70.68 | 19.83 |      | 150.0 |         |
|           |                                               | Z | 3.41 | 72.43 | 20.20 |      | 150.0 |         |
| 10186-AAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)        | X | 2.74 | 67.99 | 17.16 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.14 | 67.14 | 17.02 |      | 150.0 |         |
|           |                                               | Z | 2.83 | 68.54 | 17.39 |      | 150.0 |         |
| 10187-CAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)        | X | 2.60 | 66.90 | 17.81 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.17 | 66.04 | 17.68 |      | 150.0 |         |
|           |                                               | Z | 2.65 | 67.32 | 18.06 |      | 150.0 |         |
| 10188-CAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)      | X | 3.33 | 72.04 | 20.13 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.61 | 71.14 | 20.14 |      | 150.0 |         |
|           |                                               | Z | 3.51 | 73.05 | 20.58 |      | 150.0 |         |
| 10189-AAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)      | X | 2.79 | 68.33 | 17.41 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.18 | 67.45 | 17.26 |      | 150.0 |         |
|           |                                               | Z | 2.89 | 68.91 | 17.66 |      | 150.0 |         |
| 10193-CAC | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)  | X | 4.35 | 66.32 | 15.83 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.08 | 67.94 | 16.57 |      | 150.0 |         |
|           |                                               | Z | 4.35 | 66.41 | 15.97 |      | 150.0 |         |
| 10194-CAC | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | X | 4.50 | 66.59 | 15.97 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.17 | 67.97 | 16.67 |      | 150.0 |         |
|           |                                               | Z | 4.50 | 66.68 | 16.11 |      | 150.0 |         |
| 10195-CAC | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | X | 4.54 | 66.63 | 15.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.18 | 67.89 | 16.64 |      | 150.0 |         |
|           |                                               | Z | 4.54 | 66.71 | 16.13 |      | 150.0 |         |
| 10196-CAC | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)       | X | 4.34 | 66.34 | 15.84 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.05 | 67.87 | 16.52 |      | 150.0 |         |
|           |                                               | Z | 4.34 | 66.43 | 15.98 |      | 150.0 |         |
| 10197-CAC | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)      | X | 4.52 | 66.61 | 15.98 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.17 | 67.97 | 16.68 |      | 150.0 |         |
|           |                                               | Z | 4.51 | 66.70 | 16.12 |      | 150.0 |         |
| 10198-CAC | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)      | X | 4.54 | 66.63 | 16.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.17 | 67.88 | 16.63 |      | 150.0 |         |
|           |                                               | Z | 4.53 | 66.72 | 16.14 |      | 150.0 |         |
| 10219-CAC | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)       | X | 4.29 | 66.36 | 15.79 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.02 | 68.01 | 16.56 |      | 150.0 |         |
|           |                                               | Z | 4.29 | 66.45 | 15.94 |      | 150.0 |         |
| 10220-CAC | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)    | X | 4.51 | 66.57 | 15.97 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.17 | 67.92 | 16.66 |      | 150.0 |         |
|           |                                               | Z | 4.50 | 66.66 | 16.11 |      | 150.0 |         |
| 10221-CAC | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)    | X | 4.55 | 66.57 | 15.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.19 | 67.87 | 16.64 |      | 150.0 |         |
|           |                                               | Z | 4.55 | 66.66 | 16.13 |      | 150.0 |         |
| 10222-CAC | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)        | X | 4.91 | 66.74 | 16.14 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.61 | 67.46 | 16.76 |      | 150.0 |         |
|           |                                               | Z | 4.92 | 66.81 | 16.28 |      | 150.0 |         |

|           |                                           |   |      |       |       |      |       |         |
|-----------|-------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10223-CAC | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)  | X | 5.20 | 66.98 | 16.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 4.78 | 67.52 | 16.75 |      | 150.0 |         |
|           |                                           | Z | 5.21 | 67.07 | 16.44 |      | 150.0 |         |
| 10224-CAC | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | X | 4.95 | 66.84 | 16.12 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 4.64 | 67.65 | 16.77 |      | 150.0 |         |
|           |                                           | Z | 4.95 | 66.92 | 16.26 |      | 150.0 |         |
| 10225-CAB | UMTS-FDD (HSPA+)                          | X | 2.60 | 65.43 | 14.52 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 2.31 | 67.01 | 13.92 |      | 150.0 |         |
|           |                                           | Z | 2.60 | 65.66 | 14.70 |      | 150.0 |         |
| 10226-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)  | X | 8.30 | 89.91 | 26.63 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 5.39 | 86.92 | 25.51 |      | 65.0  |         |
|           |                                           | Z | 8.64 | 90.59 | 26.77 |      | 65.0  |         |
| 10227-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)  | X | 8.42 | 88.94 | 25.65 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.82 | 84.03 | 23.72 |      | 65.0  |         |
|           |                                           | Z | 8.66 | 89.39 | 25.69 |      | 65.0  |         |
| 10228-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)    | X | 5.33 | 84.56 | 26.61 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 3.51 | 80.74 | 25.42 |      | 65.0  |         |
|           |                                           | Z | 5.37 | 85.04 | 26.79 |      | 65.0  |         |
| 10229-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)    | X | 7.86 | 88.78 | 26.15 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 5.00 | 85.42 | 24.89 |      | 65.0  |         |
|           |                                           | Z | 8.13 | 89.36 | 26.26 |      | 65.0  |         |
| 10230-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)    | X | 7.90 | 87.76 | 25.18 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.45 | 82.60 | 23.15 |      | 65.0  |         |
|           |                                           | Z | 8.08 | 88.11 | 25.19 |      | 65.0  |         |
| 10231-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)      | X | 5.13 | 83.76 | 26.22 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 3.36 | 79.77 | 24.94 |      | 65.0  |         |
|           |                                           | Z | 5.16 | 84.16 | 26.37 |      | 65.0  |         |
| 10232-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)    | X | 7.85 | 88.76 | 26.15 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.99 | 85.41 | 24.89 |      | 65.0  |         |
|           |                                           | Z | 8.11 | 89.34 | 26.25 |      | 65.0  |         |
| 10233-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)    | X | 7.87 | 87.73 | 25.17 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.44 | 82.56 | 23.14 |      | 65.0  |         |
|           |                                           | Z | 8.06 | 88.08 | 25.18 |      | 65.0  |         |
| 10234-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)      | X | 4.98 | 83.08 | 25.85 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 3.27 | 79.15 | 24.57 |      | 65.0  |         |
|           |                                           | Z | 5.00 | 83.43 | 25.98 |      | 65.0  |         |
| 10235-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)   | X | 7.85 | 88.79 | 26.16 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 5.00 | 85.44 | 24.91 |      | 65.0  |         |
|           |                                           | Z | 8.12 | 89.37 | 26.27 |      | 65.0  |         |
| 10236-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)   | X | 7.96 | 87.89 | 25.21 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.49 | 82.70 | 23.18 |      | 65.0  |         |
|           |                                           | Z | 8.15 | 88.24 | 25.23 |      | 65.0  |         |
| 10237-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)     | X | 5.13 | 83.78 | 26.24 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 3.35 | 79.76 | 24.95 |      | 65.0  |         |
|           |                                           | Z | 5.16 | 84.20 | 26.39 |      | 65.0  |         |
| 10238-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)   | X | 7.83 | 88.73 | 26.14 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 4.99 | 85.40 | 24.89 |      | 65.0  |         |
|           |                                           | Z | 8.09 | 89.31 | 26.24 |      | 65.0  |         |

|           |                                            |   |      |       |       |      |      |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|------|---------|
| 10239-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 7.84 | 87.68 | 25.15 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.43 | 82.52 | 23.13 |      | 65.0 |         |
|           |                                            | Z | 8.03 | 88.04 | 25.17 |      | 65.0 |         |
| 10240-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 5.12 | 83.75 | 26.22 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.35 | 79.78 | 24.95 |      | 65.0 |         |
|           |                                            | Z | 5.14 | 84.16 | 26.38 |      | 65.0 |         |
| 10241-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 6.74 | 78.78 | 24.52 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.69 | 81.27 | 25.87 |      | 65.0 |         |
|           |                                            | Z | 6.76 | 79.00 | 24.59 |      | 65.0 |         |
| 10242-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 6.37 | 77.64 | 23.95 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.22 | 79.69 | 25.18 |      | 65.0 |         |
|           |                                            | Z | 6.58 | 78.48 | 24.29 |      | 65.0 |         |
| 10243-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 5.29 | 74.44 | 23.43 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.45 | 76.12 | 24.64 |      | 65.0 |         |
|           |                                            | Z | 4.96 | 73.24 | 22.88 |      | 65.0 |         |
| 10244-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)   | X | 4.30 | 71.80 | 16.21 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 1.55 | 60.92 | 7.03  |      | 65.0 |         |
|           |                                            | Z | 4.03 | 70.91 | 15.66 |      | 65.0 |         |
| 10245-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)   | X | 4.18 | 71.11 | 15.84 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 1.55 | 60.79 | 6.91  |      | 65.0 |         |
|           |                                            | Z | 3.92 | 70.24 | 15.30 |      | 65.0 |         |
| 10246-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)     | X | 3.86 | 73.77 | 17.33 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 1.55 | 63.11 | 9.15  |      | 65.0 |         |
|           |                                            | Z | 3.72 | 73.55 | 17.17 |      | 65.0 |         |
| 10247-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 3.97 | 70.99 | 16.82 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 2.28 | 64.64 | 10.82 |      | 65.0 |         |
|           |                                            | Z | 3.84 | 70.75 | 16.69 |      | 65.0 |         |
| 10248-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 3.96 | 70.43 | 16.55 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 2.25 | 64.13 | 10.55 |      | 65.0 |         |
|           |                                            | Z | 3.83 | 70.16 | 16.40 |      | 65.0 |         |
| 10249-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 5.06 | 78.16 | 20.28 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.58 | 73.72 | 16.05 |      | 65.0 |         |
|           |                                            | Z | 5.04 | 78.50 | 20.42 |      | 65.0 |         |
| 10250-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 4.92 | 73.99 | 20.11 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.91 | 76.06 | 19.61 |      | 65.0 |         |
|           |                                            | Z | 4.82 | 73.98 | 20.18 |      | 65.0 |         |
| 10251-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 4.70 | 71.93 | 18.79 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.06 | 71.69 | 17.17 |      | 65.0 |         |
|           |                                            | Z | 4.58 | 71.78 | 18.78 |      | 65.0 |         |
| 10252-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 5.51 | 78.57 | 21.66 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.63 | 86.68 | 23.81 |      | 65.0 |         |
|           |                                            | Z | 5.47 | 78.89 | 21.88 |      | 65.0 |         |
| 10253-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 4.88 | 71.33 | 18.98 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.55 | 72.63 | 18.75 |      | 65.0 |         |
|           |                                            | Z | 4.76 | 71.16 | 18.98 |      | 65.0 |         |
| 10254-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 5.20 | 72.27 | 19.72 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.94 | 73.95 | 19.64 |      | 65.0 |         |
|           |                                            | Z | 5.08 | 72.13 | 19.74 |      | 65.0 |         |

|           |                                             |   |      |       |       |      |      |         |
|-----------|---------------------------------------------|---|------|-------|-------|------|------|---------|
| 10255-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)     | X | 5.31 | 75.57 | 20.73 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.09 | 81.09 | 22.63 |      | 65.0 |         |
|           |                                             | Z | 5.22 | 75.61 | 20.85 |      | 65.0 |         |
| 10256-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | X | 3.08 | 67.09 | 12.82 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 1.10 | 59.01 | 4.61  |      | 65.0 |         |
|           |                                             | Z | 2.85 | 66.14 | 12.16 |      | 65.0 |         |
| 10257-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | X | 3.00 | 66.43 | 12.39 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 1.10 | 58.89 | 4.44  |      | 65.0 |         |
|           |                                             | Z | 2.79 | 65.56 | 11.75 |      | 65.0 |         |
| 10258-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)   | X | 2.70 | 68.34 | 13.85 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 1.08 | 60.00 | 5.96  |      | 65.0 |         |
|           |                                             | Z | 2.52 | 67.66 | 13.41 |      | 65.0 |         |
| 10259-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)   | X | 4.36 | 72.23 | 18.07 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 3.05 | 68.29 | 13.76 |      | 65.0 |         |
|           |                                             | Z | 4.25 | 72.11 | 18.03 |      | 65.0 |         |
| 10260-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)   | X | 4.39 | 71.97 | 17.95 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 3.03 | 67.89 | 13.54 |      | 65.0 |         |
|           |                                             | Z | 4.27 | 71.82 | 17.89 |      | 65.0 |         |
| 10261-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)     | X | 5.00 | 77.54 | 20.53 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.86 | 78.27 | 18.84 |      | 65.0 |         |
|           |                                             | Z | 4.96 | 77.83 | 20.69 |      | 65.0 |         |
| 10262-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)   | X | 4.91 | 73.93 | 20.06 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.87 | 75.90 | 19.51 |      | 65.0 |         |
|           |                                             | Z | 4.80 | 73.90 | 20.13 |      | 65.0 |         |
| 10263-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)   | X | 4.69 | 71.90 | 18.78 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.05 | 71.68 | 17.17 |      | 65.0 |         |
|           |                                             | Z | 4.57 | 71.76 | 18.77 |      | 65.0 |         |
| 10264-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)     | X | 5.45 | 78.36 | 21.55 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 7.43 | 86.19 | 23.60 |      | 65.0 |         |
|           |                                             | Z | 5.41 | 78.66 | 21.76 |      | 65.0 |         |
| 10265-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)  | X | 4.95 | 71.73 | 19.22 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.69 | 73.28 | 19.42 |      | 65.0 |         |
|           |                                             | Z | 4.83 | 71.56 | 19.24 |      | 65.0 |         |
| 10266-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)  | X | 5.30 | 72.77 | 20.06 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.16 | 74.89 | 20.52 |      | 65.0 |         |
|           |                                             | Z | 5.18 | 72.63 | 20.09 |      | 65.0 |         |
| 10267-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)    | X | 5.56 | 76.21 | 20.81 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.50 | 82.16 | 23.14 |      | 65.0 |         |
|           |                                             | Z | 5.46 | 76.27 | 20.95 |      | 65.0 |         |
| 10268-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)  | X | 5.60 | 71.84 | 19.73 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.34 | 73.47 | 20.38 |      | 65.0 |         |
|           |                                             | Z | 5.47 | 71.64 | 19.74 |      | 65.0 |         |
| 10269-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)  | X | 5.61 | 71.49 | 19.61 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.38 | 73.21 | 20.25 |      | 65.0 |         |
|           |                                             | Z | 5.48 | 71.28 | 19.61 |      | 65.0 |         |
| 10270-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)    | X | 5.61 | 73.88 | 19.99 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.96 | 77.92 | 21.88 |      | 65.0 |         |
|           |                                             | Z | 5.49 | 73.78 | 20.05 |      | 65.0 |         |

|           |                                                                    |   |        |        |       |      |       |         |
|-----------|--------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10274-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)                          | X | 2.40   | 65.75  | 14.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.28   | 68.52  | 14.52 |      | 150.0 |         |
|           |                                                                    | Z | 2.41   | 66.07  | 14.63 |      | 150.0 |         |
| 10275-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)                           | X | 1.37   | 65.89  | 14.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.24   | 77.18  | 18.60 |      | 150.0 |         |
|           |                                                                    | Z | 1.41   | 66.69  | 14.48 |      | 150.0 |         |
| 10277-CAA | PHS (QPSK)                                                         | X | 1.83   | 60.56  | 6.14  | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 1.18   | 58.25  | 3.31  |      | 50.0  |         |
|           |                                                                    | Z | 1.78   | 60.31  | 5.89  |      | 50.0  |         |
| 10278-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5)                                 | X | 3.52   | 68.49  | 13.06 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 1.90   | 61.19  | 6.81  |      | 50.0  |         |
|           |                                                                    | Z | 3.28   | 67.42  | 12.39 |      | 50.0  |         |
| 10279-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38)                                | X | 3.63   | 68.79  | 13.26 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 1.93   | 61.26  | 6.89  |      | 50.0  |         |
|           |                                                                    | Z | 3.38   | 67.71  | 12.59 |      | 50.0  |         |
| 10290-AAB | CDMA2000, RC1, SO55, Full Rate                                     | X | 0.93   | 64.00  | 10.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.33   | 60.00  | 4.23  |      | 150.0 |         |
|           |                                                                    | Z | 0.92   | 64.13  | 10.27 |      | 150.0 |         |
| 10291-AAB | CDMA2000, RC3, SO55, Full Rate                                     | X | 0.56   | 62.08  | 9.05  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.25   | 60.00  | 3.73  |      | 150.0 |         |
|           |                                                                    | Z | 0.54   | 62.09  | 8.81  |      | 150.0 |         |
| 10292-AAB | CDMA2000, RC3, SO32, Full Rate                                     | X | 0.64   | 64.04  | 10.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.23   | 60.00  | 3.99  |      | 150.0 |         |
|           |                                                                    | Z | 0.63   | 64.48  | 10.42 |      | 150.0 |         |
| 10293-AAB | CDMA2000, RC3, SO3, Full Rate                                      | X | 0.84   | 67.30  | 12.52 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.24   | 60.00  | 4.44  |      | 150.0 |         |
|           |                                                                    | Z | 0.95   | 69.16  | 13.11 |      | 150.0 |         |
| 10295-AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr.                              | X | 11.34  | 87.79  | 23.91 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 100.00 | 106.64 | 24.70 |      | 50.0  |         |
|           |                                                                    | Z | 13.04  | 89.56  | 24.26 |      | 50.0  |         |
| 10297-AAC | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)                            | X | 2.43   | 68.04  | 15.58 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.68   | 73.41  | 18.60 |      | 150.0 |         |
|           |                                                                    | Z | 2.48   | 68.65  | 15.99 |      | 150.0 |         |
| 10298-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)                             | X | 1.13   | 64.13  | 11.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.47   | 60.00  | 5.40  |      | 150.0 |         |
|           |                                                                    | Z | 1.12   | 64.36  | 11.24 |      | 150.0 |         |
| 10299-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)                           | X | 1.79   | 65.44  | 11.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.62   | 60.00  | 4.41  |      | 150.0 |         |
|           |                                                                    | Z | 1.72   | 64.98  | 11.00 |      | 150.0 |         |
| 10300-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)                           | X | 1.44   | 62.46  | 9.17  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.61   | 60.00  | 3.80  |      | 150.0 |         |
|           |                                                                    | Z | 1.39   | 62.14  | 8.79  |      | 150.0 |         |
| 10301-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)                 | X | 4.49   | 65.00  | 16.96 | 4.17 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.09   | 66.69  | 17.12 |      | 50.0  |         |
|           |                                                                    | Z | 4.52   | 65.33  | 17.21 |      | 50.0  |         |
| 10302-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols) | X | 4.99   | 65.68  | 17.71 | 4.96 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.49   | 66.84  | 17.65 |      | 50.0  |         |
|           |                                                                    | Z | 4.97   | 65.74  | 17.79 |      | 50.0  |         |

|           |                                                                     |   |       |        |       |       |       |         |
|-----------|---------------------------------------------------------------------|---|-------|--------|-------|-------|-------|---------|
| 10303-AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)                 | X | 4.74  | 65.30  | 17.51 | 4.96  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.42  | 67.46  | 17.88 |       | 50.0  |         |
|           |                                                                     | Z | 4.72  | 65.36  | 17.59 |       | 50.0  |         |
| 10304-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)                 | X | 4.55  | 65.18  | 17.01 | 4.17  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.17  | 66.84  | 17.11 |       | 50.0  |         |
|           |                                                                     | Z | 4.53  | 65.26  | 17.11 |       | 50.0  |         |
| 10305-AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)    | X | 4.22  | 67.24  | 18.89 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 3.80  | 67.97  | 17.01 |       | 35.0  |         |
|           |                                                                     | Z | 4.24  | 67.52  | 19.03 |       | 35.0  |         |
| 10306-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)    | X | 4.53  | 66.32  | 18.64 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.12  | 67.69  | 17.81 |       | 35.0  |         |
|           |                                                                     | Z | 4.53  | 66.50  | 18.76 |       | 35.0  |         |
| 10307-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)     | X | 4.42  | 66.39  | 18.56 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.01  | 67.62  | 17.64 |       | 35.0  |         |
|           |                                                                     | Z | 4.42  | 66.59  | 18.68 |       | 35.0  |         |
| 10308-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)                | X | 4.40  | 66.60  | 18.70 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.05  | 68.08  | 17.93 |       | 35.0  |         |
|           |                                                                     | Z | 4.40  | 66.81  | 18.83 |       | 35.0  |         |
| 10309-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols) | X | 4.57  | 66.46  | 18.76 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.15  | 67.86  | 18.00 |       | 35.0  |         |
|           |                                                                     | Z | 4.57  | 66.64  | 18.88 |       | 35.0  |         |
| 10310-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)  | X | 4.48  | 66.38  | 18.62 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.11  | 67.92  | 17.93 |       | 35.0  |         |
|           |                                                                     | Z | 4.48  | 66.57  | 18.74 |       | 35.0  |         |
| 10311-AAC | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)                            | X | 2.77  | 67.40  | 15.33 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 2.94  | 71.44  | 17.85 |       | 150.0 |         |
|           |                                                                     | Z | 2.83  | 67.92  | 15.69 |       | 150.0 |         |
| 10313-AAA | iDEN 1:3                                                            | X | 2.63  | 70.72  | 15.17 | 6.99  | 70.0  | ± 9.6 % |
|           |                                                                     | Y | 4.78  | 79.70  | 18.53 |       | 70.0  |         |
|           |                                                                     | Z | 2.45  | 70.15  | 14.87 |       | 70.0  |         |
| 10314-AAA | iDEN 1:6                                                            | X | 4.23  | 78.95  | 21.28 | 10.00 | 30.0  | ± 9.6 % |
|           |                                                                     | Y | 21.13 | 105.84 | 29.54 |       | 30.0  |         |
|           |                                                                     | Z | 4.50  | 79.98  | 21.54 |       | 30.0  |         |
| 10315-AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)           | X | 0.98  | 62.52  | 14.02 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.09  | 67.04  | 17.16 |       | 150.0 |         |
|           |                                                                     | Z | 0.97  | 62.89  | 14.44 |       | 150.0 |         |
| 10316-AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)       | X | 4.40  | 66.34  | 15.98 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.07  | 67.64  | 16.55 |       | 150.0 |         |
|           |                                                                     | Z | 4.39  | 66.42  | 16.11 |       | 150.0 |         |
| 10317-AAC | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)             | X | 4.40  | 66.34  | 15.98 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.07  | 67.64  | 16.55 |       | 150.0 |         |
|           |                                                                     | Z | 4.39  | 66.42  | 16.11 |       | 150.0 |         |
| 10400-AAD | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)                 | X | 4.48  | 66.62  | 15.95 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.04  | 67.65  | 16.49 |       | 150.0 |         |
|           |                                                                     | Z | 4.47  | 66.71  | 16.10 |       | 150.0 |         |
| 10401-AAD | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)                 | X | 5.21  | 66.82  | 16.17 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.85  | 67.54  | 16.72 |       | 150.0 |         |
|           |                                                                     | Z | 5.22  | 66.92  | 16.32 |       | 150.0 |         |

|           |                                                                                 |   |       |        |       |      |       |         |
|-----------|---------------------------------------------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10402-AAD | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)                             | X | 5.47  | 67.11  | 16.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.17  | 67.73  | 16.77 |      | 150.0 |         |
|           |                                                                                 | Z | 5.47  | 67.15  | 16.32 |      | 150.0 |         |
| 10403-AAB | CDMA2000 (1xEV-DO, Rev. 0)                                                      | X | 0.93  | 64.00  | 10.40 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                 | Y | 0.33  | 60.00  | 4.23  |      | 115.0 |         |
|           |                                                                                 | Z | 0.92  | 64.13  | 10.27 |      | 115.0 |         |
| 10404-AAB | CDMA2000 (1xEV-DO, Rev. A)                                                      | X | 0.93  | 64.00  | 10.40 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                 | Y | 0.33  | 60.00  | 4.23  |      | 115.0 |         |
|           |                                                                                 | Z | 0.92  | 64.13  | 10.27 |      | 115.0 |         |
| 10406-AAB | CDMA2000, RC3, SO32, SCH0, Full Rate                                            | X | 16.67 | 98.68  | 24.47 | 0.00 | 100.0 | ± 9.6 % |
|           |                                                                                 | Y | 7.21  | 81.11  | 14.31 |      | 100.0 |         |
|           |                                                                                 | Z | 37.53 | 107.95 | 26.47 |      | 100.0 |         |
| 10410-AAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4) | X | 24.48 | 107.00 | 27.24 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                                 | Y | 15.52 | 100.17 | 23.54 |      | 80.0  |         |
|           |                                                                                 | Z | 35.49 | 111.31 | 27.96 |      | 80.0  |         |
| 10415-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)                       | X | 0.93  | 61.94  | 13.54 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 1.01  | 66.17  | 16.61 |      | 150.0 |         |
|           |                                                                                 | Z | 0.92  | 62.29  | 13.95 |      | 150.0 |         |
| 10416-AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)                   | X | 4.35  | 66.34  | 15.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.05  | 67.74  | 16.57 |      | 150.0 |         |
|           |                                                                                 | Z | 4.35  | 66.43  | 16.05 |      | 150.0 |         |
| 10417-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)                       | X | 4.35  | 66.34  | 15.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.05  | 67.74  | 16.57 |      | 150.0 |         |
|           |                                                                                 | Z | 4.35  | 66.43  | 16.05 |      | 150.0 |         |
| 10418-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)   | X | 4.34  | 66.51  | 15.94 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.03  | 68.00  | 16.69 |      | 150.0 |         |
|           |                                                                                 | Z | 4.34  | 66.61  | 16.09 |      | 150.0 |         |
| 10419-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble)  | X | 4.36  | 66.46  | 15.94 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.05  | 67.90  | 16.64 |      | 150.0 |         |
|           |                                                                                 | Z | 4.36  | 66.55  | 16.08 |      | 150.0 |         |
| 10422-AAB | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)                                    | X | 4.47  | 66.46  | 15.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.14  | 67.79  | 16.63 |      | 150.0 |         |
|           |                                                                                 | Z | 4.47  | 66.54  | 16.10 |      | 150.0 |         |
| 10423-AAB | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)                                 | X | 4.61  | 66.73  | 16.06 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.22  | 68.01  | 16.69 |      | 150.0 |         |
|           |                                                                                 | Z | 4.61  | 66.82  | 16.20 |      | 150.0 |         |
| 10424-AAB | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)                                 | X | 4.54  | 66.68  | 16.03 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.16  | 67.92  | 16.66 |      | 150.0 |         |
|           |                                                                                 | Z | 4.53  | 66.77  | 16.18 |      | 150.0 |         |
| 10425-AAB | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)                                     | X | 5.17  | 66.99  | 16.27 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.80  | 67.69  | 16.83 |      | 150.0 |         |
|           |                                                                                 | Z | 5.17  | 67.08  | 16.41 |      | 150.0 |         |
| 10426-AAB | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)                                   | X | 5.19  | 67.07  | 16.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.84  | 67.85  | 16.90 |      | 150.0 |         |
|           |                                                                                 | Z | 5.20  | 67.19  | 16.47 |      | 150.0 |         |

|           |                                                                |   |       |        |       |      |       |         |
|-----------|----------------------------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10427-AAB | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)                 | X | 5.17  | 66.95  | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.81  | 67.67  | 16.81 |      | 150.0 |         |
|           |                                                                | Z | 5.17  | 67.02  | 16.38 |      | 150.0 |         |
| 10430-AAB | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)                               | X | 4.04  | 70.70  | 17.69 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.18  | 78.06  | 19.24 |      | 150.0 |         |
|           |                                                                | Z | 4.12  | 71.34  | 18.06 |      | 150.0 |         |
| 10431-AAB | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)                              | X | 3.97  | 66.79  | 15.75 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.59  | 68.58  | 16.14 |      | 150.0 |         |
|           |                                                                | Z | 3.97  | 66.94  | 15.91 |      | 150.0 |         |
| 10432-AAB | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)                              | X | 4.30  | 66.71  | 15.93 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.93  | 68.25  | 16.56 |      | 150.0 |         |
|           |                                                                | Z | 4.29  | 66.83  | 16.08 |      | 150.0 |         |
| 10433-AAB | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)                              | X | 4.56  | 66.71  | 16.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.18  | 67.98  | 16.70 |      | 150.0 |         |
|           |                                                                | Z | 4.55  | 66.80  | 16.19 |      | 150.0 |         |
| 10434-AAA | W-CDMA (BS Test Model 1, 64 DPCH)                              | X | 4.08  | 71.35  | 17.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.19  | 74.65  | 16.76 |      | 150.0 |         |
|           |                                                                | Z | 4.19  | 72.07  | 17.82 |      | 150.0 |         |
| 10435-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 22.01 | 105.36 | 26.76 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                | Y | 12.26 | 97.11  | 22.67 |      | 80.0  |         |
|           |                                                                | Z | 30.46 | 109.05 | 27.35 |      | 80.0  |         |
| 10447-AAB | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)                 | X | 3.20  | 66.45  | 14.65 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 2.49  | 66.31  | 12.90 |      | 150.0 |         |
|           |                                                                | Z | 3.20  | 66.65  | 14.79 |      | 150.0 |         |
| 10448-AAB | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)                | X | 3.83  | 66.57  | 15.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.50  | 68.44  | 16.07 |      | 150.0 |         |
|           |                                                                | Z | 3.83  | 66.72  | 15.77 |      | 150.0 |         |
| 10449-AAB | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)                | X | 4.13  | 66.53  | 15.82 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.82  | 68.12  | 16.50 |      | 150.0 |         |
|           |                                                                | Z | 4.12  | 66.65  | 15.98 |      | 150.0 |         |
| 10450-AAB | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)                | X | 4.34  | 66.47  | 15.89 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.03  | 67.78  | 16.58 |      | 150.0 |         |
|           |                                                                | Z | 4.33  | 66.57  | 16.04 |      | 150.0 |         |
| 10451-AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)                | X | 3.02  | 66.30  | 14.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 1.96  | 63.95  | 10.66 |      | 150.0 |         |
|           |                                                                | Z | 3.02  | 66.48  | 14.10 |      | 150.0 |         |
| 10456-AAB | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)           | X | 6.11  | 67.70  | 16.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 6.19  | 69.21  | 17.55 |      | 150.0 |         |
|           |                                                                | Z | 6.14  | 67.81  | 16.68 |      | 150.0 |         |
| 10457-AAA | UMTS-FDD (DC-HSDPA)                                            | X | 3.68  | 65.04  | 15.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.54  | 66.84  | 16.42 |      | 150.0 |         |
|           |                                                                | Z | 3.67  | 65.12  | 15.76 |      | 150.0 |         |
| 10458-AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers)                         | X | 3.62  | 70.05  | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 1.73  | 62.72  | 9.51  |      | 150.0 |         |
|           |                                                                | Z | 3.68  | 70.56  | 16.64 |      | 150.0 |         |
| 10459-AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers)                         | X | 4.87  | 68.53  | 17.80 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.66  | 66.63  | 14.39 |      | 150.0 |         |
|           |                                                                | Z | 4.93  | 68.95  | 18.05 |      | 150.0 |         |

|           |                                                                   |   |        |        |       |      |       |         |
|-----------|-------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10460-AAA | UMTS-FDD (WCDMA, AMR)                                             | X | 0.72   | 64.98  | 13.65 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                   | Y | 8.89   | 109.57 | 29.93 |      | 150.0 |         |
|           |                                                                   | Z | 0.75   | 66.41  | 14.51 |      | 150.0 |         |
| 10461-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 13.94  | 101.67 | 26.79 | 3.29 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 127.12 | 30.86 |      | 80.0  |         |
|           |                                                                   | Z | 40.31  | 115.94 | 29.98 |      | 80.0  |         |
| 10462-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.11   | 63.17  | 10.06 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.26   | 55.58  | 3.51  |      | 80.0  |         |
|           |                                                                   | Z | 0.94   | 61.56  | 9.02  |      | 80.0  |         |
| 10463-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 0.81   | 60.00  | 7.90  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 1.89   | 63.59  | 6.01  |      | 80.0  |         |
|           |                                                                   | Z | 0.81   | 60.00  | 7.64  |      | 80.0  |         |
| 10464-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 10.27  | 95.95  | 24.48 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 10.37  | 95.51  | 22.29 |      | 80.0  |         |
|           |                                                                   | Z | 21.85  | 105.27 | 26.52 |      | 80.0  |         |
| 10465-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.01   | 62.26  | 9.56  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.26   | 55.51  | 3.41  |      | 80.0  |         |
|           |                                                                   | Z | 0.88   | 60.92  | 8.64  |      | 80.0  |         |
| 10466-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.81   | 60.00  | 7.85  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 2.94   | 64.67  | 6.15  |      | 80.0  |         |
|           |                                                                   | Z | 0.81   | 60.00  | 7.59  |      | 80.0  |         |
| 10467-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 12.26  | 98.51  | 25.22 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 17.71  | 102.01 | 24.01 |      | 80.0  |         |
|           |                                                                   | Z | 30.02  | 109.65 | 27.64 |      | 80.0  |         |
| 10468-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.04   | 62.52  | 9.70  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.26   | 55.56  | 3.48  |      | 80.0  |         |
|           |                                                                   | Z | 0.90   | 61.11  | 8.75  |      | 80.0  |         |
| 10469-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.81   | 60.00  | 7.85  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.90   | 60.91  | 5.15  |      | 80.0  |         |
|           |                                                                   | Z | 0.81   | 60.00  | 7.59  |      | 80.0  |         |
| 10470-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 12.39  | 98.68  | 25.27 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 18.66  | 102.62 | 24.14 |      | 80.0  |         |
|           |                                                                   | Z | 30.74  | 109.98 | 27.71 |      | 80.0  |         |
| 10471-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 1.03   | 62.46  | 9.66  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.26   | 55.54  | 3.46  |      | 80.0  |         |
|           |                                                                   | Z | 0.89   | 61.06  | 8.72  |      | 80.0  |         |
| 10472-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.81   | 60.00  | 7.83  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 1.83   | 63.55  | 6.01  |      | 80.0  |         |
|           |                                                                   | Z | 0.81   | 60.00  | 7.57  |      | 80.0  |         |
| 10473-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 12.30  | 98.56  | 25.23 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 17.97  | 102.17 | 24.03 |      | 80.0  |         |
|           |                                                                   | Z | 30.28  | 109.75 | 27.65 |      | 80.0  |         |
| 10474-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 1.02   | 62.43  | 9.65  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.26   | 55.54  | 3.45  |      | 80.0  |         |
|           |                                                                   | Z | 0.89   | 61.04  | 8.70  |      | 80.0  |         |
| 10475-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.81   | 60.00  | 7.83  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 3.14   | 65.15  | 6.35  |      | 80.0  |         |
|           |                                                                   | Z | 0.81   | 60.00  | 7.57  |      | 80.0  |         |

|           |                                                                     |   |        |        |       |      |      |         |
|-----------|---------------------------------------------------------------------|---|--------|--------|-------|------|------|---------|
| 10477-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)    | X | 1.00   | 62.22  | 9.52  | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 0.26   | 55.50  | 3.40  |      | 80.0 |         |
|           |                                                                     | Z | 0.88   | 60.88  | 8.60  |      | 80.0 |         |
| 10478-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)    | X | 0.81   | 60.00  | 7.82  | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.81   | 65.69  | 6.44  |      | 80.0 |         |
|           |                                                                     | Z | 0.81   | 60.00  | 7.56  |      | 80.0 |         |
| 10479-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 6.59   | 85.50  | 22.56 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 100.00 | 124.45 | 30.64 |      | 80.0 |         |
|           |                                                                     | Z | 8.59   | 89.42  | 23.62 |      | 80.0 |         |
| 10480-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.79   | 76.18  | 17.27 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 0.79   | 60.53  | 7.96  |      | 80.0 |         |
|           |                                                                     | Z | 4.72   | 75.80  | 16.90 |      | 80.0 |         |
| 10481-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.50   | 71.72  | 15.20 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 0.75   | 60.00  | 7.10  |      | 80.0 |         |
|           |                                                                     | Z | 3.26   | 70.74  | 14.59 |      | 80.0 |         |
| 10482-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 1.78   | 66.01  | 13.40 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 0.80   | 60.00  | 6.87  |      | 80.0 |         |
|           |                                                                     | Z | 1.80   | 66.49  | 13.54 |      | 80.0 |         |
| 10483-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.59   | 67.30  | 13.51 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.09   | 60.00  | 5.52  |      | 80.0 |         |
|           |                                                                     | Z | 2.37   | 66.27  | 12.85 |      | 80.0 |         |
| 10484-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.46   | 66.44  | 13.12 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.12   | 60.00  | 5.52  |      | 80.0 |         |
|           |                                                                     | Z | 2.26   | 65.46  | 12.48 |      | 80.0 |         |
| 10485-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.31   | 69.06  | 16.01 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.52   | 71.75  | 14.63 |      | 80.0 |         |
|           |                                                                     | Z | 2.43   | 70.26  | 16.55 |      | 80.0 |         |
| 10486-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.35   | 65.93  | 13.92 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.10   | 60.00  | 7.99  |      | 80.0 |         |
|           |                                                                     | Z | 2.35   | 66.25  | 14.03 |      | 80.0 |         |
| 10487-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.36   | 65.64  | 13.75 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.13   | 60.00  | 7.94  |      | 80.0 |         |
|           |                                                                     | Z | 2.36   | 65.89  | 13.84 |      | 80.0 |         |
| 10488-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 2.76   | 69.44  | 17.18 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.34   | 80.02  | 20.91 |      | 80.0 |         |
|           |                                                                     | Z | 2.84   | 70.33  | 17.68 |      | 80.0 |         |
| 10489-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 2.91   | 67.08  | 16.06 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.28   | 71.79  | 16.98 |      | 80.0 |         |
|           |                                                                     | Z | 2.93   | 67.51  | 16.34 |      | 80.0 |         |
| 10490-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.00   | 67.01  | 16.04 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.19   | 70.91  | 16.56 |      | 80.0 |         |
|           |                                                                     | Z | 3.01   | 67.40  | 16.29 |      | 80.0 |         |
| 10491-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 3.11   | 68.64  | 17.05 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.62   | 74.69  | 19.64 |      | 80.0 |         |
|           |                                                                     | Z | 3.15   | 69.19  | 17.41 |      | 80.0 |         |
| 10492-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.31   | 66.73  | 16.33 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.42   | 70.36  | 17.49 |      | 80.0 |         |
|           |                                                                     | Z | 3.30   | 66.98  | 16.55 |      | 80.0 |         |

|           |                                                                      |   |       |        |       |      |      |         |
|-----------|----------------------------------------------------------------------|---|-------|--------|-------|------|------|---------|
| 10493-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.37  | 66.65  | 16.30 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.42  | 69.99  | 17.28 |      | 80.0 |         |
|           |                                                                      | Z | 3.37  | 66.89  | 16.51 |      | 80.0 |         |
| 10494-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 3.29  | 69.76  | 17.41 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.96  | 76.26  | 20.40 |      | 80.0 |         |
|           |                                                                      | Z | 3.36  | 70.43  | 17.82 |      | 80.0 |         |
| 10495-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.32  | 66.99  | 16.51 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.45  | 70.58  | 17.96 |      | 80.0 |         |
|           |                                                                      | Z | 3.32  | 67.26  | 16.75 |      | 80.0 |         |
| 10496-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.41  | 66.83  | 16.48 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.49  | 70.20  | 17.79 |      | 80.0 |         |
|           |                                                                      | Z | 3.41  | 67.07  | 16.70 |      | 80.0 |         |
| 10497-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 1.18  | 61.39  | 9.87  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 0.42  | 53.98  | 1.19  |      | 80.0 |         |
|           |                                                                      | Z | 1.11  | 61.01  | 9.51  |      | 80.0 |         |
| 10498-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.22  | 60.00  | 7.98  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 99.99 | 258.49 | 1.69  |      | 80.0 |         |
|           |                                                                      | Z | 1.20  | 60.00  | 7.80  |      | 80.0 |         |
| 10499-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.24  | 60.00  | 7.83  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 99.95 | 273.67 | 5.17  |      | 80.0 |         |
|           |                                                                      | Z | 1.21  | 60.00  | 7.64  |      | 80.0 |         |
| 10500-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.48  | 69.15  | 16.47 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.15  | 78.35  | 18.23 |      | 80.0 |         |
|           |                                                                      | Z | 2.59  | 70.22  | 16.99 |      | 80.0 |         |
| 10501-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.62  | 66.65  | 14.86 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.65  | 63.40  | 10.90 |      | 80.0 |         |
|           |                                                                      | Z | 2.64  | 67.08  | 15.07 |      | 80.0 |         |
| 10502-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.66  | 66.53  | 14.74 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.59  | 62.74  | 10.46 |      | 80.0 |         |
|           |                                                                      | Z | 2.68  | 66.92  | 14.92 |      | 80.0 |         |
| 10503-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.73  | 69.26  | 17.09 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.21  | 79.52  | 20.70 |      | 80.0 |         |
|           |                                                                      | Z | 2.81  | 70.13  | 17.57 |      | 80.0 |         |
| 10504-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.89  | 66.99  | 16.00 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.22  | 71.53  | 16.84 |      | 80.0 |         |
|           |                                                                      | Z | 2.91  | 67.41  | 16.27 |      | 80.0 |         |
| 10505-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.98  | 66.92  | 15.98 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.15  | 70.69  | 16.45 |      | 80.0 |         |
|           |                                                                      | Z | 3.00  | 67.30  | 16.23 |      | 80.0 |         |
| 10506-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 3.27  | 69.63  | 17.34 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.91  | 76.02  | 20.28 |      | 80.0 |         |
|           |                                                                      | Z | 3.33  | 70.28  | 17.74 |      | 80.0 |         |
| 10507-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.31  | 66.93  | 16.47 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.43  | 70.48  | 17.90 |      | 80.0 |         |
|           |                                                                      | Z | 3.31  | 67.19  | 16.70 |      | 80.0 |         |

|           |                                                                     |   |        |        |       |      |       |         |
|-----------|---------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10508-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.40   | 66.77  | 16.43 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.47   | 70.07  | 17.72 |      | 80.0  |         |
|           |                                                                     | Z | 3.40   | 67.00  | 16.65 |      | 80.0  |         |
| 10509-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 3.71   | 68.99  | 17.10 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.93   | 72.91  | 19.23 |      | 80.0  |         |
|           |                                                                     | Z | 3.74   | 69.39  | 17.40 |      | 80.0  |         |
| 10510-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.81   | 66.87  | 16.61 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.70   | 69.03  | 17.73 |      | 80.0  |         |
|           |                                                                     | Z | 3.80   | 67.02  | 16.79 |      | 80.0  |         |
| 10511-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.88   | 66.72  | 16.58 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.77   | 68.83  | 17.64 |      | 80.0  |         |
|           |                                                                     | Z | 3.87   | 66.85  | 16.75 |      | 80.0  |         |
| 10512-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 3.76   | 70.05  | 17.41 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 4.13   | 74.35  | 19.72 |      | 80.0  |         |
|           |                                                                     | Z | 3.82   | 70.57  | 17.75 |      | 80.0  |         |
| 10513-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.69   | 66.99  | 16.66 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.62   | 69.07  | 17.83 |      | 80.0  |         |
|           |                                                                     | Z | 3.68   | 67.16  | 16.86 |      | 80.0  |         |
| 10514-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.74   | 66.70  | 16.58 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 3.66   | 68.68  | 17.67 |      | 80.0  |         |
|           |                                                                     | Z | 3.72   | 66.84  | 16.77 |      | 80.0  |         |
| 10515-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)           | X | 0.89   | 62.04  | 13.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.99   | 66.72  | 16.88 |      | 150.0 |         |
|           |                                                                     | Z | 0.88   | 62.43  | 13.97 |      | 150.0 |         |
| 10516-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         | X | 0.42   | 65.22  | 13.44 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 100.00 | 170.44 | 46.50 |      | 150.0 |         |
|           |                                                                     | Z | 0.47   | 67.93  | 14.90 |      | 150.0 |         |
| 10517-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)          | X | 0.71   | 63.10  | 13.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.99   | 72.70  | 19.61 |      | 150.0 |         |
|           |                                                                     | Z | 0.71   | 63.90  | 14.21 |      | 150.0 |         |
| 10518-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)           | X | 4.34   | 66.42  | 15.89 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.04   | 67.95  | 16.62 |      | 150.0 |         |
|           |                                                                     | Z | 4.34   | 66.52  | 16.03 |      | 150.0 |         |
| 10519-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)          | X | 4.50   | 66.62  | 16.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.14   | 68.05  | 16.67 |      | 150.0 |         |
|           |                                                                     | Z | 4.49   | 66.71  | 16.14 |      | 150.0 |         |
| 10520-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)          | X | 4.35   | 66.54  | 15.90 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.01   | 67.95  | 16.60 |      | 150.0 |         |
|           |                                                                     | Z | 4.35   | 66.64  | 16.05 |      | 150.0 |         |
| 10521-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)          | X | 4.29   | 66.51  | 15.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 3.94   | 67.81  | 16.52 |      | 150.0 |         |
|           |                                                                     | Z | 4.28   | 66.61  | 16.02 |      | 150.0 |         |
| 10522-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)          | X | 4.34   | 66.65  | 15.98 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 3.95   | 67.80  | 16.52 |      | 150.0 |         |
|           |                                                                     | Z | 4.34   | 66.75  | 16.13 |      | 150.0 |         |

|           |                                                            |   |      |       |       |      |       |         |
|-----------|------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10523-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) | X | 4.25 | 66.56 | 15.85 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 3.96 | 68.17 | 16.68 |      | 150.0 |         |
|           |                                                            | Z | 4.25 | 66.67 | 16.01 |      | 150.0 |         |
| 10524-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) | X | 4.29 | 66.57 | 15.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 3.92 | 67.94 | 16.65 |      | 150.0 |         |
|           |                                                            | Z | 4.28 | 66.68 | 16.11 |      | 150.0 |         |
| 10525-AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)          | X | 4.30 | 65.65 | 15.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.04 | 67.23 | 16.37 |      | 150.0 |         |
|           |                                                            | Z | 4.30 | 65.76 | 15.72 |      | 150.0 |         |
| 10526-AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)          | X | 4.44 | 65.96 | 15.69 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.10 | 67.36 | 16.43 |      | 150.0 |         |
|           |                                                            | Z | 4.44 | 66.06 | 15.84 |      | 150.0 |         |
| 10527-AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)          | X | 4.36 | 65.91 | 15.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.06 | 67.43 | 16.42 |      | 150.0 |         |
|           |                                                            | Z | 4.36 | 66.02 | 15.78 |      | 150.0 |         |
| 10528-AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)          | X | 4.38 | 65.93 | 15.65 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.05 | 67.35 | 16.40 |      | 150.0 |         |
|           |                                                            | Z | 4.38 | 66.04 | 15.81 |      | 150.0 |         |
| 10529-AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)          | X | 4.38 | 65.93 | 15.65 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.05 | 67.35 | 16.40 |      | 150.0 |         |
|           |                                                            | Z | 4.38 | 66.04 | 15.81 |      | 150.0 |         |
| 10531-AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)          | X | 4.35 | 65.97 | 15.64 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.01 | 67.35 | 16.37 |      | 150.0 |         |
|           |                                                            | Z | 4.35 | 66.08 | 15.79 |      | 150.0 |         |
| 10532-AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)          | X | 4.23 | 65.82 | 15.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 3.93 | 67.27 | 16.33 |      | 150.0 |         |
|           |                                                            | Z | 4.23 | 65.93 | 15.72 |      | 150.0 |         |
| 10533-AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)          | X | 4.39 | 65.99 | 15.65 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.07 | 67.57 | 16.46 |      | 150.0 |         |
|           |                                                            | Z | 4.39 | 66.11 | 15.81 |      | 150.0 |         |
| 10534-AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)          | X | 4.94 | 66.05 | 15.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.64 | 66.91 | 16.43 |      | 150.0 |         |
|           |                                                            | Z | 4.95 | 66.13 | 15.92 |      | 150.0 |         |
| 10535-AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)          | X | 5.00 | 66.21 | 15.85 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.65 | 66.98 | 16.47 |      | 150.0 |         |
|           |                                                            | Z | 5.00 | 66.29 | 16.00 |      | 150.0 |         |
| 10536-AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)          | X | 4.88 | 66.17 | 15.81 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.56 | 66.99 | 16.45 |      | 150.0 |         |
|           |                                                            | Z | 4.88 | 66.26 | 15.96 |      | 150.0 |         |
| 10537-AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)          | X | 4.93 | 66.14 | 15.80 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.65 | 67.13 | 16.53 |      | 150.0 |         |
|           |                                                            | Z | 4.94 | 66.23 | 15.95 |      | 150.0 |         |
| 10538-AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)          | X | 5.01 | 66.14 | 15.84 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.66 | 66.91 | 16.44 |      | 150.0 |         |
|           |                                                            | Z | 5.02 | 66.22 | 15.99 |      | 150.0 |         |
| 10540-AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)          | X | 4.94 | 66.12 | 15.84 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.60 | 66.83 | 16.43 |      | 150.0 |         |
|           |                                                            | Z | 4.95 | 66.20 | 15.99 |      | 150.0 |         |

|           |                                                    |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10541-AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)  | X | 4.92 | 66.01 | 15.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 4.61 | 66.86 | 16.41 |      | 150.0 |         |
|           |                                                    | Z | 4.92 | 66.07 | 15.91 |      | 150.0 |         |
| 10542-AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)  | X | 5.08 | 66.12 | 15.85 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 4.74 | 66.92 | 16.46 |      | 150.0 |         |
|           |                                                    | Z | 5.08 | 66.19 | 15.99 |      | 150.0 |         |
| 10543-AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)  | X | 5.14 | 66.15 | 15.90 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 4.79 | 66.97 | 16.52 |      | 150.0 |         |
|           |                                                    | Z | 5.15 | 66.24 | 16.04 |      | 150.0 |         |
| 10544-AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)  | X | 5.28 | 66.17 | 15.79 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.02 | 66.72 | 16.34 |      | 150.0 |         |
|           |                                                    | Z | 5.29 | 66.22 | 15.92 |      | 150.0 |         |
| 10545-AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)  | X | 5.46 | 66.60 | 15.97 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.15 | 67.11 | 16.50 |      | 150.0 |         |
|           |                                                    | Z | 5.48 | 66.70 | 16.12 |      | 150.0 |         |
| 10546-AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)  | X | 5.32 | 66.30 | 15.83 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.04 | 66.80 | 16.35 |      | 150.0 |         |
|           |                                                    | Z | 5.32 | 66.36 | 15.96 |      | 150.0 |         |
| 10547-AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)  | X | 5.39 | 66.39 | 15.87 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.17 | 67.18 | 16.54 |      | 150.0 |         |
|           |                                                    | Z | 5.41 | 66.46 | 16.01 |      | 150.0 |         |
| 10548-AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)  | X | 5.58 | 67.13 | 16.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.08 | 67.06 | 16.46 |      | 150.0 |         |
|           |                                                    | Z | 5.61 | 67.28 | 16.39 |      | 150.0 |         |
| 10550-AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)  | X | 5.37 | 66.44 | 15.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.20 | 67.46 | 16.69 |      | 150.0 |         |
|           |                                                    | Z | 5.39 | 66.55 | 16.06 |      | 150.0 |         |
| 10551-AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)  | X | 5.33 | 66.33 | 15.82 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.00 | 66.73 | 16.30 |      | 150.0 |         |
|           |                                                    | Z | 5.34 | 66.38 | 15.94 |      | 150.0 |         |
| 10552-AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)  | X | 5.29 | 66.25 | 15.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.03 | 66.95 | 16.40 |      | 150.0 |         |
|           |                                                    | Z | 5.29 | 66.30 | 15.90 |      | 150.0 |         |
| 10553-AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)  | X | 5.35 | 66.24 | 15.81 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.04 | 66.77 | 16.32 |      | 150.0 |         |
|           |                                                    | Z | 5.35 | 66.28 | 15.93 |      | 150.0 |         |
| 10554-AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle) | X | 5.70 | 66.53 | 15.89 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.48 | 66.93 | 16.36 |      | 150.0 |         |
|           |                                                    | Z | 5.71 | 66.58 | 16.01 |      | 150.0 |         |
| 10555-AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle) | X | 5.81 | 66.79 | 16.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.55 | 67.14 | 16.45 |      | 150.0 |         |
|           |                                                    | Z | 5.82 | 66.86 | 16.13 |      | 150.0 |         |
| 10556-AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle) | X | 5.84 | 66.87 | 16.04 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.59 | 67.27 | 16.51 |      | 150.0 |         |
|           |                                                    | Z | 5.85 | 66.94 | 16.17 |      | 150.0 |         |
| 10557-AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle) | X | 5.79 | 66.74 | 15.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.53 | 67.10 | 16.44 |      | 150.0 |         |
|           |                                                    | Z | 5.80 | 66.79 | 16.11 |      | 150.0 |         |

|           |                                                                 |   |        |        |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10558-AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)              | X | 5.83   | 66.87  | 16.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.48   | 66.99  | 16.40 |      | 150.0 |         |
|           |                                                                 | Z | 5.83   | 66.91  | 16.19 |      | 150.0 |         |
| 10560-AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)              | X | 5.83   | 66.75  | 16.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.52   | 66.99  | 16.43 |      | 150.0 |         |
|           |                                                                 | Z | 5.84   | 66.79  | 16.17 |      | 150.0 |         |
| 10561-AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle)              | X | 5.76   | 66.74  | 16.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.46   | 66.95  | 16.44 |      | 150.0 |         |
|           |                                                                 | Z | 5.77   | 66.80  | 16.20 |      | 150.0 |         |
| 10562-AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)              | X | 5.83   | 66.96  | 16.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.52   | 67.16  | 16.55 |      | 150.0 |         |
|           |                                                                 | Z | 5.84   | 67.00  | 16.31 |      | 150.0 |         |
| 10563-AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)              | X | 5.92   | 66.88  | 16.11 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.81   | 67.79  | 16.83 |      | 150.0 |         |
|           |                                                                 | Z | 5.94   | 66.97  | 16.26 |      | 150.0 |         |
| 10564-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)  | X | 4.67   | 66.49  | 16.06 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.32   | 67.73  | 16.66 |      | 150.0 |         |
|           |                                                                 | Z | 4.66   | 66.56  | 16.18 |      | 150.0 |         |
| 10565-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle) | X | 4.87   | 66.92  | 16.38 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.49   | 68.17  | 17.00 |      | 150.0 |         |
|           |                                                                 | Z | 4.86   | 67.00  | 16.52 |      | 150.0 |         |
| 10566-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle) | X | 4.71   | 66.74  | 16.18 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.33   | 67.89  | 16.77 |      | 150.0 |         |
|           |                                                                 | Z | 4.70   | 66.81  | 16.31 |      | 150.0 |         |
| 10567-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle) | X | 4.74   | 67.14  | 16.55 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.39   | 68.40  | 17.22 |      | 150.0 |         |
|           |                                                                 | Z | 4.73   | 67.23  | 16.70 |      | 150.0 |         |
| 10568-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle) | X | 4.61   | 66.49  | 15.93 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.16   | 67.29  | 16.29 |      | 150.0 |         |
|           |                                                                 | Z | 4.60   | 66.56  | 16.05 |      | 150.0 |         |
| 10569-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle) | X | 4.71   | 67.30  | 16.65 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.41   | 68.83  | 17.49 |      | 150.0 |         |
|           |                                                                 | Z | 4.71   | 67.41  | 16.81 |      | 150.0 |         |
| 10570-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle) | X | 4.73   | 67.11  | 16.56 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.35   | 68.37  | 17.24 |      | 150.0 |         |
|           |                                                                 | Z | 4.72   | 67.21  | 16.71 |      | 150.0 |         |
| 10571-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)       | X | 1.04   | 62.89  | 14.28 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.15   | 67.27  | 17.22 |      | 130.0 |         |
|           |                                                                 | Z | 1.02   | 63.22  | 14.67 |      | 130.0 |         |
| 10572-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)       | X | 1.04   | 63.32  | 14.57 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.18   | 68.30  | 17.83 |      | 130.0 |         |
|           |                                                                 | Z | 1.03   | 63.72  | 15.00 |      | 130.0 |         |
| 10573-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)     | X | 0.83   | 71.63  | 16.92 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 100.00 | 162.55 | 44.35 |      | 130.0 |         |
|           |                                                                 | Z | 1.07   | 76.86  | 19.24 |      | 130.0 |         |
| 10574-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)      | X | 1.02   | 67.14  | 16.57 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.91   | 82.76  | 24.56 |      | 130.0 |         |
|           |                                                                 | Z | 1.05   | 68.53  | 17.52 |      | 130.0 |         |

|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10575-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)  | X | 4.45 | 66.27 | 16.09 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.10 | 67.49 | 16.61 |      | 130.0 |         |
|           |                                                                 | Z | 4.44 | 66.34 | 16.22 |      | 130.0 |         |
| 10576-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)  | X | 4.47 | 66.45 | 16.16 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.15 | 67.84 | 16.79 |      | 130.0 |         |
|           |                                                                 | Z | 4.47 | 66.53 | 16.30 |      | 130.0 |         |
| 10577-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) | X | 4.65 | 66.71 | 16.33 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.27 | 68.02 | 16.91 |      | 130.0 |         |
|           |                                                                 | Z | 4.64 | 66.79 | 16.46 |      | 130.0 |         |
| 10578-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) | X | 4.55 | 66.84 | 16.42 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.20 | 68.23 | 17.08 |      | 130.0 |         |
|           |                                                                 | Z | 4.54 | 66.94 | 16.56 |      | 130.0 |         |
| 10579-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) | X | 4.31 | 66.05 | 15.67 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 3.90 | 66.98 | 16.06 |      | 130.0 |         |
|           |                                                                 | Z | 4.30 | 66.11 | 15.79 |      | 130.0 |         |
| 10580-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) | X | 4.35 | 66.12 | 15.70 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 3.88 | 66.84 | 15.95 |      | 130.0 |         |
|           |                                                                 | Z | 4.34 | 66.18 | 15.83 |      | 130.0 |         |
| 10581-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) | X | 4.45 | 66.88 | 16.36 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.14 | 68.42 | 17.13 |      | 130.0 |         |
|           |                                                                 | Z | 4.44 | 66.99 | 16.52 |      | 130.0 |         |
| 10582-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) | X | 4.24 | 65.81 | 15.45 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 3.79 | 66.65 | 15.78 |      | 130.0 |         |
|           |                                                                 | Z | 4.23 | 65.87 | 15.57 |      | 130.0 |         |
| 10583-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)       | X | 4.45 | 66.27 | 16.09 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.10 | 67.49 | 16.61 |      | 130.0 |         |
|           |                                                                 | Z | 4.44 | 66.34 | 16.22 |      | 130.0 |         |
| 10584-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)       | X | 4.47 | 66.45 | 16.16 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.15 | 67.84 | 16.79 |      | 130.0 |         |
|           |                                                                 | Z | 4.47 | 66.53 | 16.30 |      | 130.0 |         |
| 10585-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)      | X | 4.65 | 66.71 | 16.33 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.27 | 68.02 | 16.91 |      | 130.0 |         |
|           |                                                                 | Z | 4.64 | 66.79 | 16.46 |      | 130.0 |         |
| 10586-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)      | X | 4.55 | 66.84 | 16.42 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.20 | 68.23 | 17.08 |      | 130.0 |         |
|           |                                                                 | Z | 4.54 | 66.94 | 16.56 |      | 130.0 |         |
| 10587-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)      | X | 4.31 | 66.05 | 15.67 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 3.90 | 66.98 | 16.06 |      | 130.0 |         |
|           |                                                                 | Z | 4.30 | 66.11 | 15.79 |      | 130.0 |         |
| 10588-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)      | X | 4.35 | 66.12 | 15.70 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 3.88 | 66.84 | 15.95 |      | 130.0 |         |
|           |                                                                 | Z | 4.34 | 66.18 | 15.83 |      | 130.0 |         |
| 10589-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)      | X | 4.45 | 66.88 | 16.36 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.14 | 68.42 | 17.13 |      | 130.0 |         |
|           |                                                                 | Z | 4.44 | 66.99 | 16.52 |      | 130.0 |         |
| 10590-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)      | X | 4.24 | 65.81 | 15.45 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 3.79 | 66.65 | 15.78 |      | 130.0 |         |
|           |                                                                 | Z | 4.23 | 65.87 | 15.57 |      | 130.0 |         |

|           |                                                       |   |      |       |       |      |       |         |
|-----------|-------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10591-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle) | X | 4.61 | 66.36 | 16.22 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.27 | 67.61 | 16.79 |      | 130.0 |         |
|           |                                                       | Z | 4.60 | 66.43 | 16.35 |      | 130.0 |         |
| 10592-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle) | X | 4.73 | 66.67 | 16.34 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.33 | 67.81 | 16.89 |      | 130.0 |         |
|           |                                                       | Z | 4.72 | 66.74 | 16.48 |      | 130.0 |         |
| 10593-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle) | X | 4.65 | 66.54 | 16.20 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.27 | 67.73 | 16.75 |      | 130.0 |         |
|           |                                                       | Z | 4.64 | 66.61 | 16.33 |      | 130.0 |         |
| 10594-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle) | X | 4.71 | 66.72 | 16.37 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.31 | 67.86 | 16.91 |      | 130.0 |         |
|           |                                                       | Z | 4.70 | 66.80 | 16.50 |      | 130.0 |         |
| 10595-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle) | X | 4.67 | 66.68 | 16.26 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.27 | 67.85 | 16.83 |      | 130.0 |         |
|           |                                                       | Z | 4.66 | 66.76 | 16.40 |      | 130.0 |         |
| 10596-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle) | X | 4.60 | 66.65 | 16.25 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.18 | 67.67 | 16.75 |      | 130.0 |         |
|           |                                                       | Z | 4.59 | 66.73 | 16.39 |      | 130.0 |         |
| 10597-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle) | X | 4.55 | 66.52 | 16.11 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.16 | 67.60 | 16.61 |      | 130.0 |         |
|           |                                                       | Z | 4.54 | 66.60 | 16.24 |      | 130.0 |         |
| 10598-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle) | X | 4.54 | 66.75 | 16.38 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.21 | 68.06 | 17.02 |      | 130.0 |         |
|           |                                                       | Z | 4.53 | 66.84 | 16.52 |      | 130.0 |         |
| 10599-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle) | X | 5.29 | 66.89 | 16.48 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.11 | 68.25 | 17.34 |      | 130.0 |         |
|           |                                                       | Z | 5.30 | 66.99 | 16.63 |      | 130.0 |         |
| 10600-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle) | X | 5.40 | 67.29 | 16.65 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.01 | 67.95 | 17.16 |      | 130.0 |         |
|           |                                                       | Z | 5.43 | 67.45 | 16.83 |      | 130.0 |         |
| 10601-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle) | X | 5.30 | 67.04 | 16.55 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.95 | 67.81 | 17.11 |      | 130.0 |         |
|           |                                                       | Z | 5.31 | 67.16 | 16.70 |      | 130.0 |         |
| 10602-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle) | X | 5.43 | 67.22 | 16.56 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.98 | 67.69 | 16.96 |      | 130.0 |         |
|           |                                                       | Z | 5.44 | 67.31 | 16.70 |      | 130.0 |         |
| 10603-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle) | X | 5.50 | 67.52 | 16.84 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.00 | 67.82 | 17.18 |      | 130.0 |         |
|           |                                                       | Z | 5.52 | 67.67 | 17.02 |      | 130.0 |         |
| 10604-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle) | X | 5.38 | 67.17 | 16.65 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.97 | 67.66 | 17.06 |      | 130.0 |         |
|           |                                                       | Z | 5.40 | 67.31 | 16.82 |      | 130.0 |         |
| 10605-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle) | X | 5.40 | 67.20 | 16.66 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.93 | 67.56 | 17.02 |      | 130.0 |         |
|           |                                                       | Z | 5.42 | 67.33 | 16.82 |      | 130.0 |         |
| 10606-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle) | X | 5.15 | 66.52 | 16.17 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.95 | 67.77 | 16.96 |      | 130.0 |         |
|           |                                                       | Z | 5.16 | 66.62 | 16.32 |      | 130.0 |         |

|           |                                                   |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10607-AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle) | X | 4.44 | 65.66 | 15.83 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.14 | 67.09 | 16.52 |      | 130.0 |         |
|           |                                                   | Z | 4.44 | 65.75 | 15.97 |      | 130.0 |         |
| 10608-AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | X | 4.60 | 66.02 | 15.98 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.22 | 67.28 | 16.62 |      | 130.0 |         |
|           |                                                   | Z | 4.59 | 66.11 | 16.13 |      | 130.0 |         |
| 10609-AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle) | X | 4.49 | 65.84 | 15.80 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.13 | 67.14 | 16.44 |      | 130.0 |         |
|           |                                                   | Z | 4.48 | 65.93 | 15.94 |      | 130.0 |         |
| 10610-AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | X | 4.54 | 66.01 | 15.97 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.18 | 67.30 | 16.61 |      | 130.0 |         |
|           |                                                   | Z | 4.53 | 66.10 | 16.12 |      | 130.0 |         |
| 10611-AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) | X | 4.45 | 65.81 | 15.81 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.09 | 67.07 | 16.44 |      | 130.0 |         |
|           |                                                   | Z | 4.45 | 65.90 | 15.96 |      | 130.0 |         |
| 10612-AAB | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) | X | 4.45 | 65.93 | 15.85 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.03 | 67.00 | 16.38 |      | 130.0 |         |
|           |                                                   | Z | 4.44 | 66.03 | 15.99 |      | 130.0 |         |
| 10613-AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) | X | 4.44 | 65.77 | 15.70 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.05 | 66.88 | 16.24 |      | 130.0 |         |
|           |                                                   | Z | 4.44 | 65.85 | 15.84 |      | 130.0 |         |
| 10614-AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) | X | 4.41 | 65.98 | 15.95 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.08 | 67.31 | 16.62 |      | 130.0 |         |
|           |                                                   | Z | 4.40 | 66.08 | 16.10 |      | 130.0 |         |
| 10615-AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) | X | 4.45 | 65.64 | 15.58 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.06 | 66.87 | 16.16 |      | 130.0 |         |
|           |                                                   | Z | 4.44 | 65.72 | 15.71 |      | 130.0 |         |
| 10616-AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) | X | 5.09 | 66.09 | 16.06 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.76 | 66.84 | 16.63 |      | 130.0 |         |
|           |                                                   | Z | 5.10 | 66.16 | 16.20 |      | 130.0 |         |
| 10617-AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) | X | 5.16 | 66.28 | 16.13 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.76 | 66.87 | 16.63 |      | 130.0 |         |
|           |                                                   | Z | 5.16 | 66.37 | 16.28 |      | 130.0 |         |
| 10618-AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) | X | 5.05 | 66.30 | 16.16 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.69 | 66.97 | 16.69 |      | 130.0 |         |
|           |                                                   | Z | 5.06 | 66.39 | 16.30 |      | 130.0 |         |
| 10619-AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) | X | 5.06 | 66.08 | 15.98 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.75 | 66.94 | 16.61 |      | 130.0 |         |
|           |                                                   | Z | 5.07 | 66.17 | 16.13 |      | 130.0 |         |
| 10620-AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) | X | 5.14 | 66.12 | 16.05 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.76 | 66.75 | 16.54 |      | 130.0 |         |
|           |                                                   | Z | 5.15 | 66.20 | 16.19 |      | 130.0 |         |
| 10621-AAB | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) | X | 5.15 | 66.26 | 16.24 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.80 | 66.94 | 16.78 |      | 130.0 |         |
|           |                                                   | Z | 5.16 | 66.33 | 16.38 |      | 130.0 |         |
| 10622-AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) | X | 5.15 | 66.36 | 16.29 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.77 | 66.96 | 16.79 |      | 130.0 |         |
|           |                                                   | Z | 5.15 | 66.43 | 16.42 |      | 130.0 |         |

|           |                                                    |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10623-AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)  | X | 5.03 | 65.89 | 15.92 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 4.69 | 66.61 | 16.45 |      | 130.0 |         |
|           |                                                    | Z | 5.03 | 65.94 | 16.04 |      | 130.0 |         |
| 10624-AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)  | X | 5.23 | 66.15 | 16.11 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 4.85 | 66.81 | 16.62 |      | 130.0 |         |
|           |                                                    | Z | 5.23 | 66.22 | 16.25 |      | 130.0 |         |
| 10625-AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)  | X | 5.41 | 66.58 | 16.39 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 4.98 | 67.17 | 16.88 |      | 130.0 |         |
|           |                                                    | Z | 5.39 | 66.59 | 16.50 |      | 130.0 |         |
| 10626-AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)  | X | 5.42 | 66.17 | 16.04 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.14 | 66.64 | 16.52 |      | 130.0 |         |
|           |                                                    | Z | 5.42 | 66.21 | 16.16 |      | 130.0 |         |
| 10627-AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)  | X | 5.65 | 66.77 | 16.32 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.31 | 67.18 | 16.77 |      | 130.0 |         |
|           |                                                    | Z | 5.68 | 66.90 | 16.48 |      | 130.0 |         |
| 10628-AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)  | X | 5.42 | 66.16 | 15.94 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.11 | 66.54 | 16.37 |      | 130.0 |         |
|           |                                                    | Z | 5.42 | 66.21 | 16.06 |      | 130.0 |         |
| 10629-AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)  | X | 5.51 | 66.29 | 16.00 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.29 | 67.09 | 16.65 |      | 130.0 |         |
|           |                                                    | Z | 5.53 | 66.38 | 16.14 |      | 130.0 |         |
| 10630-AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)  | X | 5.82 | 67.43 | 16.57 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.21 | 66.99 | 16.61 |      | 130.0 |         |
|           |                                                    | Z | 5.87 | 67.63 | 16.77 |      | 130.0 |         |
| 10631-AAB | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)  | X | 5.76 | 67.37 | 16.74 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.33 | 67.57 | 17.10 |      | 130.0 |         |
|           |                                                    | Z | 5.78 | 67.47 | 16.89 |      | 130.0 |         |
| 10632-AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)  | X | 5.64 | 66.89 | 16.52 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.50 | 68.05 | 17.35 |      | 130.0 |         |
|           |                                                    | Z | 5.67 | 67.03 | 16.69 |      | 130.0 |         |
| 10633-AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)  | X | 5.49 | 66.38 | 16.08 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.12 | 66.68 | 16.49 |      | 130.0 |         |
|           |                                                    | Z | 5.49 | 66.42 | 16.20 |      | 130.0 |         |
| 10634-AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)  | X | 5.47 | 66.40 | 16.15 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.20 | 67.06 | 16.73 |      | 130.0 |         |
|           |                                                    | Z | 5.47 | 66.45 | 16.27 |      | 130.0 |         |
| 10635-AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)  | X | 5.34 | 65.69 | 15.52 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 4.98 | 66.00 | 15.88 |      | 130.0 |         |
|           |                                                    | Z | 5.34 | 65.71 | 15.62 |      | 130.0 |         |
| 10636-AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle) | X | 5.85 | 66.55 | 16.15 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.60 | 66.87 | 16.55 |      | 130.0 |         |
|           |                                                    | Z | 5.86 | 66.59 | 16.27 |      | 130.0 |         |
| 10637-AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle) | X | 5.99 | 66.90 | 16.31 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.71 | 67.22 | 16.72 |      | 130.0 |         |
|           |                                                    | Z | 6.00 | 66.97 | 16.44 |      | 130.0 |         |
| 10638-AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle) | X | 5.99 | 66.89 | 16.28 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.74 | 67.30 | 16.74 |      | 130.0 |         |
|           |                                                    | Z | 6.01 | 66.96 | 16.42 |      | 130.0 |         |

|           |                                                        |   |        |        |       |       |       |         |
|-----------|--------------------------------------------------------|---|--------|--------|-------|-------|-------|---------|
| 10639-AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)     | X | 5.96   | 66.80  | 16.28 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.67   | 67.08  | 16.67 |       | 130.0 |         |
|           |                                                        | Z | 5.97   | 66.85  | 16.40 |       | 130.0 |         |
| 10640-AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)     | X | 5.95   | 66.77  | 16.21 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.56   | 66.76  | 16.45 |       | 130.0 |         |
|           |                                                        | Z | 5.95   | 66.81  | 16.32 |       | 130.0 |         |
| 10641-AAC | IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)     | X | 6.02   | 66.79  | 16.24 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.69   | 66.96  | 16.57 |       | 130.0 |         |
|           |                                                        | Z | 6.04   | 66.86  | 16.37 |       | 130.0 |         |
| 10642-AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)     | X | 6.05   | 66.99  | 16.51 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.71   | 67.14  | 16.83 |       | 130.0 |         |
|           |                                                        | Z | 6.06   | 67.04  | 16.63 |       | 130.0 |         |
| 10643-AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)     | X | 5.89   | 66.69  | 16.25 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.55   | 66.75  | 16.51 |       | 130.0 |         |
|           |                                                        | Z | 5.91   | 66.75  | 16.38 |       | 130.0 |         |
| 10644-AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)     | X | 5.98   | 66.95  | 16.40 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 5.64   | 67.07  | 16.70 |       | 130.0 |         |
|           |                                                        | Z | 5.98   | 66.98  | 16.51 |       | 130.0 |         |
| 10645-AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)     | X | 6.12   | 67.04  | 16.41 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.04   | 68.05  | 17.16 |       | 130.0 |         |
|           |                                                        | Z | 6.18   | 67.23  | 16.60 |       | 130.0 |         |
| 10646-AAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)  | X | 9.30   | 96.04  | 33.28 | 9.30  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 4.72   | 85.46  | 29.98 |       | 60.0  |         |
|           |                                                        | Z | 9.03   | 95.55  | 33.06 |       | 60.0  |         |
| 10647-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) | X | 8.21   | 93.71  | 32.60 | 9.30  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 4.16   | 82.96  | 29.11 |       | 60.0  |         |
|           |                                                        | Z | 7.96   | 93.24  | 32.39 |       | 60.0  |         |
| 10648-AAA | CDMA2000 (1x Advanced)                                 | X | 0.48   | 60.73  | 7.74  | 0.00  | 150.0 | ± 9.6 % |
|           |                                                        | Y | 0.28   | 60.00  | 2.97  |       | 150.0 |         |
|           |                                                        | Z | 0.45   | 60.55  | 7.36  |       | 150.0 |         |
| 10652-AAB | LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)         | X | 3.22   | 65.68  | 15.68 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 3.30   | 69.14  | 16.34 |       | 80.0  |         |
|           |                                                        | Z | 3.22   | 65.91  | 15.87 |       | 80.0  |         |
| 10653-AAB | LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)        | X | 3.80   | 65.29  | 16.06 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 3.72   | 67.55  | 16.85 |       | 80.0  |         |
|           |                                                        | Z | 3.78   | 65.38  | 16.21 |       | 80.0  |         |
| 10654-AAB | LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)        | X | 3.81   | 64.97  | 16.11 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 3.74   | 66.80  | 16.91 |       | 80.0  |         |
|           |                                                        | Z | 3.80   | 65.03  | 16.25 |       | 80.0  |         |
| 10655-AAB | LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)        | X | 3.89   | 64.93  | 16.16 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 3.83   | 66.43  | 16.92 |       | 80.0  |         |
|           |                                                        | Z | 3.87   | 64.98  | 16.29 |       | 80.0  |         |
| 10658-AAA | Pulse Waveform (200Hz, 10%)                            | X | 14.05  | 86.04  | 19.08 | 10.00 | 50.0  | ± 9.6 % |
|           |                                                        | Y | 3.58   | 69.28  | 11.90 |       | 50.0  |         |
|           |                                                        | Z | 8.33   | 79.49  | 16.82 |       | 50.0  |         |
| 10659-AAA | Pulse Waveform (200Hz, 20%)                            | X | 100.00 | 106.74 | 22.89 | 6.99  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 3.69   | 71.79  | 11.78 |       | 60.0  |         |
|           |                                                        | Z | 100.00 | 105.40 | 22.19 |       | 60.0  |         |

|           |                             |   |        |        |          |      |       |         |
|-----------|-----------------------------|---|--------|--------|----------|------|-------|---------|
| 10660-AAA | Pulse Waveform (200Hz, 40%) | X | 100.00 | 104.23 | 20.43    | 3.98 | 80.0  | ± 9.6 % |
|           |                             | Y | 100.00 | 95.42  | 16.30    |      | 80.0  |         |
|           |                             | Z | 100.00 | 101.41 | 19.06    |      | 80.0  |         |
| 10661-AAA | Pulse Waveform (200Hz, 60%) | X | 100.00 | 99.34  | 17.30    | 2.22 | 100.0 | ± 9.6 % |
|           |                             | Y | 100.00 | 88.65  | 12.65    |      | 100.0 |         |
|           |                             | Z | 15.45  | 82.53  | 12.34    |      | 100.0 |         |
| 10662-AAA | Pulse Waveform (200Hz, 80%) | X | 0.16   | 60.00  | 3.79     | 0.97 | 120.0 | ± 9.6 % |
|           |                             | Y | 0.01   | 60.00  | 22597.33 |      | 120.0 |         |
|           |                             | Z | 27.38  | 213.45 | 12.35    |      | 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: **EX3-7409\_Jun18**

## CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:7409**

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: **June 25, 2018**

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

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

Calibration Equipment used (M&TE critical for calibration)

| Primary Standards          | ID               | Cal Date (Certificate No.)        | Scheduled Calibration  |
|----------------------------|------------------|-----------------------------------|------------------------|
| Power meter NRP            | SN: 104778       | 04-Apr-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 HP 8753E  | SN: US37390585   | 18-Oct-01 (in house check Oct-17) | In house check: Oct-18 |

Calibrated by: **Name** Claudio Leubler **Function** Laboratory Technician

Approved by: **Name** Katja Pokovic **Function** Technical Manager

Signature

Issued: June 26, 2018

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### Glossary:

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

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

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

### Methods Applied and Interpretation of Parameters:

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

# Probe EX3DV4

## SN:7409

Manufactured: November 24, 2015  
Calibrated: June 25, 2018

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

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7409

### Basic Calibration Parameters

|                                                           | Sensor X | Sensor Y | Sensor Z | Unc (k=2)     |
|-----------------------------------------------------------|----------|----------|----------|---------------|
| Norm ( $\mu\text{V}/(\text{V}/\text{m})^2$ ) <sup>A</sup> | 0.38     | 0.33     | 0.38     | $\pm 10.1 \%$ |
| DCP (mV) <sup>B</sup>                                     | 100.8    | 102.3    | 97.7     |               |

### Modulation Calibration Parameters

| UID | Communication System Name |   | A<br>dB | B<br>dB/ $\mu\text{V}$ | 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    | 157.1    | $\pm 2.2 \%$              |
|     |                           | Y | 0.0     | 0.0                    | 1.0 |         | 172.6    |                           |
|     |                           | Z | 0.0     | 0.0                    | 1.0 |         | 175.7    |                           |

Note: For details on UID parameters see Appendix.

### Sensor Model Parameters

|   | C1<br>fF | C2<br>fF | $\alpha$<br>$\text{V}^{-1}$ | T1<br>$\text{ms} \cdot \text{V}^{-2}$ | T2<br>$\text{ms} \cdot \text{V}^{-1}$ | T3<br>ms | T4<br>$\text{V}^{-2}$ | T5<br>$\text{V}^{-1}$ | T6    |
|---|----------|----------|-----------------------------|---------------------------------------|---------------------------------------|----------|-----------------------|-----------------------|-------|
| X | 15.40    | 116.5    | 36.38                       | 2.655                                 | 0.140                                 | 4.978    | 0.000                 | 0.017                 | 1.008 |
| Y | 27.94    | 206.6    | 35.20                       | 4.338                                 | 0.095                                 | 4.989    | 1.642                 | 0.000                 | 1.004 |
| Z | 31.47    | 244.0    | 37.99                       | 3.819                                 | 0.313                                 | 5.030    | 0.103                 | 0.363                 | 1.006 |

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:7409

### 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                            | 9.91    | 9.91    | 9.91    | 0.44               | 0.90                    | ± 12.0 %  |
| 835                  | 41.5                               | 0.90                            | 9.67    | 9.67    | 9.67    | 0.46               | 0.85                    | ± 12.0 %  |
| 1750                 | 40.1                               | 1.37                            | 8.43    | 8.43    | 8.43    | 0.38               | 0.80                    | ± 12.0 %  |
| 1900                 | 40.0                               | 1.40                            | 8.05    | 8.05    | 8.05    | 0.38               | 0.84                    | ± 12.0 %  |
| 2300                 | 39.5                               | 1.67                            | 7.57    | 7.57    | 7.57    | 0.32               | 0.80                    | ± 12.0 %  |
| 2450                 | 39.2                               | 1.80                            | 7.23    | 7.23    | 7.23    | 0.34               | 0.86                    | ± 12.0 %  |
| 2600                 | 39.0                               | 1.96                            | 6.98    | 6.98    | 6.98    | 0.39               | 0.86                    | ± 12.0 %  |
| 5250                 | 35.9                               | 4.71                            | 5.20    | 5.20    | 5.20    | 0.40               | 1.80                    | ± 13.1 %  |
| 5600                 | 35.5                               | 5.07                            | 4.77    | 4.77    | 4.77    | 0.40               | 1.80                    | ± 13.1 %  |
| 5750                 | 35.4                               | 5.22                            | 4.82    | 4.82    | 4.82    | 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:7409

### 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                            | 9.82    | 9.82    | 9.82    | 0.52               | 0.84                    | ± 12.0 %  |
| 835                  | 55.2                               | 0.97                            | 9.63    | 9.63    | 9.63    | 0.48               | 0.80                    | ± 12.0 %  |
| 1750                 | 53.4                               | 1.49                            | 7.91    | 7.91    | 7.91    | 0.36               | 0.93                    | ± 12.0 %  |
| 1900                 | 53.3                               | 1.52                            | 7.60    | 7.60    | 7.60    | 0.44               | 0.80                    | ± 12.0 %  |
| 2300                 | 52.9                               | 1.81                            | 7.36    | 7.36    | 7.36    | 0.38               | 0.88                    | ± 12.0 %  |
| 2450                 | 52.7                               | 1.95                            | 7.24    | 7.24    | 7.24    | 0.33               | 0.89                    | ± 12.0 %  |
| 2600                 | 52.5                               | 2.16                            | 7.07    | 7.07    | 7.07    | 0.32               | 0.96                    | ± 12.0 %  |
| 5250                 | 48.9                               | 5.36                            | 4.67    | 4.67    | 4.67    | 0.50               | 1.90                    | ± 13.1 %  |
| 5600                 | 48.5                               | 5.77                            | 4.25    | 4.25    | 4.25    | 0.50               | 1.90                    | ± 13.1 %  |
| 5750                 | 48.3                               | 5.94                            | 4.32    | 4.32    | 4.32    | 0.50               | 1.90                    | ± 13.1 %  |

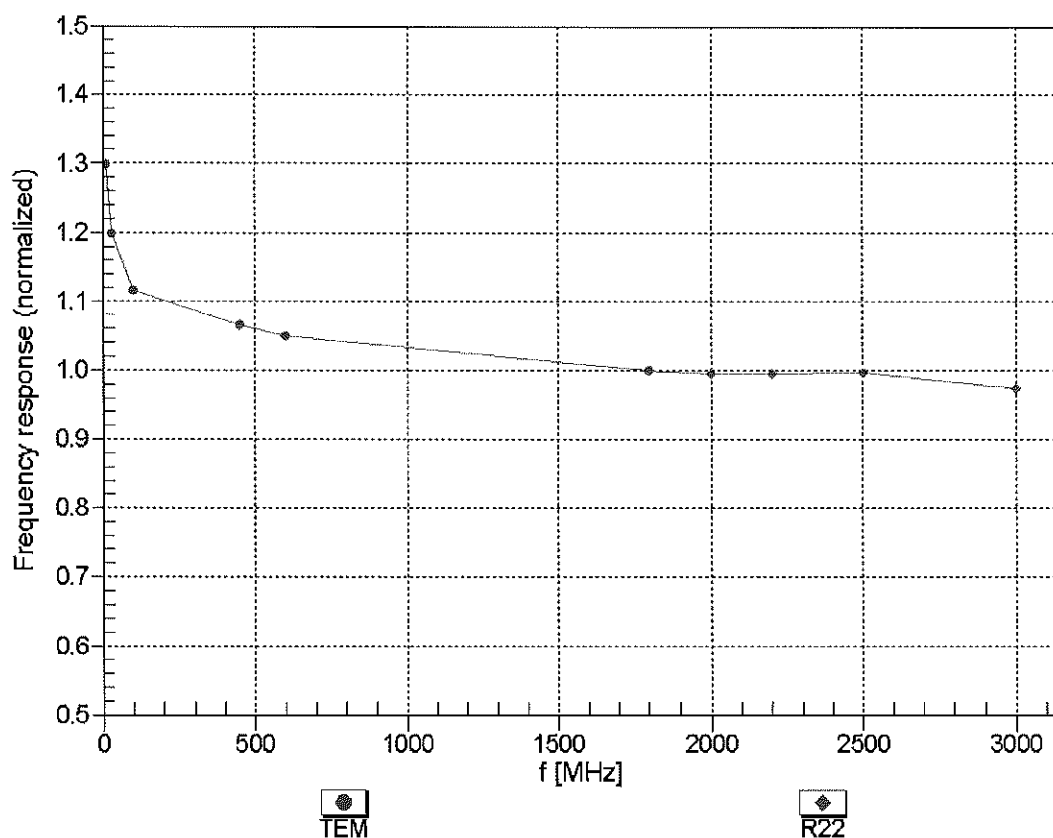
<sup>C</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below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

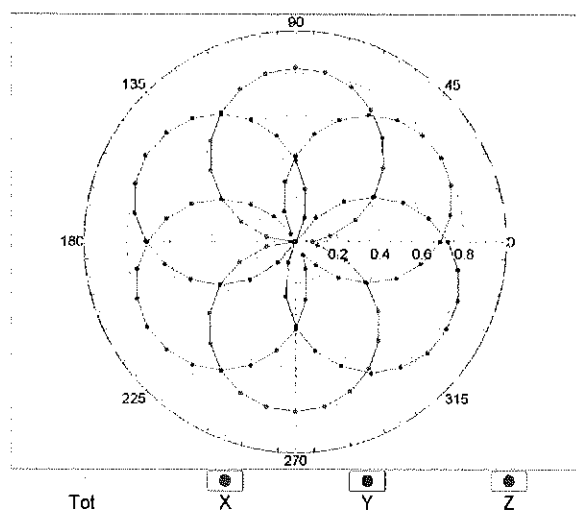
(TEM-Cell:ifi110 EXX, Waveguide: R22)



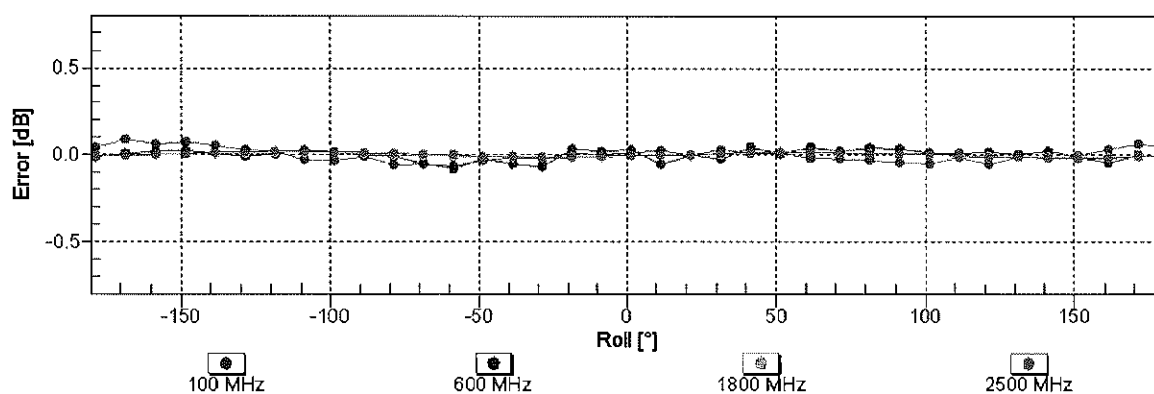
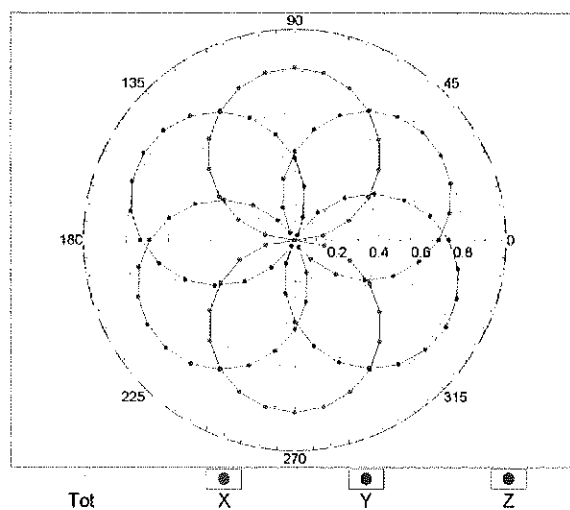
Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  ( $k=2$ )

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

f=600 MHz,TEM

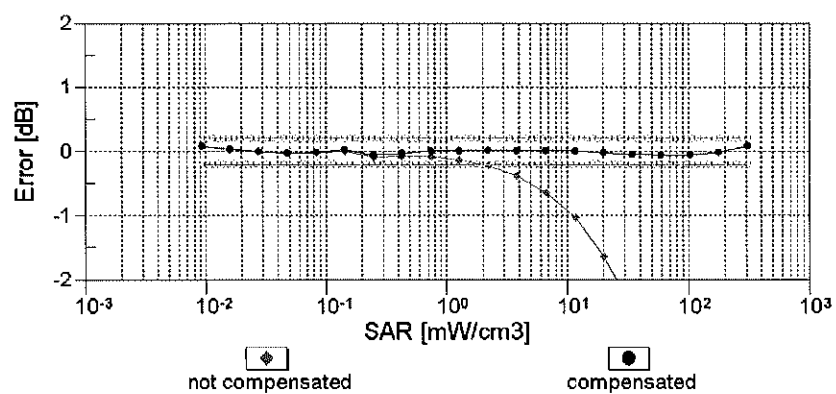
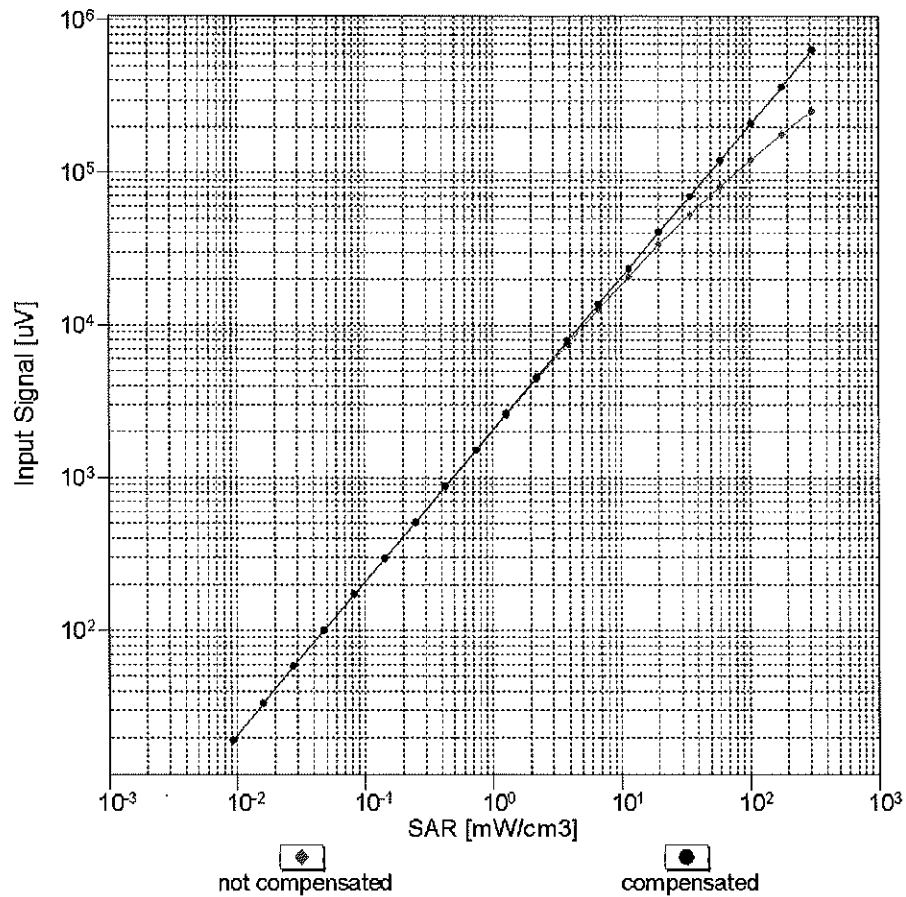


f=1800 MHz,R22



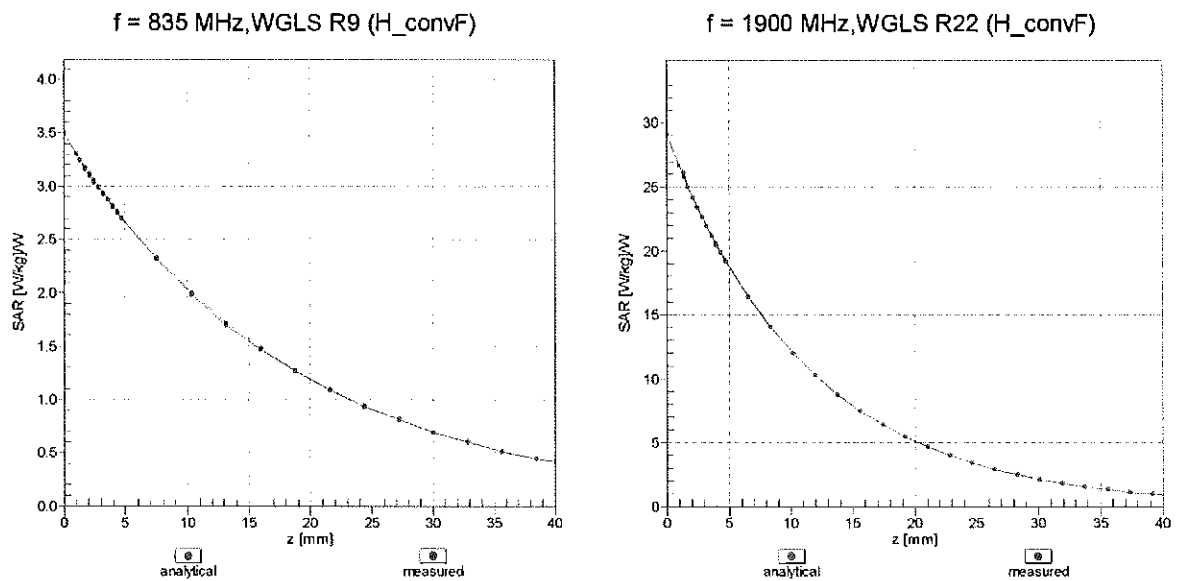
Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  ( $k=2$ )

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



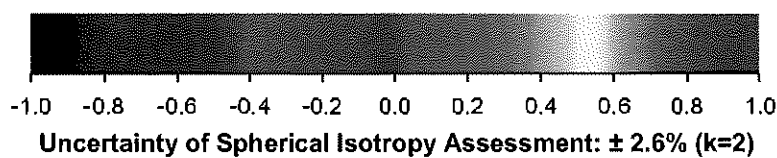
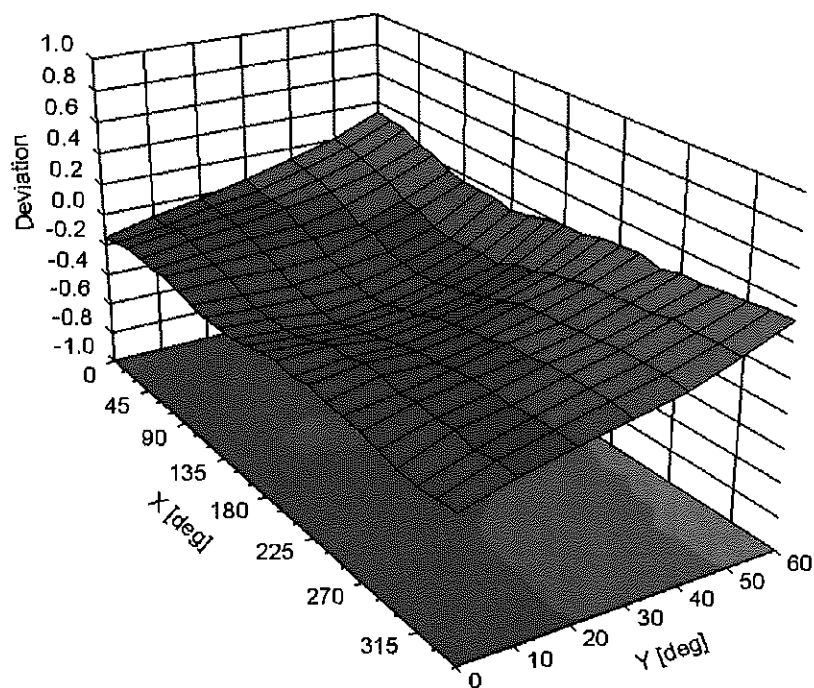
Uncertainty of Linearity Assessment:  $\pm 0.6\%$  ( $k=2$ )

## Conversion Factor Assessment



## Deviation from Isotropy in Liquid

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



## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7409

### Other Probe Parameters

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle (°)                           | 41.5       |
| 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    | 157.1    | $\pm 2.2 \%$                     |
|               |                                               | Y | 0.00    | 0.00                   | 1.00  |         | 172.6    |                                  |
|               |                                               | Z | 0.00    | 0.00                   | 1.00  |         | 175.7    |                                  |
| 10010-<br>CAA | SAR Validation (Square, 100ms, 10ms)          | X | 1.25    | 60.42                  | 5.97  | 10.00   | 20.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 1.37    | 61.35                  | 6.72  |         | 20.0     |                                  |
|               |                                               | Z | 1.46    | 61.54                  | 7.06  |         | 20.0     |                                  |
| 10011-<br>CAB | UMTS-FDD (WCDMA)                              | X | 0.71    | 66.47                  | 12.38 | 0.00    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 1.49    | 76.31                  | 19.52 |         | 150.0    |                                  |
|               |                                               | Z | 0.80    | 65.38                  | 13.27 |         | 150.0    |                                  |
| 10012-<br>CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)      | X | 0.97    | 63.61                  | 14.22 | 0.41    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 1.14    | 65.32                  | 16.39 |         | 150.0    |                                  |
|               |                                               | Z | 1.01    | 62.66                  | 14.20 |         | 150.0    |                                  |
| 10013-<br>CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | X | 3.98    | 66.92                  | 16.39 | 1.46    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 4.51    | 67.09                  | 17.14 |         | 150.0    |                                  |
|               |                                               | Z | 4.51    | 66.48                  | 16.81 |         | 150.0    |                                  |
| 10021-<br>DAC | GSM-FDD (TDMA, GMSK)                          | X | 2.93    | 68.02                  | 10.47 | 9.39    | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 5.30    | 74.12                  | 13.20 |         | 50.0     |                                  |
|               |                                               | Z | 8.30    | 79.26                  | 15.55 |         | 50.0     |                                  |
| 10023-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0)                   | X | 2.04    | 64.26                  | 8.75  | 9.57    | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 3.75    | 70.52                  | 11.87 |         | 50.0     |                                  |
|               |                                               | Z | 5.18    | 74.16                  | 13.81 |         | 50.0     |                                  |
| 10024-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1)                 | X | 0.77    | 60.84                  | 5.97  | 6.56    | 60.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 98.81                  | 18.33 |         | 60.0     |                                  |
|               |                                               | Z | 7.39    | 79.44                  | 14.17 |         | 60.0     |                                  |
| 10025-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0)                   | X | 2.92    | 62.32                  | 21.25 | 12.57   | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 3.79    | 70.21                  | 26.28 |         | 50.0     |                                  |
|               |                                               | Z | 3.08    | 62.64                  | 21.59 |         | 50.0     |                                  |
| 10026-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1)                 | X | 4.19    | 76.79                  | 26.73 | 9.56    | 60.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 5.08    | 81.51                  | 29.10 |         | 60.0     |                                  |
|               |                                               | Z | 4.89    | 79.35                  | 27.91 |         | 60.0     |                                  |
| 10027-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2)               | X | 0.43    | 60.00                  | 4.84  | 4.80    | 80.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 98.82                  | 17.61 |         | 80.0     |                                  |
|               |                                               | Z | 99.96   | 97.90                  | 17.31 |         | 80.0     |                                  |
| 10028-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)             | X | 0.29    | 60.00                  | 4.20  | 3.55    | 100.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 100.72                 | 17.79 |         | 100.0    |                                  |
|               |                                               | Z | 0.57    | 63.31                  | 6.83  |         | 100.0    |                                  |
| 10029-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2)               | X | 3.08    | 70.55                  | 22.84 | 7.80    | 80.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 3.50    | 73.17                  | 24.28 |         | 80.0     |                                  |
|               |                                               | Z | 3.45    | 72.07                  | 23.57 |         | 80.0     |                                  |
| 10030-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1)           | X | 0.52    | 60.00                  | 4.79  | 5.30    | 70.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 1.54    | 67.33                  | 9.06  |         | 70.0     |                                  |
|               |                                               | Z | 1.17    | 65.26                  | 8.49  |         | 70.0     |                                  |
| 10031-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3)           | X | 0.04    | 196.26                 | 30.81 | 1.88    | 100.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 0.17    | 60.00                  | 4.10  |         | 100.0    |                                  |
|               |                                               | Z | 15.90   | 60.96                  | 1.69  |         | 100.0    |                                  |

|           |                                                     |   |        |        |        |       |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|--------|-------|-------|---------|
| 10032-CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5)                 | X | 0.00   | 86.08  | 35.43  | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 99.99  | 344.89 | 100.44 |       | 100.0 |         |
|           |                                                     | Z | 1.14   | 132.41 | 13.71  |       | 100.0 |         |
| 10033-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)           | X | 0.95   | 60.75  | 6.54   | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 4.98   | 80.79  | 18.23  |       | 70.0  |         |
|           |                                                     | Z | 3.25   | 75.39  | 16.74  |       | 70.0  |         |
| 10034-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)           | X | 3.04   | 65.72  | 5.34   | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 1.68   | 70.56  | 12.82  |       | 100.0 |         |
|           |                                                     | Z | 0.99   | 64.34  | 10.07  |       | 100.0 |         |
| 10035-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)           | X | 24.75  | 218.80 | 26.78  | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 1.37   | 69.43  | 12.15  |       | 100.0 |         |
|           |                                                     | Z | 0.77   | 62.85  | 8.95   |       | 100.0 |         |
| 10036-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1)               | X | 0.94   | 60.83  | 6.63   | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 7.23   | 85.73  | 19.90  |       | 70.0  |         |
|           |                                                     | Z | 3.94   | 78.17  | 17.83  |       | 70.0  |         |
| 10037-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3)               | X | 1.41   | 63.61  | 4.82   | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 1.40   | 68.85  | 12.14  |       | 100.0 |         |
|           |                                                     | Z | 0.93   | 63.88  | 9.84   |       | 100.0 |         |
| 10038-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5)               | X | 26.17  | 217.46 | 26.16  | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 1.45   | 70.29  | 12.67  |       | 100.0 |         |
|           |                                                     | Z | 0.78   | 63.02  | 9.17   |       | 100.0 |         |
| 10039-CAB | CDMA2000 (1xRTT, RC1)                               | X | 21.96  | 306.20 | 30.49  | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.63   | 72.13  | 12.95  |       | 150.0 |         |
|           |                                                     | Z | 0.63   | 61.62  | 7.75   |       | 150.0 |         |
| 10042-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | X | 1.01   | 60.95  | 6.26   | 7.78  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 1.74   | 65.58  | 9.03   |       | 50.0  |         |
|           |                                                     | Z | 1.77   | 65.58  | 9.34   |       | 50.0  |         |
| 10044-CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM)                    | X | 0.10   | 124.30 | 3.45   | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.01   | 119.74 | 2.99   |       | 150.0 |         |
|           |                                                     | Z | 0.14   | 123.41 | 9.03   |       | 150.0 |         |
| 10048-CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)           | X | 2.82   | 62.25  | 9.34   | 13.80 | 25.0  | ± 9.6 % |
|           |                                                     | Y | 3.46   | 64.98  | 10.90  |       | 25.0  |         |
|           |                                                     | Z | 4.35   | 67.54  | 12.61  |       | 25.0  |         |
| 10049-CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)         | X | 2.47   | 64.28  | 8.96   | 10.79 | 40.0  | ± 9.6 % |
|           |                                                     | Y | 3.27   | 67.55  | 10.82  |       | 40.0  |         |
|           |                                                     | Z | 4.02   | 69.88  | 12.36  |       | 40.0  |         |
| 10056-CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps)                      | X | 2.81   | 66.64  | 10.78  | 9.03  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 11.82  | 86.24  | 20.09  |       | 50.0  |         |
|           |                                                     | Z | 9.59   | 84.12  | 20.02  |       | 50.0  |         |
| 10058-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)                   | X | 2.65   | 68.11  | 20.96  | 6.55  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 2.94   | 70.05  | 22.07  |       | 100.0 |         |
|           |                                                     | Z | 2.91   | 69.15  | 21.44  |       | 100.0 |         |
| 10059-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)            | X | 0.95   | 64.02  | 14.39  | 0.61  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 1.14   | 66.10  | 16.82  |       | 110.0 |         |
|           |                                                     | Z | 1.00   | 63.23  | 14.55  |       | 110.0 |         |
| 10060-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)          | X | 1.76   | 81.26  | 19.48  | 1.30  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 100.00 | 150.16 | 40.00  |       | 110.0 |         |
|           |                                                     | Z | 1.90   | 81.85  | 20.27  |       | 110.0 |         |

|           |                                                |   |      |       |       |      |       |         |
|-----------|------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10061-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)      | X | 1.18 | 69.71 | 16.58 | 2.04 | 110.0 | ± 9.6 % |
|           |                                                | Y | 1.94 | 78.32 | 21.99 |      | 110.0 |         |
|           |                                                | Z | 1.40 | 71.35 | 18.33 |      | 110.0 |         |
| 10062-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)       | X | 3.80 | 66.99 | 15.87 | 0.49 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.35 | 67.21 | 16.69 |      | 100.0 |         |
|           |                                                | Z | 4.31 | 66.43 | 16.23 |      | 100.0 |         |
| 10063-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)       | X | 3.81 | 67.06 | 15.96 | 0.72 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.36 | 67.29 | 16.77 |      | 100.0 |         |
|           |                                                | Z | 4.32 | 66.52 | 16.32 |      | 100.0 |         |
| 10064-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)      | X | 3.97 | 67.23 | 16.12 | 0.86 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.56 | 67.40 | 16.91 |      | 100.0 |         |
|           |                                                | Z | 4.55 | 66.72 | 16.52 |      | 100.0 |         |
| 10065-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)      | X | 3.85 | 66.82 | 16.06 | 1.21 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.42 | 67.15 | 16.92 |      | 100.0 |         |
|           |                                                | Z | 4.42 | 66.52 | 16.58 |      | 100.0 |         |
| 10066-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)      | X | 3.83 | 66.65 | 16.06 | 1.46 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.41 | 67.05 | 17.01 |      | 100.0 |         |
|           |                                                | Z | 4.42 | 66.49 | 16.71 |      | 100.0 |         |
| 10067-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)      | X | 4.01 | 66.66 | 16.35 | 2.04 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.65 | 67.23 | 17.40 |      | 100.0 |         |
|           |                                                | Z | 4.70 | 66.78 | 17.19 |      | 100.0 |         |
| 10068-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)      | X | 4.12 | 66.97 | 16.78 | 2.55 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.69 | 67.14 | 17.56 |      | 100.0 |         |
|           |                                                | Z | 4.73 | 66.69 | 17.36 |      | 100.0 |         |
| 10069-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)      | X | 4.11 | 66.73 | 16.77 | 2.67 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.72 | 67.08 | 17.69 |      | 100.0 |         |
|           |                                                | Z | 4.78 | 66.70 | 17.53 |      | 100.0 |         |
| 10071-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)  | X | 4.07 | 66.96 | 16.68 | 1.99 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.59 | 67.07 | 17.37 |      | 100.0 |         |
|           |                                                | Z | 4.60 | 66.53 | 17.10 |      | 100.0 |         |
| 10072-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | X | 3.98 | 66.89 | 16.71 | 2.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.51 | 67.19 | 17.50 |      | 100.0 |         |
|           |                                                | Z | 4.54 | 66.70 | 17.26 |      | 100.0 |         |
| 10073-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | X | 4.03 | 67.09 | 17.06 | 2.83 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.56 | 67.35 | 17.81 |      | 100.0 |         |
|           |                                                | Z | 4.59 | 66.87 | 17.58 |      | 100.0 |         |
| 10074-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | X | 4.11 | 67.36 | 17.40 | 3.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.57 | 67.31 | 17.95 |      | 100.0 |         |
|           |                                                | Z | 4.60 | 66.82 | 17.73 |      | 100.0 |         |
| 10075-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | X | 4.18 | 67.58 | 17.73 | 3.82 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.58 | 67.25 | 18.15 |      | 90.0  |         |
|           |                                                | Z | 4.61 | 66.79 | 17.96 |      | 90.0  |         |
| 10076-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | X | 4.24 | 67.48 | 17.91 | 4.15 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.61 | 67.08 | 18.28 |      | 90.0  |         |
|           |                                                | Z | 4.65 | 66.67 | 18.13 |      | 90.0  |         |
| 10077-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | X | 4.28 | 67.60 | 18.06 | 4.30 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.64 | 67.18 | 18.41 |      | 90.0  |         |
|           |                                                | Z | 4.68 | 66.76 | 18.25 |      | 90.0  |         |

|           |                                                     |   |        |        |       |      |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10081-CAB | CDMA2000 (1xRTT, RC3)                               | X | 7.85   | 258.95 | 40.09 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.57   | 64.50  | 9.19  |      | 150.0 |         |
|           |                                                     | Z | 0.37   | 60.00  | 6.09  |      | 150.0 |         |
| 10082-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | X | 72.13  | 59.07  | 0.77  | 4.77 | 80.0  | ± 9.6 % |
|           |                                                     | Y | 7.02   | 60.09  | 1.53  |      | 80.0  |         |
|           |                                                     | Z | 7.63   | 60.12  | 1.53  |      | 80.0  |         |
| 10090-DAC | GPRS-FDD (TDMA, GMSK, TN 0-4)                       | X | 0.78   | 60.88  | 6.00  | 6.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 98.83  | 18.35 |      | 60.0  |         |
|           |                                                     | Z | 8.66   | 80.77  | 14.58 |      | 60.0  |         |
| 10097-CAB | UMTS-FDD (HSDPA)                                    | X | 1.12   | 65.69  | 11.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.39   | 74.48  | 18.29 |      | 150.0 |         |
|           |                                                     | Z | 1.58   | 66.95  | 14.31 |      | 150.0 |         |
| 10098-CAB | UMTS-FDD (HSUPA, Subtest 2)                         | X | 1.11   | 65.81  | 11.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.34   | 74.47  | 18.31 |      | 150.0 |         |
|           |                                                     | Z | 1.54   | 66.88  | 14.28 |      | 150.0 |         |
| 10099-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4)                       | X | 4.22   | 76.90  | 26.77 | 9.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 5.12   | 81.66  | 29.15 |      | 60.0  |         |
|           |                                                     | Z | 4.92   | 79.46  | 27.95 |      | 60.0  |         |
| 10100-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 2.39   | 69.31  | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.20   | 72.58  | 18.18 |      | 150.0 |         |
|           |                                                     | Z | 2.69   | 68.81  | 15.94 |      | 150.0 |         |
| 10101-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 2.61   | 67.07  | 15.44 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.12   | 68.53  | 16.66 |      | 150.0 |         |
|           |                                                     | Z | 2.91   | 66.65  | 15.40 |      | 150.0 |         |
| 10102-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 2.71   | 67.23  | 15.58 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.22   | 68.53  | 16.74 |      | 150.0 |         |
|           |                                                     | Z | 3.02   | 66.72  | 15.54 |      | 150.0 |         |
| 10103-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 3.72   | 71.26  | 18.49 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 4.70   | 73.63  | 19.84 |      | 65.0  |         |
|           |                                                     | Z | 4.41   | 71.81  | 18.98 |      | 65.0  |         |
| 10104-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 3.95   | 69.27  | 17.90 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 4.71   | 71.04  | 19.29 |      | 65.0  |         |
|           |                                                     | Z | 4.63   | 70.10  | 18.86 |      | 65.0  |         |
| 10105-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 3.78   | 68.25  | 17.72 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 4.47   | 69.73  | 18.97 |      | 65.0  |         |
|           |                                                     | Z | 4.37   | 68.68  | 18.48 |      | 65.0  |         |
| 10108-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)            | X | 1.98   | 69.15  | 15.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.77   | 72.39  | 18.20 |      | 150.0 |         |
|           |                                                     | Z | 2.29   | 68.22  | 15.72 |      | 150.0 |         |
| 10109-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)          | X | 2.19   | 67.24  | 14.70 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.80   | 69.06  | 16.71 |      | 150.0 |         |
|           |                                                     | Z | 2.54   | 66.58  | 15.14 |      | 150.0 |         |
| 10110-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)             | X | 1.35   | 66.94  | 13.41 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.32   | 72.63  | 18.00 |      | 150.0 |         |
|           |                                                     | Z | 1.78   | 67.28  | 14.92 |      | 150.0 |         |
| 10111-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)           | X | 1.58   | 65.90  | 12.12 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.81   | 72.30  | 17.60 |      | 150.0 |         |
|           |                                                     | Z | 2.22   | 67.49  | 14.99 |      | 150.0 |         |

|           |                                                |   |      |        |       |      |       |         |
|-----------|------------------------------------------------|---|------|--------|-------|------|-------|---------|
| 10112-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)     | X | 2.30 | 67.45  | 14.81 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.93 | 69.12  | 16.76 |      | 150.0 |         |
|           |                                                | Z | 2.66 | 66.72  | 15.26 |      | 150.0 |         |
| 10113-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)      | X | 1.64 | 65.77  | 12.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.95 | 72.32  | 17.65 |      | 150.0 |         |
|           |                                                | Z | 2.37 | 67.73  | 15.17 |      | 150.0 |         |
| 10114-CAC | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)  | X | 4.34 | 66.99  | 16.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.86 | 67.57  | 16.78 |      | 150.0 |         |
|           |                                                | Z | 4.82 | 66.90  | 16.32 |      | 150.0 |         |
| 10115-CAC | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)  | X | 4.58 | 67.29  | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.08 | 67.61  | 16.77 |      | 150.0 |         |
|           |                                                | Z | 5.06 | 66.98  | 16.35 |      | 150.0 |         |
| 10116-CAC | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | X | 4.40 | 67.26  | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.93 | 67.75  | 16.79 |      | 150.0 |         |
|           |                                                | Z | 4.89 | 67.04  | 16.31 |      | 150.0 |         |
| 10117-CAC | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)       | X | 4.33 | 66.90  | 16.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.84 | 67.46  | 16.74 |      | 150.0 |         |
|           |                                                | Z | 4.79 | 66.75  | 16.26 |      | 150.0 |         |
| 10118-CAC | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)       | X | 4.58 | 67.24  | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.15 | 67.78  | 16.86 |      | 150.0 |         |
|           |                                                | Z | 5.14 | 67.21  | 16.48 |      | 150.0 |         |
| 10119-CAC | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)      | X | 4.39 | 67.16  | 16.27 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 4.94 | 67.78  | 16.81 |      | 150.0 |         |
|           |                                                | Z | 4.90 | 67.08  | 16.34 |      | 150.0 |         |
| 10140-CAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)     | X | 2.65 | 67.18  | 15.35 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.23 | 68.57  | 16.65 |      | 150.0 |         |
|           |                                                | Z | 3.03 | 66.74  | 15.44 |      | 150.0 |         |
| 10141-CAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)     | X | 2.80 | 67.68  | 15.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.37 | 68.79  | 16.86 |      | 150.0 |         |
|           |                                                | Z | 3.16 | 66.97  | 15.67 |      | 150.0 |         |
| 10142-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)        | X | 0.71 | 61.44  | 8.06  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.27 | 74.06  | 17.56 |      | 150.0 |         |
|           |                                                | Z | 1.48 | 66.51  | 13.59 |      | 150.0 |         |
| 10143-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)      | X | 0.73 | 60.00  | 6.15  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.80 | 73.44  | 16.54 |      | 150.0 |         |
|           |                                                | Z | 1.85 | 66.55  | 13.15 |      | 150.0 |         |
| 10144-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)      | X | 0.73 | 60.00  | 5.65  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.85 | 66.75  | 12.85 |      | 150.0 |         |
|           |                                                | Z | 1.61 | 64.01  | 11.28 |      | 150.0 |         |
| 10145-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)      | X | 5.16 | 385.51 | 36.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 0.54 | 60.00  | 5.91  |      | 150.0 |         |
|           |                                                | Z | 0.58 | 60.00  | 5.88  |      | 150.0 |         |
| 10146-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)    | X | 0.00 | 60.00  | 0.00  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 0.74 | 60.00  | 4.95  |      | 150.0 |         |
|           |                                                | Z | 0.80 | 60.00  | 5.53  |      | 150.0 |         |
| 10147-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)    | X | 0.00 | 60.00  | 0.00  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 0.60 | 58.26  | 3.86  |      | 150.0 |         |
|           |                                                | Z | 0.82 | 60.00  | 5.58  |      | 150.0 |         |

|           |                                            |   |      |       |       |      |       |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10149-CAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 2.21 | 67.36 | 14.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.81 | 69.16 | 16.77 |      | 150.0 |         |
|           |                                            | Z | 2.55 | 66.65 | 15.19 |      | 150.0 |         |
| 10150-CAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 2.32 | 67.56 | 14.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.94 | 69.22 | 16.82 |      | 150.0 |         |
|           |                                            | Z | 2.67 | 66.78 | 15.30 |      | 150.0 |         |
| 10151-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)    | X | 3.66 | 73.29 | 18.78 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 4.98 | 76.80 | 21.12 |      | 65.0  |         |
|           |                                            | Z | 4.55 | 74.40 | 20.06 |      | 65.0  |         |
| 10152-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 3.31 | 68.29 | 16.15 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 4.23 | 70.96 | 18.67 |      | 65.0  |         |
|           |                                            | Z | 4.14 | 69.89 | 18.22 |      | 65.0  |         |
| 10153-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 3.64 | 69.78 | 17.29 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 4.61 | 72.30 | 19.68 |      | 65.0  |         |
|           |                                            | Z | 4.49 | 71.11 | 19.19 |      | 65.0  |         |
| 10154-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 1.38 | 67.29 | 13.63 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.40 | 73.30 | 18.35 |      | 150.0 |         |
|           |                                            | Z | 1.82 | 67.63 | 15.14 |      | 150.0 |         |
| 10155-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 1.60 | 66.02 | 12.20 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.83 | 72.40 | 17.66 |      | 150.0 |         |
|           |                                            | Z | 2.23 | 67.54 | 15.03 |      | 150.0 |         |
| 10156-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 0.51 | 60.00 | 5.91  | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.15 | 74.23 | 16.90 |      | 150.0 |         |
|           |                                            | Z | 1.25 | 65.50 | 12.43 |      | 150.0 |         |
| 10157-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 0.57 | 60.00 | 4.69  | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.61 | 66.51 | 12.13 |      | 150.0 |         |
|           |                                            | Z | 1.35 | 63.41 | 10.38 |      | 150.0 |         |
| 10158-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 1.65 | 65.90 | 12.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.98 | 72.51 | 17.74 |      | 150.0 |         |
|           |                                            | Z | 2.38 | 67.83 | 15.24 |      | 150.0 |         |
| 10159-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 0.59 | 60.00 | 4.69  | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.68 | 66.77 | 12.27 |      | 150.0 |         |
|           |                                            | Z | 1.39 | 63.54 | 10.48 |      | 150.0 |         |
| 10160-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)    | X | 1.93 | 68.16 | 15.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.76 | 71.39 | 17.74 |      | 150.0 |         |
|           |                                            | Z | 2.38 | 67.93 | 15.64 |      | 150.0 |         |
| 10161-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 2.12 | 67.05 | 14.02 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.84 | 69.35 | 16.71 |      | 150.0 |         |
|           |                                            | Z | 2.55 | 66.69 | 15.09 |      | 150.0 |         |
| 10162-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 2.21 | 67.37 | 14.17 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.96 | 69.65 | 16.87 |      | 150.0 |         |
|           |                                            | Z | 2.66 | 66.96 | 15.26 |      | 150.0 |         |
| 10166-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 2.13 | 65.17 | 17.70 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.00 | 69.75 | 19.60 |      | 150.0 |         |
|           |                                            | Z | 2.90 | 67.96 | 18.43 |      | 150.0 |         |
| 10167-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 1.98 | 65.92 | 17.43 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.74 | 74.17 | 20.63 |      | 150.0 |         |
|           |                                            | Z | 3.28 | 70.17 | 18.57 |      | 150.0 |         |

|           |                                            |   |      |       |       |      |       |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10168-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 2.18 | 68.43 | 19.32 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.55 | 78.58 | 22.96 |      | 150.0 |         |
|           |                                            | Z | 3.73 | 73.08 | 20.34 |      | 150.0 |         |
| 10169-CAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 1.87 | 64.00 | 17.04 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.53 | 68.75 | 19.16 |      | 150.0 |         |
|           |                                            | Z | 2.36 | 66.10 | 17.52 |      | 150.0 |         |
| 10170-CAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 1.85 | 66.74 | 18.73 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.84 | 78.32 | 23.19 |      | 150.0 |         |
|           |                                            | Z | 2.87 | 70.66 | 19.54 |      | 150.0 |         |
| 10171-AAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 1.59 | 63.66 | 15.82 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.83 | 71.75 | 19.17 |      | 150.0 |         |
|           |                                            | Z | 2.39 | 66.90 | 16.66 |      | 150.0 |         |
| 10172-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 1.63 | 66.94 | 19.47 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 2.64 | 75.18 | 23.09 |      | 65.0  |         |
|           |                                            | Z | 2.68 | 72.94 | 21.86 |      | 65.0  |         |
| 10173-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 1.75 | 70.70 | 19.61 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 6.55 | 90.87 | 26.66 |      | 65.0  |         |
|           |                                            | Z | 4.15 | 79.90 | 22.82 |      | 65.0  |         |
| 10174-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 1.33 | 66.12 | 16.85 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 3.87 | 81.08 | 22.62 |      | 65.0  |         |
|           |                                            | Z | 2.77 | 72.65 | 19.43 |      | 65.0  |         |
| 10175-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)      | X | 1.85 | 63.78 | 16.81 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.49 | 68.40 | 18.88 |      | 150.0 |         |
|           |                                            | Z | 2.33 | 65.83 | 17.28 |      | 150.0 |         |
| 10176-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)    | X | 1.86 | 66.75 | 18.74 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.85 | 78.36 | 23.20 |      | 150.0 |         |
|           |                                            | Z | 2.87 | 70.68 | 19.55 |      | 150.0 |         |
| 10177-CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)       | X | 1.86 | 63.82 | 16.84 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.51 | 68.53 | 18.95 |      | 150.0 |         |
|           |                                            | Z | 2.34 | 65.93 | 17.35 |      | 150.0 |         |
| 10178-CAE | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)     | X | 1.85 | 66.70 | 18.70 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.81 | 78.15 | 23.10 |      | 150.0 |         |
|           |                                            | Z | 2.85 | 70.55 | 19.47 |      | 150.0 |         |
| 10179-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)    | X | 1.70 | 65.12 | 17.16 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.27 | 74.82 | 21.01 |      | 150.0 |         |
|           |                                            | Z | 2.59 | 68.61 | 17.93 |      | 150.0 |         |
| 10180-CAE | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)     | X | 1.59 | 63.66 | 15.82 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.82 | 71.71 | 19.14 |      | 150.0 |         |
|           |                                            | Z | 2.39 | 66.88 | 16.63 |      | 150.0 |         |
| 10181-CAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 1.86 | 63.82 | 16.84 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.50 | 68.51 | 18.95 |      | 150.0 |         |
|           |                                            | Z | 2.34 | 65.92 | 17.34 |      | 150.0 |         |
| 10182-CAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)    | X | 1.85 | 66.68 | 18.69 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.80 | 78.11 | 23.08 |      | 150.0 |         |
|           |                                            | Z | 2.85 | 70.52 | 19.45 |      | 150.0 |         |
| 10183-AAC | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 1.59 | 63.65 | 15.80 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.82 | 71.68 | 19.12 |      | 150.0 |         |
|           |                                            | Z | 2.38 | 66.86 | 16.62 |      | 150.0 |         |

|           |                                               |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10184-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)          | X | 1.86 | 63.84 | 16.85 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.51 | 68.55 | 18.97 |      | 150.0 |         |
|           |                                               | Z | 2.35 | 65.96 | 17.36 |      | 150.0 |         |
| 10185-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)        | X | 1.86 | 66.74 | 18.73 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.83 | 78.22 | 23.13 |      | 150.0 |         |
|           |                                               | Z | 2.86 | 70.59 | 19.49 |      | 150.0 |         |
| 10186-AAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)        | X | 1.59 | 63.69 | 15.83 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.83 | 71.76 | 19.16 |      | 150.0 |         |
|           |                                               | Z | 2.39 | 66.91 | 16.65 |      | 150.0 |         |
| 10187-CAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)        | X | 1.87 | 63.97 | 16.99 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.53 | 68.67 | 19.08 |      | 150.0 |         |
|           |                                               | Z | 2.36 | 66.04 | 17.45 |      | 150.0 |         |
| 10188-CAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)      | X | 1.89 | 67.14 | 19.05 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.00 | 79.20 | 23.64 |      | 150.0 |         |
|           |                                               | Z | 2.94 | 71.15 | 19.86 |      | 150.0 |         |
| 10189-AAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)      | X | 1.61 | 63.93 | 16.07 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.91 | 72.32 | 19.52 |      | 150.0 |         |
|           |                                               | Z | 2.43 | 67.24 | 16.90 |      | 150.0 |         |
| 10193-CAC | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)  | X | 3.74 | 67.40 | 15.79 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.29 | 67.57 | 16.55 |      | 150.0 |         |
|           |                                               | Z | 4.20 | 66.51 | 15.90 |      | 150.0 |         |
| 10194-CAC | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | X | 3.82 | 67.41 | 15.90 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.40 | 67.71 | 16.67 |      | 150.0 |         |
|           |                                               | Z | 4.32 | 66.72 | 16.05 |      | 150.0 |         |
| 10195-CAC | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | X | 3.83 | 67.37 | 15.89 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.42 | 67.68 | 16.66 |      | 150.0 |         |
|           |                                               | Z | 4.35 | 66.72 | 16.06 |      | 150.0 |         |
| 10196-CAC | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)       | X | 3.72 | 67.37 | 15.75 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.26 | 67.52 | 16.51 |      | 150.0 |         |
|           |                                               | Z | 4.17 | 66.48 | 15.88 |      | 150.0 |         |
| 10197-CAC | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)      | X | 3.82 | 67.41 | 15.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.41 | 67.70 | 16.67 |      | 150.0 |         |
|           |                                               | Z | 4.33 | 66.72 | 16.05 |      | 150.0 |         |
| 10198-CAC | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)      | X | 3.82 | 67.36 | 15.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.41 | 67.66 | 16.65 |      | 150.0 |         |
|           |                                               | Z | 4.34 | 66.71 | 16.05 |      | 150.0 |         |
| 10219-CAC | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)       | X | 3.68 | 67.48 | 15.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.22 | 67.61 | 16.52 |      | 150.0 |         |
|           |                                               | Z | 4.13 | 66.53 | 15.85 |      | 150.0 |         |
| 10220-CAC | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)    | X | 3.82 | 67.41 | 15.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.40 | 67.66 | 16.65 |      | 150.0 |         |
|           |                                               | Z | 4.32 | 66.68 | 16.04 |      | 150.0 |         |
| 10221-CAC | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)    | X | 3.85 | 67.40 | 15.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.43 | 67.62 | 16.64 |      | 150.0 |         |
|           |                                               | Z | 4.36 | 66.67 | 16.05 |      | 150.0 |         |
| 10222-CAC | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)        | X | 4.34 | 66.97 | 16.27 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.82 | 67.47 | 16.73 |      | 150.0 |         |
|           |                                               | Z | 4.77 | 66.77 | 16.26 |      | 150.0 |         |

|           |                                           |   |      |       |       |      |       |         |
|-----------|-------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10223-CAC | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)  | X | 4.49 | 67.10 | 16.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.02 | 67.50 | 16.74 |      | 150.0 |         |
|           |                                           | Z | 5.01 | 66.90 | 16.33 |      | 150.0 |         |
| 10224-CAC | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | X | 4.35 | 67.14 | 16.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 4.86 | 67.63 | 16.73 |      | 150.0 |         |
|           |                                           | Z | 4.81 | 66.90 | 16.25 |      | 150.0 |         |
| 10225-CAB | UMTS-FDD (HSPA+)                          | X | 1.60 | 62.87 | 10.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 2.64 | 67.73 | 15.37 |      | 150.0 |         |
|           |                                           | Z | 2.42 | 65.46 | 14.06 |      | 150.0 |         |
| 10226-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)  | X | 1.83 | 71.58 | 20.13 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 7.36 | 93.10 | 27.50 |      | 65.0  |         |
|           |                                           | Z | 4.39 | 80.98 | 23.33 |      | 65.0  |         |
| 10227-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)  | X | 1.73 | 70.59 | 18.93 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 7.00 | 90.72 | 25.86 |      | 65.0  |         |
|           |                                           | Z | 4.34 | 79.99 | 22.28 |      | 65.0  |         |
| 10228-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)    | X | 1.83 | 69.36 | 20.71 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 3.28 | 79.62 | 24.97 |      | 65.0  |         |
|           |                                           | Z | 3.15 | 76.53 | 23.48 |      | 65.0  |         |
| 10229-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)    | X | 1.76 | 70.79 | 19.64 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.63 | 91.03 | 26.72 |      | 65.0  |         |
|           |                                           | Z | 4.18 | 80.00 | 22.86 |      | 65.0  |         |
| 10230-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)    | X | 1.65 | 69.73 | 18.45 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.22 | 88.63 | 25.09 |      | 65.0  |         |
|           |                                           | Z | 4.10 | 78.96 | 21.82 |      | 65.0  |         |
| 10231-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)      | X | 1.79 | 68.81 | 20.33 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 3.15 | 78.74 | 24.52 |      | 65.0  |         |
|           |                                           | Z | 3.06 | 75.85 | 23.10 |      | 65.0  |         |
| 10232-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)    | X | 1.76 | 70.77 | 19.64 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.61 | 91.00 | 26.71 |      | 65.0  |         |
|           |                                           | Z | 4.18 | 79.98 | 22.86 |      | 65.0  |         |
| 10233-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)    | X | 1.65 | 69.70 | 18.44 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.19 | 88.57 | 25.08 |      | 65.0  |         |
|           |                                           | Z | 4.09 | 78.93 | 21.81 |      | 65.0  |         |
| 10234-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)      | X | 1.76 | 68.43 | 20.02 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 3.07 | 78.12 | 24.14 |      | 65.0  |         |
|           |                                           | Z | 2.98 | 75.33 | 22.76 |      | 65.0  |         |
| 10235-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)   | X | 1.76 | 70.76 | 19.64 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.61 | 91.04 | 26.73 |      | 65.0  |         |
|           |                                           | Z | 4.18 | 80.00 | 22.87 |      | 65.0  |         |
| 10236-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)   | X | 1.66 | 69.79 | 18.48 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.30 | 88.80 | 25.14 |      | 65.0  |         |
|           |                                           | Z | 4.13 | 79.05 | 21.85 |      | 65.0  |         |
| 10237-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)     | X | 1.78 | 68.76 | 20.32 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 3.15 | 78.74 | 24.53 |      | 65.0  |         |
|           |                                           | Z | 3.05 | 75.85 | 23.11 |      | 65.0  |         |
| 10238-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)   | X | 1.76 | 70.75 | 19.64 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 6.59 | 90.97 | 26.70 |      | 65.0  |         |
|           |                                           | Z | 4.17 | 79.95 | 22.85 |      | 65.0  |         |

|           |                                            |   |      |       |       |      |      |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|------|---------|
| 10239-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 1.65 | 69.67 | 18.43 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.16 | 88.50 | 25.06 |      | 65.0 |         |
|           |                                            | Z | 4.07 | 78.89 | 21.79 |      | 65.0 |         |
| 10240-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 1.78 | 68.77 | 20.32 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.14 | 78.73 | 24.52 |      | 65.0 |         |
|           |                                            | Z | 3.05 | 75.83 | 23.10 |      | 65.0 |         |
| 10241-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 3.09 | 71.04 | 21.81 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.84 | 80.29 | 25.20 |      | 65.0 |         |
|           |                                            | Z | 5.54 | 77.13 | 23.79 |      | 65.0 |         |
| 10242-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 2.70 | 68.41 | 20.47 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.94 | 76.94 | 23.76 |      | 65.0 |         |
|           |                                            | Z | 4.89 | 74.64 | 22.64 |      | 65.0 |         |
| 10243-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 2.78 | 67.24 | 20.54 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.14 | 72.94 | 22.88 |      | 65.0 |         |
|           |                                            | Z | 4.22 | 71.72 | 22.18 |      | 65.0 |         |
| 10244-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)   | X | 0.80 | 57.73 | 3.36  | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 2.15 | 64.01 | 10.18 |      | 65.0 |         |
|           |                                            | Z | 2.44 | 64.99 | 11.42 |      | 65.0 |         |
| 10245-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)   | X | 0.82 | 57.61 | 3.20  | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 2.13 | 63.69 | 9.96  |      | 65.0 |         |
|           |                                            | Z | 2.42 | 64.65 | 11.19 |      | 65.0 |         |
| 10246-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)     | X | 0.87 | 60.00 | 5.50  | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 2.12 | 67.09 | 12.65 |      | 65.0 |         |
|           |                                            | Z | 2.17 | 66.84 | 12.89 |      | 65.0 |         |
| 10247-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 1.26 | 60.00 | 6.38  | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 2.78 | 67.32 | 13.60 |      | 65.0 |         |
|           |                                            | Z | 2.82 | 66.99 | 13.82 |      | 65.0 |         |
| 10248-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 1.30 | 60.00 | 6.40  | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 2.73 | 66.64 | 13.26 |      | 65.0 |         |
|           |                                            | Z | 2.81 | 66.52 | 13.58 |      | 65.0 |         |
| 10249-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 1.24 | 61.72 | 8.36  | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.85 | 75.74 | 18.20 |      | 65.0 |         |
|           |                                            | Z | 3.35 | 73.06 | 17.32 |      | 65.0 |         |
| 10250-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 2.74 | 67.58 | 14.25 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.25 | 73.58 | 19.37 |      | 65.0 |         |
|           |                                            | Z | 4.02 | 71.93 | 18.78 |      | 65.0 |         |
| 10251-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 2.46 | 65.14 | 12.48 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 3.86 | 70.68 | 17.56 |      | 65.0 |         |
|           |                                            | Z | 3.78 | 69.64 | 17.25 |      | 65.0 |         |
| 10252-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 2.82 | 71.28 | 16.40 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.98 | 79.52 | 21.77 |      | 65.0 |         |
|           |                                            | Z | 4.29 | 76.11 | 20.42 |      | 65.0 |         |
| 10253-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 3.12 | 67.32 | 15.07 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.18 | 70.66 | 18.33 |      | 65.0 |         |
|           |                                            | Z | 4.10 | 69.61 | 17.93 |      | 65.0 |         |
| 10254-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 3.39 | 68.52 | 15.96 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.50 | 71.75 | 19.15 |      | 65.0 |         |
|           |                                            | Z | 4.39 | 70.63 | 18.74 |      | 65.0 |         |

|           |                                             |   |      |       |       |      |      |         |
|-----------|---------------------------------------------|---|------|-------|-------|------|------|---------|
| 10255-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)     | X | 3.40 | 72.07 | 17.90 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.72 | 76.03 | 20.86 |      | 65.0 |         |
|           |                                             | Z | 4.36 | 73.79 | 19.90 |      | 65.0 |         |
| 10256-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | X | 0.74 | 56.57 | 1.48  | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 1.50 | 60.83 | 7.03  |      | 65.0 |         |
|           |                                             | Z | 1.77 | 61.73 | 8.31  |      | 65.0 |         |
| 10257-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | X | 0.63 | 56.72 | 1.58  | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 1.50 | 60.62 | 6.80  |      | 65.0 |         |
|           |                                             | Z | 1.77 | 61.47 | 8.06  |      | 65.0 |         |
| 10258-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)   | X | 0.75 | 60.00 | 4.13  | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 1.38 | 61.96 | 8.52  |      | 65.0 |         |
|           |                                             | Z | 1.52 | 62.42 | 9.24  |      | 65.0 |         |
| 10259-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)   | X | 1.62 | 61.68 | 8.48  | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 3.35 | 69.89 | 15.82 |      | 65.0 |         |
|           |                                             | Z | 3.28 | 68.97 | 15.69 |      | 65.0 |         |
| 10260-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)   | X | 1.65 | 61.61 | 8.42  | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 3.36 | 69.55 | 15.64 |      | 65.0 |         |
|           |                                             | Z | 3.31 | 68.75 | 15.57 |      | 65.0 |         |
| 10261-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)     | X | 1.63 | 64.06 | 10.69 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.19 | 76.83 | 19.42 |      | 65.0 |         |
|           |                                             | Z | 3.63 | 73.87 | 18.36 |      | 65.0 |         |
| 10262-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)   | X | 2.73 | 67.47 | 14.17 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.22 | 73.47 | 19.30 |      | 65.0 |         |
|           |                                             | Z | 4.00 | 71.83 | 18.72 |      | 65.0 |         |
| 10263-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)   | X | 2.46 | 65.13 | 12.47 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 3.85 | 70.66 | 17.56 |      | 65.0 |         |
|           |                                             | Z | 3.77 | 69.62 | 17.25 |      | 65.0 |         |
| 10264-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)     | X | 2.78 | 71.03 | 16.25 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.91 | 79.23 | 21.63 |      | 65.0 |         |
|           |                                             | Z | 4.25 | 75.88 | 20.29 |      | 65.0 |         |
| 10265-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)  | X | 3.31 | 68.31 | 16.16 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.23 | 70.96 | 18.67 |      | 65.0 |         |
|           |                                             | Z | 4.14 | 69.89 | 18.23 |      | 65.0 |         |
| 10266-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)  | X | 3.64 | 69.75 | 17.27 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.61 | 72.28 | 19.66 |      | 65.0 |         |
|           |                                             | Z | 4.48 | 71.09 | 19.18 |      | 65.0 |         |
| 10267-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)    | X | 3.65 | 73.23 | 18.74 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.96 | 76.74 | 21.09 |      | 65.0 |         |
|           |                                             | Z | 4.55 | 74.35 | 20.04 |      | 65.0 |         |
| 10268-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)  | X | 4.08 | 69.60 | 17.97 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.89 | 71.20 | 19.41 |      | 65.0 |         |
|           |                                             | Z | 4.81 | 70.25 | 18.99 |      | 65.0 |         |
| 10269-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)  | X | 4.15 | 69.51 | 17.90 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.93 | 70.92 | 19.29 |      | 65.0 |         |
|           |                                             | Z | 4.85 | 69.98 | 18.89 |      | 65.0 |         |
| 10270-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)    | X | 4.11 | 72.44 | 19.03 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.01 | 74.05 | 20.18 |      | 65.0 |         |
|           |                                             | Z | 4.76 | 72.38 | 19.41 |      | 65.0 |         |

|           |                                                                    |   |        |        |       |      |       |         |
|-----------|--------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10274-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)                          | X | 1.45   | 63.39  | 10.22 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.58   | 68.99  | 15.79 |      | 150.0 |         |
|           |                                                                    | Z | 2.26   | 65.99  | 14.08 |      | 150.0 |         |
| 10275-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)                           | X | 1.00   | 66.09  | 12.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.98   | 74.04  | 18.23 |      | 150.0 |         |
|           |                                                                    | Z | 1.30   | 66.38  | 13.95 |      | 150.0 |         |
| 10277-CAA | PHS (QPSK)                                                         | X | 4.43   | 65.00  | 5.66  | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 1.25   | 57.54  | 2.57  |      | 50.0  |         |
|           |                                                                    | Z | 1.34   | 58.35  | 3.69  |      | 50.0  |         |
| 10278-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5)                                 | X | 1.39   | 58.79  | 4.19  | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 2.00   | 62.01  | 7.70  |      | 50.0  |         |
|           |                                                                    | Z | 2.27   | 62.99  | 8.81  |      | 50.0  |         |
| 10279-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38)                                | X | 1.42   | 58.87  | 4.28  | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 2.04   | 62.14  | 7.84  |      | 50.0  |         |
|           |                                                                    | Z | 2.32   | 63.16  | 8.96  |      | 50.0  |         |
| 10290-AAB | CDMA2000, RC1, SO55, Full Rate                                     | X | 24.89  | 264.54 | 21.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.75   | 64.32  | 9.28  |      | 150.0 |         |
|           |                                                                    | Z | 0.55   | 60.53  | 6.84  |      | 150.0 |         |
| 10291-AAB | CDMA2000, RC3, SO55, Full Rate                                     | X | 8.17   | 257.05 | 37.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.54   | 64.12  | 8.98  |      | 150.0 |         |
|           |                                                                    | Z | 0.37   | 60.00  | 6.07  |      | 150.0 |         |
| 10292-AAB | CDMA2000, RC3, SO32, Full Rate                                     | X | 2.31   | 326.58 | 8.83  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 100.00 | 114.29 | 23.68 |      | 150.0 |         |
|           |                                                                    | Z | 0.37   | 60.29  | 6.50  |      | 150.0 |         |
| 10293-AAB | CDMA2000, RC3, SO3, Full Rate                                      | X | 2.41   | 304.08 | 37.98 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 100.00 | 121.87 | 26.96 |      | 150.0 |         |
|           |                                                                    | Z | 0.47   | 62.33  | 8.10  |      | 150.0 |         |
| 10295-AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr.                              | X | 11.16  | 76.14  | 13.68 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 24.30  | 94.04  | 23.00 |      | 50.0  |         |
|           |                                                                    | Z | 21.29  | 93.19  | 23.41 |      | 50.0  |         |
| 10297-AAC | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)                            | X | 2.00   | 69.33  | 16.06 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.80   | 72.57  | 18.31 |      | 150.0 |         |
|           |                                                                    | Z | 2.31   | 68.33  | 15.80 |      | 150.0 |         |
| 10298-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)                             | X | 8.49   | 243.95 | 30.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.98   | 64.80  | 10.42 |      | 150.0 |         |
|           |                                                                    | Z | 0.78   | 61.52  | 8.38  |      | 150.0 |         |
| 10299-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)                           | X | 12.17  | 331.10 | 45.12 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.99   | 61.11  | 7.01  |      | 150.0 |         |
|           |                                                                    | Z | 1.06   | 61.03  | 7.46  |      | 150.0 |         |
| 10300-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)                           | X | 10.15  | 348.38 | 28.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.82   | 59.43  | 5.36  |      | 150.0 |         |
|           |                                                                    | Z | 0.95   | 60.00  | 6.23  |      | 150.0 |         |
| 10301-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)                 | X | 3.30   | 64.31  | 15.03 | 4.17 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.07   | 65.29  | 17.00 |      | 50.0  |         |
|           |                                                                    | Z | 4.16   | 64.88  | 16.72 |      | 50.0  |         |
| 10302-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols) | X | 3.81   | 65.12  | 15.99 | 4.96 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.52   | 65.76  | 17.66 |      | 50.0  |         |
|           |                                                                    | Z | 4.66   | 65.71  | 17.60 |      | 50.0  |         |

|           |                                                                     |   |      |       |       |       |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|-------|-------|---------|
| 10303-AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)                 | X | 3.64 | 65.07 | 15.71 | 4.96  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.29 | 65.44 | 17.44 |       | 50.0  |         |
|           |                                                                     | Z | 4.42 | 65.39 | 17.39 |       | 50.0  |         |
| 10304-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)                 | X | 3.46 | 64.98 | 15.29 | 4.17  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.15 | 65.58 | 17.11 |       | 50.0  |         |
|           |                                                                     | Z | 4.21 | 64.95 | 16.68 |       | 50.0  |         |
| 10305-AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)    | X | 2.52 | 62.00 | 12.12 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 3.52 | 65.78 | 17.45 |       | 35.0  |         |
|           |                                                                     | Z | 3.76 | 66.23 | 17.67 |       | 35.0  |         |
| 10306-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)    | X | 3.12 | 63.64 | 14.29 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 3.94 | 65.53 | 17.75 |       | 35.0  |         |
|           |                                                                     | Z | 4.14 | 65.73 | 17.85 |       | 35.0  |         |
| 10307-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)     | X | 3.01 | 63.42 | 14.02 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 3.81 | 65.44 | 17.59 |       | 35.0  |         |
|           |                                                                     | Z | 4.01 | 65.68 | 17.70 |       | 35.0  |         |
| 10308-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)                | X | 3.02 | 63.75 | 14.28 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 3.78 | 65.60 | 17.74 |       | 35.0  |         |
|           |                                                                     | Z | 3.98 | 65.86 | 17.83 |       | 35.0  |         |
| 10309-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols) | X | 3.17 | 63.94 | 14.58 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 3.94 | 65.55 | 17.83 |       | 35.0  |         |
|           |                                                                     | Z | 4.14 | 65.77 | 17.93 |       | 35.0  |         |
| 10310-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)  | X | 3.11 | 63.82 | 14.42 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 3.89 | 65.58 | 17.76 |       | 35.0  |         |
|           |                                                                     | Z | 4.09 | 65.78 | 17.84 |       | 35.0  |         |
| 10311-AAC | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)                            | X | 2.31 | 68.15 | 15.92 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 3.15 | 71.23 | 17.71 |       | 150.0 |         |
|           |                                                                     | Z | 2.66 | 67.57 | 15.55 |       | 150.0 |         |
| 10313-AAA | iDEN 1:3                                                            | X | 1.67 | 67.67 | 13.40 | 6.99  | 70.0  | ± 9.6 % |
|           |                                                                     | Y | 2.25 | 71.10 | 15.22 |       | 70.0  |         |
|           |                                                                     | Z | 1.73 | 67.06 | 13.24 |       | 70.0  |         |
| 10314-AAA | iDEN 1:6                                                            | X | 6.12 | 86.17 | 23.14 | 10.00 | 30.0  | ± 9.6 % |
|           |                                                                     | Y | 7.14 | 89.19 | 24.60 |       | 30.0  |         |
|           |                                                                     | Z | 3.49 | 76.84 | 20.05 |       | 30.0  |         |
| 10315-AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)           | X | 0.91 | 63.92 | 14.34 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.09 | 65.84 | 16.70 |       | 150.0 |         |
|           |                                                                     | Z | 0.93 | 62.70 | 14.16 |       | 150.0 |         |
| 10316-AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)       | X | 3.71 | 66.95 | 15.64 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.26 | 67.26 | 16.51 |       | 150.0 |         |
|           |                                                                     | Z | 4.21 | 66.40 | 15.98 |       | 150.0 |         |
| 10317-AAC | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)             | X | 3.71 | 66.95 | 15.64 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.26 | 67.26 | 16.51 |       | 150.0 |         |
|           |                                                                     | Z | 4.21 | 66.40 | 15.98 |       | 150.0 |         |
| 10400-AAD | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)                 | X | 3.67 | 66.95 | 15.61 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.32 | 67.59 | 16.58 |       | 150.0 |         |
|           |                                                                     | Z | 4.27 | 66.67 | 15.99 |       | 150.0 |         |
| 10401-AAD | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)                 | X | 4.49 | 66.84 | 16.09 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 5.01 | 67.23 | 16.55 |       | 150.0 |         |
|           |                                                                     | Z | 4.95 | 66.47 | 16.07 |       | 150.0 |         |

|           |                                                                                 |   |        |        |       |      |       |         |
|-----------|---------------------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10402-AAD | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)                             | X | 4.90   | 67.23  | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.37   | 67.75  | 16.72 |      | 150.0 |         |
|           |                                                                                 | Z | 5.33   | 67.10  | 16.30 |      | 150.0 |         |
| 10403-AAB | CDMA2000 (1xEV-DO, Rev. 0)                                                      | X | 24.89  | 264.54 | 21.43 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                 | Y | 0.75   | 64.32  | 9.28  |      | 115.0 |         |
|           |                                                                                 | Z | 0.55   | 60.53  | 6.84  |      | 115.0 |         |
| 10404-AAB | CDMA2000 (1xEV-DO, Rev. A)                                                      | X | 24.89  | 264.54 | 21.43 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                 | Y | 0.75   | 64.32  | 9.28  |      | 115.0 |         |
|           |                                                                                 | Z | 0.55   | 60.53  | 6.84  |      | 115.0 |         |
| 10406-AAB | CDMA2000, RC3, SO32, SCH0, Full Rate                                            | X | 0.25   | 60.00  | 3.04  | 0.00 | 100.0 | ± 9.6 % |
|           |                                                                                 | Y | 100.00 | 107.14 | 22.27 |      | 100.0 |         |
|           |                                                                                 | Z | 35.03  | 104.04 | 23.84 |      | 100.0 |         |
| 10410-AAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4) | X | 1.11   | 74.02  | 16.29 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                                 | Y | 100.00 | 123.32 | 29.06 |      | 80.0  |         |
|           |                                                                                 | Z | 3.02   | 80.23  | 18.57 |      | 80.0  |         |
| 10415-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)                       | X | 0.88   | 63.60  | 14.08 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 1.05   | 65.44  | 16.40 |      | 150.0 |         |
|           |                                                                                 | Z | 0.90   | 62.27  | 13.77 |      | 150.0 |         |
| 10416-AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)                   | X | 3.72   | 67.22  | 15.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.26   | 67.46  | 16.59 |      | 150.0 |         |
|           |                                                                                 | Z | 4.18   | 66.47  | 15.97 |      | 150.0 |         |
| 10417-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)                       | X | 3.72   | 67.22  | 15.78 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.26   | 67.46  | 16.59 |      | 150.0 |         |
|           |                                                                                 | Z | 4.18   | 66.47  | 15.97 |      | 150.0 |         |
| 10418-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)   | X | 3.67   | 67.37  | 15.86 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.26   | 67.73  | 16.69 |      | 150.0 |         |
|           |                                                                                 | Z | 4.18   | 66.68  | 16.03 |      | 150.0 |         |
| 10419-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble)  | X | 3.70   | 67.32  | 15.83 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.28   | 67.63  | 16.66 |      | 150.0 |         |
|           |                                                                                 | Z | 4.19   | 66.61  | 16.02 |      | 150.0 |         |
| 10422-AAB | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)                                    | X | 3.79   | 67.23  | 15.85 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.37   | 67.55  | 16.64 |      | 150.0 |         |
|           |                                                                                 | Z | 4.30   | 66.59  | 16.04 |      | 150.0 |         |
| 10423-AAB | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)                                 | X | 3.85   | 67.43  | 15.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.48   | 67.79  | 16.72 |      | 150.0 |         |
|           |                                                                                 | Z | 4.41   | 66.83  | 16.12 |      | 150.0 |         |
| 10424-AAB | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)                                 | X | 3.80   | 67.32  | 15.87 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.41   | 67.73  | 16.70 |      | 150.0 |         |
|           |                                                                                 | Z | 4.34   | 66.77  | 16.09 |      | 150.0 |         |
| 10425-AAB | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)                                     | X | 4.52   | 67.29  | 16.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.01   | 67.60  | 16.77 |      | 150.0 |         |
|           |                                                                                 | Z | 5.00   | 66.98  | 16.36 |      | 150.0 |         |
| 10426-AAB | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)                                   | X | 4.54   | 67.39  | 16.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.06   | 67.79  | 16.86 |      | 150.0 |         |
|           |                                                                                 | Z | 5.04   | 67.17  | 16.45 |      | 150.0 |         |

|           |                                                                |   |        |        |       |      |       |         |
|-----------|----------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10427-AAB | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)                 | X | 4.54   | 67.34  | 16.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.02   | 67.56  | 16.74 |      | 150.0 |         |
|           |                                                                | Z | 4.99   | 66.89  | 16.30 |      | 150.0 |         |
| 10430-AAB | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)                               | X | 2.54   | 67.86  | 12.99 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.20   | 77.46  | 20.26 |      | 150.0 |         |
|           |                                                                | Z | 4.04   | 72.15  | 17.87 |      | 150.0 |         |
| 10431-AAB | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)                              | X | 3.04   | 66.93  | 14.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.88   | 68.36  | 16.49 |      | 150.0 |         |
|           |                                                                | Z | 3.75   | 66.95  | 15.66 |      | 150.0 |         |
| 10432-AAB | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)                              | X | 3.52   | 67.40  | 15.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.19   | 67.98  | 16.66 |      | 150.0 |         |
|           |                                                                | Z | 4.09   | 66.85  | 15.96 |      | 150.0 |         |
| 10433-AAB | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)                              | X | 3.82   | 67.39  | 15.92 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.43   | 67.78  | 16.72 |      | 150.0 |         |
|           |                                                                | Z | 4.36   | 66.81  | 16.12 |      | 150.0 |         |
| 10434-AAA | W-CDMA (BS Test Model 1, 64 DPCH)                              | X | 1.61   | 62.74  | 9.15  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.68   | 78.98  | 20.05 |      | 150.0 |         |
|           |                                                                | Z | 3.98   | 72.24  | 17.17 |      | 150.0 |         |
| 10435-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 1.04   | 73.03  | 15.81 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                | Y | 100.00 | 122.83 | 28.83 |      | 80.0  |         |
|           |                                                                | Z | 2.85   | 79.40  | 18.23 |      | 80.0  |         |
| 10447-AAB | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)                 | X | 1.63   | 62.08  | 8.98  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.10   | 68.15  | 14.99 |      | 150.0 |         |
|           |                                                                | Z | 2.89   | 66.18  | 13.94 |      | 150.0 |         |
| 10448-AAB | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)                | X | 2.97   | 66.84  | 14.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.76   | 68.19  | 16.40 |      | 150.0 |         |
|           |                                                                | Z | 3.63   | 66.75  | 15.54 |      | 150.0 |         |
| 10449-AAB | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)                | X | 3.43   | 67.31  | 15.47 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.05   | 67.84  | 16.58 |      | 150.0 |         |
|           |                                                                | Z | 3.95   | 66.68  | 15.86 |      | 150.0 |         |
| 10450-AAB | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)                | X | 3.70   | 67.17  | 15.79 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.26   | 67.58  | 16.60 |      | 150.0 |         |
|           |                                                                | Z | 4.17   | 66.58  | 15.96 |      | 150.0 |         |
| 10451-AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)                | X | 1.22   | 60.20  | 6.79  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 2.78   | 67.25  | 13.76 |      | 150.0 |         |
|           |                                                                | Z | 2.61   | 65.48  | 12.83 |      | 150.0 |         |
| 10456-AAB | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)           | X | 5.60   | 67.64  | 16.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 6.26   | 68.94  | 17.34 |      | 150.0 |         |
|           |                                                                | Z | 6.00   | 67.69  | 16.64 |      | 150.0 |         |
| 10457-AAA | UMTS-FDD (DC-HSDPA)                                            | X | 3.27   | 66.46  | 15.58 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.68   | 66.34  | 16.37 |      | 150.0 |         |
|           |                                                                | Z | 3.59   | 65.30  | 15.71 |      | 150.0 |         |
| 10458-AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers)                         | X | 1.12   | 60.00  | 5.83  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.56   | 71.73  | 16.05 |      | 150.0 |         |
|           |                                                                | Z | 3.03   | 68.42  | 14.58 |      | 150.0 |         |
| 10459-AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers)                         | X | 2.37   | 61.19  | 9.10  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.86   | 70.51  | 17.92 |      | 150.0 |         |
|           |                                                                | Z | 4.63   | 68.94  | 17.35 |      | 150.0 |         |

|           |                                                                   |   |        |        |       |      |       |         |
|-----------|-------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10460-AAA | UMTS-FDD (WCDMA, AMR)                                             | X | 0.77   | 69.97  | 14.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                   | Y | 1.81   | 83.33  | 22.94 |      | 150.0 |         |
|           |                                                                   | Z | 0.70   | 66.15  | 13.99 |      | 150.0 |         |
| 10461-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 1.10   | 74.88  | 17.91 | 3.29 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 130.63 | 32.41 |      | 80.0  |         |
|           |                                                                   | Z | 2.28   | 78.08  | 18.84 |      | 80.0  |         |
| 10462-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.93   | 230.19 | 29.26 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.59   | 60.00  | 5.55  |      | 80.0  |         |
|           |                                                                   | Z | 0.64   | 60.00  | 7.06  |      | 80.0  |         |
| 10463-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 3.96   | 233.23 | 22.29 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 23.26  | 230.85 | 21.52 |      | 80.0  |         |
|           |                                                                   | Z | 0.66   | 60.00  | 6.36  |      | 80.0  |         |
| 10464-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 0.60   | 67.04  | 13.62 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 124.51 | 29.50 |      | 80.0  |         |
|           |                                                                   | Z | 1.46   | 72.00  | 15.83 |      | 80.0  |         |
| 10465-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 6.88   | 228.32 | 21.10 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.24   | 55.14  | 2.95  |      | 80.0  |         |
|           |                                                                   | Z | 0.64   | 60.00  | 7.00  |      | 80.0  |         |
| 10466-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.90   | 230.59 | 11.80 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 24.92  | 227.37 | 29.84 |      | 80.0  |         |
|           |                                                                   | Z | 0.66   | 60.00  | 6.32  |      | 80.0  |         |
| 10467-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 0.65   | 68.17  | 14.23 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 125.25 | 29.82 |      | 80.0  |         |
|           |                                                                   | Z | 1.58   | 73.06  | 16.29 |      | 80.0  |         |
| 10468-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 6.75   | 228.62 | 22.92 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.24   | 55.19  | 3.02  |      | 80.0  |         |
|           |                                                                   | Z | 0.64   | 60.00  | 7.02  |      | 80.0  |         |
| 10469-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 4.89   | 230.67 | 12.36 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 24.62  | 227.52 | 30.16 |      | 80.0  |         |
|           |                                                                   | Z | 0.66   | 60.00  | 6.32  |      | 80.0  |         |
| 10470-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 0.65   | 68.21  | 14.25 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 125.26 | 29.81 |      | 80.0  |         |
|           |                                                                   | Z | 1.58   | 73.08  | 16.29 |      | 80.0  |         |
| 10471-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 6.71   | 228.68 | 22.79 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.24   | 55.16  | 2.98  |      | 80.0  |         |
|           |                                                                   | Z | 0.64   | 60.00  | 7.01  |      | 80.0  |         |
| 10472-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 4.83   | 230.72 | 12.16 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 24.39  | 227.78 | 30.29 |      | 80.0  |         |
|           |                                                                   | Z | 0.66   | 60.00  | 6.30  |      | 80.0  |         |
| 10473-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 0.65   | 68.12  | 14.21 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 125.20 | 29.78 |      | 80.0  |         |
|           |                                                                   | Z | 1.57   | 73.01  | 16.25 |      | 80.0  |         |
| 10474-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 6.67   | 228.73 | 22.56 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 0.59   | 60.00  | 5.48  |      | 80.0  |         |
|           |                                                                   | Z | 0.64   | 60.00  | 7.01  |      | 80.0  |         |
| 10475-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 4.82   | 230.67 | 11.80 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 24.34  | 227.67 | 30.21 |      | 80.0  |         |
|           |                                                                   | Z | 0.66   | 60.00  | 6.30  |      | 80.0  |         |

|           |                                                                     |   |        |        |       |      |      |         |
|-----------|---------------------------------------------------------------------|---|--------|--------|-------|------|------|---------|
| 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.



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 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 %  |

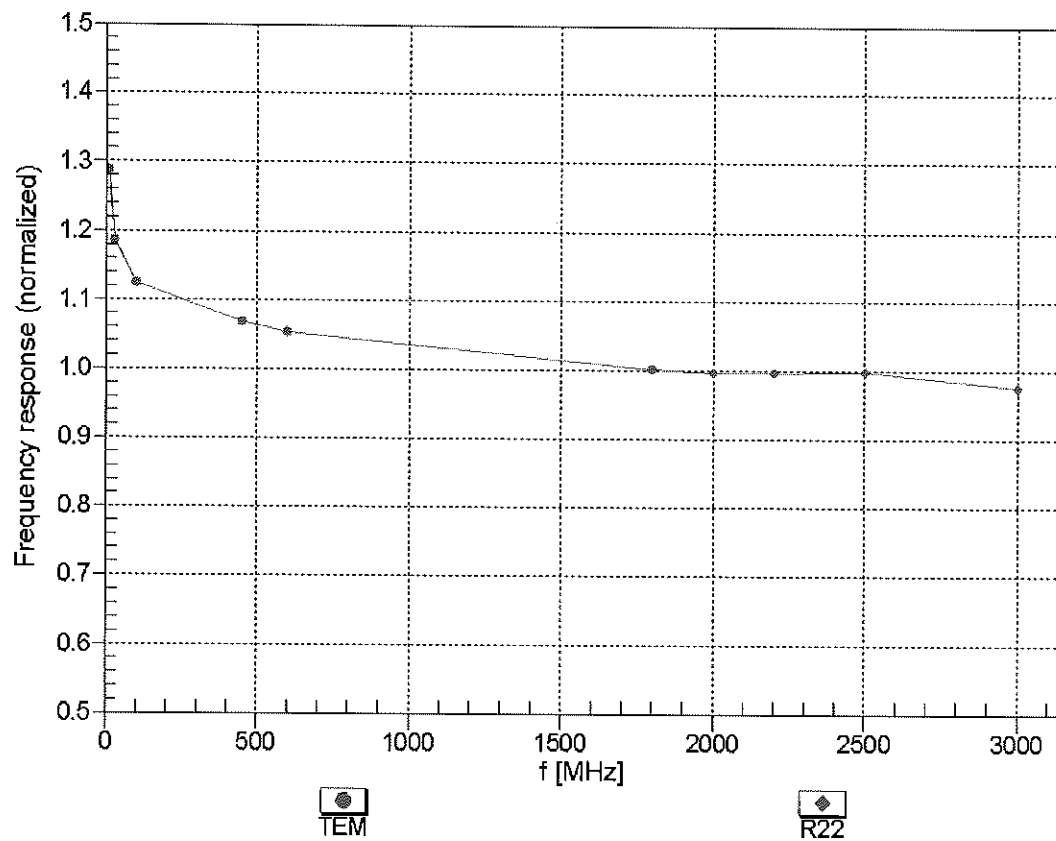
<sup>C</sup> Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below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

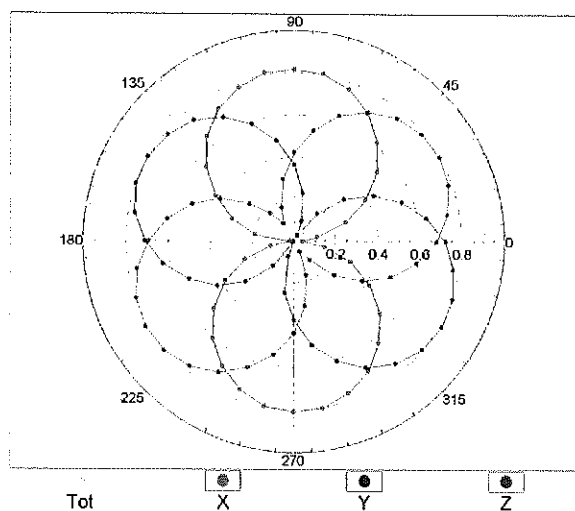
(TEM-Cell:ifi110 EXX, Waveguide: R22)



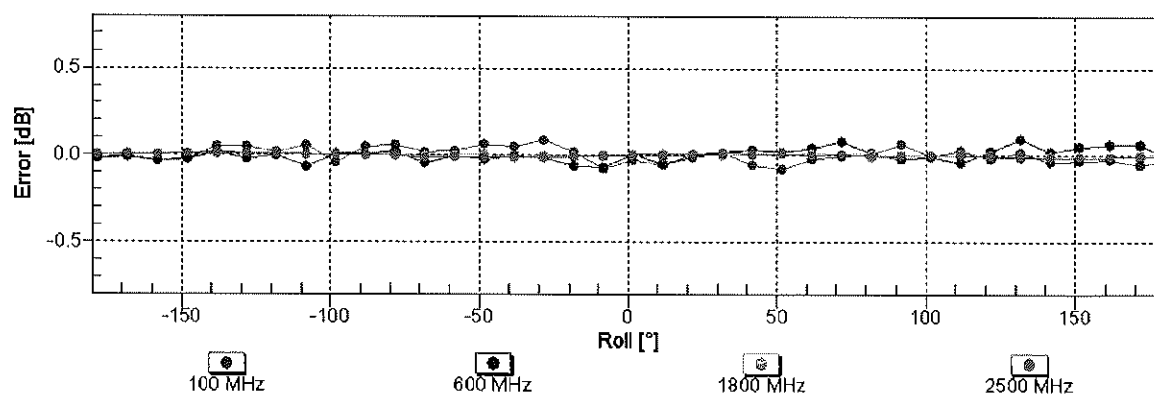
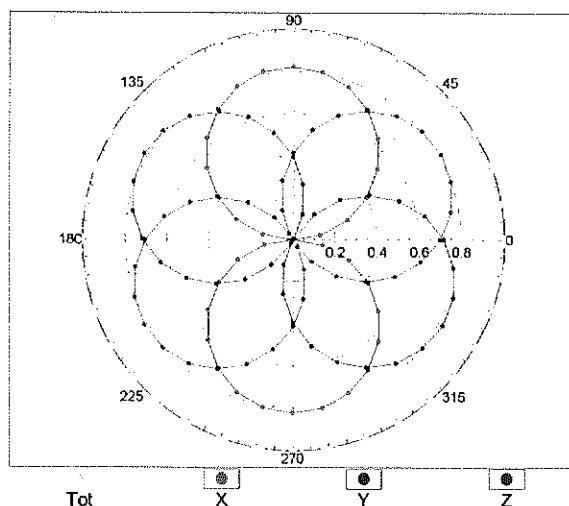
Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  ( $k=2$ )

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

f=600 MHz,TEM

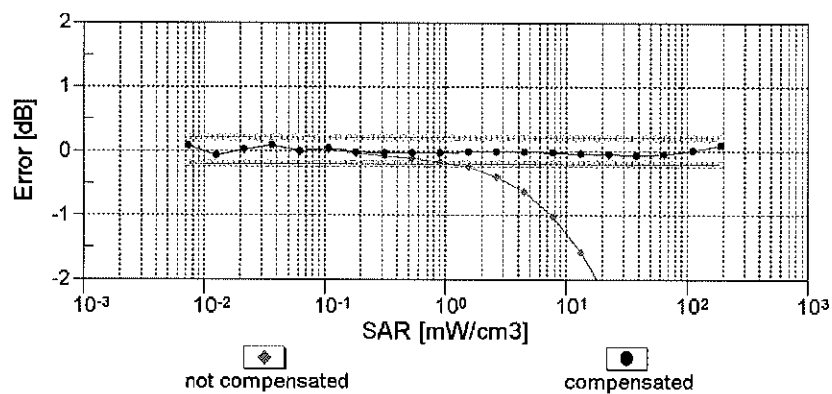
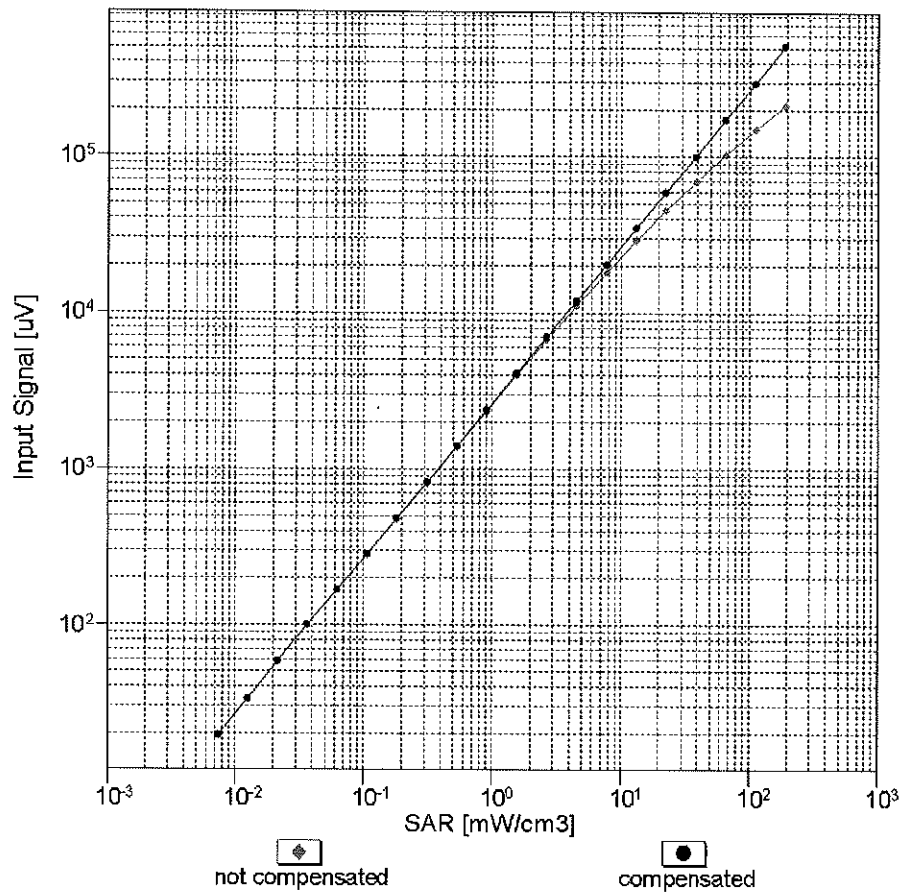


f=1800 MHz,R22



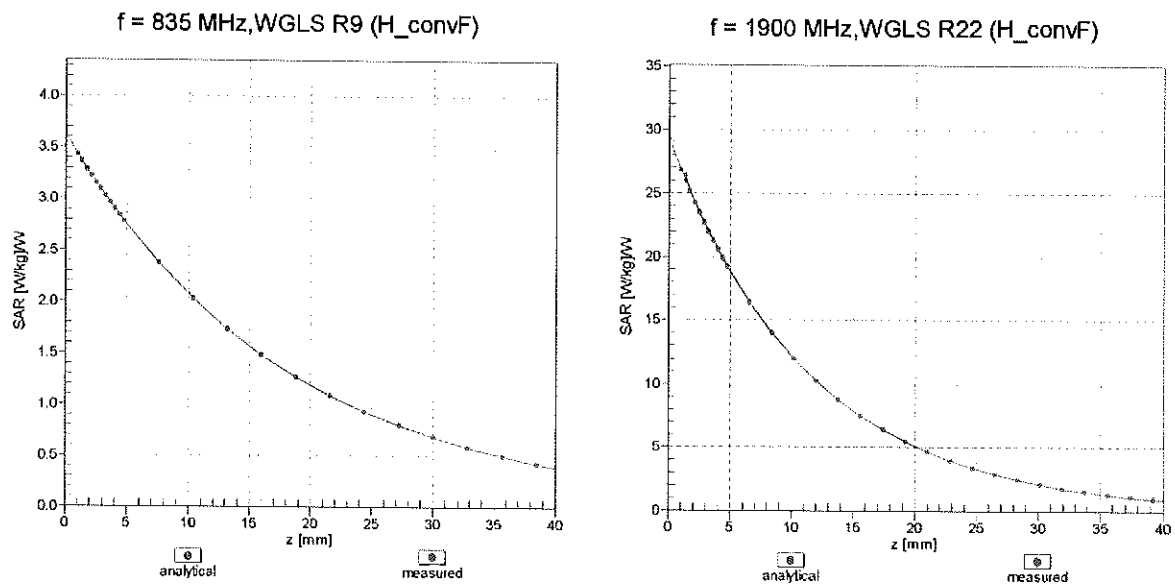
Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  (k=2)

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



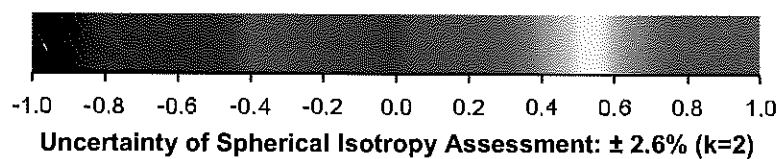
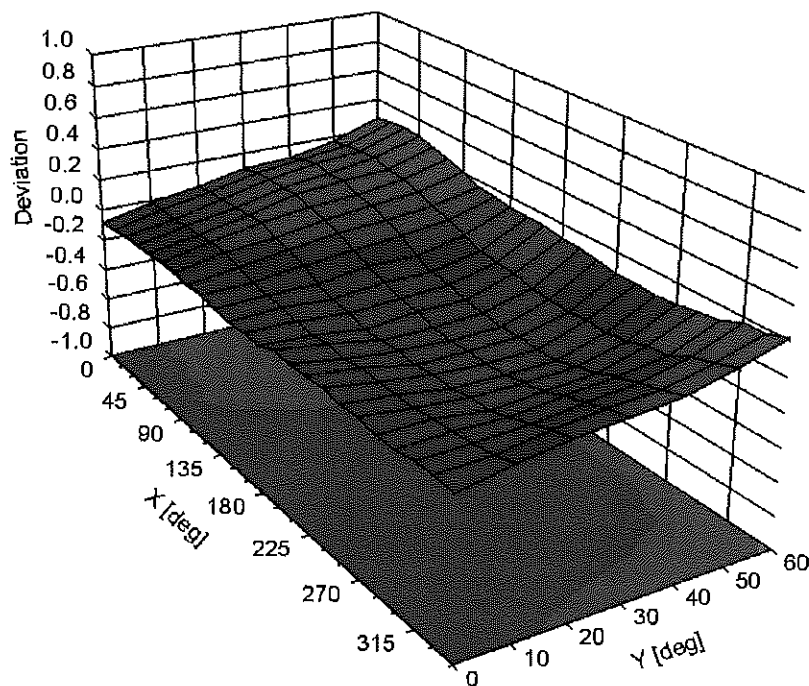
Uncertainty of Linearity Assessment:  $\pm 0.6\%$  ( $k=2$ )

## 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.

## APPENDIX D: SAR TISSUE SPECIFICATIONS

Measurement Procedure for Tissue verification:

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

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

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

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

| Frequency (MHz)           | 750          | 750        | 835   | 835   | 1750 | 1750 | 1900  | 1900  | 2450       | 2450 | 3500 - 5800 | 3500 - 5800 |
|---------------------------|--------------|------------|-------|-------|------|------|-------|-------|------------|------|-------------|-------------|
| Tissue                    | Head         | Body       | Head  | Body  | Head | Body | Head  | Body  | Head       | Body | Head        | Body        |
| Ingredients (% by weight) |              |            |       |       |      |      |       |       |            |      |             |             |
| Bactericide               | See page 2-3 | See page 2 | 0.1   | 0.1   |      |      |       |       | See page 4 |      | See page 5  | See page 6  |
| DGBE                      |              |            |       |       | 47   | 31   | 44.92 | 29.44 |            | 26.7 |             |             |
| HEC                       |              |            | 1     | 1     |      |      |       |       |            |      |             |             |
| NaCl                      |              |            | 1.45  | 0.94  | 0.4  | 0.2  | 0.18  | 0.39  |            | 0.1  |             |             |
| Sucrose                   |              |            | 57    | 44.9  |      |      |       |       |            |      |             |             |
| Water                     |              |            | 40.45 | 53.06 | 52.6 | 68.8 | 54.9  | 70.17 |            | 73.2 |             |             |

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFG820UM                  |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>01/11/19 - 02/05/19 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX D:<br>Page 1 of 6      |

## 2 Composition / Information on ingredients

The Item is composed of the following ingredients:

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

Figure D-1

### Composition of 750 MHz Head and Body Tissue Equivalent Matter

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

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#### Measurement Certificate / Material Test

|              |                                          |
|--------------|------------------------------------------|
| Item Name    | Body Tissue Simulating Liquid (MSL750V2) |
| Product No.  | SL AAM 075 AA (Batch: 170608-1)          |
| Manufacturer | SPEAG                                    |

#### Measurement Method

TSL dielectric parameters measured using calibrated DAK probe.

#### Setup Validation

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

#### Target Parameters

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

#### Test Condition

|                 |                                                             |
|-----------------|-------------------------------------------------------------|
| Ambient         | Environment temperatur ( $22 \pm 3$ )°C and humidity < 70%. |
| TSL Temperature | 22°C                                                        |
| Test Date       | 20-Jun-17                                                   |
| Operator        | CL                                                          |

#### Additional Information

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

| f [MHz] | Measured |       |       | Target |       | Diff. to Target [%] |         |
|---------|----------|-------|-------|--------|-------|---------------------|---------|
|         | e'       | e''   | sigma | eps    | sigma | Δ-eps               | Δ-sigma |
| 600     | 57.3     | 26.02 | 0.84  | 66.1   | 0.95  | 2.2                 | -12.2   |
| 625     | 57.1     | 24.67 | 0.86  | 56.0   | 0.95  | 1.9                 | -10.1   |
| 650     | 56.8     | 24.32 | 0.88  | 55.9   | 0.96  | 1.6                 | -8.0    |
| 675     | 56.6     | 24.02 | 0.90  | 55.8   | 0.96  | 1.3                 | -5.8    |
| 700     | 56.3     | 23.71 | 0.92  | 55.7   | 0.96  | 1.1                 | -3.8    |
| 725     | 56.1     | 23.46 | 0.95  | 55.6   | 0.96  | 0.8                 | -1.5    |
| 750     | 55.9     | 23.25 | 0.97  | 55.5   | 0.96  | 0.6                 | 0.7     |
| 775     | 55.6     | 23.04 | 0.99  | 55.4   | 0.97  | 0.3                 | 2.9     |
| 800     | 55.4     | 22.82 | 1.02  | 55.3   | 0.97  | 0.1                 | 5.0     |
| 825     | 55.2     | 22.65 | 1.04  | 55.2   | 0.98  | -0.1                | 6.3     |
| 838     | 55.1     | 22.56 | 1.05  | 55.2   | 0.98  | -0.3                | 6.9     |
| 850     | 54.9     | 22.47 | 1.06  | 55.2   | 0.99  | -0.4                | 7.5     |
| 875     | 54.7     | 22.34 | 1.09  | 55.1   | 1.02  | -0.7                | 6.7     |
| 900     | 54.5     | 22.21 | 1.11  | 55.0   | 1.05  | -0.9                | 5.9     |
| 925     | 54.3     | 22.08 | 1.14  | 55.0   | 1.06  | -1.3                | 6.9     |
| 950     | 54.1     | 21.95 | 1.16  | 54.9   | 1.08  | -1.6                | 7.9     |
| 975     | 53.8     | 21.86 | 1.19  | 54.9   | 1.09  | -1.9                | 9.1     |
| 1000    | 53.6     | 21.76 | 1.21  | 54.8   | 1.10  | -2.2                | 10.2    |

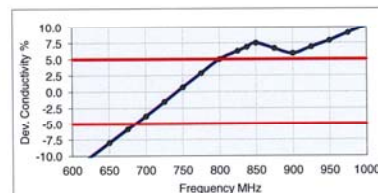
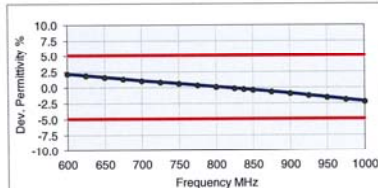


Figure D-2  
750MHz Body Tissue Equivalent Matter

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFG820UM                  |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>01/11/19 - 02/05/19 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX D:<br>Page 2 of 6      |

**Measurement Certificate / Material Test**

Item Name **Head Tissue Simulating Liquid (HSL750V2)**  
 Product No. SL AAH 075 AA (Batch: 170612-4)  
 Manufacturer **SPEAG**

**Measurement Method**

TSL dielectric parameters measured using calibrated DAK probe.

**Setup Validation**

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

**Target Parameters**

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

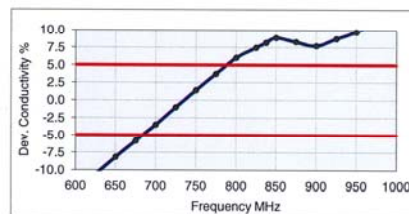
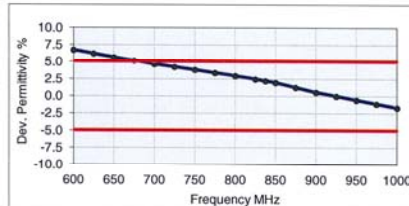
**Test Condition**

Ambient Environment temperatur ( $22 \pm 3^\circ\text{C}$  and humidity  $< 70\%$ ).  
 TSL Temperature  $22^\circ\text{C}$   
 Test Date 20-Jun-17  
 Operator CL

**Additional Information**

TSL Density  $1.284 \text{ g/cm}^3$   
 TSL Heat-capacity  $2.701 \text{ kJ/(kg}^\circ\text{K)}$

| f [MHz] | Measured |       |       | Target |       | Diff. to Target [%] |                       |
|---------|----------|-------|-------|--------|-------|---------------------|-----------------------|
|         | e'       | e''   | sigma | eps    | sigma | $\Delta\text{-eps}$ | $\Delta\text{-sigma}$ |
| 600     | 45.6     | 22.97 | 0.77  | 42.7   | 0.88  | 6.7                 | -13.1                 |
| 625     | 45.2     | 22.73 | 0.79  | 42.6   | 0.88  | 6.2                 | -10.6                 |
| 650     | 44.9     | 22.49 | 0.81  | 42.5   | 0.89  | 5.6                 | -8.2                  |
| 675     | 44.5     | 22.27 | 0.84  | 42.3   | 0.89  | 5.1                 | -5.8                  |
| 700     | 44.2     | 22.05 | 0.86  | 42.2   | 0.89  | 4.6                 | -3.5                  |
| 725     | 43.8     | 21.88 | 0.88  | 42.1   | 0.89  | 4.2                 | -1.0                  |
| 750     | 43.5     | 21.72 | 0.91  | 41.9   | 0.89  | 3.8                 | 1.4                   |
| 775     | 43.2     | 21.55 | 0.93  | 41.8   | 0.90  | 3.4                 | 3.7                   |
| 800     | 42.9     | 21.38 | 0.95  | 41.7   | 0.90  | 2.9                 | 6.0                   |
| 825     | 42.6     | 21.24 | 0.97  | 41.6   | 0.91  | 2.4                 | 7.5                   |
| 838     | 42.5     | 21.17 | 0.99  | 41.5   | 0.91  | 2.2                 | 8.2                   |
| 850     | 42.3     | 21.09 | 1.00  | 41.5   | 0.92  | 2.0                 | 8.9                   |
| 875     | 42.0     | 20.98 | 1.02  | 41.5   | 0.94  | 1.2                 | 8.3                   |
| 900     | 41.7     | 20.87 | 1.05  | 41.5   | 0.97  | 0.5                 | 7.7                   |
| 925     | 41.5     | 20.76 | 1.07  | 41.5   | 0.98  | 0.0                 | 8.7                   |
| 950     | 41.2     | 20.64 | 1.09  | 41.4   | 0.99  | -0.6                | 9.7                   |
| 975     | 40.9     | 20.55 | 1.11  | 41.4   | 1.00  | -1.1                | 10.9                  |
| 1000    | 40.6     | 20.46 | 1.14  | 41.3   | 1.01  | -1.7                | 12.1                  |



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

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFG820UM                  |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>01/11/19 - 02/05/19 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX D:<br>Page 3 of 6      |

### 3 Composition / Information on ingredients

The Item is composed of the following ingredients:

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

Safety relevant ingredients:

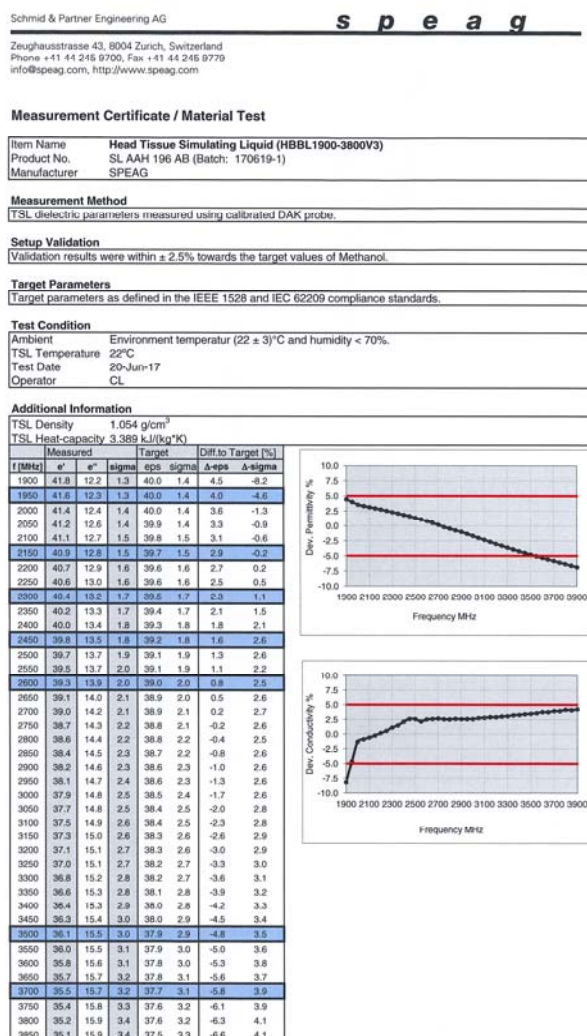
|                    |         |                                                                                                        |
|--------------------|---------|--------------------------------------------------------------------------------------------------------|
| CAS-No. 55965-84-9 | <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

|                   |       |                                     |
|-------------------|-------|-------------------------------------|
| CAS-No. 9005-64-5 | <50 % | polyoxyethylenesorbitan monolaurate |
|-------------------|-------|-------------------------------------|

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

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

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



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

|                                    |                               |                       |  |                                 |
|------------------------------------|-------------------------------|-----------------------|--|---------------------------------|
| FCC ID: ZNFG820UM                  |                               | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>01/11/19 - 02/05/19 | DUT Type:<br>Portable Handset |                       |  | APPENDIX D:<br>Page 4 of 6      |

## 2 Composition / Information on ingredients

The Item is composed of the following ingredients:

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

Figure D-6

### Composition of 3.5 – 5 GHz Head Tissue Equivalent Matter

**Note:** 3.5 – 5 GHz head liquid recipes are proprietary SPEAG. Since the composition is approximate to the actual liquids utilized, the manufacturer tissue-equivalent liquid data sheets are provided below.

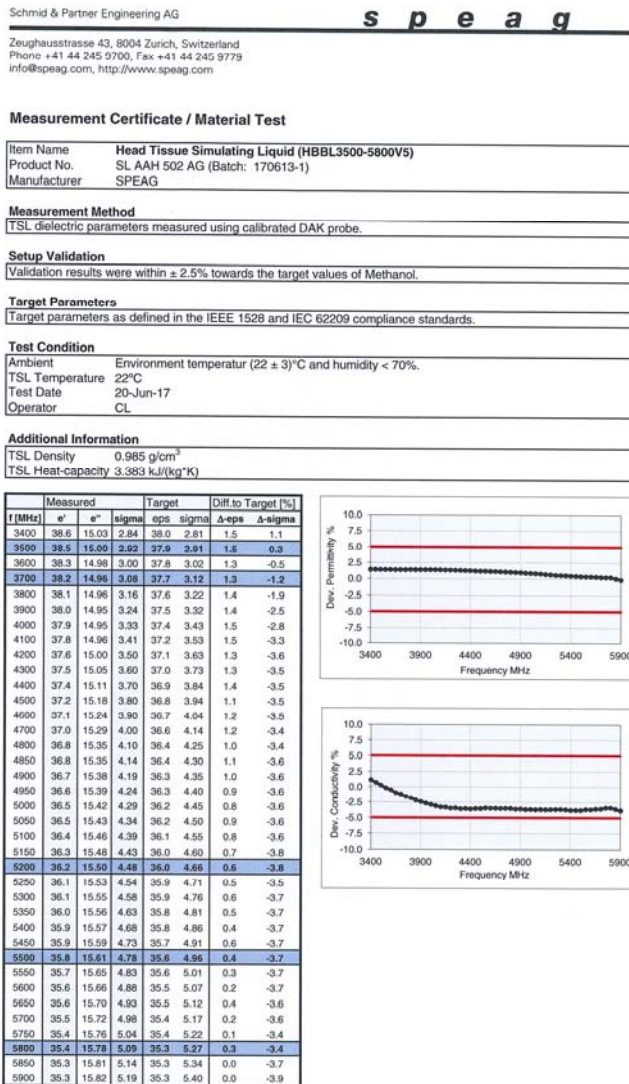


Figure D-7

### 3.5 – 5 GHz Head Tissue Equivalent Matter

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFG820UM                  |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>01/11/19 - 02/05/19 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX D:<br>Page 5 of 6      |

### 3 Composition / Information on ingredients

The Item is composed of the following ingredients:

|                                 |          |
|---------------------------------|----------|
| Water                           | 60 – 80% |
| Esters, Emulsifiers, Inhibitors | 20 – 40% |
| Sodium salt                     | 0 – 1.5% |

**Figure D-8**  
**Composition of 3.5 – 5 GHz Body Tissue Equivalent Matter**

**Note:** 3.5 – 5 GHz Body 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.

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#### Measurement Certificate / Material Test

|              |                                                 |
|--------------|-------------------------------------------------|
| Item Name    | Body Tissue Simulating Liquid (MBBL3500-5800V5) |
| Product No.  | SL AAM 501 EA (Batch: 180423-2)                 |
| Manufacturer | SPEAG                                           |

#### Measurement Method

TSL dielectric parameters measured using calibrated DAK probe.

#### Setup Validation

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

#### Target Parameters

Target parameters as defined in the KDB 865664 compliance standard.

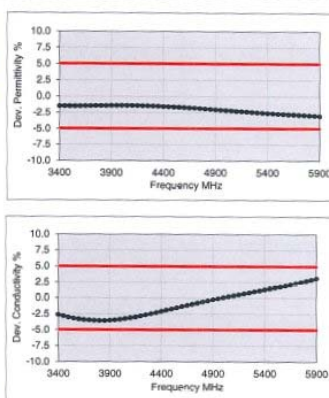
#### Test Condition

|                 |                                                             |
|-----------------|-------------------------------------------------------------|
| Ambient         | Environment temperatur ( $22 \pm 3$ )°C and humidity < 70%. |
| TSL Temperature | 22°C                                                        |
| Test Date       | 25-Apr-18                                                   |
| Operator        | WM                                                          |

#### Additional Information

|                   |                         |
|-------------------|-------------------------|
| TSL Density       | 0.996 g/cm <sup>3</sup> |
| TSL Heat-capacity | 3.765 kJ/(kg·K)         |

| f [MHz] | Measured |       |      | Target |      | Diff.to Target [%] |      |
|---------|----------|-------|------|--------|------|--------------------|------|
|         | e'       | e''   | σ    | εps    | σ    | Δ-εps              | Δ-σ  |
| 3400    | 50.7     | 16.46 | 3.11 | 51.5   | 3.20 | -1.5               | -2.7 |
| 3500    | 50.5     | 16.50 | 3.21 | 51.3   | 3.31 | -1.6               | -3.1 |
| 3600    | 50.4     | 16.56 | 3.32 | 51.2   | 3.43 | -1.5               | -3.2 |
| 3700    | 50.3     | 16.62 | 3.42 | 51.1   | 3.55 | -1.5               | -3.6 |
| 3800    | 50.2     | 16.72 | 3.53 | 50.9   | 3.66 | -1.4               | -3.7 |
| 3900    | 50.1     | 16.81 | 3.65 | 50.8   | 3.78 | -1.3               | -3.5 |
| 4000    | 49.9     | 16.93 | 3.77 | 50.6   | 3.90 | -1.5               | -3.3 |
| 4100    | 49.8     | 17.05 | 3.89 | 50.5   | 4.01 | -1.4               | -3.1 |
| 4200    | 49.6     | 17.18 | 4.01 | 50.4   | 4.13 | -1.5               | -2.9 |
| 4300    | 49.5     | 17.32 | 4.14 | 50.2   | 4.25 | -1.5               | -2.5 |
| 4400    | 49.3     | 17.46 | 4.27 | 50.1   | 4.37 | -1.6               | -2.2 |
| 4500    | 49.2     | 17.59 | 4.40 | 50.0   | 4.48 | -1.5               | -1.8 |
| 4600    | 49.0     | 17.73 | 4.54 | 49.8   | 4.60 | -1.7               | -1.3 |
| 4700    | 48.8     | 17.86 | 4.67 | 49.7   | 4.72 | -1.8               | -1.0 |
| 4800    | 48.6     | 17.99 | 4.80 | 49.6   | 4.83 | -1.9               | -0.7 |
| 4850    | 48.5     | 18.05 | 4.87 | 49.5   | 4.89 | -2.0               | -0.4 |
| 4900    | 48.4     | 18.11 | 4.94 | 49.4   | 4.95 | -2.1               | -0.2 |
| 4950    | 48.3     | 18.17 | 5.00 | 49.4   | 5.01 | -2.1               | -0.1 |
| 5000    | 48.2     | 18.23 | 5.07 | 49.3   | 5.07 | -2.2               | 0.1  |
| 5050    | 48.1     | 18.29 | 5.14 | 49.2   | 5.12 | -2.3               | 0.3  |
| 5100    | 48.0     | 18.34 | 5.20 | 49.2   | 5.18 | -2.3               | 0.3  |
| 5150    | 47.9     | 18.39 | 5.27 | 49.1   | 5.24 | -2.4               | 0.6  |
| 5200    | 47.9     | 18.45 | 5.34 | 49.0   | 5.30 | -2.3               | 0.8  |
| 5250    | 47.8     | 18.50 | 5.40 | 48.9   | 5.36 | -2.3               | 0.8  |
| 5300    | 47.7     | 18.56 | 5.47 | 48.9   | 5.42 | -2.4               | 1.0  |
| 5350    | 47.6     | 18.61 | 5.54 | 48.8   | 5.47 | -2.5               | 1.2  |
| 5400    | 47.5     | 18.67 | 5.61 | 48.7   | 5.53 | -2.5               | 1.4  |
| 5450    | 47.4     | 18.72 | 5.68 | 48.7   | 5.59 | -2.6               | 1.6  |
| 5500    | 47.3     | 18.77 | 5.74 | 48.6   | 5.65 | -2.7               | 1.6  |
| 5550    | 47.2     | 18.83 | 5.81 | 48.5   | 5.71 | -2.8               | 1.8  |
| 5600    | 47.1     | 18.88 | 5.88 | 48.5   | 5.77 | -2.8               | 2.0  |
| 5650    | 47.1     | 18.93 | 5.95 | 48.4   | 5.82 | -2.7               | 2.1  |
| 5700    | 47.0     | 18.99 | 6.02 | 48.3   | 5.88 | -2.8               | 2.3  |
| 5750    | 46.9     | 19.04 | 6.09 | 48.3   | 5.94 | -2.8               | 2.5  |
| 5800    | 46.8     | 19.10 | 6.16 | 48.2   | 6.00 | -2.9               | 2.7  |
| 5850    | 46.7     | 19.16 | 6.23 | 48.1   | 6.06 | -3.0               | 2.8  |
| 5900    | 46.6     | 19.22 | 6.31 | 48.1   | 6.12 | -3.0               | 3.2  |



**Figure D-9**  
**3.5 – 5 GHz Body Tissue Equivalent Matter**

|                                    |                               |                       |  |                                 |
|------------------------------------|-------------------------------|-----------------------|--|---------------------------------|
| FCC ID: ZNFG820UM                  |                               | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>01/11/19 - 02/05/19 | DUT Type:<br>Portable Handset |                       |  | APPENDIX D:<br>Page 6 of 6      |

## 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. (σ) | Perm. (ε <sub>r</sub> ) | CW VALIDATION |                 |                | MOD. VALIDATION |             |      |
|------------|-------------|------------|----------|-----------------|------|-----------|-------------------------|---------------|-----------------|----------------|-----------------|-------------|------|
|            |             |            |          |                 |      |           |                         | SENSITIVITY   | PROBE LINEARITY | PROBE ISOTROPY | MOD. TYPE       | DUTY FACTOR | PAR  |
| D          | 750         | 10/26/2018 | 7357     | 750             | Head | 0.898     | 40.96                   | PASS          | PASS            | PASS           | N/A             | N/A         | N/A  |
| G          | 835         | 8/9/2018   | 7410     | 835             | Head | 0.889     | 40.915                  | PASS          | PASS            | PASS           | GMSK            | PASS        | N/A  |
| D          | 1750        | 10/26/2018 | 7357     | 1750            | Head | 1.345     | 39.703                  | PASS          | PASS            | PASS           | N/A             | N/A         | N/A  |
| M          | 1750        | 11/5/2018  | 3287     | 1750            | Head | 1.342     | 39.217                  | PASS          | PASS            | PASS           | N/A             | N/A         | N/A  |
| M          | 1900        | 11/5/2018  | 3287     | 1900            | Head | 1.43      | 39.014                  | PASS          | PASS            | PASS           | GMSK            | PASS        | N/A  |
| H          | 2300        | 8/9/2018   | 7409     | 2300            | Head | 1.685     | 39.093                  | PASS          | PASS            | PASS           | N/A             | N/A         | N/A  |
| H          | 2450        | 8/8/2018   | 7409     | 2450            | Head | 1.844     | 40.474                  | PASS          | PASS            | PASS           | OFDM/TDD        | PASS        | PASS |
| H          | 2600        | 8/9/2018   | 7409     | 2600            | Head | 1.914     | 38.662                  | PASS          | PASS            | PASS           | TDD             | PASS        | N/A  |
| G          | 2450        | 8/7/2018   | 7410     | 2450            | Head | 1.865     | 39.618                  | PASS          | PASS            | PASS           | OFDM/TDD        | PASS        | PASS |
| G          | 2600        | 8/8/2018   | 7410     | 2600            | Head | 2.04      | 39.033                  | PASS          | PASS            | PASS           | TDD             | PASS        | N/A  |
| H          | 3500        | 10/30/2018 | 3949     | 3500            | Head | 2.803     | 38.5                    | PASS          | PASS            | PASS           | TDD             | PASS        | N/A  |
| H          | 3700        | 10/30/2018 | 3949     | 3700            | Head | 2.997     | 38.156                  | PASS          | PASS            | PASS           | TDD             | PASS        | N/A  |
| H          | 5250        | 7/5/2018   | 7409     | 5250            | Head | 4.492     | 34.994                  | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |
| H          | 5600        | 7/5/2018   | 7409     | 5600            | Head | 4.839     | 34.496                  | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |
| H          | 5750        | 7/5/2018   | 7409     | 5750            | Head | 4.995     | 34.288                  | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |
| J          | 750         | 9/6/2018   | 3347     | 750             | Body | 0.962     | 54.636                  | PASS          | PASS            | PASS           | N/A             | N/A         | N/A  |
| I          | 835         | 8/8/2018   | 7406     | 835             | Body | 0.98      | 53.497                  | PASS          | PASS            | PASS           | GMSK            | PASS        | N/A  |
| D          | 835         | 8/15/2018  | 7357     | 835             | Body | 1         | 53.368                  | PASS          | PASS            | PASS           | GMSK            | PASS        | N/A  |
| J          | 1750        | 9/5/2018   | 3347     | 1750            | Body | 1.454     | 53.515                  | PASS          | PASS            | PASS           | N/A             | N/A         | N/A  |
| G          | 1900        | 8/10/2018  | 7410     | 1900            | Body | 1.567     | 52.239                  | PASS          | PASS            | PASS           | GMSK            | PASS        | N/A  |
| K          | 2300        | 4/3/2018   | 3319     | 2300            | Body | 1.871     | 51.575                  | PASS          | PASS            | PASS           | N/A             | N/A         | N/A  |
| K          | 2450        | 4/3/2018   | 3319     | 2450            | Body | 2.043     | 51.13                   | PASS          | PASS            | PASS           | OFDM/TDD        | PASS        | PASS |
| K          | 2600        | 4/3/2018   | 3319     | 2600            | Body | 2.225     | 50.665                  | PASS          | PASS            | PASS           | TDD             | PASS        | N/A  |
| L          | 3500        | 11/1/2018  | 3914     | 3500            | Body | 3.336     | 51.607                  | PASS          | PASS            | PASS           | TDD             | PASS        | N/A  |
| L          | 3700        | 11/2/2018  | 3914     | 3700            | Body | 3.55      | 51.31                   | PASS          | PASS            | PASS           | TDD             | PASS        | N/A  |
| L          | 5250        | 10/29/2018 | 7308     | 5250            | Body | 5.511     | 48.77                   | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |
| L          | 5600        | 10/29/2018 | 7308     | 5600            | Body | 5.994     | 48.2                    | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |
| L          | 5750        | 10/29/2018 | 7308     | 5750            | Body | 6.219     | 47.96                   | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |

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

| SAR System | Freq. (MHz) | Date       | Probe SN | Probe Cal Point |      | Cond. (σ) | Perm. (εr) | CW VALIDATION |                 |                | MOD. VALIDATION |             |      |
|------------|-------------|------------|----------|-----------------|------|-----------|------------|---------------|-----------------|----------------|-----------------|-------------|------|
|            |             |            |          |                 |      |           |            | SENSITIVITY   | PROBE LINEARITY | PROBE ISOTROPY | MOD. TYPE       | DUTY FACTOR | PAR  |
| J          | 1750        | 9/5/2018   | 3347     | 1750            | Body | 1.454     | 53.515     | PASS          | PASS            | PASS           | N/A             | N/A         | N/A  |
| G          | 1900        | 8/10/2018  | 7410     | 1900            | Body | 1.567     | 52.239     | PASS          | PASS            | PASS           | GMSK            | PASS        | N/A  |
| K          | 2300        | 4/3/2018   | 3319     | 2300            | Body | 1.871     | 51.575     | PASS          | PASS            | PASS           | N/A             | N/A         | N/A  |
| K          | 2450        | 4/3/2018   | 3319     | 2450            | Body | 2.043     | 51.13      | PASS          | PASS            | PASS           | OFDM/TDD        | PASS        | PASS |
| K          | 2600        | 4/3/2018   | 3319     | 2600            | Body | 2.225     | 50.665     | PASS          | PASS            | PASS           | TDD             | PASS        | N/A  |
| L          | 5250        | 10/29/2018 | 7308     | 5250            | Body | 5.511     | 48.77      | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |
| L          | 5600        | 10/29/2018 | 7308     | 5600            | Body | 5.994     | 48.2       | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |
| L          | 5750        | 10/29/2018 | 7308     | 5750            | Body | 6.219     | 47.96      | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |

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

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFG820UM                  |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>01/11/19 - 02/05/19 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX E:<br>Page 1 of 1      |

## APPENDIX G POWER REDUCTION VERIFICATION

Per the May 2017 TCBC Workshop Notes, demonstration of proper functioning of the power reduction mechanisms is required to support the corresponding SAR configurations. The verification process was divided into two parts: (1) evaluation of output power levels for individual or multiple triggering mechanisms and (2) evaluation of the triggering distances for proximity-based sensors.

### G.1 Power Verification Procedure

The power verification was performed according to the following procedure:

1. A base station simulator was used to establish a conducted RF connection and the output power was monitored. The power measurements were confirmed to be within expected tolerances for all states before and after a power reduction mechanism was triggered.
2. Step 1 was repeated for all relevant modes and frequency bands for the mechanism being investigated.
3. Steps 1 and 2 were repeated for all individual power reduction mechanisms and combinations thereof. For the combination cases, one mechanism was switched to a 'triggered' state at a time; powers were confirmed to be within tolerances after each additional mechanism was activated.

### G.2 Distance Verification Procedure

The distance verification procedure was performed according to the following procedure:

1. A base station simulator was used to establish an RF connection and to monitor the power levels. The device being tested was placed below the relevant section of the phantom with the relevant side or edge of the device facing toward the phantom.
2. The device was moved toward and away from the phantom to determine the distance at which the mechanism triggers and the output power is reduced, per KDB Publication 616217 D04v01r02 and FCC Guidance. Each applicable test position was evaluated. The distances were confirmed to be the same or larger (more conservative) than the minimum distances provided by the manufacturer.
3. Steps 1 and 2 were repeated for low, mid, and high bands, as appropriate (see note below Table G-2 for more details).
4. Steps 1 through 3 were repeated for all distance-based power reduction mechanisms.

|                                    |                                                                                                                                   |                       |                                                                                       |                                 |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFG820UM                  |  <b>PCTEST</b><br>ENGINEERING LABORATORY, INC. | SAR EVALUATION REPORT |  | Reviewed by:<br>Quality Manager |
| Test Dates:<br>01/11/19 - 02/05/19 | DUT Type:<br>Portable Handset                                                                                                     |                       |                                                                                       | APPENDIX G:<br>Page 1 of 2      |

### G.3 Main Antenna Verification Summary

**Table G-1**  
**Power Measurement Verification for Main Antenna**

| Mechanism(s)     | Mode/Band             | Conducted Power (dBm) |                        |
|------------------|-----------------------|-----------------------|------------------------|
|                  |                       | Un-triggered (Max)    | Mechanism #1 (Reduced) |
| Proximity Sensor | UMTS 1750             | 24.89                 | 23.33                  |
| Proximity Sensor | UMTS 1900             | 24.75                 | 22.86                  |
| Proximity Sensor | PCS CDMA              | 24.79                 | 22.48                  |
| Proximity Sensor | LTE FDD Band 4        | 24.11                 | 23.44                  |
| Proximity Sensor | LTE FDD Band 66       | 24.09                 | 23.31                  |
| Proximity Sensor | LTE FDD Band 2        | 24.27                 | 22.63                  |
| Proximity Sensor | LTE FDD Band 25       | 24.48                 | 22.73                  |
| Proximity Sensor | LTE FDD Band 30       | 23.49                 | 20.63                  |
| Proximity Sensor | LTE FDD Band 7        | 23.45                 | 20.91                  |
| Proximity Sensor | LTE TDD Band 41 (PC2) | 27.43                 | 24.52                  |

**Table G-2**  
**Distance Measurement Verification for Main Antenna**

| Mechanism(s)     | Test Condition        | Band | Distance Measurements (mm) |             | Minimum Distance per Manufacturer (mm) |
|------------------|-----------------------|------|----------------------------|-------------|----------------------------------------|
|                  |                       |      | Moving Toward              | Moving Away |                                        |
| Proximity Sensor | Phablet - Back Side   | mid  | 3                          | 5           | 3                                      |
| Proximity Sensor | Phablet - Front Side  | mid  | 2                          | 3           | 1                                      |
| Proximity Sensor | Phablet - Bottom Edge | mid  | 5                          | 8           | 4                                      |
| Proximity Sensor | Phablet - Back Side   | high | 3                          | 5           | 3                                      |
| Proximity Sensor | Phablet - Front Side  | high | 2                          | 3           | 1                                      |
| Proximity Sensor | Phablet - Bottom Edge | high | 5                          | 8           | 4                                      |

\*Note: Mid band refers to: PCS CDMA, UMTS 1750/1900, LTE B2/4/25/66; High band refers to: LTE B7/30/41

### G.4 WIFI Verification Summary

**Table G-3**  
**Power Measurement Verification WIFI**

| Mechanism(s) | Mode/Band                | Conducted Power (dBm) |                        |
|--------------|--------------------------|-----------------------|------------------------|
|              |                          | Un-triggered (Max)    | Mechanism #1 (Reduced) |
| Held-to-Ear  | 802.11b                  | 19.42                 | 16.42                  |
| Held-to-Ear  | 802.11g                  | 18.66                 | 16.25                  |
| Held-to-Ear  | 802.11n (2.4GHz)         | 17.31                 | 16.62                  |
| Held-to-Ear  | 802.11a (5GHz, 20MHz BW) | 18.02                 | 13.26                  |
| Held-to-Ear  | 802.11n (5GHz, 20MHz BW) | 18.13                 | 13.35                  |
| Held-to-Ear  | 802.11n (5GHz, 40MHz BW) | 15.22                 | 13.68                  |

\*Note: 802.11ac and MIMO WIFI modes were not evaluated due to equipment limitations.

|                                           |                                                                                                                                   |                              |                                                                                       |                                        |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------|---------------------------------------------------------------------------------------|----------------------------------------|
| FCC ID: ZNFG820UM                         |  <b>PCTEST</b><br>Engineering Laboratory, Inc. | <b>SAR EVALUATION REPORT</b> |  | <b>Reviewed by:</b><br>Quality Manager |
| <b>Test Dates:</b><br>01/11/19 - 02/05/19 | <b>DUT Type:</b><br>Portable Handset                                                                                              |                              |                                                                                       | <b>APPENDIX G:</b><br>Page 2 of 2      |

## APPENDIX H: 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.
- Downlink CA combinations for SISO and 4x4 Downlink MIMO operations were measured independently, per May 2017 TCBC Workshop notes.

Table 1 – Example of Exclusion Table for SISO Configurations

| Supervisory Control Subsystem (SCS) |                 |            |            |     |     |     |             |                                           |  | Supervisory Control Subsystem (SCS) |                 |            |            |            |            |     |             |                                           |  |
|-------------------------------------|-----------------|------------|------------|-----|-----|-----|-------------|-------------------------------------------|--|-------------------------------------|-----------------|------------|------------|------------|------------|-----|-------------|-------------------------------------------|--|
| Index                               |                 | ACC        | SCS        |     |     |     | Restoration | Completely Covered by Measurement Support |  | Index                               |                 | ACC        | SCS        |            |            |     | Restoration | Completely Covered by Measurement Support |  |
|                                     |                 |            | SC1        | SC2 | SC3 | SC4 |             |                                           |  |                                     |                 |            |            | SC1        | SC2        | SC3 | SC4         |                                           |  |
| SC-001                              | CA-20           | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-004      |                                           |  | SC-001                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-004      |                                           |  |
| SC-002                              | CA-20-01-00-000 | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-005      |                                           |  | SC-002                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-005      |                                           |  |
| SC-003                              | CA-20-02-00-000 | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-006      |                                           |  | SC-003                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-006      |                                           |  |
| SC-004                              | CA-20-03-00-000 | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-007      |                                           |  | SC-004                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-007      |                                           |  |
| SC-005                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-008      |                                           |  | SC-005                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-008      |                                           |  |
| SC-006                              | CA-20-05-00-000 | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-009      |                                           |  | SC-006                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-009      |                                           |  |
| SC-007                              | CA-20-06-00-000 | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-010      |                                           |  | SC-007                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-010      |                                           |  |
| SC-008                              | CA-20-07-00-000 | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-011      |                                           |  | SC-008                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-011      |                                           |  |
| SC-009                              | CA-20-08-00-000 | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-012      |                                           |  | SC-009                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-012      |                                           |  |
| SC-010                              | CA-20-09-00-000 | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-013      |                                           |  | SC-010                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-013      |                                           |  |
| SC-011                              | CA-20-10-00-000 | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-014      |                                           |  | SC-011                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-014      |                                           |  |
| SC-012                              | CA-20-11-00-000 | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-015      |                                           |  | SC-012                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-015      |                                           |  |

| Supervisory Control Subsystem (SCS) |                 |            |            |     |     |     |             |                                           |  | Supervisory Control Subsystem (SCS) |                 |            |            |            |            |     |             |                                           |  |
|-------------------------------------|-----------------|------------|------------|-----|-----|-----|-------------|-------------------------------------------|--|-------------------------------------|-----------------|------------|------------|------------|------------|-----|-------------|-------------------------------------------|--|
| Index                               |                 | ACC        | SCS        |     |     |     | Restoration | Completely Covered by Measurement Support |  | Index                               |                 | ACC        | SCS        |            |            |     | Restoration | Completely Covered by Measurement Support |  |
|                                     |                 |            | SC1        | SC2 | SC3 | SC4 |             |                                           |  |                                     |                 |            |            | SC1        | SC2        | SC3 | SC4         |                                           |  |
| SC-001                              | CA-20           | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-004      |                                           |  | SC-001                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-004      |                                           |  |
| SC-002                              | CA-20-01-00-000 | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-005      |                                           |  | SC-002                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-005      |                                           |  |
| SC-003                              | CA-20-02-00-000 | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-006      |                                           |  | SC-003                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-006      |                                           |  |
| SC-004                              | CA-20-03-00-000 | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-007      |                                           |  | SC-004                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-007      |                                           |  |
| SC-005                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-008      |                                           |  | SC-005                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-008      |                                           |  |
| SC-006                              | CA-20-05-00-000 | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-009      |                                           |  | SC-006                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-009      |                                           |  |
| SC-007                              | CA-20-06-00-000 | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-010      |                                           |  | SC-007                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-010      |                                           |  |
| SC-008                              | CA-20-07-00-000 | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-011      |                                           |  | SC-008                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-011      |                                           |  |
| SC-009                              | CA-20-08-00-000 | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-012      |                                           |  | SC-009                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-012      |                                           |  |
| SC-010                              | CA-20-09-00-000 | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-013      |                                           |  | SC-010                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-013      |                                           |  |
| SC-011                              | CA-20-10-00-000 | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-014      |                                           |  | SC-011                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-014      |                                           |  |
| SC-012                              | CA-20-11-00-000 | 5/10/10/20 | 5/10/10/20 |     |     |     | SC-015      |                                           |  | SC-012                              | CA-20-04-00-000 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 | 5/10/10/20 |     | SC-015      |                                           |  |

Table 2 – Example of Exclusion Table for 4x4 Downlink MIMO Configurations

| Table 1: CEC#M01-CEC#M17 Channel Bandwidth Configurations |                 |                                   |               |             |                                            | Table 2: CEC#M18-CEC#M25 Channel Bandwidth Configurations |                    |                                   |               |               |                                            |         |                 |                                   |               |               |                                            |         |
|-----------------------------------------------------------|-----------------|-----------------------------------|---------------|-------------|--------------------------------------------|-----------------------------------------------------------|--------------------|-----------------------------------|---------------|---------------|--------------------------------------------|---------|-----------------|-----------------------------------|---------------|---------------|--------------------------------------------|---------|
| Index                                                     | ACC             | Supported Channel Bandwidth (MHz) |               | Restriction | Completely Covered by Measurement Superset | Index                                                     | ACC                | Supported Channel Bandwidth (MHz) |               | Restriction   | Completely Covered by Measurement Superset | Index   | ACC             | Supported Channel Bandwidth (MHz) |               | Restriction   | Completely Covered by Measurement Superset |         |
|                                                           |                 | CC1                               | CC2           |             |                                            |                                                           |                    | CC1                               | CC2           | CC3           |                                            |         |                 | CC1                               | CC2           | CC3           | CC4                                        |         |
| CEC#M01                                                   | CA [2A]         | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | CEC#M06                                    | CA [2A] 2A-6A                                             | 5, 10, 15, 20      | 5, 10, 15, 20                     | 5, 10, 15, 20 | No            |                                            | CEC#M18 | CA [2A] 8A-66A  | 5, 10, 15, 20                     | 5, 10         | 5, 10         | 5, 10, 15, 20                              | No      |
| CEC#M02                                                   | CA [2A] 2A-2A   | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | CEC#M07                                    | CA [2A] 2A-12A                                            | 5, 10, 15, 20      | 5, 10, 15, 20                     | 5, 10, 15, 20 | No            |                                            | CEC#M19 | CA [2A] 2A-12A  | 5, 10, 15, 20                     | 5, 10         | 5, 10         | 5, 10, 15, 20                              | No      |
| CEC#M03                                                   | CA [2A] 2A-2A   | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M08                                                   | CA [2A] 2A-12A     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10         |                                            | CEC#M20 | CA [2A] 5A-66A  | 5, 10, 15, 20                     | 5, 10         | 5, 10, 15     | 5, 10, 15                                  | No      |
| CEC#M04                                                   | CA [2A] 4A-4A   | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | CEC#M01                                    | CEC#M04                                                   | CA [2A] 13A-2A     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 10            |                                            | CEC#M21 | CA [2A] 5A-66A  | 5, 10, 15, 20                     | 5, 10         | 5, 10, 15     | 5, 10, 15                                  | No      |
| CEC#M05                                                   | CA [2A] 5A-5A   | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | CEC#M05                                    | CEC#M05                                                   | CA [2A] 2A-50A     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10         |                                            | CEC#M22 | CA [2A] 5A-66A  | 5, 10, 15, 20                     | 5, 10         | 5, 10, 15, 20 | 5, 10, 15, 20                              | No      |
| CEC#M06                                                   | CA [2A] 5A      | 5, 10, 15, 20                     | 5, 10         |             | CEC#M01                                    | CEC#M06                                                   | CA [2A] 66A        | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | No                                         | CEC#M23 | CA [2A] 5A-66A  | 5, 10, 15, 20                     | 5, 10         | 5, 10, 15, 20 | 5, 10, 15, 20                              | No      |
| CEC#M07                                                   | CA [2A] 12A-12A | 5, 10, 15, 20                     | 5, 10         |             | No                                         | CEC#M07                                                   | CA [2A] 66A        | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | No                                         | CEC#M24 | CA [2A] 5A-66A  | 5, 10, 15, 20                     | 5, 10         | 5, 10, 15, 20 | 5, 10, 15, 20                              | No      |
| CEC#M08                                                   | CA [2A] 13A     | 5, 10, 15, 20                     | 10            |             | CEC#M06                                    | CEC#M08                                                   | CA [2A] 166A       | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | No                                         | CEC#M25 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M18 |
| CEC#M09                                                   | CA [2A] 17A     | 5, 10                             | 5, 10         |             | No                                         | CEC#M09                                                   | CA [2A] 2A-66A     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | No                                         | CEC#M26 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M19 |
| CEC#M10                                                   | CA [2A] 29A-2A  | 5, 10, 15, 20                     | 5, 10         |             | CEC#M12                                    | CEC#M10                                                   | CA [2A] 2A-66A     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | No                                         | CEC#M27 | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | No      |
| CEC#M11                                                   | CA [2A] 29A     | 5, 10, 15, 20                     | 5, 10         |             | CEC#M06                                    | CEC#M11                                                   | CA [2A] 2A-71A     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | No                                         | CEC#M28 | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | No      |
| CEC#M12                                                   | CA [2A] 66A-2A  | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | CEC#M01                                    | CEC#M12                                                   | CA [2A] 4A-29A     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | No                                         | CEC#M29 | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | No      |
| CEC#M13                                                   | CA [2A] 66A-2A  | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | CEC#M12                                    | CEC#M13                                                   | CA [2A] 4A-71A     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | No                                         | CEC#M30 | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | No      |
| CEC#M14                                                   | CA [2A] 71A     | 5, 10, 15, 20                     | 5, 10         |             | No                                         | CEC#M14                                                   | CA [2A] 50A        | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | No                                         | CEC#M31 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M20 |
| CEC#M15                                                   | CA [2A] 71A     | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | CEC#M11                                    | CEC#M15                                                   | CA [2A] 5A-66A     | 5, 10, 15, 20                     | 5, 10         | 5, 10, 15, 20 |                                            | CEC#M32 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M21 |
| CEC#M16                                                   | CA [2A] 66A     | 5, 10                             | 5, 10, 15, 20 |             | CEC#M16                                    | CEC#M16                                                   | CA [2A] 5A-66A     | 5, 10, 15, 20                     | 5, 10         | 5, 10, 15, 20 |                                            | CEC#M33 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M22 |
| CEC#M17                                                   | CA [2A] 66A-6A  | 5, 10                             | 5, 10, 15, 20 |             | CEC#M17                                    | CEC#M17                                                   | CA [2A] 13A-66A    | 5, 10, 15, 20                     | 5, 10         | 5, 10, 15, 20 |                                            | CEC#M34 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M23 |
| CEC#M18                                                   | CA [2A] 66A     | 5, 10                             | 5, 10, 15, 20 |             | CEC#M18                                    | CEC#M18                                                   | CA [2A] 13A-66A    | 5, 10, 15, 20                     | 5, 10         | 5, 10, 15, 20 |                                            | CEC#M35 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M24 |
| CEC#M19                                                   | CA [2A] 66A     | 5, 10                             | 5, 10, 15, 20 |             | CEC#M20                                    | CEC#M19                                                   | CA [2A] 13A-66A    | 5, 10, 15, 20                     | 5, 10         | 5, 10, 15, 20 |                                            | CEC#M36 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M25 |
| CEC#M20                                                   | CA [2A] 66A     | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | CEC#M21                                    | CEC#M20                                                   | CA [2A] 2A-13A-66A | 5, 10, 15, 20                     | 5, 10         | 5, 10, 15, 20 |                                            | CEC#M37 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M26 |
| CEC#M21                                                   | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | CEC#M06                                    | CEC#M21                                                   | CA [2A] 66B        | 5, 10, 15, 20                     | 5, 10, 15     | 5, 10, 15     |                                            | CEC#M38 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M27 |
| CEC#M22                                                   | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | CEC#M28                                    | CEC#M22                                                   | CA [2A] 66B        | 5, 10, 15, 20                     | 5, 10, 15     | 5, 10, 15     |                                            | CEC#M39 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M28 |
| CEC#M23                                                   | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M23                                                   | CA [2A] 66B        | 5, 10, 15, 20                     | 5, 10, 15     | 5, 10, 15     |                                            | CEC#M40 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M29 |
| CEC#M24                                                   | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M24                                                   | CA [2A] 66C        | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 |                                            | CEC#M41 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M30 |
| CEC#M25                                                   | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M25                                                   | CA [2A] 66C        | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 |                                            | CEC#M42 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M31 |
| CEC#M26                                                   | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M26                                                   | CA [2A] 66C        | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 |                                            | CEC#M43 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M32 |
| CEC#M27                                                   | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M27                                                   | CA [2A] 66A-66A    | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 |                                            | CEC#M44 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M33 |
| CEC#M28                                                   | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M28                                                   | CA [2A] 66A-66A    | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 |                                            | CEC#M45 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M34 |
| CEC#M29                                                   | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M29                                                   | CA [2A] 66A-66A    | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 |                                            | CEC#M46 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M35 |
| CEC#M30                                                   | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M30                                                   | CA [2A] 66A-66A    | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 |                                            | CEC#M47 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M36 |
| CEC#M31                                                   | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M31                                                   | CA [2A] 66A-66A    | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 |                                            | CEC#M48 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M37 |
| CEC#M32                                                   | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M32                                                   | CA [2A] 66A-66A    | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 |                                            | CEC#M49 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M38 |
| CEC#M33                                                   | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M33                                                   | CA [2A] 66A-66A    | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 |                                            | CEC#M50 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M39 |
| CEC#M34                                                   | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M34                                                   | CA [2A] 66A-66A    | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 |                                            | CEC#M51 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M40 |
| CEC#M35                                                   | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M35                                                   | CA [2A] 66A-66A    | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 |                                            | CEC#M52 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M41 |
| CEC#M36                                                   | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M36                                                   | CA [2A] 66A-66A    | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 |                                            | CEC#M53 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M42 |
| CEC#M37                                                   | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M37                                                   | CA [2A] 66A-66A    | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 |                                            | CEC#M54 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M43 |
| CEC#M38                                                   | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M38                                                   | CA [2A] 66A-66A    | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 |                                            | CEC#M55 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M44 |
| CEC#M39                                                   | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M39                                                   | CA [2A] 66A-66A    | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 |                                            | CEC#M56 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M45 |
| CEC#M40                                                   | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M40                                                   | CA [2A] 66A-66A    | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 |                                            | CEC#M57 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M46 |
| CEC#M41                                                   | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M41                                                   | CA [2A] 66A-66A    | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 |                                            | CEC#M58 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M47 |
| CEC#M42                                                   | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M42                                                   | CA [2A] 66A-66A    | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 |                                            | CEC#M59 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M48 |
| CEC#M43                                                   | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M43                                                   | CA [2A] 66A-66A    | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 |                                            | CEC#M60 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M49 |
| CEC#M44                                                   | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M44                                                   | CA [2A] 66A-66A    | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 |                                            | CEC#M61 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M50 |
| CEC#M45                                                   | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M45                                                   | CA [2A] 66A-66A    | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 |                                            | CEC#M62 | CA [2A] 66C     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | CEC#M51 |
| CEC#M46                                                   | CA [2A] 66A-66A | 5, 10, 15, 20                     | 5, 10, 15, 20 |             | No                                         | CEC#M46                                                   | CA [2A] 66A-66A    | 5, 10, 15, 20                     | 5,            |               |                                            |         |                 |                                   |               |               |                                            |         |

Note: [CC] indicates component carrier with 4x4 DL MIMO antenna configuration

|                                           |                                                                                                                                                  |                           |                                                                                       |                                        |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---------------------------------------------------------------------------------------|----------------------------------------|
| FCC ID: ZNFG820UM                         |  <b>PCTEST</b><br><small>ENGINEERING LABORATORY, INC.</small> | SAR EVALUATION REPORT     |  | <b>Reviewed by:</b><br>Quality Manager |
| <b>Test Dates:</b><br>01/11/19 - 02/05/19 | <b>DUT Type:</b><br>Portable Handset                                                                                                             | APPENDIX G<br>Page 1 of 9 |                                                                                       |                                        |

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

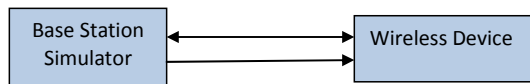
SAR test exclusion for LTE downlink Carrier Aggregation is determined by power measurements according to the number component carriers (CCs) supported by the product implementation. For those configurations required by April 2018 TCBC Workshop Notes, conducted power measurements with LTE Carrier Aggregation (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.

This device supports LAA with downlink carrier aggregation only. It uses carrier aggregation in the downlink to combine LTE in the unlicensed spectrum (i.e. LTE Band 46) with LTE in the licensed band (served as PCC). All uplink communications and acknowledgements on the PCC remain identical to specifications when downlink carrier aggregation is inactive.

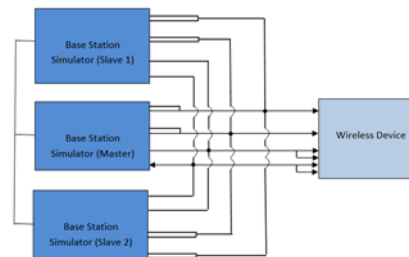
Per FCC KDB Publication 941225 D05Av01r02, no SAR measurements are required for carrier aggregation configurations when the maximum average output power with downlink only carrier aggregation active is not more than 0.25 dB higher than the average output power with downlink only carrier aggregation inactive.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



**Figure 2**  
**DL CA with DL 4x4 MIMO**  
**Power Measurement Setup**

|                                    |                                                                                                                                   |                       |                                                                                                 |                                 |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFG820UM                  |  <b>PCTEST</b><br>ENGINEERING LABORATORY, INC. | SAR EVALUATION REPORT |  <b>LG</b> | Reviewed by:<br>Quality Manager |
| Test Dates:<br>01/11/19 - 02/05/19 | DUT Type:<br>Portable Handset                                                                                                     |                       |                                                                                                 | APPENDIX G<br>Page 2 of 9       |

## 1.3 Downlink Carrier Aggregation RF Conducted Powers

### 1.3.1 LTE Band 71 as PCC

Table 1  
Maximum Output Powers

| Combination       | PCC Band | PCC BW [MHz] | PCC          |                      |      |           |                  |                  | SCC 1                |          |              |                  | SCC 2                |          |              |                  | SCC 3                |          |              |                  | Power                |                                       |                                   |
|-------------------|----------|--------------|--------------|----------------------|------|-----------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|
|                   |          |              | 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] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | LTE Tx Power with DL CA Enabled (dbm) | LTE Single Carrier Tx Power (dbm) |
| CA_2A-2A-66A-71A  | LTE B71  | 15           | 133297       | 680.5                | QPSK | 1         | 36               | 68761            | 634.5                | LTE B2   | 20           | 900              | 1960                 | LTE B2   | 20           | 700              | 1940                 | LTE B66  | 20           | 66786            | 2145                 | 25.33                                 | 25.27                             |
| CA_2A-66A-66A-71A | LTE B71  | 15           | 133297       | 680.5                | QPSK | 1         | 36               | 68761            | 634.5                | LTE B2   | 20           | 900              | 1960                 | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 67236            | 2190                 | 25.25                                 | 25.27                             |
| CA_2A-66C-71A     | LTE B71  | 15           | 133297       | 680.5                | QPSK | 1         | 36               | 68761            | 634.5                | LTE B2   | 20           | 900              | 1960                 | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 66984            | 2164.8               | 25.25                                 | 25.27                             |

### 1.3.2 LTE Band 12 as PCC

Table 2  
Maximum Output Powers

| Combination      | PCC Band | PCC BW [MHz] | PCC (UL) Ch | PCC                  |             |                  | Mod. | PCC UL RB | PCC UL RB Offset | PCC (DL) Channel | PCC (DL) Freq. [MHz] | SCC 1    |              |                  | SCC 2                |          |              | SCC 3            |                      |          | SCC 4        |                  |                      | Power    |              |                  |                      |                                       |
|------------------|----------|--------------|-------------|----------------------|-------------|------------------|------|-----------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|
|                  |          |              |             | PCC (UL) Freq. [MHz] | PCC (UL) RB | PCC (UL) Channel |      |           |                  |                  |                      | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | LTE Tx Power with DL CA Enabled (dBm) |
| CA_7A-12A-66A    | LTE B12  | 5            | 23095       | 707.5                | QPSK        | 1                | 12   | 5095      |                  | 737.5            | LTE B7               | 20       | 3100         | 2055             | LTE B66              | 20       | 66786        | 2145             |                      |          |              |                  |                      |          | 25.34        | 25.32            |                      |                                       |
| CA_13B-66A-66A   | LTE B12  | 5            | 23095       | 707.5                | QPSK        | 1                | 12   | 5095      |                  | 737.5            | LTE B12              | 5        | 5047         | 732.7            | LTE B66              | 20       | 66786        | 2145             | LTE B66              | 20       | 67236        | 2190             |                      |          | 25.27        | 25.32            |                      |                                       |
| CA_2A-2A-4A-12A  | LTE B12  | 5            | 23095       | 707.5                | QPSK        | 1                | 12   | 5095      |                  | 737.5            | LTE B2               | 20       | 900          | 1960             | LTE B2               | 20       | 700          | 1940             | LTE B4               | 20       | 2175         | 2132.0           |                      |          | 25.27        | 25.32            |                      |                                       |
| CA_2A-2A-12B-66A | LTE B12  | 5            | 23095       | 707.5                | QPSK        | 1                | 12   | 5095      |                  | 737.5            | LTE B12              | 5        | 5047         | 732.7            | LTE B2               | 20       | 900          | 1960             | LTE B2               | 20       | 700          | 1940             | LTE B66              | 20       | 66786        | 2145             | 25.26                | 25.32                                 |
| CA_2A-7A-12B-66A | LTE B12  | 5            | 23095       | 707.5                | QPSK        | 1                | 12   | 5095      |                  | 737.5            | LTE B12              | 5        | 5047         | 732.7            | LTE B2               | 20       | 900          | 1960             | LTE B7               | 20       | 3100         | 2055             | LTE B66              | 20       | 66786        | 2145             | 25.20                | 25.32                                 |
| CA_2A-7A-12A-66A | LTE B12  | 5            | 23095       | 707.5                | QPSK        | 1                | 12   | 5095      |                  | 737.5            | LTE B2               | 20       | 900          | 1960             | LTE B2               | 20       | 700          | 1940             | LTE B7               | 20       | 3100         | 2055             | LTE B66              | 20       | 66986        | 2145             | 25.14                | 25.32                                 |

### 1.3.3 LTE Band 13 as PCC

Table 3  
Maximum Output Powers

| Combination       | PCC Band | PCC BW [MHz] | PCC                  |              |             |          | Mod. | PCC UL RB | PCC UL RB Offset | PCC (DL) Channel | PCC (DL) Freq. [MHz] | SCC 1        |                  | SCC 2                |          | SCC 3        |                  | SCC 4                |          | Power        |                  |                      |                                       |                                   |       |        |       |       |
|-------------------|----------|--------------|----------------------|--------------|-------------|----------|------|-----------|------------------|------------------|----------------------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|-------|--------|-------|-------|
|                   |          |              | PCC (UL) Freq. [MHz] | PCC (UL) Ch. | PCC (UL) RB | SCC Band |      |           |                  |                  |                      | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |       |        |       |       |
| CA_2A-13A-46A     | LTE B13  | 5            | 23230                | 762          | QPSK        | 1        | 12   | 5230      |                  | 751              | LTE B2               | 20           | 900              | 1960                 | LTE B46  | 20           | 50665            | 5537.5               | -        | -            | -                | -                    | 25.41                                 | 25.29                             |       |        |       |       |
| CA_13A-46A-66B    | LTE B13  | 5            | 23230                | 762          | QPSK        | 1        | 12   | 5230      |                  | 751              | LTE B46              | 20           | 50665            | 5537.5               | LTE B66  | 15           | 66786            | 2145                 | LTE B66  | 5            | 66979            | 2154.3               | -                                     | -                                 | 25.42 | 25.29  |       |       |
| CA_13A-46A-66C    | LTE B13  | 5            | 23230                | 762          | QPSK        | 1        | 12   | 5230      |                  | 751              | LTE B46              | 20           | 50665            | 5537.5               | LTE B66  | 15           | 66786            | 2145                 | LTE B66  | 20           | 66984            | 2164.8               | -                                     | -                                 | 25.40 | 25.29  |       |       |
| CA_2A-13A-46C     | LTE B13  | 5            | 23230                | 762          | QPSK        | 1        | 12   | 5230      |                  | 751              | LTE B2               | 20           | 900              | 1960                 | LTE B46  | 20           | 50665            | 5537.5               | LTE B46  | 20           | 50467            | 5517.7               | -                                     | -                                 | 25.41 | 25.29  |       |       |
| CA_2A-13A-46A-66A | LTE B13  | 5            | 23230                | 762          | QPSK        | 1        | 12   | 5230      |                  | 751              | LTE B2               | 20           | 900              | 1960                 | LTE B46  | 20           | 50665            | 5537.5               | LTE B66  | 20           | 66786            | 2145                 | -                                     | -                                 | 25.42 | 25.29  |       |       |
| CA_13A-46C-66A    | LTE B13  | 5            | 23230                | 762          | QPSK        | 1        | 12   | 5230      |                  | 751              | LTE B46              | 20           | 50665            | 5537.5               | LTE B46  | 20           | 50467            | 5517.7               | LTE B46  | 20           | 50663            | 5557.3               | -                                     | -                                 | 25.41 | 25.29  |       |       |
| CA_2A-13A-46C-66A | LTE B13  | 5            | 23230                | 762          | QPSK        | 1        | 12   | 5230      |                  | 751              | LTE B2               | 20           | 900              | 1960                 | LTE B46  | 20           | 50665            | 5537.5               | LTE B46  | 20           | 50467            | 5517.7               | LTE B66                               | 20                                | 66986 | 2145   | 25.29 | 25.29 |
| CA_2A-13A-48D     | LTE B13  | 5            | 23230                | 762          | QPSK        | 1        | 12   | 5230      |                  | 751              | LTE B2               | 20           | 900              | 1960                 | LTE B48  | 20           | 50960            | 5625                 | LTE B48  | 20           | 50388            | 5644.8               | LTE B48                               | 20                                | 50388 | 5644.8 | 25.42 | 25.29 |

### 1.3.4 LTE Band 14 as PCC

Table 4  
Maximum Output Powers

| Combination       | PCC Band | PCC BW [MHz] | PCC          |                      |      |           |                  |                  | SCC 1                |          |              | SCC 2            |                      |          | SCC 3        |                  |                      | SCC 4    |              |                  | Power                |          |              |                  |                      |                                       |                                   |
|-------------------|----------|--------------|--------------|----------------------|------|-----------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|
|                   |          |              | 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] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_2A-14A-66A-66A | LTE B14  | 5            | 23330        | 793                  | QPSK | 1         | 0                | 5330             | 763                  | LTE B2   | 20           | 900              | 1960                 | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 67236            | 2190                 | LTE B66  | 20           | 66936            | 2220                 | 25.32                                 | 25.30                             |

### 1.3.5 LTE Band 5 as PCC

Table 5  
Maximum Output Powers

| Combination         | PCC Band | PCC BW [MHz] | PCC          |                      |             |                    | Mod. | PCC UL RB | PCC UL RB Offset | PCC (DL) Channel | PCC (DL) Freq. [MHz] | SCC 1    |              |                  | SCC 2                |          |              | SCC 3            |                      |          | SCC 4        |                  |                      | Power    |              |                  |                      |                         |
|---------------------|----------|--------------|--------------|----------------------|-------------|--------------------|------|-----------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|-------------------------|
|                     |          |              | PCC (UL) Ch. | PCC (UL) Freq. [MHz] | PCC (UL) RB | PCC (UL) RB Offset |      |           |                  |                  |                      | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | LTE Tx Power with DL CA |
| CA_5A-41A           | LTE B5   | 5            | 20525        | 836.5                | QPSK        | 1                  | 12   | 2525      |                  | 881.5            | LTE B41              | 20       | 40620        | 2593             | -                    | -        | -            | -                | -                    | -        | -            | -                | -                    | -        | 25.23        | 25.30            |                      |                         |
| CA_5A-5A            | LTE B5   | 5            | 20525        | 836.5                | QPSK        | 1                  | 12   | 2525      |                  | 881.5            | LTE B5               | 10       | 2450         | 874              | -                    | -        | -            | -                | -                    | -        | -            | -                | -                    | -        | 25.28        | 25.30            |                      |                         |
| CA_5A-5A (1)        | LTE B5   | 5            | 20415        | 825.5                | QPSK        | 1                  | 14   | 2415      |                  | 870.5            | LTE B5               | 5        | 2425         | 893.5            | -                    | -        | -            | -                | -                    | -        | -            | -                | -                    | -        | 25.28        | 25.29            |                      |                         |
| CA_2A-5A-46A        | LTE B5   | 5            | 20525        | 836.5                | QPSK        | 1                  | 12   | 2525      |                  | 881.5            | LTE B2               | 20       | 900          | 1960             | LTE B46              | 20       | 50665        | 5537.5           | -                    | -        | -            | -                | -                    | -        | 25.13        | 25.30            |                      |                         |
| CA_5A-46A-66A       | LTE B5   | 5            | 20525        | 836.5                | QPSK        | 1                  | 12   | 2525      |                  | 881.5            | LTE B46              | 20       | 50665        | 5537.5           | LTE B66              | 20       | 66786        | 2145             | -                    | -        | -            | -                | -                    | -        | 25.06        | 25.30            |                      |                         |
| CA_5A-46C           | LTE B5   | 5            | 20525        | 836.5                | QPSK        | 1                  | 12   | 2525      |                  | 881.5            | LTE B46              | 20       | 50665        | 5537.5           | LTE B46              | 20       | 66786        | 2145             | -                    | -        | -            | -                | -                    | -        | 25.13        | 25.30            |                      |                         |
| CA_2A-5A-46C        | LTE B5   | 5            | 20525        | 836.5                | QPSK        | 1                  | 12   | 2525      |                  | 881.5            | LTE B2               | 20       | 900          | 1960             | LTE B46              | 20       | 50665        | 5537.5           | LTE B46              | 20       | 50467        | 5517.7           | -                    | -        | 25.05        | 25.30            |                      |                         |
| CA_5A-46C-66A       | LTE B5   | 5            | 20525        | 836.5                | QPSK        | 1                  | 12   | 2525      |                  | 881.5            | LTE B46              | 20       | 50665        | 5537.5           | LTE B46              | 20       | 50467        | 5517.7           | LTE B66              | 20       | 50467        | 5517.7           | -                    | -        | 25.09        | 25.30            |                      |                         |
| CA_5A-48D (1)       | LTE B5   | 5            | 20525        | 836.5                | QPSK        | 1                  | 12   | 2525      |                  | 881.5            | LTE B46              | 20       | 50665        | 5537.5           | LTE B46              | 20       | 50467        | 5517.7           | LTE B46              | 20       | 50663        | 5557.3           | -                    | -        | 25.13        | 25.30            |                      |                         |
| CA_5A-48D           | LTE B5   | 5            | 20525        | 836.5                | QPSK        | 1                  | 12   | 2525      |                  | 881.5            | LTE B46              | 20       | 50665        | 5537.5           | LTE B46              | 20       | 50663        | 5557.3           | LTE B46              | 20       | 50663        | 5557.3           | -                    | -        | 25.14        | 25.30            |                      |                         |
| CA_2A-2A-5A-46A-66A | LTE B5   | 5            | 20525        | 836.5                | QPSK        | 1                  | 12   | 2525      |                  | 881.5            | LTE B2               | 20       | 900          | 1960             | LTE B2               | 20       | 700          | 1940             | LTE B66              | 20       | 66786        | 2145             | -                    | -        | 25.03        | 25.30            |                      |                         |
| CA_2A-5A-48D        | LTE B5   | 5            | 20525        | 836.5                | QPSK        | 1                  | 12   | 2525      |                  | 881.5            | LTE B2               | 20       | 900          | 1960             | LTE B46              | 20       | 50665        | 5537.5           | LTE B46              | 20       | 50467        | 5517.7           | LTE B66              | 20       | 66986        | 2145             | 25.10                | 25.30                   |
| CA_5A-46D-66A       | LTE B5   | 5            | 20525        | 836.5                | QPSK        | 1                  | 12   | 2525      |                  | 881.5            | LTE B46              | 20       | 50665        | 5537.5           | LTE B46              | 20       | 50467        | 5517.7           | LTE B46              | 20       | 50467        | 5517.7           | LTE B66              | 20       | 66986        | 2145             | 25.14                | 25.30                   |

|                                    |                                                                                     |                           |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|---------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFG820UM                  |  | SAR EVALUATION REPORT     |  | Reviewed by:<br>Quality Manager |
| Test Dates:<br>01/11/19 - 02/05/19 | DUT Type:<br>Portable Handset                                                       | APPENDIX G<br>Page 3 of 9 |                                                                                       |                                 |

### 1.3.6 LTE Band 26 as PCC

**Table 6**  
**Maximum Output Powers**

|                | PCC      |              |              |                      |      |         |                  |                  |                      | SCC 1    |              |                  | SCC 2                |          |              | Power            |                      |                                       |                                   |
|----------------|----------|--------------|--------------|----------------------|------|---------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|
| Combination    | PCC Band | PCC BW [MHz] | PCC [UL] Ch. | PCC [UL] Freq. [MHz] | Mod. | PCC UL# | PCC UL RB Offset | PCC [DL] Channel | PCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Channel | SCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Channel | SCC [DL] Freq. [MHz] | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_25A-25A-26A | LTE B26  | 3            | 26865        | 831.5                | QPSK | 1       | 14               | 8865             | 876.5                | LTE B25  | 20           | 8365             | 1962.5               | LTE B25  | 20           | 8590             | 1985                 | 25.42                                 | 25.41                             |

### 1.3.7 LTE Band 66 as PCC

**Table 7**  
**Maximum Output Powers**

[illegible]

### 1.3.8 LTE Band 25 as PCC

**Table 8**  
**Maximum Output Powers**

|                | PCC      |              |              |                      |      |         |                  |                  |                      | SCC 1    |              |                  |                      | SCC 2    |              |                  |                      | Power                                 |                                   |
|----------------|----------|--------------|--------------|----------------------|------|---------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|
| Combination    | PCC Band | PCC BW [MHz] | PCC [UL] Ch. | PCC [UL] Freq. [MHz] | Mod. | PCC UL# | PCC UL RB Offset | PCC [DL] Channel | PCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Channel | SCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Channel | SCC [DL] Freq. [MHz] | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_25A-25A-26A | LTE B25  | 15           | 26365        | 1882.5               | QPSK | 1       | 74               | 8365             | 1962.5               | LTE B25  | 20           | 8140             | 1940                 | LTE B26  | 5            | 8865             | 876.5                | 23.16                                 | 25.19                             |

### 1.3.9 LTE Band 7 as PCC

**Table 9**  
**Maximum Output Powers**

| Combination      | PCB Band | PCC          |          |                      |      |             |                 | SSC-1            |                      |          |              | SSC-2            |                      |          |              | SSC-3            |                      |          |              | Power            |                      |                                    |                                   |
|------------------|----------|--------------|----------|----------------------|------|-------------|-----------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|------------------------------------|-----------------------------------|
|                  |          | PCC BW [MHz] | PCC [Hz] | PCC [Hz] Freq. [MHz] | QPSK | PCC ULIR BB | PCC ULIR Offset | PCC [Hz] Channel | PCC [Hz] Freq. [MHz] | SSC Band | SSC BW [MHz] | SSC [Hz] Channel | SSC [Hz] Freq. [MHz] | SSC Band | SSC BW [MHz] | SSC [Hz] Channel | SSC [Hz] Freq. [MHz] | SSC Band | SSC BW [MHz] | SSC [Hz] Channel | SSC [Hz] Freq. [MHz] | LTE Tx Power with CA Enabled [dBm] | LTE Single Carrier Tx Power [dBm] |
| CA-2A-2A         | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B2   | 10           | 5055             | 2140                 | -        | -            | -                | -                    | 21.69                              | 21.70                             |
| CA-7A-2A-55A     | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B12  | 10           | 5055             | 737.5                | LTE B56  | 20           | 66795            | 2145                 | -        | -            | -                | -                    | 21.68                              | 21.70                             |
| CA-7A-6A-65A     | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B56  | 20           | 66795            | 2145                 | LTE B56  | 20           | 66795            | 2180                 | -        | -            | -                | -                    | 21.68                              | 21.70                             |
| CA-7A-6A-65A     | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B56  | 20           | 66795            | 2145                 | LTE B56  | 20           | 66795            | 2180                 | -        | -            | -                | -                    | 21.68                              | 21.70                             |
| CA-7A-4B(1)      | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B46  | 20           | 50565            | 9517.7               | LTE B46  | 20           | 50565            | 9517.7               | -        | -            | -                | -                    | 21.68                              | 21.70                             |
| CA-7A-4B(1)      | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B46  | 20           | 50565            | 9517.7               | LTE B46  | 20           | 50565            | 9517.7               | -        | -            | -                | -                    | 21.68                              | 21.70                             |
| CA-7C-6A-65A     | LTE B7   | 20           | 21100    | 2535                 | QPSK | 1           | 69              | 3100             | 2655                 | LTE B7   | 20           | 2652             | 2632.2               | LTE B46  | 20           | 50565            | 6539.5               | LTE B46  | 20           | 50565            | 9517.7               | 21.68                              | 21.68                             |
| CA-7C-6A-65A     | LTE B7   | 20           | 21100    | 2535                 | QPSK | 1           | 69              | 3400             | 2685                 | LTE B7   | 20           | 2652             | 2632.2               | LTE B46  | 20           | 50565            | 6539.5               | LTE B46  | 20           | 50565            | 9517.7               | 21.68                              | 21.70                             |
| CA-2A-7A-25A     | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.69                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK | 1           | 49              | 3400             | 2685                 | LTE B2   | 10           | 5055             | 1960                 | LTE B12  | 10           | 5055             | 737.5                | LTE B12  | 10           | 5055             | 737.5                | 21.68                              | 21.70                             |
| CA-2A-7A-25A-65A | LTE B7   | 10           | 21400    | 2565                 | QPSK |             |                 |                  |                      |          |              |                  |                      |          |              |                  |                      |          |              |                  |                      |                                    |                                   |

### 1.3.10 LTE Band 30 as PCC

**Table 10**  
**Maximum Output Powers**

| Combination        | PCC Band | PCC          |              |                      |      |           | SCC 1            |                  |                      |          | SCC 2        |                  |                      |          | SCC 3        |                  |                      |          | Power        |                  |                      |                                    |                                   |
|--------------------|----------|--------------|--------------|----------------------|------|-----------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|------------------------------------|-----------------------------------|
|                    |          | PCC BW [MHz] | PCC [UL] Ch. | PCC [UL] Freq. [MHz] | Mod. | PCC UL/RB | PCC UL/RB Offset | PCC [DL] Channel | PCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Channel | SCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Channel | SCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Channel | SCC [DL] Freq. [MHz] | LTE Tx Power with CA Enabled (dbm) | LTE Single Carrier Tx Power (dbm) |
| CA 29A-30A-66A-66A | LTE B30  | 5            | 27710        | 2310                 | QPSK | 1         | 24               | 9820             | 2355                 | LTE B20  | 10           | 9715             | 722.5                | LTE B68  | 20           | 66786            | 2145                 | LTE B68  | 20           | 67236            | 2190                 | 21.49                              | 21.49                             |

|                                           |                                                                                                                                                         |                              |                                                                                       |                                        |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|---------------------------------------------------------------------------------------|----------------------------------------|
| <b>FCC ID:</b> ZNFG820UM                  |  <b>PCTEST</b><br><small>PROFESSIONAL COMMUNICATIONS TESTING</small> | <b>SAR EVALUATION REPORT</b> |  | <b>Reviewed by:</b><br>Quality Manager |
| <b>Test Dates:</b><br>01/11/19 - 02/05/19 | <b>DUT Type:</b><br>Portable Handset                                                                                                                    |                              |                                                                                       | APPENDIX G<br>Page 4 of 9              |

### 1.3.11 LTE Band 41 as PCC

**Table 11**  
**Maximum Output Powers**

|                | PCC      |              |              |                      |      |           |                  |                  |                      | SCC 1    |              |                  |                      | SCC 2    |              |                  |                      | SCC 3    |              |                  |                      | Power                                 |                                   |
|----------------|----------|--------------|--------------|----------------------|------|-----------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|
| Combination    | 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] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_41A-41A-41C | LTE B41  | 15           | 40620        | 2593                 | QPSK | 1         | 74               | 40620            | 2593                 | LTE B41  | 20           | 40185            | 2549.5               | LTE B41  | 20           | 41490            | 2690                 | LTE B41  | 20           | 41292            | 2690.2               | 25.14                                 | 25.16                             |
| CA_41E         | LTE B41  | 15           | 40620        | 2593                 | QPSK | 1         | 74               | 40620            | 2593                 | LTE B41  | 20           | 40449            | 2579.9               | LTE B41  | 20           | 40791            | 2610.1               | LTE B41  | 20           | 40989            | 2629.9               | 25.15                                 | 25.16                             |

### 1.3.12 LTE Band 41 PC2 as PCC

**Table 12**  
**Maximum Output Powers**

| Combination    | PCC         |              |              |                      |      |           |                  |                  |                      | SCC 1       |              |                  |                      | SCC 2       |              |                  |                      | SCC 3       |              |                  |                      | 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] | SCC Band    | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band    | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | LTE Tx Power with DL CA Enabled [dBm] | LTE Single Carrier Tx Power (dBm) |
| CA_41A-41A-41C | LTE B41 PC2 | 20           | 40620        | 2593                 | QPSK | 1         | 99               | 40620            | 2593                 | LTE B41 PC2 | 20           | 40185            | 2549.5               | LTE B41 PC2 | 20           | 41490            | 2690                 | LTE B41 PC2 | 20           | 41292            | 2690.2               | 27.65                                 | 27.66                             |
| CA_41E         | LTE B41 PC2 | 20           | 40620        | 2593                 | QPSK | 1         | 99               | 40620            | 2593                 | LTE B41 PC2 | 20           | 40422            | 2573.2               | LTE B41 PC2 | 20           | 40818            | 2612.8               | LTE B41 PC2 | 20           | 41016            | 2632.6               | 27.64                                 | 27.66                             |

### 1.3.1 LTE Band 48 as PCC

**Table 13**  
**Maximum Output Powers**

| Combination | PCC      |              |              |                      |      |           |                  |                  | SCC 1                |          |              |                  | SCC 2                |          |              |                  | SCC 3                |          |              |                  | 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] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Channel | SCC (DL) Freq. [MHz] | LTE Tx Power with DL CA Enabled [dBm] | LTE Single Carrier Tx Power (dBm) |
| CA_48D      | LTE B48  | 5            | 55265        | 3552.5               | QPSK | 1         | 12               | 55265            | 3552.5               | LTE B48  | 20           | 55382            | 3564.2               | LTE B48  | 20           | 55580            | 3584                 | -        | -            | -                | -                    | 22.70                                 | 22.68                             |
| CA_48E      | LTE B48  | 5            | 55265        | 3552.5               | QPSK | 1         | 12               | 55265            | 3552.5               | LTE B48  | 20           | 55382            | 3564.2               | LTE B48  | 20           | 55580            | 3584                 | LTE B48  | 20           | 55778            | 3603.8               | 22.70                                 | 22.68                             |

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFG820UM                  |  | SAR EVALUATION REPORT |  | Reviewed by:<br>Quality Manager |
| Test Dates:<br>01/11/19 - 02/05/19 | DUT Type:<br>Portable Handset                                                       |                       |                                                                                       | APPENDIX G<br>Page 5 of 9       |

## 1.4 DL CA with DL 4x4 MIMO RF Conduction Powers

This device supports downlink 4x4 MIMO operations for some LTE bands. Uplink transmission is limited to a single output stream. When carrier aggregation was applicable, the general test selection and setup procedures described in Section 1.2 were applied.

Per May 2017 TCB Workshop Notes, SAR for 4x4 DL MIMO was not needed since the maximum average output power in 4x4 DL MIMO mode was not more than 0.25 dB higher than the maximum output power with 4x4 DL MIMO inactive. Additionally, SAR for 4x4 MIMO Downlink Carrier Aggregation was not needed since the maximum average output power in 4x4 MIMO Downlink Carrier Aggregation mode was not more than 0.25 dB higher than the maximum output power with 4x4 MIMO Downlink and downlink carrier aggregation inactive.

### 1.4.1 LTE 4x4 MIMO DL Standalone Powers

Table 14  
Maximum Output Powers

| Combination             | PCC Band | PCC          |              |                      |      |           |                  |              |                      |                 |          | SCC 1        |              |                      |                 | SCC 2    |              |              |                      | SCC 3           |          |              |              | Power                |                 |                                 |                                   |
|-------------------------|----------|--------------|--------------|----------------------|------|-----------|------------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|---------------------------------|-----------------------------------|
|                         |          | PCC BW [MHz] | PCC (UL) Ch. | PCC (UL) Freq. [MHz] | Mod. | PCC UL RB | PCC UL RB Offset | PCC (DL) Ch. | PCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | LTE Tx Power with DL CA Enabled | LTE Single Carrier Tx Power (dBm) |
| CA_[2A]_[2A]_[66A]-71A  | LTE B71  | 15           | 133297       | 680.5                | QPSK | 1         | 36               | 68761        | 634.5                | 2x2             | LTE B2   | 20           | 900          | 1960                 | 4x4             | LTE B2   | 20           | 700          | 1940                 | 4x4             | LTE B66  | 20           | 66786        | 2145                 | 4x4             | 25.14                           | 25.27                             |
| CA_[2A]_[66A]_[66A]-71A | LTE B71  | 15           | 133297       | 680.5                | QPSK | 1         | 36               | 68761        | 634.5                | 2x2             | LTE B2   | 20           | 900          | 1960                 | 4x4             | LTE B66  | 20           | 66786        | 2145                 | 4x4             | LTE B66  | 20           | 67236        | 2190                 | 4x4             | 25.28                           | 25.27                             |
| CA_[2A]_[66C]-71A       | LTE B71  | 15           | 133297       | 680.5                | QPSK | 1         | 36               | 68761        | 634.5                | 2x2             | LTE B2   | 20           | 900          | 1960                 | 4x4             | LTE B66  | 20           | 66786        | 2145                 | 4x4             | LTE B66  | 20           | 66984        | 2164.8               | 4x4             | 25.17                           | 25.27                             |

### 1.4.2 LTE Band 12 as PCC

Table 15  
Maximum Output Powers

| Combination                     | PCC Band | PCC BW [MHz] | PCC (UL) Freq. [MHz] | Mod.  | PCC UL RB | PCC UL RB Offset | PCC (DL) Ch. | PCC (DL) Freq. [MHz] | DL Ant. Config. | SCC 1    |              |              |                      | SCC 2           |          |              |              | SCC 3                |                 |          |              | Power        |                      |                 |                         |                                   |       |
|---------------------------------|----------|--------------|----------------------|-------|-----------|------------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|-------------------------|-----------------------------------|-------|
|                                 |          |              |                      |       |           |                  |              |                      |                 | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | LTE Tx Power with DL CA | LTE Single Carrier Tx Power [dBm] |       |
| CA_[2A]_[12A]_[66A]_[66A]       | LTE B12  | 5            | 23095                | 707.5 | QPSK      | 1                | 12           | 5095                 | 737.5           | 2x2      | LTE B2       | 20           | 900                  | 1960            | 4x4      | LTE B66      | 20           | 66786                | 2145            | 4x4      | LTE B66      | 20           | 67236                | 2190            | 4x4                     | 25.32                             | 25.32 |
| CA_[2A]_[12A]_[66C]_[66A]       | LTE B12  | 5            | 23095                | 707.5 | QPSK      | 1                | 12           | 5095                 | 737.5           | 2x2      | LTE B2       | 20           | 900                  | 1960            | 4x4      | LTE B66      | 20           | 66786                | 2145            | 4x4      | LTE B66      | 20           | 66984                | 2164.8          | 4x4                     | 25.27                             | 25.32 |
| CA_[2A]_[2A]_[12A]_[66A]        | LTE B12  | 5            | 23095                | 707.5 | QPSK      | 1                | 12           | 5095                 | 737.5           | 2x2      | LTE B2       | 20           | 900                  | 1960            | 4x4      | LTE B2       | 20           | 700                  | 1940            | 4x4      | LTE B66      | 20           | 66786                | 2145            | 4x4                     | 25.30                             | 25.32 |
| CA_[2A]_[66A]_[66A]_[66A]_[12A] | LTE B12  | 5            | 23095                | 707.5 | QPSK      | 1                | 12           | 5095                 | 737.5           | 2x2      | LTE B2       | 20           | 900                  | 1960            | 4x4      | LTE B2       | 20           | 700                  | 1940            | 4x4      | LTE B66      | 20           | 66786                | 2145            | 4x4                     | 25.28                             | 25.32 |
| CA_[2A]_[7A]_[12A]_[66A]        | LTE B12  | 5            | 23095                | 707.5 | QPSK      | 1                | 12           | 5095                 | 737.5           | 2x2      | LTE B2       | 20           | 900                  | 1960            | 4x4      | LTE B7       | 20           | 3100                 | 2655            | 4x4      | LTE B66      | 20           | 66786                | 2145            | 2x2                     | 25.38                             | 25.32 |
| CA_[2A]_[7A]_[12A]_[66A]        | LTE B12  | 5            | 23095                | 707.5 | QPSK      | 1                | 12           | 5095                 | 737.5           | 2x2      | LTE B2       | 20           | 900                  | 1960            | 4x4      | LTE B7       | 20           | 3100                 | 2655            | 4x4      | LTE B66      | 20           | 66786                | 2145            | 4x4                     | 25.35                             | 25.32 |
| CA_[2A]_[2A]_[12A]_[30A]_[66A]  | LTE B12  | 5            | 23095                | 707.5 | QPSK      | 1                | 12           | 5095                 | 737.5           | 2x2      | LTE B2       | 20           | 900                  | 1960            | 4x4      | LTE B2       | 20           | 700                  | 1940            | 4x4      | LTE B30      | 10           | 8620                 | 2355            | 2x2                     | 25.31                             | 25.32 |
| CA_[2A]_[2A]_[12A]_[30A]_[66A]  | LTE B12  | 5            | 23095                | 707.5 | QPSK      | 1                | 12           | 5095                 | 737.5           | 2x2      | LTE B2       | 20           | 900                  | 1960            | 4x4      | LTE B2       | 20           | 700                  | 1940            | 2x2      | LTE B66      | 20           | 66786                | 2145            | 4x4                     | 25.30                             | 25.32 |
| CA_[2A]_[7A]_[12B]_[66A]        | LTE B12  | 5            | 23095                | 707.5 | QPSK      | 1                | 12           | 5095                 | 737.5           | 2x2      | LTE B12      | 5            | 5047                 | 732.7           | 2x2      | LTE B2       | 20           | 900                  | 1960            | 4x4      | LTE B7       | 20           | 3100                 | 2655            | 4x4                     | 25.33                             | 25.32 |
| CA_[2A]_[7A]_[12B]_[66A]        | LTE B12  | 5            | 23095                | 707.5 | QPSK      | 1                | 12           | 5095                 | 737.5           | 2x2      | LTE B12      | 5            | 5047                 | 732.7           | 2x2      | LTE B2       | 20           | 900                  | 1960            | 4x4      | LTE B7       | 20           | 3100                 | 2655            | 2x2                     | 25.33                             | 25.32 |
| CA_[2A]_[7A]_[12B]_[66A]        | LTE B12  | 5            | 23095                | 707.5 | QPSK      | 1                | 12           | 5095                 | 737.5           | 2x2      | LTE B12      | 5            | 5047                 | 732.7           | 2x2      | LTE B2       | 20           | 900                  | 1960            | 2x2      | LTE B7       | 20           | 3100                 | 2655            | 4x4                     | 25.35                             | 25.32 |
| CA_[2A]_[7A]_[12B]_[66A]        | LTE B12  | 5            | 23095                | 707.5 | QPSK      | 1                | 12           | 5095                 | 737.5           | 2x2      | LTE B12      | 5            | 5047                 | 732.7           | 2x2      | LTE B2       | 20           | 900                  | 1960            | 4x4      | LTE B7       | 20           | 3100                 | 2655            | 2x2                     | 25.38                             | 25.32 |
| CA_[2A]_[7A]_[12B]_[66A]        | LTE B12  | 5            | 23095                | 707.5 | QPSK      | 1                | 12           | 5095                 | 737.5           | 2x2      | LTE B12      | 5            | 5047                 | 732.7           | 2x2      | LTE B2       | 20           | 900                  | 1960            | 2x2      | LTE B7       | 20           | 3100                 | 2655            | 4x4                     | 25.35                             | 25.32 |
| CA_[2A]_[7A]_[12B]_[66A]        | LTE B12  | 5            | 23095                | 707.5 | QPSK      | 1                | 12           | 5095                 | 737.5           | 2x2      | LTE B12      | 5            | 5047                 | 732.7           | 2x2      | LTE B2       | 20           | 900                  | 1960            | 2x2      | LTE B7       | 20           | 3100                 | 2655            | 2x2                     | 25.38                             | 25.32 |

### 1.4.3 LTE Band 13 as PCC

Table 16  
Maximum Output Powers

| Combination               | PCC Band | PCC BW [MHz] | PCC (UL) Ch. | PCC (UL) Freq. [MHz] | Mod. | PCC UL RB | PCC UL RB Offset | PCC (DL) Ch. | PCC (DL) Freq. [MHz] | DL Ant. Config. | SCC 1    |              |              |                      | SCC 2           |          |              |              | SCC 3                |                 |          |              | Power        |                      |                 |                                 |                                   |
|---------------------------|----------|--------------|--------------|----------------------|------|-----------|------------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|---------------------------------|-----------------------------------|
|                           |          |              |              |                      |      |           |                  |              |                      |                 | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | LTE Tx Power with DL CA Enabled | LTE Single Carrier Tx Power (dBm) |
| CA_[2A]_[13A]_[66A]_[66A] | LTE B13  | 5            | 23230        | 782                  | QPSK | 1         | 12               | 5230         | 751                  | 2x2             | LTE B2   | 20           | 900          | 1960                 | 4x4             | LTE B66  | 20           | 66786        | 2145                 | 4x4             | LTE B66  | 20           | 67236        | 2190                 | 4x4             | 25.49                           | 25.29                             |
| CA_[2A]_[13A]_[66B]_[66A] | LTE B13  | 5            | 23230        | 782                  | QPSK | 1         | 12               | 5230         | 751                  | 2x2             | LTE B2   | 20           | 900          | 1960                 | 4x4             | LTE B66  | 15           | 66786        | 2145                 | 4x4             | LTE B66  | 5            | 66879        | 2154.3               | 4x4             | 25.45                           | 25.29                             |
| CA_[2A]_[13A]_[66C]_[66A] | LTE B13  | 5            | 23230        | 782                  | QPSK | 1         | 12               | 5230         | 751                  | 2x2             | LTE B2   | 20           | 900          | 1960                 | 4x4             | LTE B66  | 20           | 66786        | 2145                 | 4x4             | LTE B66  | 20           | 66984        | 2164.8               | 4x4             | 25.44                           | 25.29                             |
| CA_[2A]_[2A]_[13A]_[66A]  | LTE B13  | 5            | 23230        | 782                  | QPSK | 1         | 12               | 5230         | 751                  | 2x2             | LTE B2   | 20           | 900          | 1960                 | 4x4             | LTE B2   | 20           | 700          | 1940                 | 4x4             | LTE B66  | 20           | 66786        | 2145                 | 4x4             | 25.48                           | 25.29                             |

|                                    |                                                                                     |                           |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|---------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFG820UM                  |  | SAR EVALUATION REPORT     |  | Reviewed by:<br>Quality Manager |
| Test Dates:<br>01/11/19 - 02/05/19 | DUT Type:<br>Portable Handset                                                       | APPENDIX G<br>Page 6 of 9 |                                                                                       |                                 |



#### 1.4.6 LTE Band 7 as PCC

**Table 19**  
**Maximum Output Powers**

| Combination        | PCB Band | PCB BW [MHz] | UT Ch. | PCC [U/L] | Mod. | PCC       |        |                  |           | SVC 1     |                   |                 |              | SVC 2         |                       |                 |              | SVC 3         |                       |                 |              | SVC 4         |                       |                 |              | Power         |                       |                 |                            |                                   |      |      |      |
|--------------------|----------|--------------|--------|-----------|------|-----------|--------|------------------|-----------|-----------|-------------------|-----------------|--------------|---------------|-----------------------|-----------------|--------------|---------------|-----------------------|-----------------|--------------|---------------|-----------------------|-----------------|--------------|---------------|-----------------------|-----------------|----------------------------|-----------------------------------|------|------|------|
|                    |          |              |        |           |      | PCB [U/L] | PCB RB | PCB UL RB Offset | PCB [D/L] | PCC [D/L] | PCC [Freq. [MHz]] | DL Ant. Config. | SVC BW [MHz] | SVC [D/L] Ch. | SVC [D/L] Freq. [MHz] | DL Ant. Config. | SVC BW [MHz] | SVC [D/L] Ch. | SVC [D/L] Freq. [MHz] | DL Ant. Config. | SVC BW [MHz] | SVC [D/L] Ch. | SVC [D/L] Freq. [MHz] | DL Ant. Config. | SVC BW [MHz] | SVC [D/L] Ch. | SVC [D/L] Freq. [MHz] | DL Ant. Config. | LTE Tx Power with CA [dBm] | LTE Single Carrier Tx Power [dBm] |      |      |      |
| CA_2A[2A]40A[7A]   | LTE B7   | 10           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 4x4       | LTE B82           | 20              | 900          | 1960          | 4x4                   | LTE B82         | 20           | 1900          | 4x4                   | LTE B82         | 20           | 1900          | 4x4                   | LTE B82         | 20           | 1900          | 4x4                   | 23.6            | 23.6                       |                                   |      |      |      |
| CA_4A[4A]40A[7A]   | LTE B7   | 10           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 4x4       | LTE B84           | 20              | 2175         | 2132.5        | 4x4                   | LTE B84         | 20           | 2100          | 4x4                   | LTE B84         | 20           | 2100          | 4x4                   | LTE B84         | 20           | 2100          | 4x4                   | 23.6            | 23.6                       |                                   |      |      |      |
| CA_7A[7A]40A[7A]   | LTE B7   | 10           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 4x4       | LTE B68           | 20              | 6878         | 2145          | 4x4                   | LTE B68         | 20           | 6736          | 2190                  | 4x4             | LTE B68      | 20            | 6736                  | 2190            | 4x4          | LTE B68       | 20                    | 6736            | 2190                       | 23.6                              | 23.6 |      |      |
| CA_10A[10A]40A[7A] | LTE B7   | 10           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 4x4       | LTE B68           | 20              | 6878         | 2145          | 2x2                   | LTE B68         | 20           | 6736          | 2190                  | 4x4             | LTE B68      | 20            | 6736                  | 2190            | 4x4          | LTE B68       | 20                    | 6736            | 2190                       | 23.6                              | 23.6 |      |      |
| CA_7A[7A]40A[6A]   | LTE B7   | 10           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 4x4       | LTE B17           | 20              | 2650         | 5337.5        | 4x4                   | LTE B48         | 20           | 5065          | 5337.5                | 2x2             | LTE B48      | 20            | 5065                  | 5337.5          | 2x2          | LTE B48       | 20                    | 5065            | 5337.5                     | 23.6                              | 23.6 |      |      |
| CA_7A[7A]40A[6A]   | LTE B7   | 10           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 2x2       | LTE B17           | 20              | 2650         | 5337.5        | 2x2                   | LTE B48         | 20           | 5065          | 5337.5                | 2x2             | LTE B48      | 20            | 5065                  | 5337.5          | 2x2          | LTE B48       | 20                    | 5065            | 5337.5                     | 23.6                              | 23.6 |      |      |
| CA_7A[7A]40A[6A]   | LTE B7   | 10           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 4x4       | LTE B17           | 20              | 2650         | 2600          | 2x2                   | LTE B48         | 20           | 5065          | 5337.5                | 2x2             | LTE B48      | 20            | 5065                  | 5337.5          | 2x2          | LTE B48       | 20                    | 5065            | 5337.5                     | 23.6                              | 23.6 |      |      |
| CA_7A[7A]40A[6A]   | LTE B7   | 10           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 2x2       | LTE B68           | 20              | 6878         | 2145          | 4x4                   | LTE B68         | 20           | 6736          | 2190                  | 4x4             | LTE B68      | 20            | 6736                  | 2190            | 4x4          | LTE B68       | 20                    | 6736            | 2190                       | 23.6                              | 23.6 |      |      |
| CA_7A[7A]40A[6A]   | LTE B7   | 10           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 4x4       | LTE B68           | 20              | 6878         | 2145          | 4x4                   | LTE B68         | 20           | 6736          | 2190                  | 2x2             | LTE B68      | 20            | 6736                  | 2190            | 2x2          | LTE B68       | 20                    | 6736            | 2190                       | 23.6                              | 23.6 |      |      |
| CA_2A[2A]40A[6A]   | LTE B7   | 10           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 4x4       | LTE B82           | 20              | 900          | 1960          | 4x4                   | LTE B82         | 20           | 1900          | 2x2                   | LTE B82         | 20           | 1900          | 2x2                   | LTE B82         | 20           | 1900          | 2x2                   | LTE B82         | 20                         | 1900                              | 2x2  | 23.6 | 23.6 |
| CA_2A[2A]40A[6A]   | LTE B7   | 10           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 4x4       | LTE B82           | 20              | 2850         | 2630          | 4x4                   | LTE B82         | 20           | 900           | 1960                  | 4x4             | LTE B84      | 20            | 2175                  | 2132.5          | 4x4          | LTE B84       | 20                    | 2175            | 2132.5                     | 23.6                              | 23.6 |      |      |
| CA_2A[2A]40A[6A]   | LTE B7   | 10           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 4x4       | LTE B82           | 20              | 900          | 1960          | 4x4                   | LTE B17         | 20           | 5095          | 737.5                 | 2x2             | LTE B68      | 20            | 6878                  | 2145            | 4x4          | LTE B68       | 20                    | 6878            | 2145                       | 23.6                              | 23.6 |      |      |
| CA_2A[2A]40A[6A]   | LTE B7   | 10           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 4x4       | LTE B82           | 20              | 900          | 1960          | 4x4                   | LTE B17         | 20           | 5095          | 737.5                 | 2x2             | LTE B68      | 20            | 6878                  | 2145            | 4x4          | LTE B68       | 20                    | 6878            | 2145                       | 23.6                              | 23.6 |      |      |
| CA_7C[7C]40A[6A]   | LTE B7   | 20           | 23100  | 2535      | QPSK | 1         | 99     | 1300             | 2605      | 4x4       | LTE B87           | 20              | 2902         | 2652.5        | 4x4                   | LTE B48         | 20           | 5065          | 5337.5                | 2x2             | LTE B48      | 20            | 5065                  | 5337.7          | 2x2          | LTE B48       | 20                    | 5065            | 5337.7                     | 23.6                              | 23.6 |      |      |
| CA_7C[7C]40A[6A]   | LTE B7   | 20           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 4x4       | LTE B87           | 20              | 3256         | 2670.6        | 4x4                   | LTE B68         | 20           | 6878          | 2145                  | 4x4             | LTE B68      | 20            | 6736                  | 2190            | 4x4          | LTE B68       | 20                    | 6736            | 2190                       | 23.6                              | 23.6 |      |      |
| CA_7C[7C]40A[6A]   | LTE B7   | 20           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 4x4       | LTE B87           | 20              | 3256         | 2670.6        | 4x4                   | LTE B68         | 20           | 6878          | 2145                  | 2x2             | LTE B68      | 20            | 6736                  | 2190            | 2x2          | LTE B68       | 20                    | 6736            | 2190                       | 23.6                              | 23.6 |      |      |
| CA_7C[7C]40A[6A]   | LTE B7   | 20           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 2x2       | LTE B87           | 20              | 3256         | 2670.6        | 2x2                   | LTE B68         | 20           | 6878          | 2145                  | 4x4             | LTE B68      | 20            | 6736                  | 2190            | 4x4          | LTE B68       | 20                    | 6736            | 2190                       | 23.6                              | 23.6 |      |      |
| CA_7C[7C]40A[6A]   | LTE B7   | 20           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 2x2       | LTE B87           | 20              | 3256         | 2670.6        | 2x2                   | LTE B68         | 20           | 6878          | 2145                  | 4x4             | LTE B68      | 20            | 6736                  | 2190            | 4x4          | LTE B68       | 20                    | 6736            | 2190                       | 23.6                              | 23.6 |      |      |
| CA_2A[2A]40A[6A]   | LTE B7   | 10           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 4x4       | LTE B82           | 20              | 900          | 1960          | 4x4                   | LTE B17         | 20           | 5095          | 737.5                 | 2x2             | LTE B17      | 20            | 5047                  | 732.7           | 2x2          | LTE B68       | 20                    | 6878            | 2145                       | 4x4                               | 23.6 | 23.6 |      |
| CA_7C[7C]40A[6A]   | LTE B7   | 20           | 23100  | 2535      | QPSK | 1         | 99     | 1300             | 2605      | 4x4       | LTE B87           | 20              | 2902         | 2652.5        | 4x4                   | LTE B48         | 20           | 5065          | 5337.5                | 2x2             | LTE B48      | 20            | 5065                  | 5337.7          | 2x2          | LTE B48       | 20                    | 5065            | 5337.7                     | 23.6                              | 23.6 |      |      |
| CA_7C[7C]40A[6A]   | LTE B7   | 20           | 23100  | 2535      | QPSK | 1         | 99     | 1300             | 2605      | 4x4       | LTE B87           | 20              | 2902         | 2652.5        | 4x4                   | LTE B48         | 20           | 5065          | 5337.5                | 2x2             | LTE B48      | 20            | 5065                  | 5337.7          | 2x2          | LTE B48       | 20                    | 5065            | 5337.7                     | 23.6                              | 23.6 |      |      |
| CA_2A[2A]40A[6A]   | LTE B7   | 10           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 2x2       | LTE B82           | 20              | 900          | 1960          | 4x4                   | LTE B17         | 20           | 5095          | 737.5                 | 2x2             | LTE B17      | 20            | 5047                  | 732.7           | 2x2          | LTE B68       | 20                    | 6878            | 2145                       | 4x4                               | 23.6 | 23.6 |      |
| CA_2A[2A]40A[6A]   | LTE B7   | 10           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 2x2       | LTE B82           | 20              | 900          | 1960          | 4x4                   | LTE B17         | 20           | 5095          | 737.5                 | 2x2             | LTE B17      | 20            | 5047                  | 732.7           | 2x2          | LTE B68       | 20                    | 6878            | 2145                       | 4x4                               | 23.6 | 23.6 |      |
| CA_2A[2A]40A[6A]   | LTE B7   | 10           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 2x2       | LTE B82           | 20              | 900          | 1960          | 4x4                   | LTE B17         | 20           | 5095          | 737.5                 | 2x2             | LTE B17      | 20            | 5047                  | 732.7           | 2x2          | LTE B68       | 20                    | 6878            | 2145                       | 4x4                               | 23.6 | 23.6 |      |
| CA_2A[2A]40A[6A]   | LTE B7   | 10           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 2x2       | LTE B82           | 20              | 900          | 1960          | 4x4                   | LTE B17         | 20           | 5095          | 737.5                 | 2x2             | LTE B17      | 20            | 5047                  | 732.7           | 2x2          | LTE B68       | 20                    | 6878            | 2145                       | 4x4                               | 23.6 | 23.6 |      |
| CA_2A[2A]40A[6A]   | LTE B7   | 10           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 2x2       | LTE B82           | 20              | 900          | 1960          | 4x4                   | LTE B17         | 20           | 5095          | 737.5                 | 2x2             | LTE B17      | 20            | 5047                  | 732.7           | 2x2          | LTE B68       | 20                    | 6878            | 2145                       | 4x4                               | 23.6 | 23.6 |      |
| CA_2A[2A]40A[6A]   | LTE B7   | 10           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 2x2       | LTE B82           | 20              | 900          | 1960          | 4x4                   | LTE B17         | 20           | 5095          | 737.5                 | 2x2             | LTE B17      | 20            | 5047                  | 732.7           | 2x2          | LTE B68       | 20                    | 6878            | 2145                       | 4x4                               | 23.6 | 23.6 |      |
| CA_2A[2A]40A[6A]   | LTE B7   | 10           | 23400  | 2565      | QPSK | 1         | 49     | 3400             | 2685      | 2x2       | LTE B82           | 20              | 900          | 1960          | 4x4                   | LTE B17         | 20           | 5095          | 737.5                 | 2x2             | LTE B17      | 20            | 5047                  | 732.7           | 2x2          | LTE B68       | 20                    | 6878            | 2145                       | 4x4                               | 23.6 | 23.6 |      |

#### 1.4.7 LTE Band 30 as PCC

**Table 20**  
**Maximum Output Powers**

| Combination           | PCB Band | PCC          |              |                      |      |           | SSC 1        |                      |                 |          |              | SSC 2        |                      |                 |          |              | SSC 3        |                      |                 |          |              | SSC 4        |                      |                 |          |              | Power        |                      |                 |                              |                                   |       |
|-----------------------|----------|--------------|--------------|----------------------|------|-----------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|------------------------------|-----------------------------------|-------|
|                       |          | PCC BW [MHz] | PCC [UL] Ch. | PCC [UL] Freq. [MHz] | Mod. | PCC UL RB | PCC [DL] Ch. | PCC [DL] Freq. [MHz] | DL Ant. Config. | SSC Band | SSC BW [MHz] | SSC [DL] Ch. | SSC [DL] Freq. [MHz] | DL Ant. Config. | SSC Band | SSC BW [MHz] | SSC [DL] Ch. | SSC [DL] Freq. [MHz] | DL Ant. Config. | SSC Band | SSC BW [MHz] | SSC [DL] Ch. | SSC [DL] Freq. [MHz] | DL Ant. Config. | SSC Band | SSC BW [MHz] | SSC [DL] Ch. | SSC [DL] Freq. [MHz] | DL Ant. Config. | LTE Tx Power with CA Enabled | LTE Single Carrier Tx Power [dBm] |       |
| CA [2,4]44-30A        | LTE B20  | 5            | 27730        | 2330                 | QPSK | 1         | 24           | 2800                 | 2355            | 262      | LTE B2       | 20           | 300                  | 1560            | 464      | LTE B4       | 20           | 2175                 | 2132.5          | 464      | LTE B12      | 20           | 1875                 | 1832.5          | 464      | LTE B6B      | 20           | 6675                 | 6145            | 464                          | 21.55                             | 21.45 |
| CA [2,4]5-12A-30A-66A | LTE B20  | 5            | 27730        | 2330                 | QPSK | 1         | 24           | 2800                 | 2355            | 262      | LTE B2       | 20           | 300                  | 1560            | 464      | LTE B4       | 20           | 2175                 | 2132.5          | 464      | LTE B12      | 20           | 1875                 | 1832.5          | 464      | LTE B6B      | 20           | 6675                 | 6145            | 464                          | 21.55                             | 21.45 |
| CA [2,4]5-12A-30A-66A | LTE B20  | 5            | 27730        | 2330                 | QPSK | 1         | 24           | 2800                 | 2355            | 262      | LTE B2       | 20           | 300                  | 1560            | 464      | LTE B4       | 20           | 2175                 | 2132.5          | 464      | LTE B12      | 20           | 1875                 | 1832.5          | 464      | LTE B6B      | 20           | 6675                 | 6145            | 464                          | 21.55                             | 21.45 |

#### 1.4.8 LTE Band 41 as PCC

**Table 21**  
**Maximum Output Powers**

| PCC            |          |              |            |                      |      |           |                  |              |                      | SCC 1           |          |              |              | SCC 2                |                 |          |              | SCC 3        |                      |                 |          | Power        |              |                      |                 |                                 |                                   |
|----------------|----------|--------------|------------|----------------------|------|-----------|------------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|---------------------------------|-----------------------------------|
| Combination    | PCC Band | PCC BW [MHz] | PCC UL Ch. | PCC [UL] Freq. [MHz] | Mod. | PCC UL RB | PCC RB UL Offset | PCC [DL] Ch. | PCC [DL] Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | DL Ant. Config. | LTE Tx-Power With DL CA Enabled | LTE Single Carrier Tx Power (dBm) |
| CA_[41A]_[41A] | LTE B41  | 15           | 40620      | 2593                 | QPSK | 1         | 74               | 40620        | 2593                 | 4x4             | LTE B41  | 20           | 41094        | 26040                | 4x4             | LTE B41  | 20           | 41292        | 26052                | 4x4             | LTE B41  | 20           | 41490        | 26180                | 4x4             | 25.17                           | 25.16                             |
| CA_[41C]_[41A] | LTE B41  | 15           | 40620      | 2593                 | QPSK | 1         | 74               | 40620        | 2593                 | 4x4             | LTE B41  | 20           | 40795        | 26050                | 4x4             | LTE B41  | 20           | 41292        | 26052                | 4x4             | LTE B41  | 20           | 41490        | 26180                | 4x4             | 25.18                           | 25.16                             |
| CA_[41C]_[41C] | LTE B41  | 15           | 40620      | 2593                 | QPSK | 1         | 74               | 40620        | 2593                 | 4x4             | LTE B41  | 20           | 40449        | 25975                | 4x4             | LTE B41  | 20           | 41292        | 26052                | 4x4             | LTE B41  | 20           | 41490        | 26180                | 4x4             | 25.19                           | 25.16                             |
| CA_[41E]_[41E] | LTE B41  | 15           | 40620      | 2593                 | QPSK | 1         | 74               | 40620        | 2593                 | 4x4             | LTE B41  | 20           | 40449        | 25975                | 4x4             | LTE B41  | 20           | 40791        | 26010                | 4x4             | LTE B41  | 20           | 40989        | 26201                | 4x4             | 25.10                           | 25.16                             |

#### 1.4.9 LTE Band 41 PC2 as PCC

**Table 22**  
**Maximum Output Powers**

| Combination    | PCC         |              |               |                |      |           |                  |              |                |          | SCC1        |              |              |                | SCC2     |             |              |              | SCC3           |          |             |              | Power        |                |          |                              |                                   |
|----------------|-------------|--------------|---------------|----------------|------|-----------|------------------|--------------|----------------|----------|-------------|--------------|--------------|----------------|----------|-------------|--------------|--------------|----------------|----------|-------------|--------------|--------------|----------------|----------|------------------------------|-----------------------------------|
|                | PCC Band    | PCC BW [MHz] | PCC UCh [Ch.] | PCC Freq [MHz] | Mod. | PCC UL RB | PCC UL RB Offset | PCC [DL] Ch. | PCC Freq [MHz] | DL Conf. | SCC Band    | SCC BW [MHz] | SCC [DL] Ch. | SCC Freq [MHz] | DL Conf. | SCC Band    | SCC BW [MHz] | SCC [DL] Ch. | SCC Freq [MHz] | DL Conf. | SCC Band    | SCC BW [MHz] | SCC [DL] Ch. | SCC Freq [MHz] | DL Conf. | LTE Tx-Power with CA Enabled | LTE Single Carrier Tx Power (dbm) |
| CA [41A] [41D] | LTE B41 PCC | 20           | 40620         | 2593           | QPSK | 1         | Offset           | 40620        | 2593           | 4x4      | LTE B41 PCC | 20           | 41094        | 2640.4         | 4x4      | LTE B41 PCC | 20           | 41292        | 2660.2         | 4x4      | LTE B41 PCC | 20           | 41490        | 2680           | 4x4      | 27.69                        | 27.69                             |
| CA [41D] [41A] | LTE B41 PCC | 20           | 40620         | 2593           | QPSK | 1         | Offset           | 40620        | 2593           | 4x4      | LTE B41 PCC | 20           | 40422        | 2573.2         | 4x4      | LTE B41 PCC | 20           | 40620        | 2593           | 4x4      | LTE B41 PCC | 20           | 40818        | 2613           | 4x4      | 27.68                        | 27.68                             |
| CA [41C] [41C] | LTE B41 PCC | 20           | 40620         | 2593           | QPSK | 1         | Offset           | 40620        | 2593           | 4x4      | LTE B41 PCC | 20           | 40422        | 2573.2         | 4x4      | LTE B41 PCC | 20           | 40620        | 2593           | 4x4      | LTE B41 PCC | 20           | 40818        | 2613           | 4x4      | 27.69                        | 27.69                             |
| CA [41E]       | LTE B41 PCC | 20           | 40620         | 2593           | QPSK | 1         | Offset           | 40620        | 2593           | 4x4      | LTE B41 PCC | 20           | 40422        | 2573.2         | 4x4      | LTE B41 PCC | 20           | 40818        | 2613           | 4x4      | LTE B41 PCC | 20           | 41016        | 2633           | 4x4      | 27.68                        | 27.68                             |

|                                           |                                                                                                                                                               |                              |                                                                                       |                                        |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|---------------------------------------------------------------------------------------|----------------------------------------|
| <b>FCC ID:</b> ZNFG820UM                  |  <b>PCTEST</b><br><small>PROFESSIONAL COMMUNICATIONS TESTING, INC.</small> | <b>SAR EVALUATION REPORT</b> |  | <b>Reviewed by:</b><br>Quality Manager |
| <b>Test Dates:</b><br>01/11/19 - 02/05/19 | <b>DUT Type:</b><br>Portable Handset                                                                                                                          | APPENDIX G<br>Page 8 of 9    |                                                                                       |                                        |

## 1.5 Downlink Carrier Aggregation with CA\_41C Uplink Carrier Aggregation enabled

This device supports uplink carrier aggregation (ULCA) with additional Carrier Aggregation configurations active in the downlink. Power measurements were performed with ULCA active and additional CA configurations active in the downlink for the configuration per Fall 2017 TCB Workshop Notes.

Per FCC Guidance, additional SAR measurements for these configurations were not required since their maximum output power was not more than 0.25 dB higher than the maximum output power for with only ULCA active.

### 1.5.1 UL Carrier Aggregation with DL 4x4 MIMO RF Conducted Powers

Note: 4x4 DL MIMO is only operating in the downlink. Uplink transmission is limited to a single output stream for each component carrier of ULCA.

**Table 23**  
**Maximum Output Powers**

|                             |  | PCC         |          |                     |                     |                             |                 |            |            | SCC1             |          |                     |                     |                             |                 |            |            | SCC2             |          |                     |                |                        |                 |                                                  |                     | Power |  |
|-----------------------------|--|-------------|----------|---------------------|---------------------|-----------------------------|-----------------|------------|------------|------------------|----------|---------------------|---------------------|-----------------------------|-----------------|------------|------------|------------------|----------|---------------------|----------------|------------------------|-----------------|--------------------------------------------------|---------------------|-------|--|
| Additional DLCA Combination |  |             | PCC Band | PCC Bandwidth [MHz] | PCC (UL/DL) Channel | PCC (UL/DL) Frequency [MHz] | DL Ant. Config. | Modulation | PCC UL# RB | PCC UL RB Offset | SCC Band | SCC Bandwidth [MHz] | SCC (UL/DL) Channel | SCC (UL/DL) Frequency [MHz] | DL Ant. Config. | Modulation | SCC UL# RB | SCC UL RB Offset | SCC Band | SCC Bandwidth [MHz] | SCC DL Channel | SCC DL Frequency [MHz] | DL Ant. Config. | ULCA Tx Power with additional DLCA Enabled (dBm) | ULCA Tx Power (dBm) |       |  |
|                             |  |             |          |                     |                     |                             |                 |            |            |                  |          |                     |                     |                             |                 |            |            |                  |          |                     |                |                        |                 |                                                  |                     |       |  |
| CA [41C] (1)                |  | LTE B41     | 20       | 40620               | 2593.0              | 4x4                         | QPSK            | 1          | 0          | LTE B41          | 20       | 40422               | 2573.2              | 4x4                         | QPSK            | 1          | 99         | -                | -        | -                   | -              | -                      | -               | 25.04                                            | 25.09               |       |  |
| CA [41D]                    |  | LTE B41     | 20       | 40620               | 2593.0              | 4x4                         | QPSK            | 1          | 0          | LTE B41          | 20       | 40422               | 2573.2              | 4x4                         | QPSK            | 1          | 99         | LTE B41          | 20       | 40818               | 2612.8         | 4x4                    | 25.06           | 25.09                                            |                     |       |  |
| CA [41C] (1)                |  | LTE B41 PC2 | 20       | 40620               | 2593.0              | 4x4                         | QPSK            | 1          | 0          | LTE B41 PC2      | 20       | 40422               | 2573.2              | 4x4                         | QPSK            | 1          | 99         | -                | -        | -                   | -              | -                      | -               | 27.12                                            | 27.24               |       |  |
| CA [41D]                    |  | LTE B41 PC2 | 20       | 40620               | 2593.0              | 4x4                         | QPSK            | 1          | 0          | LTE B41 PC2      | 20       | 40422               | 2573.2              | 4x4                         | QPSK            | 1          | 99         | LTE B41 PC2      | 20       | 40818               | 2612.8         | 4x4                    | 27.04           | 27.24                                            |                     |       |  |

|                                    |                                                                                                                                   |                       |                                                                                       |                                 |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: ZNFG820UM                  |  <b>PCTEST</b><br>ENGINEERING LABORATORY, INC. | SAR EVALUATION REPORT |  | Reviewed by:<br>Quality Manager |
| Test Dates:<br>01/11/19 - 02/05/19 | DUT Type:<br>Portable Handset                                                                                                     |                       |                                                                                       | APPENDIX G<br>Page 9 of 9       |