

|           |                                                                 |   |        |        |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 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-AAB | 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-AAB | 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-AAB | 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.



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 Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **PC Test**

Certificate No: **ES3-3319\_Mar18**

## CALIBRATION CERTIFICATE

Object **ES3DV3 - SN:3319**

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

Calibration date: **March 13, 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)

BN ✓  
 03/30/2018

| Primary Standards          | ID               | Cal Date (Certificate No.)        | Scheduled Calibration  |
|----------------------------|------------------|-----------------------------------|------------------------|
| Power meter NRP            | SN: 104778       | 04-Apr-17 (No. 217-02521/02522)   | Apr-18                 |
| Power sensor NRP-Z91       | SN: 103244       | 04-Apr-17 (No. 217-02521)         | Apr-18                 |
| Power sensor NRP-Z91       | SN: 103245       | 04-Apr-17 (No. 217-02525)         | Apr-18                 |
| Reference 20 dB Attenuator | SN: S5277 (20x)  | 07-Apr-17 (No. 217-02528)         | Apr-18                 |
| Reference Probe ES3DV2     | SN: 3013         | 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 |

|                                                                                                                 | Name           | Function              | Signature              |
|-----------------------------------------------------------------------------------------------------------------|----------------|-----------------------|------------------------|
| Calibrated by:                                                                                                  | Jeton Kastrati | Laboratory Technician |                        |
| Approved by:                                                                                                    | Katja Pokovic  | Technical Manager     |                        |
|                                                                                                                 |                |                       | Issued: March 15, 2018 |
| This calibration certificate shall not be reproduced except in full without written approval of the laboratory. |                |                       |                        |



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Accreditation No.: **SCS 0108**

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## Glossary:

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

## Calibration is Performed According to the Following Standards:

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

## Methods Applied and Interpretation of Parameters:

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

# Probe ES3DV3

## SN:3319

Manufactured: January 10, 2012  
Calibrated: March 13, 2018

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

## DASY/EASY - Parameters of Probe: ES3DV3 - SN:3319

### Basic Calibration Parameters

|                                                           | Sensor X | Sensor Y | Sensor Z | Unc (k=2)     |
|-----------------------------------------------------------|----------|----------|----------|---------------|
| Norm ( $\mu\text{V}/(\text{V}/\text{m})^2$ ) <sup>A</sup> | 1.08     | 1.05     | 1.12     | $\pm 10.1 \%$ |
| DCP (mV) <sup>B</sup>                                     | 104.0    | 103.0    | 104.0    |               |

### 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    | 197.9    | $\pm 3.8 \%$              |
|     |                           | Y | 0.0     | 0.0                          | 1.0 |         | 198.2    |                           |
|     |                           | Z | 0.0     | 0.0                          | 1.0 |         | 200.6    |                           |

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 | 60.52    | 430.8    | 35.08                       | 29.64                               | 3.011                               | 5.10     | 0.615                 | 0.538                 | 1.010 |
| Y | 55.79    | 400.8    | 35.48                       | 29.01                               | 2.492                               | 5.10     | 0.600                 | 0.518                 | 1.009 |
| Z | 63.98    | 455.3    | 34.93                       | 29.72                               | 3.442                               | 5.10     | 0.679                 | 0.571                 | 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: ES3DV3 - SN:3319

### Calibration Parameter Determined in Head Tissue Simulating Media

| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 750                  | 41.9                               | 0.89                            | 6.70    | 6.70    | 6.70    | 0.80               | 1.21                    | ± 12.0 %  |
| 835                  | 41.5                               | 0.90                            | 6.44    | 6.44    | 6.44    | 0.80               | 1.17                    | ± 12.0 %  |
| 1750                 | 40.1                               | 1.37                            | 5.49    | 5.49    | 5.49    | 0.65               | 1.43                    | ± 12.0 %  |
| 1900                 | 40.0                               | 1.40                            | 5.29    | 5.29    | 5.29    | 0.76               | 1.30                    | ± 12.0 %  |
| 2300                 | 39.5                               | 1.67                            | 5.06    | 5.06    | 5.06    | 0.72               | 1.29                    | ± 12.0 %  |
| 2450                 | 39.2                               | 1.80                            | 4.71    | 4.71    | 4.71    | 0.77               | 1.30                    | ± 12.0 %  |
| 2600                 | 39.0                               | 1.96                            | 4.55    | 4.55    | 4.55    | 0.80               | 1.31                    | ± 12.0 %  |

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

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

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

## DASY/EASY - Parameters of Probe: ES3DV3 - SN:3319

### Calibration Parameter Determined in Body Tissue Simulating Media

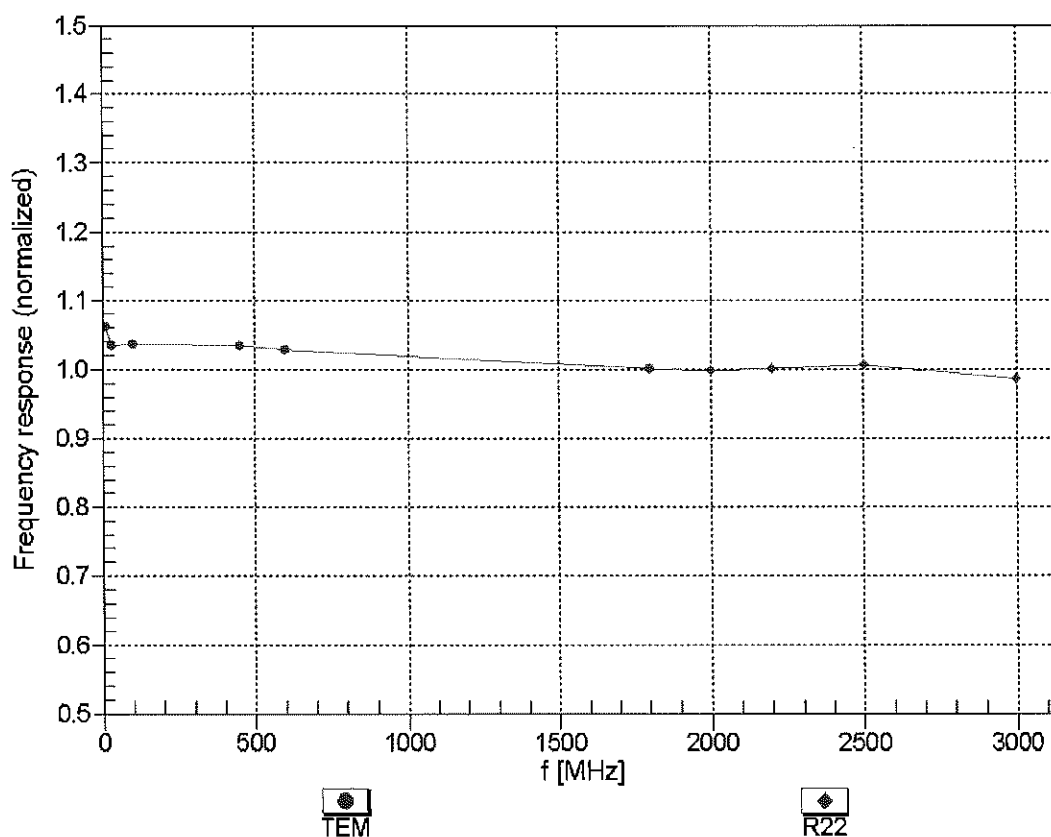
| f (MHz) <sup>c</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 750                  | 55.5                               | 0.96                            | 6.32    | 6.32    | 6.32    | 0.65               | 1.26                    | ± 12.0 %  |
| 835                  | 55.2                               | 0.97                            | 6.20    | 6.20    | 6.20    | 0.80               | 1.14                    | ± 12.0 %  |
| 1750                 | 53.4                               | 1.49                            | 5.05    | 5.05    | 5.05    | 0.76               | 1.27                    | ± 12.0 %  |
| 1900                 | 53.3                               | 1.52                            | 4.84    | 4.84    | 4.84    | 0.55               | 1.56                    | ± 12.0 %  |
| 2300                 | 52.9                               | 1.81                            | 4.63    | 4.63    | 4.63    | 0.80               | 1.30                    | ± 12.0 %  |
| 2450                 | 52.7                               | 1.95                            | 4.51    | 4.51    | 4.51    | 0.80               | 1.25                    | ± 12.0 %  |
| 2600                 | 52.5                               | 2.16                            | 4.33    | 4.33    | 4.33    | 0.80               | 1.20                    | ± 12.0 %  |

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

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

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

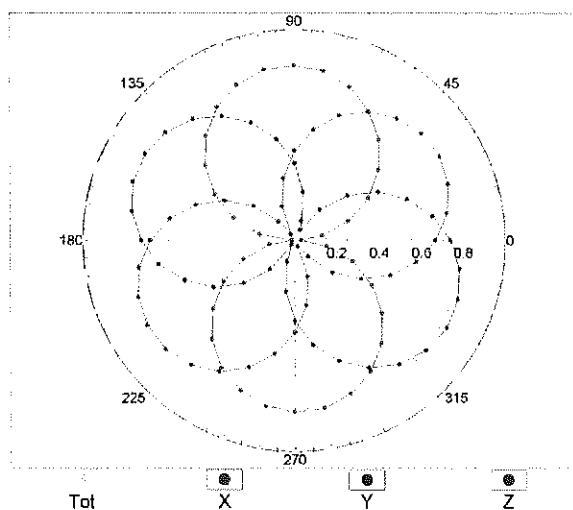
## Frequency Response of E-Field (TEM-Cell:ifi110 EXX, Waveguide: R22)



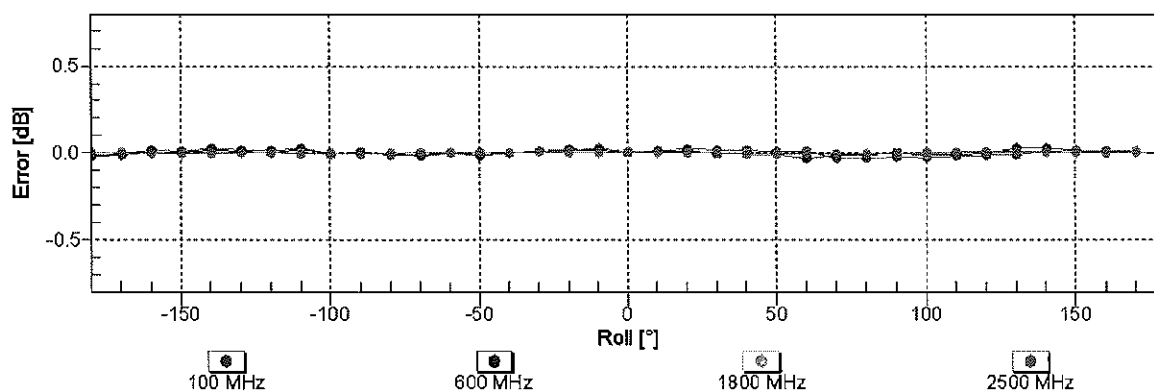
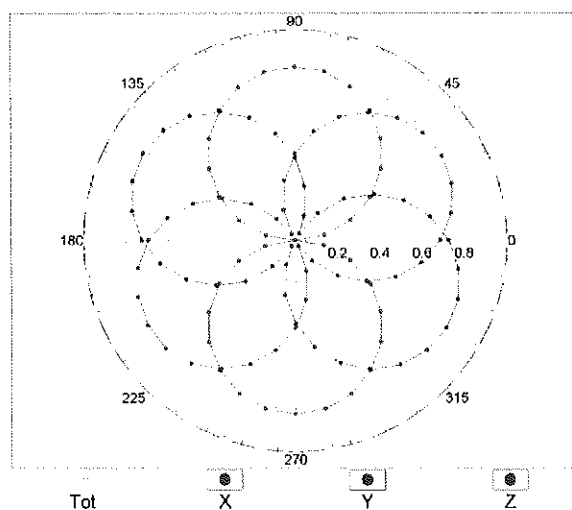
Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  ( $k=2$ )

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

f=600 MHz,TEM

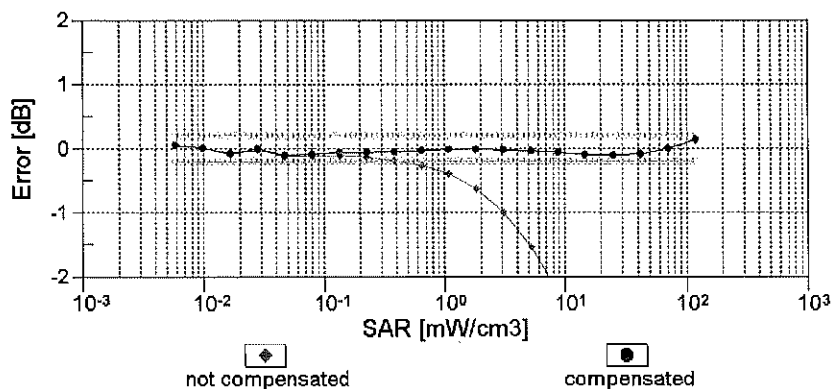
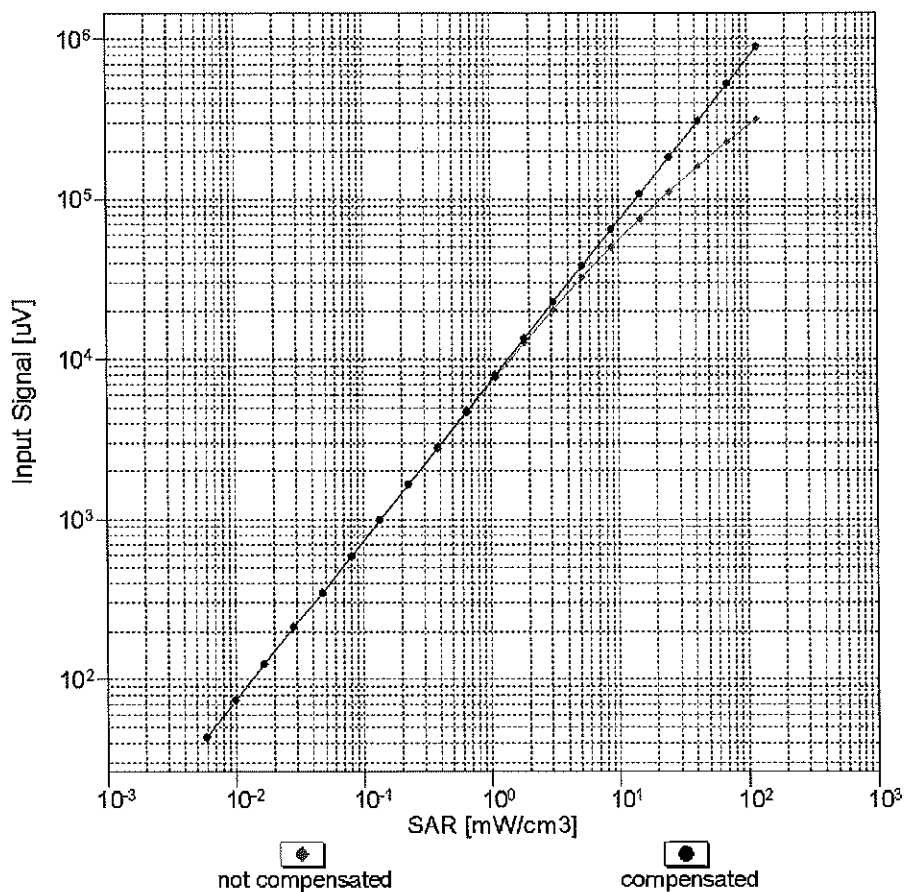


f=1800 MHz,R22



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

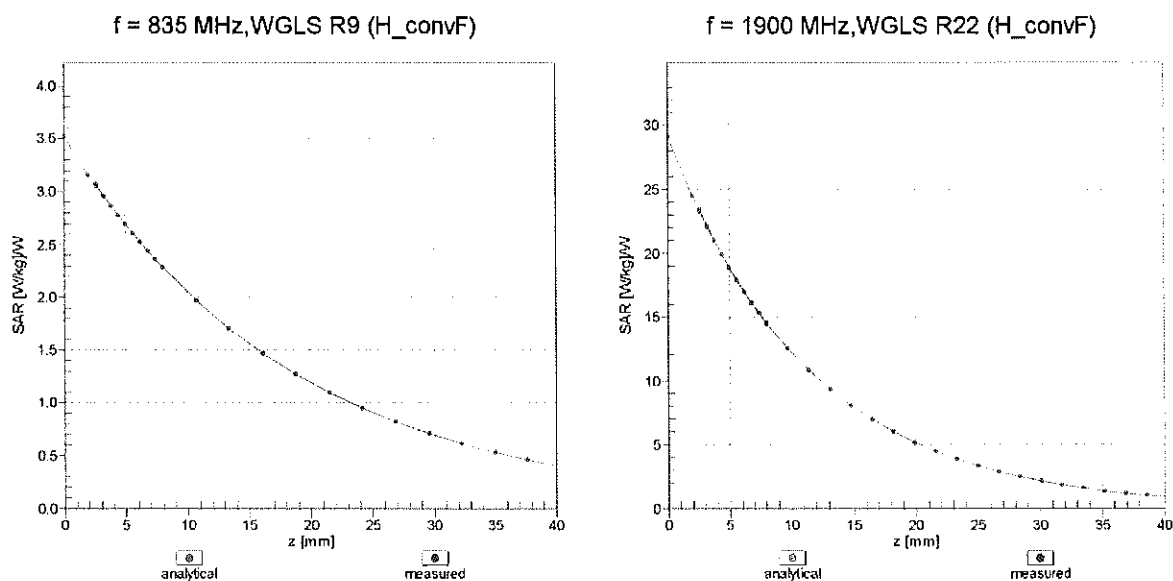
# Dynamic Range $f(\text{SAR}_{\text{head}})$ (TEM cell , $f_{\text{eval}} = 1900 \text{ MHz}$ )



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

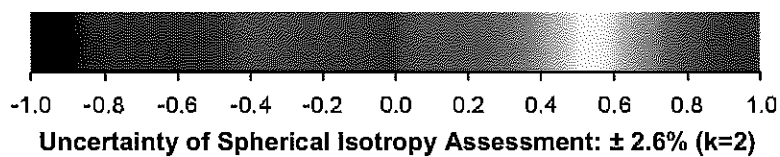
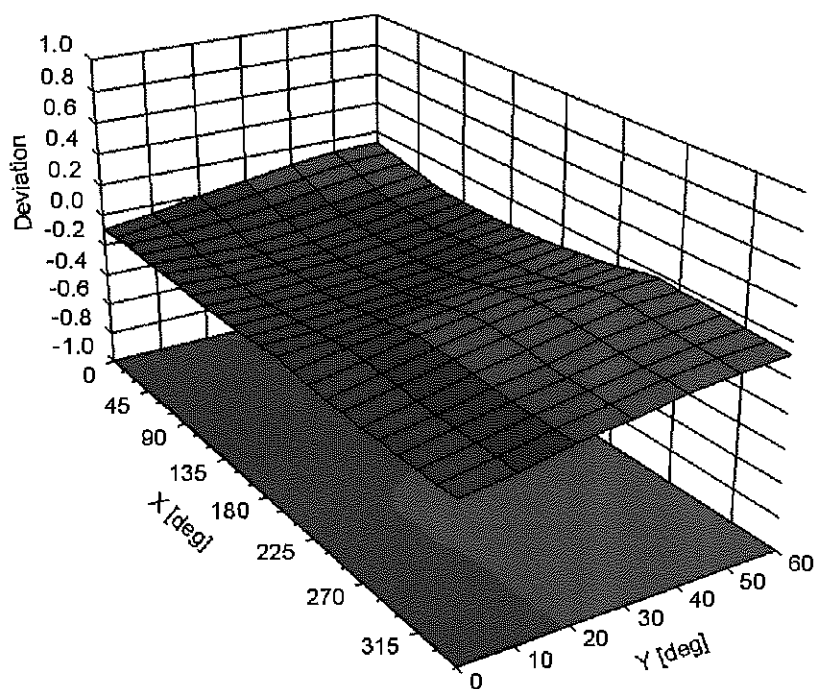


## Conversion Factor Assessment



## Deviation from Isotropy in Liquid

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



## DASY/EASY - Parameters of Probe: ES3DV3 - SN:3319

### Other Probe Parameters

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle (°)                           | 60.4       |
| Mechanical Surface Detection Mode             | enabled    |
| Optical Surface Detection Mode                | disabled   |
| Probe Overall Length                          | 337 mm     |
| Probe Body Diameter                           | 10 mm      |
| Tip Length                                    | 10 mm      |
| Tip Diameter                                  | 4 mm       |
| Probe Tip to Sensor X Calibration Point       | 2 mm       |
| Probe Tip to Sensor Y Calibration Point       | 2 mm       |
| Probe Tip to Sensor Z Calibration Point       | 2 mm       |
| Recommended Measurement Distance from Surface | 3 mm       |

**Appendix: Modulation Calibration Parameters**

| UID           | Communication System Name                     |   | A<br>dB | B<br>dB $\mu$ V | C     | D<br>dB | VR<br>mV | Max<br>Unc <sup>E</sup><br>(k=2) |
|---------------|-----------------------------------------------|---|---------|-----------------|-------|---------|----------|----------------------------------|
| 0             | CW                                            | X | 0.00    | 0.00            | 1.00  | 0.00    | 197.9    | $\pm 3.8 \%$                     |
|               |                                               | Y | 0.00    | 0.00            | 1.00  |         | 198.2    |                                  |
|               |                                               | Z | 0.00    | 0.00            | 1.00  |         | 200.6    |                                  |
| 10010-<br>CAA | SAR Validation (Square, 100ms, 10ms)          | X | 9.56    | 81.28           | 19.98 | 10.00   | 25.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 8.09    | 78.70           | 18.35 |         | 25.0     |                                  |
|               |                                               | Z | 8.70    | 79.52           | 19.57 |         | 25.0     |                                  |
| 10011-<br>CAB | UMTS-FDD (WCDMA)                              | X | 1.34    | 72.37           | 18.08 | 0.00    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 0.99    | 67.12           | 14.82 |         | 150.0    |                                  |
|               |                                               | Z | 1.12    | 68.87           | 16.00 |         | 150.0    |                                  |
| 10012-<br>CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)      | X | 1.37    | 66.58           | 17.00 | 0.41    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 1.25    | 64.92           | 15.59 |         | 150.0    |                                  |
|               |                                               | Z | 1.32    | 65.58           | 16.11 |         | 150.0    |                                  |
| 10013-<br>CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | X | 5.18    | 67.48           | 17.64 | 1.46    | 150.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 5.08    | 67.20           | 17.36 |         | 150.0    |                                  |
|               |                                               | Z | 5.20    | 67.32           | 17.47 |         | 150.0    |                                  |
| 10021-<br>DAC | GSM-FDD (TDMA, GMSK)                          | X | 20.40   | 95.52           | 26.57 | 9.39    | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 29.46   | 101.11          | 27.60 |         | 50.0     |                                  |
|               |                                               | Z | 14.66   | 89.52           | 24.83 |         | 50.0     |                                  |
| 10023-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0)                   | X | 18.37   | 93.61           | 26.02 | 9.57    | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 24.41   | 97.95           | 26.72 |         | 50.0     |                                  |
|               |                                               | Z | 13.84   | 88.39           | 24.49 |         | 50.0     |                                  |
| 10024-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1)                 | X | 100.00  | 119.56          | 31.31 | 6.56    | 60.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 117.39          | 29.93 |         | 60.0     |                                  |
|               |                                               | Z | 47.21   | 108.31          | 28.71 |         | 60.0     |                                  |
| 10025-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0)                   | X | 21.09   | 108.48          | 41.18 | 12.57   | 50.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 17.11   | 102.80          | 38.82 |         | 50.0     |                                  |
|               |                                               | Z | 18.44   | 103.12          | 38.97 |         | 50.0     |                                  |
| 10026-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1)                 | X | 21.59   | 105.09          | 36.25 | 9.56    | 60.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 18.95   | 102.20          | 35.03 |         | 60.0     |                                  |
|               |                                               | Z | 18.49   | 100.22          | 34.38 |         | 60.0     |                                  |
| 10027-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2)               | X | 100.00  | 118.49          | 29.83 | 4.80    | 80.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 115.83          | 28.28 |         | 80.0     |                                  |
|               |                                               | Z | 100.00  | 118.30          | 29.89 |         | 80.0     |                                  |
| 10028-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)             | X | 100.00  | 118.84          | 29.14 | 3.55    | 100.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 115.36          | 27.25 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 118.10          | 28.92 |         | 100.0    |                                  |
| 10029-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2)               | X | 15.08   | 97.16           | 32.49 | 7.80    | 80.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 12.90   | 93.80           | 31.06 |         | 80.0     |                                  |
|               |                                               | Z | 13.60   | 93.82           | 31.09 |         | 80.0     |                                  |
| 10030-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1)           | X | 100.00  | 118.11          | 30.01 | 5.30    | 70.0     | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 115.58          | 28.50 |         | 70.0     |                                  |
|               |                                               | Z | 100.00  | 118.16          | 30.20 |         | 70.0     |                                  |
| 10031-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3)           | X | 100.00  | 121.01          | 28.44 | 1.88    | 100.0    | $\pm 9.6 \%$                     |
|               |                                               | Y | 100.00  | 114.03          | 25.11 |         | 100.0    |                                  |
|               |                                               | Z | 100.00  | 118.73          | 27.54 |         | 100.0    |                                  |

|           |                                                     |   |        |        |       |       |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|-------|-------|---------|
| 10032-CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5)                 | X | 100.00 | 127.26 | 29.88 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 100.00 | 114.89 | 24.38 |       | 100.0 |         |
|           |                                                     | Z | 100.00 | 122.11 | 27.79 |       | 100.0 |         |
| 10033-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)           | X | 21.21  | 99.84  | 27.91 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 19.09  | 97.43  | 26.61 |       | 70.0  |         |
|           |                                                     | Z | 13.98  | 92.26  | 25.56 |       | 70.0  |         |
| 10034-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)           | X | 14.93  | 98.23  | 25.94 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 7.46   | 86.71  | 21.62 |       | 100.0 |         |
|           |                                                     | Z | 7.45   | 87.10  | 22.42 |       | 100.0 |         |
| 10035-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)           | X | 7.98   | 90.77  | 23.49 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 3.97   | 79.58  | 18.90 |       | 100.0 |         |
|           |                                                     | Z | 4.48   | 81.52  | 20.27 |       | 100.0 |         |
| 10036-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1)               | X | 26.12  | 103.52 | 29.04 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 24.16  | 101.42 | 27.84 |       | 70.0  |         |
|           |                                                     | Z | 15.99  | 94.67  | 26.38 |       | 70.0  |         |
| 10037-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3)               | X | 14.25  | 97.55  | 25.70 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 7.04   | 85.92  | 21.32 |       | 100.0 |         |
|           |                                                     | Z | 7.24   | 86.72  | 22.25 |       | 100.0 |         |
| 10038-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5)               | X | 8.53   | 92.07  | 23.99 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 4.13   | 80.37  | 19.27 |       | 100.0 |         |
|           |                                                     | Z | 4.65   | 82.31  | 20.62 |       | 100.0 |         |
| 10039-CAB | CDMA2000 (1xRTT, RC1)                               | X | 2.96   | 79.09  | 19.43 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.75   | 71.10  | 15.36 |       | 150.0 |         |
|           |                                                     | Z | 2.10   | 73.23  | 16.92 |       | 150.0 |         |
| 10042-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | X | 53.77  | 109.05 | 28.70 | 7.78  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 79.10  | 112.95 | 28.86 |       | 50.0  |         |
|           |                                                     | Z | 23.46  | 96.42  | 25.41 |       | 50.0  |         |
| 10044-CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM)                    | X | 0.00   | 123.18 | 1.26  | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.02   | 127.84 | 0.07  |       | 150.0 |         |
|           |                                                     | Z | 0.00   | 110.77 | 4.52  |       | 150.0 |         |
| 10048-CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)           | X | 11.41  | 83.11  | 24.20 | 13.80 | 25.0  | ± 9.6 % |
|           |                                                     | Y | 12.66  | 85.48  | 24.49 |       | 25.0  |         |
|           |                                                     | Z | 10.45  | 80.79  | 23.56 |       | 25.0  |         |
| 10049-CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)         | X | 13.41  | 87.55  | 24.40 | 10.79 | 40.0  | ± 9.6 % |
|           |                                                     | Y | 15.25  | 89.77  | 24.55 |       | 40.0  |         |
|           |                                                     | Z | 11.61  | 84.53  | 23.55 |       | 40.0  |         |
| 10056-CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps)                      | X | 13.37  | 87.98  | 25.03 | 9.03  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 13.72  | 88.51  | 24.74 |       | 50.0  |         |
|           |                                                     | Z | 11.72  | 85.02  | 24.05 |       | 50.0  |         |
| 10058-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)                   | X | 11.14  | 91.28  | 29.72 | 6.55  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 9.52   | 87.98  | 28.26 |       | 100.0 |         |
|           |                                                     | Z | 10.41  | 88.91  | 28.62 |       | 100.0 |         |
| 10059-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)            | X | 1.60   | 69.38  | 18.31 | 0.61  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 1.43   | 67.15  | 16.67 |       | 110.0 |         |
|           |                                                     | Z | 1.53   | 67.97  | 17.25 |       | 110.0 |         |
| 10060-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)          | X | 100.00 | 133.15 | 34.60 | 1.30  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 100.00 | 128.63 | 32.36 |       | 110.0 |         |
|           |                                                     | Z | 100.00 | 130.16 | 33.31 |       | 110.0 |         |

|           |                                                |   |       |        |       |      |       |         |
|-----------|------------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10061-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)      | X | 24.68 | 111.64 | 31.63 | 2.04 | 110.0 | ± 9.6 % |
|           |                                                | Y | 11.26 | 97.49  | 27.04 |      | 110.0 |         |
|           |                                                | Z | 10.95 | 96.57  | 26.98 |      | 110.0 |         |
| 10062-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)       | X | 4.90  | 67.24  | 16.94 | 0.49 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.79  | 66.94  | 16.63 |      | 100.0 |         |
|           |                                                | Z | 4.90  | 67.05  | 16.74 |      | 100.0 |         |
| 10063-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)       | X | 4.95  | 67.42  | 17.09 | 0.72 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.84  | 67.10  | 16.77 |      | 100.0 |         |
|           |                                                | Z | 4.95  | 67.23  | 16.89 |      | 100.0 |         |
| 10064-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)      | X | 5.28  | 67.75  | 17.35 | 0.86 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.16  | 67.43  | 17.04 |      | 100.0 |         |
|           |                                                | Z | 5.30  | 67.59  | 17.17 |      | 100.0 |         |
| 10065-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)      | X | 5.19  | 67.81  | 17.53 | 1.21 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.07  | 67.47  | 17.22 |      | 100.0 |         |
|           |                                                | Z | 5.21  | 67.65  | 17.35 |      | 100.0 |         |
| 10066-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)      | X | 5.25  | 67.95  | 17.76 | 1.46 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.12  | 67.61  | 17.44 |      | 100.0 |         |
|           |                                                | Z | 5.27  | 67.80  | 17.59 |      | 100.0 |         |
| 10067-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)      | X | 5.57  | 68.10  | 18.21 | 2.04 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.44  | 67.80  | 17.92 |      | 100.0 |         |
|           |                                                | Z | 5.60  | 67.97  | 18.05 |      | 100.0 |         |
| 10068-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)      | X | 5.73  | 68.50  | 18.60 | 2.55 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.58  | 68.13  | 18.28 |      | 100.0 |         |
|           |                                                | Z | 5.77  | 68.41  | 18.46 |      | 100.0 |         |
| 10069-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)      | X | 5.81  | 68.43  | 18.78 | 2.67 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.66  | 68.09  | 18.46 |      | 100.0 |         |
|           |                                                | Z | 5.84  | 68.33  | 18.64 |      | 100.0 |         |
| 10071-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)  | X | 5.34  | 67.73  | 18.04 | 1.99 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.22  | 67.44  | 17.75 |      | 100.0 |         |
|           |                                                | Z | 5.35  | 67.60  | 17.87 |      | 100.0 |         |
| 10072-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | X | 5.42  | 68.35  | 18.39 | 2.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.29  | 68.00  | 18.07 |      | 100.0 |         |
|           |                                                | Z | 5.44  | 68.21  | 18.22 |      | 100.0 |         |
| 10073-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | X | 5.57  | 68.74  | 18.83 | 2.83 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.42  | 68.36  | 18.50 |      | 100.0 |         |
|           |                                                | Z | 5.60  | 68.62  | 18.66 |      | 100.0 |         |
| 10074-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | X | 5.61  | 68.84  | 19.10 | 3.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.46  | 68.44  | 18.75 |      | 100.0 |         |
|           |                                                | Z | 5.65  | 68.74  | 18.95 |      | 100.0 |         |
| 10075-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | X | 5.79  | 69.40  | 19.63 | 3.82 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.61  | 68.91  | 19.24 |      | 90.0  |         |
|           |                                                | Z | 5.85  | 69.35  | 19.51 |      | 90.0  |         |
| 10076-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | X | 5.80  | 69.20  | 19.75 | 4.15 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.64  | 68.73  | 19.37 |      | 90.0  |         |
|           |                                                | Z | 5.86  | 69.15  | 19.63 |      | 90.0  |         |
| 10077-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | X | 5.84  | 69.30  | 19.86 | 4.30 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.68  | 68.82  | 19.47 |      | 90.0  |         |
|           |                                                | Z | 5.90  | 69.25  | 19.74 |      | 90.0  |         |

|           |                                                     |   |        |        |       |      |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10081-CAB | CDMA2000 (1xRTT, RC3)                               | X | 1.29   | 72.14  | 16.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.81   | 65.51  | 12.24 |      | 150.0 |         |
|           |                                                     | Z | 0.99   | 67.68  | 14.05 |      | 150.0 |         |
| 10082-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | X | 2.36   | 64.73  | 9.48  | 4.77 | 80.0  | ± 9.6 % |
|           |                                                     | Y | 1.97   | 63.15  | 8.18  |      | 80.0  |         |
|           |                                                     | Z | 2.45   | 64.78  | 9.67  |      | 80.0  |         |
| 10090-DAC | GPRS-FDD (TDMA, GMSK, TN 0-4)                       | X | 100.00 | 119.65 | 31.37 | 6.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 117.49 | 29.99 |      | 60.0  |         |
|           |                                                     | Z | 45.52  | 107.81 | 28.61 |      | 60.0  |         |
| 10097-CAB | UMTS-FDD (HSDPA)                                    | X | 2.00   | 69.44  | 16.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.78   | 67.32  | 15.42 |      | 150.0 |         |
|           |                                                     | Z | 1.87   | 67.93  | 15.97 |      | 150.0 |         |
| 10098-CAB | UMTS-FDD (HSUPA, Subtest 2)                         | X | 1.97   | 69.46  | 16.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.74   | 67.28  | 15.38 |      | 150.0 |         |
|           |                                                     | Z | 1.84   | 67.91  | 15.95 |      | 150.0 |         |
| 10099-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4)                       | X | 21.45  | 104.88 | 36.18 | 9.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 18.89  | 102.07 | 34.98 |      | 60.0  |         |
|           |                                                     | Z | 18.39  | 100.05 | 34.32 |      | 60.0  |         |
| 10100-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 3.55   | 72.46  | 17.74 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.14   | 70.29  | 16.48 |      | 150.0 |         |
|           |                                                     | Z | 3.35   | 71.19  | 16.95 |      | 150.0 |         |
| 10101-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 3.45   | 68.62  | 16.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.26   | 67.61  | 15.85 |      | 150.0 |         |
|           |                                                     | Z | 3.39   | 68.08  | 16.14 |      | 150.0 |         |
| 10102-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 3.54   | 68.46  | 16.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.37   | 67.56  | 15.95 |      | 150.0 |         |
|           |                                                     | Z | 3.49   | 67.97  | 16.20 |      | 150.0 |         |
| 10103-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 8.98   | 78.82  | 21.57 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 8.50   | 78.15  | 21.17 |      | 65.0  |         |
|           |                                                     | Z | 8.60   | 77.58  | 20.95 |      | 65.0  |         |
| 10104-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 8.85   | 77.44  | 21.89 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 8.45   | 76.83  | 21.49 |      | 65.0  |         |
|           |                                                     | Z | 8.72   | 76.72  | 21.48 |      | 65.0  |         |
| 10105-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 8.33   | 76.23  | 21.66 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 7.79   | 75.22  | 21.09 |      | 65.0  |         |
|           |                                                     | Z | 7.71   | 74.28  | 20.69 |      | 65.0  |         |
| 10108-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)            | X | 3.11   | 71.64  | 17.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.75   | 69.54  | 16.32 |      | 150.0 |         |
|           |                                                     | Z | 2.95   | 70.37  | 16.78 |      | 150.0 |         |
| 10109-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)          | X | 3.12   | 68.50  | 16.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.92   | 67.41  | 15.75 |      | 150.0 |         |
|           |                                                     | Z | 3.06   | 67.87  | 16.07 |      | 150.0 |         |
| 10110-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)             | X | 2.56   | 70.84  | 17.38 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.24   | 68.61  | 15.94 |      | 150.0 |         |
|           |                                                     | Z | 2.42   | 69.44  | 16.48 |      | 150.0 |         |
| 10111-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)           | X | 2.84   | 69.29  | 16.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.62   | 68.02  | 15.99 |      | 150.0 |         |
|           |                                                     | Z | 2.75   | 68.36  | 16.33 |      | 150.0 |         |

|           |                                                |   |      |       |       |      |       |         |
|-----------|------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10112-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)     | X | 3.23 | 68.35 | 16.55 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.05 | 67.38 | 15.81 |      | 150.0 |         |
|           |                                                | Z | 3.18 | 67.77 | 16.10 |      | 150.0 |         |
| 10113-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)      | X | 2.98 | 69.28 | 17.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.77 | 68.14 | 16.13 |      | 150.0 |         |
|           |                                                | Z | 2.90 | 68.40 | 16.43 |      | 150.0 |         |
| 10114-CAC | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)  | X | 5.25 | 67.55 | 16.67 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.16 | 67.27 | 16.41 |      | 150.0 |         |
|           |                                                | Z | 5.23 | 67.36 | 16.47 |      | 150.0 |         |
| 10115-CAC | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)  | X | 5.62 | 67.87 | 16.84 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.53 | 67.61 | 16.59 |      | 150.0 |         |
|           |                                                | Z | 5.61 | 67.68 | 16.64 |      | 150.0 |         |
| 10116-CAC | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | X | 5.38 | 67.84 | 16.74 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.28 | 67.54 | 16.47 |      | 150.0 |         |
|           |                                                | Z | 5.37 | 67.64 | 16.53 |      | 150.0 |         |
| 10117-CAC | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)       | X | 5.26 | 67.57 | 16.70 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.15 | 67.22 | 16.40 |      | 150.0 |         |
|           |                                                | Z | 5.24 | 67.39 | 16.51 |      | 150.0 |         |
| 10118-CAC | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)       | X | 5.70 | 68.05 | 16.94 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.61 | 67.82 | 16.70 |      | 150.0 |         |
|           |                                                | Z | 5.67 | 67.81 | 16.71 |      | 150.0 |         |
| 10119-CAC | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)      | X | 5.36 | 67.79 | 16.73 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.26 | 67.48 | 16.45 |      | 150.0 |         |
|           |                                                | Z | 5.34 | 67.59 | 16.52 |      | 150.0 |         |
| 10140-CAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)     | X | 3.59 | 68.46 | 16.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.41 | 67.56 | 15.87 |      | 150.0 |         |
|           |                                                | Z | 3.54 | 67.97 | 16.13 |      | 150.0 |         |
| 10141-CAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)     | X | 3.70 | 68.46 | 16.65 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.53 | 67.64 | 16.03 |      | 150.0 |         |
|           |                                                | Z | 3.65 | 67.99 | 16.26 |      | 150.0 |         |
| 10142-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)        | X | 2.36 | 71.08 | 17.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.01 | 68.49 | 15.62 |      | 150.0 |         |
|           |                                                | Z | 2.20 | 69.37 | 16.30 |      | 150.0 |         |
| 10143-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)      | X | 2.76 | 70.34 | 17.00 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.47 | 68.62 | 15.73 |      | 150.0 |         |
|           |                                                | Z | 2.62 | 69.02 | 16.23 |      | 150.0 |         |
| 10144-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)      | X | 2.54 | 68.16 | 15.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.28 | 66.60 | 14.27 |      | 150.0 |         |
|           |                                                | Z | 2.46 | 67.23 | 14.93 |      | 150.0 |         |
| 10145-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)      | X | 1.75 | 69.86 | 15.18 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.29 | 65.55 | 12.27 |      | 150.0 |         |
|           |                                                | Z | 1.55 | 67.61 | 14.05 |      | 150.0 |         |
| 10146-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)    | X | 4.07 | 76.05 | 17.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.52 | 69.20 | 13.62 |      | 150.0 |         |
|           |                                                | Z | 3.50 | 73.50 | 16.33 |      | 150.0 |         |
| 10147-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)    | X | 5.72 | 80.95 | 19.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.13 | 72.10 | 15.05 |      | 150.0 |         |
|           |                                                | Z | 4.43 | 76.91 | 17.88 |      | 150.0 |         |

|           |                                            |   |      |       |       |      |       |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10149-CAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 3.13 | 68.56 | 16.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.93 | 67.47 | 15.80 |      | 150.0 |         |
|           |                                            | Z | 3.07 | 67.93 | 16.12 |      | 150.0 |         |
| 10150-CAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 3.24 | 68.40 | 16.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.05 | 67.43 | 15.85 |      | 150.0 |         |
|           |                                            | Z | 3.18 | 67.82 | 16.13 |      | 150.0 |         |
| 10151-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)    | X | 9.59 | 81.21 | 22.61 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 9.21 | 80.79 | 22.27 |      | 65.0  |         |
|           |                                            | Z | 9.05 | 79.62 | 21.87 |      | 65.0  |         |
| 10152-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 8.53 | 77.77 | 21.82 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 8.07 | 77.03 | 21.32 |      | 65.0  |         |
|           |                                            | Z | 8.36 | 76.93 | 21.37 |      | 65.0  |         |
| 10153-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 8.87 | 78.41 | 22.41 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 8.48 | 77.88 | 22.02 |      | 65.0  |         |
|           |                                            | Z | 8.68 | 77.54 | 21.94 |      | 65.0  |         |
| 10154-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 2.63 | 71.34 | 17.67 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.29 | 69.04 | 16.21 |      | 150.0 |         |
|           |                                            | Z | 2.48 | 69.88 | 16.75 |      | 150.0 |         |
| 10155-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 2.84 | 69.30 | 16.97 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.62 | 68.03 | 16.00 |      | 150.0 |         |
|           |                                            | Z | 2.75 | 68.36 | 16.34 |      | 150.0 |         |
| 10156-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 2.26 | 71.67 | 17.44 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.86 | 68.59 | 15.46 |      | 150.0 |         |
|           |                                            | Z | 2.07 | 69.64 | 16.29 |      | 150.0 |         |
| 10157-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 2.42 | 69.16 | 15.83 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.11 | 67.12 | 14.31 |      | 150.0 |         |
|           |                                            | Z | 2.30 | 67.87 | 15.10 |      | 150.0 |         |
| 10158-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 2.99 | 69.33 | 17.05 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.78 | 68.20 | 16.17 |      | 150.0 |         |
|           |                                            | Z | 2.90 | 68.44 | 16.46 |      | 150.0 |         |
| 10159-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 2.55 | 69.60 | 16.11 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.22 | 67.56 | 14.60 |      | 150.0 |         |
|           |                                            | Z | 2.41 | 68.28 | 15.37 |      | 150.0 |         |
| 10160-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)    | X | 3.02 | 70.16 | 17.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.77 | 68.66 | 16.17 |      | 150.0 |         |
|           |                                            | Z | 2.91 | 69.14 | 16.50 |      | 150.0 |         |
| 10161-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 3.13 | 68.32 | 16.54 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.95 | 67.34 | 15.78 |      | 150.0 |         |
|           |                                            | Z | 3.07 | 67.70 | 16.08 |      | 150.0 |         |
| 10162-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 3.23 | 68.35 | 16.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.06 | 67.45 | 15.88 |      | 150.0 |         |
|           |                                            | Z | 3.18 | 67.74 | 16.14 |      | 150.0 |         |
| 10166-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 4.02 | 71.10 | 20.08 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.79 | 70.19 | 19.37 |      | 150.0 |         |
|           |                                            | Z | 4.03 | 70.69 | 19.72 |      | 150.0 |         |
| 10167-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 5.24 | 74.71 | 20.79 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.82 | 73.39 | 19.92 |      | 150.0 |         |
|           |                                            | Z | 5.25 | 74.14 | 20.39 |      | 150.0 |         |

|           |                                            |   |       |        |       |      |       |         |
|-----------|--------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10168-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 5.76  | 76.76  | 21.96 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 5.36  | 75.66  | 21.24 |      | 150.0 |         |
|           |                                            | Z | 5.73  | 75.99  | 21.47 |      | 150.0 |         |
| 10169-CAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 3.69  | 72.72  | 20.82 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.33  | 70.78  | 19.63 |      | 150.0 |         |
|           |                                            | Z | 3.78  | 72.61  | 20.53 |      | 150.0 |         |
| 10170-CAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 5.76  | 80.54  | 23.62 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.94  | 77.74  | 22.22 |      | 150.0 |         |
|           |                                            | Z | 5.83  | 79.90  | 23.09 |      | 150.0 |         |
| 10171-AAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 4.61  | 75.69  | 20.76 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.94  | 72.92  | 19.25 |      | 150.0 |         |
|           |                                            | Z | 4.70  | 75.28  | 20.35 |      | 150.0 |         |
| 10172-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 36.99 | 114.19 | 35.08 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 22.97 | 105.21 | 32.24 |      | 65.0  |         |
|           |                                            | Z | 26.68 | 106.36 | 32.56 |      | 65.0  |         |
| 10173-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 41.01 | 110.69 | 32.32 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 35.83 | 108.35 | 31.36 |      | 65.0  |         |
|           |                                            | Z | 28.00 | 102.66 | 29.85 |      | 65.0  |         |
| 10174-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 30.73 | 104.07 | 29.95 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 27.27 | 102.14 | 29.08 |      | 65.0  |         |
|           |                                            | Z | 22.20 | 97.35  | 27.81 |      | 65.0  |         |
| 10175-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)      | X | 3.64  | 72.35  | 20.56 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.28  | 70.42  | 19.36 |      | 150.0 |         |
|           |                                            | Z | 3.72  | 72.25  | 20.28 |      | 150.0 |         |
| 10176-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)    | X | 5.77  | 80.56  | 23.63 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.95  | 77.76  | 22.23 |      | 150.0 |         |
|           |                                            | Z | 5.84  | 79.92  | 23.10 |      | 150.0 |         |
| 10177-CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)       | X | 3.67  | 72.53  | 20.66 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.31  | 70.60  | 19.46 |      | 150.0 |         |
|           |                                            | Z | 3.76  | 72.42  | 20.38 |      | 150.0 |         |
| 10178-CAE | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)     | X | 5.68  | 80.23  | 23.47 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.88  | 77.46  | 22.08 |      | 150.0 |         |
|           |                                            | Z | 5.74  | 79.60  | 22.95 |      | 150.0 |         |
| 10179-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)    | X | 5.14  | 77.96  | 22.04 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.38  | 75.13  | 20.57 |      | 150.0 |         |
|           |                                            | Z | 5.21  | 77.41  | 21.56 |      | 150.0 |         |
| 10180-CAE | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)     | X | 4.59  | 75.59  | 20.70 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.92  | 72.83  | 19.19 |      | 150.0 |         |
|           |                                            | Z | 4.68  | 75.18  | 20.29 |      | 150.0 |         |
| 10181-CAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 3.66  | 72.51  | 20.66 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.30  | 70.58  | 19.46 |      | 150.0 |         |
|           |                                            | Z | 3.75  | 72.41  | 20.37 |      | 150.0 |         |
| 10182-CAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)    | X | 5.67  | 80.21  | 23.46 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.87  | 77.43  | 22.07 |      | 150.0 |         |
|           |                                            | Z | 5.73  | 79.57  | 22.94 |      | 150.0 |         |
| 10183-AAC | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 4.58  | 75.56  | 20.68 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.92  | 72.80  | 19.18 |      | 150.0 |         |
|           |                                            | Z | 4.67  | 75.15  | 20.27 |      | 150.0 |         |

|           |                                               |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10184-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)          | X | 3.68 | 72.56 | 20.68 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.32 | 70.63 | 19.48 |      | 150.0 |         |
|           |                                               | Z | 3.77 | 72.45 | 20.39 |      | 150.0 |         |
| 10185-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)        | X | 5.70 | 80.29 | 23.50 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.90 | 77.51 | 22.11 |      | 150.0 |         |
|           |                                               | Z | 5.76 | 79.65 | 22.97 |      | 150.0 |         |
| 10186-AAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)        | X | 4.61 | 75.64 | 20.72 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.94 | 72.88 | 19.21 |      | 150.0 |         |
|           |                                               | Z | 4.69 | 75.23 | 20.31 |      | 150.0 |         |
| 10187-CAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)        | X | 3.69 | 72.61 | 20.73 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.33 | 70.68 | 19.54 |      | 150.0 |         |
|           |                                               | Z | 3.77 | 72.50 | 20.44 |      | 150.0 |         |
| 10188-CAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)      | X | 5.93 | 81.11 | 23.91 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 5.09 | 78.33 | 22.53 |      | 150.0 |         |
|           |                                               | Z | 5.99 | 80.44 | 23.37 |      | 150.0 |         |
| 10189-AAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)      | X | 4.73 | 76.16 | 21.02 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.04 | 73.37 | 19.51 |      | 150.0 |         |
|           |                                               | Z | 4.82 | 75.73 | 20.60 |      | 150.0 |         |
| 10193-CAC | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)  | X | 4.67 | 66.99 | 16.47 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.56 | 66.66 | 16.13 |      | 150.0 |         |
|           |                                               | Z | 4.66 | 66.78 | 16.26 |      | 150.0 |         |
| 10194-CAC | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | X | 4.87 | 67.36 | 16.58 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.75 | 67.00 | 16.25 |      | 150.0 |         |
|           |                                               | Z | 4.87 | 67.15 | 16.37 |      | 150.0 |         |
| 10195-CAC | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | X | 4.91 | 67.37 | 16.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.79 | 67.03 | 16.27 |      | 150.0 |         |
|           |                                               | Z | 4.91 | 67.16 | 16.38 |      | 150.0 |         |
| 10196-CAC | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)       | X | 4.69 | 67.10 | 16.51 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.58 | 66.74 | 16.16 |      | 150.0 |         |
|           |                                               | Z | 4.69 | 66.88 | 16.30 |      | 150.0 |         |
| 10197-CAC | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)      | X | 4.89 | 67.38 | 16.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.77 | 67.03 | 16.26 |      | 150.0 |         |
|           |                                               | Z | 4.88 | 67.17 | 16.38 |      | 150.0 |         |
| 10198-CAC | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)      | X | 4.92 | 67.39 | 16.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.80 | 67.05 | 16.28 |      | 150.0 |         |
|           |                                               | Z | 4.91 | 67.18 | 16.39 |      | 150.0 |         |
| 10219-CAC | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)       | X | 4.64 | 67.11 | 16.47 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.53 | 66.75 | 16.12 |      | 150.0 |         |
|           |                                               | Z | 4.64 | 66.90 | 16.26 |      | 150.0 |         |
| 10220-CAC | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)    | X | 4.88 | 67.37 | 16.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.76 | 67.01 | 16.26 |      | 150.0 |         |
|           |                                               | Z | 4.88 | 67.17 | 16.38 |      | 150.0 |         |
| 10221-CAC | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)    | X | 4.92 | 67.32 | 16.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.80 | 66.98 | 16.27 |      | 150.0 |         |
|           |                                               | Z | 4.92 | 67.11 | 16.38 |      | 150.0 |         |
| 10222-CAC | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)        | X | 5.23 | 67.59 | 16.70 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 5.12 | 67.23 | 16.39 |      | 150.0 |         |
|           |                                               | Z | 5.22 | 67.42 | 16.51 |      | 150.0 |         |

|           |                                           |   |       |        |       |      |       |         |
|-----------|-------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10223-CAC | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)  | X | 5.61  | 67.92  | 16.89 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.46  | 67.48  | 16.54 |      | 150.0 |         |
|           |                                           | Z | 5.61  | 67.78  | 16.72 |      | 150.0 |         |
| 10224-CAC | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | X | 5.28  | 67.68  | 16.67 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.17  | 67.32  | 16.37 |      | 150.0 |         |
|           |                                           | Z | 5.27  | 67.52  | 16.48 |      | 150.0 |         |
| 10225-CAB | UMTS-FDD (HSPA+)                          | X | 2.96  | 66.82  | 16.01 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 2.82  | 66.09  | 15.31 |      | 150.0 |         |
|           |                                           | Z | 2.93  | 66.33  | 15.63 |      | 150.0 |         |
| 10226-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)  | X | 43.59 | 111.94 | 32.75 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 38.77 | 109.92 | 31.88 |      | 65.0  |         |
|           |                                           | Z | 29.30 | 103.58 | 30.20 |      | 65.0  |         |
| 10227-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)  | X | 32.72 | 105.33 | 30.40 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 30.31 | 104.10 | 29.73 |      | 65.0  |         |
|           |                                           | Z | 23.58 | 98.50  | 28.23 |      | 65.0  |         |
| 10228-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)    | X | 45.04 | 118.57 | 36.38 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 33.63 | 112.96 | 34.54 |      | 65.0  |         |
|           |                                           | Z | 30.07 | 109.15 | 33.47 |      | 65.0  |         |
| 10229-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)    | X | 40.99 | 110.67 | 32.33 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 35.91 | 108.38 | 31.38 |      | 65.0  |         |
|           |                                           | Z | 28.02 | 102.65 | 29.86 |      | 65.0  |         |
| 10230-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)    | X | 31.17 | 104.37 | 30.06 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 28.46 | 102.90 | 29.31 |      | 65.0  |         |
|           |                                           | Z | 22.72 | 97.78  | 27.95 |      | 65.0  |         |
| 10231-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)      | X | 42.43 | 117.25 | 35.96 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 31.37 | 111.47 | 34.05 |      | 65.0  |         |
|           |                                           | Z | 28.77 | 108.18 | 33.13 |      | 65.0  |         |
| 10232-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)    | X | 40.99 | 110.68 | 32.33 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 35.90 | 108.38 | 31.38 |      | 65.0  |         |
|           |                                           | Z | 28.01 | 102.65 | 29.86 |      | 65.0  |         |
| 10233-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)    | X | 31.21 | 104.41 | 30.07 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 28.46 | 102.91 | 29.32 |      | 65.0  |         |
|           |                                           | Z | 22.74 | 97.80  | 27.96 |      | 65.0  |         |
| 10234-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)      | X | 39.80 | 115.77 | 35.45 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 29.32 | 109.94 | 33.51 |      | 65.0  |         |
|           |                                           | Z | 27.42 | 107.07 | 32.71 |      | 65.0  |         |
| 10235-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)   | X | 41.16 | 110.77 | 32.35 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 36.04 | 108.46 | 31.40 |      | 65.0  |         |
|           |                                           | Z | 28.08 | 102.71 | 29.87 |      | 65.0  |         |
| 10236-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)   | X | 31.50 | 104.54 | 30.10 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 28.73 | 103.05 | 29.35 |      | 65.0  |         |
|           |                                           | Z | 22.90 | 97.90  | 27.98 |      | 65.0  |         |
| 10237-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)     | X | 42.99 | 117.54 | 36.03 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 31.67 | 111.68 | 34.11 |      | 65.0  |         |
|           |                                           | Z | 29.03 | 108.38 | 33.18 |      | 65.0  |         |
| 10238-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)   | X | 41.04 | 110.71 | 32.33 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 35.91 | 108.40 | 31.38 |      | 65.0  |         |
|           |                                           | Z | 28.02 | 102.67 | 29.86 |      | 65.0  |         |

|           |                                            |   |       |        |       |      |      |         |
|-----------|--------------------------------------------|---|-------|--------|-------|------|------|---------|
| 10239-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 31.24 | 104.44 | 30.08 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 28.46 | 102.92 | 29.32 |      | 65.0 |         |
|           |                                            | Z | 22.74 | 97.82  | 27.96 |      | 65.0 |         |
| 10240-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 42.83 | 117.47 | 36.01 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 31.56 | 111.62 | 34.09 |      | 65.0 |         |
|           |                                            | Z | 28.94 | 108.32 | 33.17 |      | 65.0 |         |
| 10241-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 13.21 | 88.13  | 28.12 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 12.19 | 86.75  | 27.34 |      | 65.0 |         |
|           |                                            | Z | 12.93 | 86.92  | 27.56 |      | 65.0 |         |
| 10242-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 11.82 | 85.64  | 27.08 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 11.88 | 86.18  | 27.05 |      | 65.0 |         |
|           |                                            | Z | 11.71 | 84.70  | 26.62 |      | 65.0 |         |
| 10243-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 9.69  | 83.18  | 27.04 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.48  | 80.58  | 25.71 |      | 65.0 |         |
|           |                                            | Z | 9.71  | 82.55  | 26.66 |      | 65.0 |         |
| 10244-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)   | X | 10.16 | 81.71  | 21.73 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 9.31  | 80.28  | 20.70 |      | 65.0 |         |
|           |                                            | Z | 9.66  | 80.44  | 21.31 |      | 65.0 |         |
| 10245-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)   | X | 9.99  | 81.19  | 21.49 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 9.12  | 79.71  | 20.44 |      | 65.0 |         |
|           |                                            | Z | 9.56  | 80.04  | 21.12 |      | 65.0 |         |
| 10246-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)     | X | 10.26 | 84.67  | 22.74 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 9.22  | 82.91  | 21.64 |      | 65.0 |         |
|           |                                            | Z | 9.02  | 82.03  | 21.79 |      | 65.0 |         |
| 10247-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 8.13  | 78.66  | 21.05 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.56  | 77.60  | 20.25 |      | 65.0 |         |
|           |                                            | Z | 7.81  | 77.51  | 20.59 |      | 65.0 |         |
| 10248-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 8.10  | 78.15  | 20.84 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.50  | 77.03  | 20.01 |      | 65.0 |         |
|           |                                            | Z | 7.84  | 77.14  | 20.44 |      | 65.0 |         |
| 10249-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 11.10 | 86.20  | 23.88 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 10.38 | 85.15  | 23.14 |      | 65.0 |         |
|           |                                            | Z | 9.69  | 83.27  | 22.77 |      | 65.0 |         |
| 10250-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 8.90  | 80.26  | 22.85 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.50  | 79.72  | 22.41 |      | 65.0 |         |
|           |                                            | Z | 8.55  | 78.98  | 22.26 |      | 65.0 |         |
| 10251-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 8.43  | 78.18  | 21.77 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.97  | 77.44  | 21.21 |      | 65.0 |         |
|           |                                            | Z | 8.21  | 77.20  | 21.30 |      | 65.0 |         |
| 10252-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 10.55 | 84.69  | 23.95 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 10.10 | 84.18  | 23.52 |      | 65.0 |         |
|           |                                            | Z | 9.56  | 82.30  | 22.95 |      | 65.0 |         |
| 10253-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 8.29  | 77.16  | 21.61 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.87  | 76.45  | 21.11 |      | 65.0 |         |
|           |                                            | Z | 8.15  | 76.38  | 21.20 |      | 65.0 |         |
| 10254-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 8.65  | 77.83  | 22.17 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 8.27  | 77.28  | 21.75 |      | 65.0 |         |
|           |                                            | Z | 8.49  | 77.01  | 21.74 |      | 65.0 |         |

|           |                                             |   |       |       |       |      |      |         |
|-----------|---------------------------------------------|---|-------|-------|-------|------|------|---------|
| 10255-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)     | X | 9.28  | 80.86 | 22.71 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.89  | 80.40 | 22.35 |      | 65.0 |         |
|           |                                             | Z | 8.80  | 79.34 | 21.99 |      | 65.0 |         |
| 10256-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | X | 9.13  | 79.62 | 20.18 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 7.96  | 77.38 | 18.74 |      | 65.0 |         |
|           |                                             | Z | 8.84  | 78.74 | 19.97 |      | 65.0 |         |
| 10257-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | X | 8.90  | 78.86 | 19.81 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 7.73  | 76.58 | 18.34 |      | 65.0 |         |
|           |                                             | Z | 8.71  | 78.17 | 19.67 |      | 65.0 |         |
| 10258-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)   | X | 8.90  | 81.94 | 21.19 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 7.60  | 79.37 | 19.69 |      | 65.0 |         |
|           |                                             | Z | 8.10  | 80.01 | 20.54 |      | 65.0 |         |
| 10259-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)   | X | 8.43  | 79.20 | 21.67 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 7.92  | 78.34 | 21.01 |      | 65.0 |         |
|           |                                             | Z | 8.11  | 78.01 | 21.17 |      | 65.0 |         |
| 10260-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)   | X | 8.43  | 78.91 | 21.57 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 7.92  | 78.05 | 20.91 |      | 65.0 |         |
|           |                                             | Z | 8.14  | 77.80 | 21.11 |      | 65.0 |         |
| 10261-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)     | X | 10.44 | 84.93 | 23.72 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 9.81  | 84.03 | 23.07 |      | 65.0 |         |
|           |                                             | Z | 9.35  | 82.40 | 22.71 |      | 65.0 |         |
| 10262-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)   | X | 8.89  | 80.23 | 22.82 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.49  | 79.67 | 22.37 |      | 65.0 |         |
|           |                                             | Z | 8.55  | 78.95 | 22.23 |      | 65.0 |         |
| 10263-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)   | X | 8.43  | 78.18 | 21.77 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 7.96  | 77.43 | 21.21 |      | 65.0 |         |
|           |                                             | Z | 8.21  | 77.20 | 21.30 |      | 65.0 |         |
| 10264-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)     | X | 10.49 | 84.56 | 23.88 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 10.02 | 84.01 | 23.44 |      | 65.0 |         |
|           |                                             | Z | 9.51  | 82.19 | 22.89 |      | 65.0 |         |
| 10265-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)  | X | 8.52  | 77.77 | 21.82 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.07  | 77.03 | 21.32 |      | 65.0 |         |
|           |                                             | Z | 8.36  | 76.93 | 21.38 |      | 65.0 |         |
| 10266-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)  | X | 8.87  | 78.41 | 22.40 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.48  | 77.88 | 22.01 |      | 65.0 |         |
|           |                                             | Z | 8.68  | 77.54 | 21.94 |      | 65.0 |         |
| 10267-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)    | X | 9.58  | 81.18 | 22.60 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 9.19  | 80.75 | 22.26 |      | 65.0 |         |
|           |                                             | Z | 9.04  | 79.59 | 21.85 |      | 65.0 |         |
| 10268-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)  | X | 8.91  | 77.09 | 21.88 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.54  | 76.56 | 21.51 |      | 65.0 |         |
|           |                                             | Z | 8.80  | 76.43 | 21.50 |      | 65.0 |         |
| 10269-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)  | X | 8.82  | 76.67 | 21.78 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.46  | 76.15 | 21.41 |      | 65.0 |         |
|           |                                             | Z | 8.73  | 76.06 | 21.42 |      | 65.0 |         |
| 10270-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)    | X | 8.97  | 78.33 | 21.62 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 8.64  | 77.97 | 21.34 |      | 65.0 |         |
|           |                                             | Z | 8.71  | 77.32 | 21.10 |      | 65.0 |         |

|           |                                                                    |   |       |       |       |      |       |         |
|-----------|--------------------------------------------------------------------|---|-------|-------|-------|------|-------|---------|
| 10274-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)                          | X | 2.72  | 67.23 | 15.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.57  | 66.31 | 15.13 |      | 150.0 |         |
|           |                                                                    | Z | 2.65  | 66.56 | 15.46 |      | 150.0 |         |
| 10275-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)                           | X | 1.89  | 70.77 | 17.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.58  | 67.67 | 15.25 |      | 150.0 |         |
|           |                                                                    | Z | 1.72  | 68.75 | 16.01 |      | 150.0 |         |
| 10277-CAA | PHS (QPSK)                                                         | X | 6.00  | 70.47 | 14.76 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 5.21  | 68.57 | 13.21 |      | 50.0  |         |
|           |                                                                    | Z | 6.28  | 70.88 | 15.27 |      | 50.0  |         |
| 10278-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5)                                 | X | 9.55  | 80.33 | 21.17 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 8.72  | 78.79 | 19.97 |      | 50.0  |         |
|           |                                                                    | Z | 9.29  | 79.51 | 21.06 |      | 50.0  |         |
| 10279-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38)                                | X | 9.72  | 80.54 | 21.26 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 8.86  | 78.97 | 20.05 |      | 50.0  |         |
|           |                                                                    | Z | 9.46  | 79.72 | 21.15 |      | 50.0  |         |
| 10290-AAB | CDMA2000, RC1, SO55, Full Rate                                     | X | 2.18  | 74.40 | 17.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.44  | 68.27 | 13.81 |      | 150.0 |         |
|           |                                                                    | Z | 1.72  | 70.30 | 15.40 |      | 150.0 |         |
| 10291-AAB | CDMA2000, RC3, SO55, Full Rate                                     | X | 1.24  | 71.68 | 16.15 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.80  | 65.30 | 12.12 |      | 150.0 |         |
|           |                                                                    | Z | 0.97  | 67.39 | 13.90 |      | 150.0 |         |
| 10292-AAB | CDMA2000, RC3, SO32, Full Rate                                     | X | 2.10  | 80.68 | 20.23 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.98  | 68.86 | 14.25 |      | 150.0 |         |
|           |                                                                    | Z | 1.23  | 71.77 | 16.34 |      | 150.0 |         |
| 10293-AAB | CDMA2000, RC3, SO3, Full Rate                                      | X | 4.35  | 92.52 | 24.81 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.43  | 74.29 | 17.12 |      | 150.0 |         |
|           |                                                                    | Z | 1.75  | 77.17 | 19.08 |      | 150.0 |         |
| 10295-AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr.                              | X | 11.19 | 84.61 | 24.64 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 11.12 | 84.62 | 24.20 |      | 50.0  |         |
|           |                                                                    | Z | 10.33 | 82.52 | 23.91 |      | 50.0  |         |
| 10297-AAC | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)                            | X | 3.13  | 71.75 | 17.66 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.77  | 69.64 | 16.38 |      | 150.0 |         |
|           |                                                                    | Z | 2.96  | 70.46 | 16.84 |      | 150.0 |         |
| 10298-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)                             | X | 2.07  | 71.56 | 16.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.59  | 67.63 | 14.15 |      | 150.0 |         |
|           |                                                                    | Z | 1.84  | 69.13 | 15.41 |      | 150.0 |         |
| 10299-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)                           | X | 4.44  | 77.05 | 18.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 3.17  | 71.89 | 15.69 |      | 150.0 |         |
|           |                                                                    | Z | 3.89  | 74.52 | 17.46 |      | 150.0 |         |
| 10300-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)                           | X | 2.98  | 70.18 | 14.87 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.33  | 66.80 | 12.64 |      | 150.0 |         |
|           |                                                                    | Z | 2.88  | 69.22 | 14.45 |      | 150.0 |         |
| 10301-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)                 | X | 5.88  | 68.71 | 19.12 | 4.17 | 80.0  | ± 9.6 % |
|           |                                                                    | Y | 5.67  | 68.35 | 18.79 |      | 80.0  |         |
|           |                                                                    | Z | 5.96  | 68.70 | 19.05 |      | 80.0  |         |
| 10302-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols) | X | 6.49  | 69.93 | 20.23 | 4.96 | 80.0  | ± 9.6 % |
|           |                                                                    | Y | 6.06  | 68.48 | 19.24 |      | 80.0  |         |
|           |                                                                    | Z | 6.58  | 69.96 | 20.17 |      | 80.0  |         |

|           |                                                                     |   |       |       |       |       |       |         |
|-----------|---------------------------------------------------------------------|---|-------|-------|-------|-------|-------|---------|
| 10303-AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)                 | X | 6.38  | 70.18 | 20.37 | 4.96  | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.90  | 68.52 | 19.27 |       | 80.0  |         |
|           |                                                                     | Z | 6.49  | 70.27 | 20.35 |       | 80.0  |         |
| 10304-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)                 | X | 5.94  | 69.20 | 19.41 | 4.17  | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.55  | 67.84 | 18.48 |       | 80.0  |         |
|           |                                                                     | Z | 6.02  | 69.19 | 19.33 |       | 80.0  |         |
| 10305-AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)    | X | 8.63  | 79.84 | 25.16 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 8.50  | 80.74 | 25.49 |       | 50.0  |         |
|           |                                                                     | Z | 9.07  | 80.51 | 25.38 |       | 50.0  |         |
| 10306-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)    | X | 7.19  | 74.26 | 22.98 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 6.24  | 70.98 | 21.03 |       | 50.0  |         |
|           |                                                                     | Z | 7.44  | 74.65 | 23.11 |       | 50.0  |         |
| 10307-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)     | X | 7.43  | 75.32 | 23.26 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 7.08  | 75.34 | 23.24 |       | 50.0  |         |
|           |                                                                     | Z | 7.71  | 75.76 | 23.39 |       | 50.0  |         |
| 10308-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)                | X | 7.56  | 75.95 | 23.55 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 7.22  | 76.07 | 23.58 |       | 50.0  |         |
|           |                                                                     | Z | 7.85  | 76.40 | 23.68 |       | 50.0  |         |
| 10309-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols) | X | 7.34  | 74.67 | 23.20 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 6.34  | 71.28 | 21.21 |       | 50.0  |         |
|           |                                                                     | Z | 7.59  | 75.05 | 23.31 |       | 50.0  |         |
| 10310-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)  | X | 7.26  | 74.63 | 23.05 | 6.02  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 6.24  | 71.19 | 21.04 |       | 50.0  |         |
|           |                                                                     | Z | 7.51  | 75.03 | 23.17 |       | 50.0  |         |
| 10311-AAC | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)                            | X | 3.50  | 70.87 | 17.20 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 3.12  | 68.92 | 16.05 |       | 150.0 |         |
|           |                                                                     | Z | 3.32  | 69.72 | 16.47 |       | 150.0 |         |
| 10313-AAA | iDEN 1:3                                                            | X | 8.27  | 79.76 | 19.38 | 6.99  | 70.0  | ± 9.6 % |
|           |                                                                     | Y | 7.09  | 77.48 | 18.12 |       | 70.0  |         |
|           |                                                                     | Z | 7.27  | 77.42 | 18.52 |       | 70.0  |         |
| 10314-AAA | iDEN 1:6                                                            | X | 10.52 | 85.41 | 23.73 | 10.00 | 30.0  | ± 9.6 % |
|           |                                                                     | Y | 9.80  | 84.47 | 23.05 |       | 30.0  |         |
|           |                                                                     | Z | 8.56  | 81.26 | 22.24 |       | 30.0  |         |
| 10315-AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)           | X | 1.21  | 66.04 | 16.76 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.11  | 64.36 | 15.28 |       | 150.0 |         |
|           |                                                                     | Z | 1.16  | 64.99 | 15.81 |       | 150.0 |         |
| 10316-AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)       | X | 4.78  | 67.20 | 16.69 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.67  | 66.87 | 16.36 |       | 150.0 |         |
|           |                                                                     | Z | 4.78  | 67.00 | 16.48 |       | 150.0 |         |
| 10317-AAC | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)             | X | 4.78  | 67.20 | 16.69 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.67  | 66.87 | 16.36 |       | 150.0 |         |
|           |                                                                     | Z | 4.78  | 67.00 | 16.48 |       | 150.0 |         |
| 10400-AAD | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)                 | X | 4.88  | 67.44 | 16.59 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.75  | 67.07 | 16.25 |       | 150.0 |         |
|           |                                                                     | Z | 4.88  | 67.23 | 16.38 |       | 150.0 |         |
| 10401-AAD | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)                 | X | 5.52  | 67.51 | 16.67 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 5.43  | 67.26 | 16.42 |       | 150.0 |         |
|           |                                                                     | Z | 5.50  | 67.29 | 16.46 |       | 150.0 |         |

|           |                                                                                 |   |        |        |       |      |       |         |
|-----------|---------------------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10402-AAD | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)                             | X | 5.81   | 67.99  | 16.74 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.71   | 67.67  | 16.46 |      | 150.0 |         |
|           |                                                                                 | Z | 5.80   | 67.83  | 16.56 |      | 150.0 |         |
| 10403-AAB | CDMA2000 (1xEV-DO, Rev. 0)                                                      | X | 2.18   | 74.40  | 17.31 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                 | Y | 1.44   | 68.27  | 13.81 |      | 115.0 |         |
|           |                                                                                 | Z | 1.72   | 70.30  | 15.40 |      | 115.0 |         |
| 10404-AAB | CDMA2000 (1xEV-DO, Rev. A)                                                      | X | 2.18   | 74.40  | 17.31 | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                 | Y | 1.44   | 68.27  | 13.81 |      | 115.0 |         |
|           |                                                                                 | Z | 1.72   | 70.30  | 15.40 |      | 115.0 |         |
| 10406-AAB | CDMA2000, RC3, SO32, SCH0, Full Rate                                            | X | 100.00 | 125.34 | 32.57 | 0.00 | 100.0 | ± 9.6 % |
|           |                                                                                 | Y | 100.00 | 122.30 | 30.90 |      | 100.0 |         |
|           |                                                                                 | Z | 100.00 | 123.59 | 31.86 |      | 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 | 100.00 | 121.08 | 31.14 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                                 | Y | 100.00 | 119.39 | 30.03 |      | 80.0  |         |
|           |                                                                                 | Z | 100.00 | 119.84 | 30.69 |      | 80.0  |         |
| 10415-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)                       | X | 1.04   | 64.21  | 15.75 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 0.96   | 62.81  | 14.37 |      | 150.0 |         |
|           |                                                                                 | Z | 1.00   | 63.31  | 14.86 |      | 150.0 |         |
| 10416-AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)                   | X | 4.68   | 67.03  | 16.52 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.57   | 66.70  | 16.19 |      | 150.0 |         |
|           |                                                                                 | Z | 4.67   | 66.81  | 16.30 |      | 150.0 |         |
| 10417-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)                       | X | 4.68   | 67.03  | 16.52 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.57   | 66.70  | 16.19 |      | 150.0 |         |
|           |                                                                                 | Z | 4.67   | 66.81  | 16.30 |      | 150.0 |         |
| 10418-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)   | X | 4.66   | 67.18  | 16.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.55   | 66.84  | 16.19 |      | 150.0 |         |
|           |                                                                                 | Z | 4.65   | 66.94  | 16.30 |      | 150.0 |         |
| 10419-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble)  | X | 4.69   | 67.13  | 16.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.58   | 66.80  | 16.20 |      | 150.0 |         |
|           |                                                                                 | Z | 4.68   | 66.91  | 16.31 |      | 150.0 |         |
| 10422-AAB | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)                                    | X | 4.81   | 67.13  | 16.54 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.70   | 66.81  | 16.22 |      | 150.0 |         |
|           |                                                                                 | Z | 4.80   | 66.92  | 16.33 |      | 150.0 |         |
| 10423-AAB | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)                                 | X | 5.01   | 67.51  | 16.68 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.89   | 67.16  | 16.35 |      | 150.0 |         |
|           |                                                                                 | Z | 5.01   | 67.31  | 16.47 |      | 150.0 |         |
| 10424-AAB | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)                                 | X | 4.92   | 67.45  | 16.65 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.80   | 67.10  | 16.32 |      | 150.0 |         |
|           |                                                                                 | Z | 4.92   | 67.24  | 16.43 |      | 150.0 |         |
| 10425-AAB | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)                                     | X | 5.50   | 67.77  | 16.79 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.41   | 67.50  | 16.53 |      | 150.0 |         |
|           |                                                                                 | Z | 5.49   | 67.58  | 16.59 |      | 150.0 |         |
| 10426-AAB | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)                                   | X | 5.51   | 67.80  | 16.80 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.41   | 67.51  | 16.53 |      | 150.0 |         |
|           |                                                                                 | Z | 5.50   | 67.62  | 16.60 |      | 150.0 |         |

|           |                                                                |   |        |        |       |      |       |         |
|-----------|----------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10427-AAB | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)                 | X | 5.53   | 67.79  | 16.79 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.42   | 67.48  | 16.51 |      | 150.0 |         |
|           |                                                                | Z | 5.52   | 67.63  | 16.61 |      | 150.0 |         |
| 10430-AAB | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)                               | X | 4.38   | 70.70  | 18.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.25   | 70.46  | 18.05 |      | 150.0 |         |
|           |                                                                | Z | 4.31   | 70.02  | 17.98 |      | 150.0 |         |
| 10431-AAB | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)                              | X | 4.42   | 67.67  | 16.62 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.27   | 67.23  | 16.20 |      | 150.0 |         |
|           |                                                                | Z | 4.41   | 67.37  | 16.37 |      | 150.0 |         |
| 10432-AAB | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)                              | X | 4.70   | 67.52  | 16.63 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.57   | 67.13  | 16.26 |      | 150.0 |         |
|           |                                                                | Z | 4.70   | 67.28  | 16.40 |      | 150.0 |         |
| 10433-AAB | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)                              | X | 4.94   | 67.50  | 16.67 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.82   | 67.14  | 16.34 |      | 150.0 |         |
|           |                                                                | Z | 4.94   | 67.29  | 16.46 |      | 150.0 |         |
| 10434-AAA | W-CDMA (BS Test Model 1, 64 DPCH)                              | X | 4.49   | 71.52  | 18.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.34   | 71.22  | 18.01 |      | 150.0 |         |
|           |                                                                | Z | 4.39   | 70.68  | 17.96 |      | 150.0 |         |
| 10435-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 100.00 | 120.92 | 31.06 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                | Y | 100.00 | 119.22 | 29.95 |      | 80.0  |         |
|           |                                                                | Z | 100.00 | 119.70 | 30.62 |      | 80.0  |         |
| 10447-AAB | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)                 | X | 3.75   | 67.86  | 16.21 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.56   | 67.20  | 15.57 |      | 150.0 |         |
|           |                                                                | Z | 3.73   | 67.41  | 15.90 |      | 150.0 |         |
| 10448-AAB | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)                | X | 4.24   | 67.45  | 16.49 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.10   | 67.00  | 16.05 |      | 150.0 |         |
|           |                                                                | Z | 4.22   | 67.14  | 16.23 |      | 150.0 |         |
| 10449-AAB | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)                | X | 4.49   | 67.35  | 16.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.37   | 66.95  | 16.16 |      | 150.0 |         |
|           |                                                                | Z | 4.48   | 67.09  | 16.30 |      | 150.0 |         |
| 10450-AAB | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)                | X | 4.67   | 67.26  | 16.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.56   | 66.89  | 16.18 |      | 150.0 |         |
|           |                                                                | Z | 4.66   | 67.04  | 16.31 |      | 150.0 |         |
| 10451-AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)                | X | 3.69   | 68.21  | 15.98 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.47   | 67.39  | 15.23 |      | 150.0 |         |
|           |                                                                | Z | 3.66   | 67.69  | 15.67 |      | 150.0 |         |
| 10456-AAB | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)           | X | 6.36   | 68.35  | 16.93 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 6.27   | 68.07  | 16.69 |      | 150.0 |         |
|           |                                                                | Z | 6.35   | 68.21  | 16.77 |      | 150.0 |         |
| 10457-AAA | UMTS-FDD (DC-HSDPA)                                            | X | 3.86   | 65.66  | 16.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.78   | 65.32  | 15.90 |      | 150.0 |         |
|           |                                                                | Z | 3.84   | 65.45  | 16.04 |      | 150.0 |         |
| 10458-AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers)                         | X | 4.10   | 70.68  | 17.90 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.95   | 70.36  | 17.40 |      | 150.0 |         |
|           |                                                                | Z | 3.98   | 69.73  | 17.40 |      | 150.0 |         |
| 10459-AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers)                         | X | 5.16   | 67.87  | 18.15 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.08   | 67.96  | 18.01 |      | 150.0 |         |
|           |                                                                | Z | 5.12   | 67.39  | 17.86 |      | 150.0 |         |

|           |                                                                   |   |        |        |       |      |       |         |
|-----------|-------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10460-AAA | UMTS-FDD (WCDMA, AMR)                                             | X | 1.21   | 74.36  | 19.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                   | Y | 0.84   | 67.73  | 15.53 |      | 150.0 |         |
|           |                                                                   | Z | 0.96   | 69.69  | 16.87 |      | 150.0 |         |
| 10461-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 124.72 | 32.88 | 3.29 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 122.71 | 31.63 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 122.27 | 31.89 |      | 80.0  |         |
| 10462-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 100.00 | 110.81 | 26.22 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 107.68 | 24.48 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 109.58 | 25.81 |      | 80.0  |         |
| 10463-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 100.00 | 108.02 | 24.88 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 17.57  | 87.04  | 18.79 |      | 80.0  |         |
|           |                                                                   | Z | 57.71  | 101.03 | 23.21 |      | 80.0  |         |
| 10464-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 100.00 | 122.99 | 31.92 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 120.66 | 30.52 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 120.59 | 30.96 |      | 80.0  |         |
| 10465-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 110.36 | 26.00 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 69.93  | 103.37 | 23.39 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 109.17 | 25.60 |      | 80.0  |         |
| 10466-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 107.59 | 24.67 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 10.32  | 81.39  | 17.12 |      | 80.0  |         |
|           |                                                                   | Z | 32.56  | 94.43  | 21.51 |      | 80.0  |         |
| 10467-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 100.00 | 123.18 | 32.01 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 120.88 | 30.62 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 120.77 | 31.04 |      | 80.0  |         |
| 10468-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 110.50 | 26.06 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 95.55  | 106.84 | 24.20 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 109.30 | 25.66 |      | 80.0  |         |
| 10469-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 100.00 | 107.60 | 24.67 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 10.51  | 81.58  | 17.17 |      | 80.0  |         |
|           |                                                                   | Z | 33.51  | 94.76  | 21.58 |      | 80.0  |         |
| 10470-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 123.21 | 32.02 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 120.90 | 30.62 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 120.79 | 31.05 |      | 80.0  |         |
| 10471-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 110.46 | 26.04 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 94.56  | 106.68 | 24.14 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 109.26 | 25.63 |      | 80.0  |         |
| 10472-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 107.56 | 24.64 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 10.43  | 81.48  | 17.13 |      | 80.0  |         |
|           |                                                                   | Z | 33.64  | 94.78  | 21.58 |      | 80.0  |         |
| 10473-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 123.19 | 32.00 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 120.87 | 30.61 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 120.77 | 31.03 |      | 80.0  |         |
| 10474-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 110.47 | 26.04 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 92.06  | 106.40 | 24.08 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 109.26 | 25.64 |      | 80.0  |         |
| 10475-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 100.00 | 107.57 | 24.65 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 10.30  | 81.37  | 17.09 |      | 80.0  |         |
|           |                                                                   | Z | 33.12  | 94.61  | 21.54 |      | 80.0  |         |

|           |                                                                     |   |        |        |       |      |      |         |
|-----------|---------------------------------------------------------------------|---|--------|--------|-------|------|------|---------|
| 10477-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 110.32 | 25.97 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 73.47  | 103.85 | 23.47 |      | 80.0 |         |
|           |                                                                     | Z | 100.00 | 109.13 | 25.57 |      | 80.0 |         |
| 10478-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)    | X | 100.00 | 107.52 | 24.63 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 10.13  | 81.17  | 17.03 |      | 80.0 |         |
|           |                                                                     | Z | 32.56  | 94.40  | 21.47 |      | 80.0 |         |
| 10479-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 23.24  | 102.02 | 28.60 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 17.72  | 96.96  | 26.53 |      | 80.0 |         |
|           |                                                                     | Z | 12.62  | 91.31  | 25.32 |      | 80.0 |         |
| 10480-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 23.79  | 96.38  | 25.31 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 16.50  | 90.35  | 22.90 |      | 80.0 |         |
|           |                                                                     | Z | 13.56  | 87.65  | 22.71 |      | 80.0 |         |
| 10481-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 19.64  | 92.74  | 23.93 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 13.10  | 86.39  | 21.35 |      | 80.0 |         |
|           |                                                                     | Z | 12.05  | 85.29  | 21.66 |      | 80.0 |         |
| 10482-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 8.49   | 84.69  | 22.05 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.66   | 78.52  | 19.36 |      | 80.0 |         |
|           |                                                                     | Z | 6.07   | 79.11  | 20.05 |      | 80.0 |         |
| 10483-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 11.70  | 86.22  | 22.45 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 8.73   | 81.47  | 20.24 |      | 80.0 |         |
|           |                                                                     | Z | 8.71   | 81.39  | 20.85 |      | 80.0 |         |
| 10484-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 10.50  | 84.41  | 21.86 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 7.92   | 79.90  | 19.71 |      | 80.0 |         |
|           |                                                                     | Z | 8.18   | 80.26  | 20.46 |      | 80.0 |         |
| 10485-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 8.12   | 84.44  | 22.68 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.95   | 79.56  | 20.54 |      | 80.0 |         |
|           |                                                                     | Z | 6.24   | 79.61  | 20.83 |      | 80.0 |         |
| 10486-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.60   | 75.72  | 19.25 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.71   | 73.16  | 17.81 |      | 80.0 |         |
|           |                                                                     | Z | 5.00   | 73.46  | 18.29 |      | 80.0 |         |
| 10487-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.48   | 75.06  | 18.99 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.65   | 72.64  | 17.60 |      | 80.0 |         |
|           |                                                                     | Z | 4.96   | 73.01  | 18.11 |      | 80.0 |         |
| 10488-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 7.06   | 80.88  | 21.92 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.70   | 77.55  | 20.40 |      | 80.0 |         |
|           |                                                                     | Z | 6.08   | 77.77  | 20.57 |      | 80.0 |         |
| 10489-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 5.31   | 73.88  | 19.45 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.75   | 72.25  | 18.50 |      | 80.0 |         |
|           |                                                                     | Z | 5.02   | 72.44  | 18.71 |      | 80.0 |         |
| 10490-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 5.32   | 73.40  | 19.28 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.80   | 71.92  | 18.39 |      | 80.0 |         |
|           |                                                                     | Z | 5.07   | 72.08  | 18.60 |      | 80.0 |         |
| 10491-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 6.29   | 77.08  | 20.62 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.44   | 74.84  | 19.51 |      | 80.0 |         |
|           |                                                                     | Z | 5.78   | 75.12  | 19.66 |      | 80.0 |         |
| 10492-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 5.38   | 72.26  | 19.03 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.95   | 71.03  | 18.29 |      | 80.0 |         |
|           |                                                                     | Z | 5.22   | 71.29  | 18.47 |      | 80.0 |         |

|           |                                                                      |   |      |       |       |      |      |         |
|-----------|----------------------------------------------------------------------|---|------|-------|-------|------|------|---------|
| 10493-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.41 | 71.97 | 18.93 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.99 | 70.82 | 18.22 |      | 80.0 |         |
|           |                                                                      | Z | 5.27 | 71.06 | 18.40 |      | 80.0 |         |
| 10494-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 7.26 | 79.46 | 21.31 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 6.08 | 76.70 | 20.04 |      | 80.0 |         |
|           |                                                                      | Z | 6.47 | 77.03 | 20.19 |      | 80.0 |         |
| 10495-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.52 | 72.92 | 19.28 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.04 | 71.57 | 18.51 |      | 80.0 |         |
|           |                                                                      | Z | 5.33 | 71.88 | 18.69 |      | 80.0 |         |
| 10496-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.51 | 72.36 | 19.10 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.07 | 71.15 | 18.38 |      | 80.0 |         |
|           |                                                                      | Z | 5.35 | 71.43 | 18.55 |      | 80.0 |         |
| 10497-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 6.84 | 81.16 | 20.14 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.18 | 74.07 | 16.91 |      | 80.0 |         |
|           |                                                                      | Z | 4.97 | 76.21 | 18.38 |      | 80.0 |         |
| 10498-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.23 | 71.63 | 15.72 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.88 | 66.72 | 12.99 |      | 80.0 |         |
|           |                                                                      | Z | 3.81 | 69.89 | 15.10 |      | 80.0 |         |
| 10499-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 4.07 | 70.79 | 15.25 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.78 | 66.03 | 12.55 |      | 80.0 |         |
|           |                                                                      | Z | 3.73 | 69.33 | 14.75 |      | 80.0 |         |
| 10500-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 7.25 | 82.07 | 22.09 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.64 | 78.16 | 20.30 |      | 80.0 |         |
|           |                                                                      | Z | 5.95 | 78.24 | 20.53 |      | 80.0 |         |
| 10501-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.43 | 74.78 | 19.24 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.72 | 72.72 | 18.04 |      | 80.0 |         |
|           |                                                                      | Z | 4.99 | 72.91 | 18.39 |      | 80.0 |         |
| 10502-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.43 | 74.40 | 19.05 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.75 | 72.45 | 17.89 |      | 80.0 |         |
|           |                                                                      | Z | 5.01 | 72.63 | 18.25 |      | 80.0 |         |
| 10503-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 6.96 | 80.64 | 21.82 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.62 | 77.31 | 20.29 |      | 80.0 |         |
|           |                                                                      | Z | 6.00 | 77.58 | 20.48 |      | 80.0 |         |
| 10504-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.28 | 73.79 | 19.40 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.72 | 72.15 | 18.44 |      | 80.0 |         |
|           |                                                                      | Z | 5.00 | 72.37 | 18.67 |      | 80.0 |         |
| 10505-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 5.30 | 73.31 | 19.23 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.78 | 71.81 | 18.34 |      | 80.0 |         |
|           |                                                                      | Z | 5.05 | 72.00 | 18.55 |      | 80.0 |         |
| 10506-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 7.19 | 79.29 | 21.23 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 6.02 | 76.53 | 19.97 |      | 80.0 |         |
|           |                                                                      | Z | 6.42 | 76.89 | 20.13 |      | 80.0 |         |
| 10507-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 5.49 | 72.85 | 19.25 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 5.02 | 71.50 | 18.47 |      | 80.0 |         |
|           |                                                                      | Z | 5.31 | 71.82 | 18.66 |      | 80.0 |         |

|           |                                                                     |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10508-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.49 | 72.29 | 19.06 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.05 | 71.07 | 18.34 |      | 80.0  |         |
|           |                                                                     | Z | 5.33 | 71.37 | 18.52 |      | 80.0  |         |
| 10509-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 6.71 | 76.12 | 20.06 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.94 | 74.25 | 19.13 |      | 80.0  |         |
|           |                                                                     | Z | 6.28 | 74.57 | 19.27 |      | 80.0  |         |
| 10510-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.84 | 71.95 | 18.94 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.42 | 70.86 | 18.30 |      | 80.0  |         |
|           |                                                                     | Z | 5.71 | 71.20 | 18.47 |      | 80.0  |         |
| 10511-AAC | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.82 | 71.51 | 18.81 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.44 | 70.51 | 18.21 |      | 80.0  |         |
|           |                                                                     | Z | 5.71 | 70.83 | 18.37 |      | 80.0  |         |
| 10512-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 7.61 | 78.80 | 20.90 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 6.48 | 76.29 | 19.75 |      | 80.0  |         |
|           |                                                                     | Z | 6.88 | 76.71 | 19.92 |      | 80.0  |         |
| 10513-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.82 | 72.58 | 19.18 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.36 | 71.33 | 18.47 |      | 80.0  |         |
|           |                                                                     | Z | 5.67 | 71.74 | 18.66 |      | 80.0  |         |
| 10514-AAC | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 5.73 | 71.89 | 18.96 | 2.23 | 80.0  | ± 9.6 % |
|           |                                                                     | Y | 5.32 | 70.77 | 18.31 |      | 80.0  |         |
|           |                                                                     | Z | 5.61 | 71.15 | 18.49 |      | 80.0  |         |
| 10515-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)           | X | 1.00 | 64.53 | 15.90 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.92 | 62.98 | 14.41 |      | 150.0 |         |
|           |                                                                     | Z | 0.96 | 63.54 | 14.94 |      | 150.0 |         |
| 10516-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)         | X | 1.68 | 91.06 | 26.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.55 | 69.99 | 16.34 |      | 150.0 |         |
|           |                                                                     | Z | 0.73 | 74.56 | 19.01 |      | 150.0 |         |
| 10517-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)          | X | 0.92 | 68.12 | 17.45 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 0.77 | 64.83 | 14.89 |      | 150.0 |         |
|           |                                                                     | Z | 0.84 | 65.95 | 15.79 |      | 150.0 |         |
| 10518-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)           | X | 4.67 | 67.12 | 16.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.56 | 66.77 | 16.17 |      | 150.0 |         |
|           |                                                                     | Z | 4.66 | 66.89 | 16.28 |      | 150.0 |         |
| 10519-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)          | X | 4.89 | 67.40 | 16.64 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.77 | 67.04 | 16.30 |      | 150.0 |         |
|           |                                                                     | Z | 4.89 | 67.19 | 16.43 |      | 150.0 |         |
| 10520-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)          | X | 4.74 | 67.39 | 16.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.61 | 67.01 | 16.22 |      | 150.0 |         |
|           |                                                                     | Z | 4.74 | 67.17 | 16.35 |      | 150.0 |         |
| 10521-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)          | X | 4.67 | 67.41 | 16.56 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.55 | 67.00 | 16.20 |      | 150.0 |         |
|           |                                                                     | Z | 4.67 | 67.18 | 16.34 |      | 150.0 |         |
| 10522-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)          | X | 4.72 | 67.39 | 16.60 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.60 | 67.04 | 16.27 |      | 150.0 |         |
|           |                                                                     | Z | 4.71 | 67.14 | 16.36 |      | 150.0 |         |

|           |                                                            |   |      |       |       |      |       |         |
|-----------|------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10523-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) | X | 4.59 | 67.29 | 16.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.47 | 66.91 | 16.11 |      | 150.0 |         |
|           |                                                            | Z | 4.58 | 67.04 | 16.22 |      | 150.0 |         |
| 10524-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) | X | 4.67 | 67.35 | 16.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.55 | 66.98 | 16.24 |      | 150.0 |         |
|           |                                                            | Z | 4.67 | 67.11 | 16.36 |      | 150.0 |         |
| 10525-AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)          | X | 4.63 | 66.37 | 16.17 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.52 | 66.01 | 15.83 |      | 150.0 |         |
|           |                                                            | Z | 4.62 | 66.13 | 15.94 |      | 150.0 |         |
| 10526-AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)          | X | 4.83 | 66.78 | 16.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.70 | 66.40 | 15.97 |      | 150.0 |         |
|           |                                                            | Z | 4.82 | 66.54 | 16.09 |      | 150.0 |         |
| 10527-AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)          | X | 4.75 | 66.76 | 16.27 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.62 | 66.36 | 15.92 |      | 150.0 |         |
|           |                                                            | Z | 4.74 | 66.51 | 16.04 |      | 150.0 |         |
| 10528-AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)          | X | 4.77 | 66.78 | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.64 | 66.38 | 15.95 |      | 150.0 |         |
|           |                                                            | Z | 4.76 | 66.54 | 16.08 |      | 150.0 |         |
| 10529-AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)          | X | 4.77 | 66.78 | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.64 | 66.38 | 15.95 |      | 150.0 |         |
|           |                                                            | Z | 4.76 | 66.54 | 16.08 |      | 150.0 |         |
| 10531-AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)          | X | 4.78 | 66.93 | 16.34 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.64 | 66.50 | 15.97 |      | 150.0 |         |
|           |                                                            | Z | 4.77 | 66.69 | 16.10 |      | 150.0 |         |
| 10532-AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)          | X | 4.63 | 66.80 | 16.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.49 | 66.35 | 15.90 |      | 150.0 |         |
|           |                                                            | Z | 4.62 | 66.56 | 16.05 |      | 150.0 |         |
| 10533-AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)          | X | 4.78 | 66.80 | 16.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 4.65 | 66.41 | 15.94 |      | 150.0 |         |
|           |                                                            | Z | 4.77 | 66.55 | 16.05 |      | 150.0 |         |
| 10534-AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)          | X | 5.28 | 66.88 | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.17 | 66.53 | 16.03 |      | 150.0 |         |
|           |                                                            | Z | 5.27 | 66.70 | 16.13 |      | 150.0 |         |
| 10535-AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)          | X | 5.35 | 67.03 | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.24 | 66.69 | 16.10 |      | 150.0 |         |
|           |                                                            | Z | 5.34 | 66.84 | 16.18 |      | 150.0 |         |
| 10536-AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)          | X | 5.22 | 67.03 | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.10 | 66.65 | 16.06 |      | 150.0 |         |
|           |                                                            | Z | 5.21 | 66.83 | 16.16 |      | 150.0 |         |
| 10537-AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)          | X | 5.29 | 67.00 | 16.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.17 | 66.63 | 16.05 |      | 150.0 |         |
|           |                                                            | Z | 5.27 | 66.80 | 16.15 |      | 150.0 |         |
| 10538-AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)          | X | 5.40 | 67.06 | 16.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.27 | 66.69 | 16.12 |      | 150.0 |         |
|           |                                                            | Z | 5.39 | 66.88 | 16.23 |      | 150.0 |         |
| 10540-AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)          | X | 5.30 | 67.01 | 16.42 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                            | Y | 5.19 | 66.66 | 16.12 |      | 150.0 |         |
|           |                                                            | Z | 5.29 | 66.82 | 16.22 |      | 150.0 |         |

|           |                                                    |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10541-AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)  | X | 5.28 | 66.90 | 16.36 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.16 | 66.53 | 16.05 |      | 150.0 |         |
|           |                                                    | Z | 5.27 | 66.74 | 16.17 |      | 150.0 |         |
| 10542-AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)  | X | 5.43 | 66.95 | 16.40 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.32 | 66.61 | 16.11 |      | 150.0 |         |
|           |                                                    | Z | 5.42 | 66.77 | 16.20 |      | 150.0 |         |
| 10543-AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)  | X | 5.51 | 66.95 | 16.41 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.40 | 66.65 | 16.14 |      | 150.0 |         |
|           |                                                    | Z | 5.51 | 66.78 | 16.22 |      | 150.0 |         |
| 10544-AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)  | X | 5.56 | 66.97 | 16.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.46 | 66.64 | 16.02 |      | 150.0 |         |
|           |                                                    | Z | 5.54 | 66.80 | 16.11 |      | 150.0 |         |
| 10545-AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)  | X | 5.78 | 67.41 | 16.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.68 | 67.09 | 16.19 |      | 150.0 |         |
|           |                                                    | Z | 5.76 | 67.21 | 16.25 |      | 150.0 |         |
| 10546-AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)  | X | 5.66 | 67.27 | 16.41 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.55 | 66.90 | 16.11 |      | 150.0 |         |
|           |                                                    | Z | 5.65 | 67.10 | 16.22 |      | 150.0 |         |
| 10547-AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)  | X | 5.75 | 67.34 | 16.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.64 | 66.99 | 16.14 |      | 150.0 |         |
|           |                                                    | Z | 5.73 | 67.16 | 16.24 |      | 150.0 |         |
| 10548-AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)  | X | 6.10 | 68.57 | 17.02 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.97 | 68.15 | 16.70 |      | 150.0 |         |
|           |                                                    | Z | 6.06 | 68.30 | 16.78 |      | 150.0 |         |
| 10550-AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)  | X | 5.68 | 67.21 | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.57 | 66.88 | 16.11 |      | 150.0 |         |
|           |                                                    | Z | 5.66 | 67.04 | 16.20 |      | 150.0 |         |
| 10551-AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)  | X | 5.70 | 67.30 | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.58 | 66.93 | 16.09 |      | 150.0 |         |
|           |                                                    | Z | 5.68 | 67.15 | 16.21 |      | 150.0 |         |
| 10552-AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)  | X | 5.59 | 67.05 | 16.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.48 | 66.70 | 15.99 |      | 150.0 |         |
|           |                                                    | Z | 5.58 | 66.90 | 16.10 |      | 150.0 |         |
| 10553-AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)  | X | 5.69 | 67.10 | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.57 | 66.76 | 16.05 |      | 150.0 |         |
|           |                                                    | Z | 5.67 | 66.95 | 16.15 |      | 150.0 |         |
| 10554-AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle) | X | 5.97 | 67.34 | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 5.87 | 67.02 | 16.12 |      | 150.0 |         |
|           |                                                    | Z | 5.94 | 67.19 | 16.21 |      | 150.0 |         |
| 10555-AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle) | X | 6.12 | 67.69 | 16.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 6.01 | 67.35 | 16.26 |      | 150.0 |         |
|           |                                                    | Z | 6.10 | 67.54 | 16.36 |      | 150.0 |         |
| 10556-AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle) | X | 6.13 | 67.71 | 16.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 6.03 | 67.38 | 16.27 |      | 150.0 |         |
|           |                                                    | Z | 6.11 | 67.54 | 16.35 |      | 150.0 |         |
| 10557-AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle) | X | 6.12 | 67.66 | 16.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                    | Y | 6.00 | 67.31 | 16.25 |      | 150.0 |         |
|           |                                                    | Z | 6.10 | 67.52 | 16.36 |      | 150.0 |         |

|           |                                                                 |   |        |        |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10558-AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)              | X | 6.18   | 67.86  | 16.65 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.06   | 67.49  | 16.36 |      | 150.0 |         |
|           |                                                                 | Z | 6.16   | 67.71  | 16.47 |      | 150.0 |         |
| 10560-AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)              | X | 6.16   | 67.67  | 16.59 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.05   | 67.32  | 16.31 |      | 150.0 |         |
|           |                                                                 | Z | 6.15   | 67.54  | 16.42 |      | 150.0 |         |
| 10561-AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle)              | X | 6.08   | 67.64  | 16.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.97   | 67.29  | 16.33 |      | 150.0 |         |
|           |                                                                 | Z | 6.06   | 67.49  | 16.44 |      | 150.0 |         |
| 10562-AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)              | X | 6.25   | 68.16  | 16.88 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.13   | 67.77  | 16.57 |      | 150.0 |         |
|           |                                                                 | Z | 6.23   | 68.01  | 16.70 |      | 150.0 |         |
| 10563-AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)              | X | 6.60   | 68.73  | 17.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 6.50   | 68.45  | 16.86 |      | 150.0 |         |
|           |                                                                 | Z | 6.53   | 68.43  | 16.86 |      | 150.0 |         |
| 10564-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)  | X | 5.01   | 67.24  | 16.68 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.90   | 66.90  | 16.36 |      | 150.0 |         |
|           |                                                                 | Z | 5.01   | 67.05  | 16.49 |      | 150.0 |         |
| 10565-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle) | X | 5.27   | 67.70  | 16.99 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.15   | 67.37  | 16.68 |      | 150.0 |         |
|           |                                                                 | Z | 5.27   | 67.52  | 16.80 |      | 150.0 |         |
| 10566-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle) | X | 5.11   | 67.60  | 16.84 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.98   | 67.23  | 16.50 |      | 150.0 |         |
|           |                                                                 | Z | 5.11   | 67.41  | 16.64 |      | 150.0 |         |
| 10567-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle) | X | 5.13   | 67.96  | 17.16 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.01   | 67.61  | 16.84 |      | 150.0 |         |
|           |                                                                 | Z | 5.13   | 67.75  | 16.95 |      | 150.0 |         |
| 10568-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle) | X | 5.02   | 67.36  | 16.62 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.90   | 67.01  | 16.28 |      | 150.0 |         |
|           |                                                                 | Z | 5.02   | 67.16  | 16.41 |      | 150.0 |         |
| 10569-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle) | X | 5.07   | 67.97  | 17.18 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 4.96   | 67.67  | 16.89 |      | 150.0 |         |
|           |                                                                 | Z | 5.06   | 67.76  | 16.96 |      | 150.0 |         |
| 10570-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle) | X | 5.11   | 67.83  | 17.12 | 0.46 | 150.0 | ± 9.6 % |
|           |                                                                 | Y | 5.00   | 67.52  | 16.83 |      | 150.0 |         |
|           |                                                                 | Z | 5.11   | 67.61  | 16.91 |      | 150.0 |         |
| 10571-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)       | X | 1.43   | 67.78  | 17.55 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.29   | 65.83  | 16.01 |      | 130.0 |         |
|           |                                                                 | Z | 1.37   | 66.57  | 16.56 |      | 130.0 |         |
| 10572-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)       | X | 1.47   | 68.62  | 18.01 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.32   | 66.50  | 16.39 |      | 130.0 |         |
|           |                                                                 | Z | 1.40   | 67.26  | 16.95 |      | 130.0 |         |
| 10573-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)     | X | 100.00 | 147.77 | 39.50 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 5.11   | 95.86  | 25.26 |      | 130.0 |         |
|           |                                                                 | Z | 11.46  | 108.94 | 29.46 |      | 130.0 |         |
| 10574-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)      | X | 2.11   | 79.07  | 22.64 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 1.59   | 73.49  | 19.59 |      | 130.0 |         |
|           |                                                                 | Z | 1.75   | 74.78  | 20.34 |      | 130.0 |         |

|           |                                                                 |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10575-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)  | X | 4.84 | 67.12 | 16.79 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.72 | 66.80 | 16.47 |      | 130.0 |         |
|           |                                                                 | Z | 4.83 | 66.93 | 16.59 |      | 130.0 |         |
| 10576-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)  | X | 4.86 | 67.28 | 16.85 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.75 | 66.95 | 16.53 |      | 130.0 |         |
|           |                                                                 | Z | 4.86 | 67.08 | 16.65 |      | 130.0 |         |
| 10577-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) | X | 5.09 | 67.60 | 17.02 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.97 | 67.26 | 16.71 |      | 130.0 |         |
|           |                                                                 | Z | 5.10 | 67.41 | 16.83 |      | 130.0 |         |
| 10578-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) | X | 4.99 | 67.77 | 17.12 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.86 | 67.43 | 16.80 |      | 130.0 |         |
|           |                                                                 | Z | 4.99 | 67.57 | 16.91 |      | 130.0 |         |
| 10579-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) | X | 4.77 | 67.19 | 16.53 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.64 | 66.77 | 16.15 |      | 130.0 |         |
|           |                                                                 | Z | 4.78 | 67.01 | 16.33 |      | 130.0 |         |
| 10580-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) | X | 4.81 | 67.17 | 16.53 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.68 | 66.78 | 16.16 |      | 130.0 |         |
|           |                                                                 | Z | 4.82 | 66.97 | 16.32 |      | 130.0 |         |
| 10581-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) | X | 4.90 | 67.87 | 17.09 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.77 | 67.49 | 16.75 |      | 130.0 |         |
|           |                                                                 | Z | 4.90 | 67.66 | 16.87 |      | 130.0 |         |
| 10582-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) | X | 4.73 | 66.96 | 16.34 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.59 | 66.53 | 15.94 |      | 130.0 |         |
|           |                                                                 | Z | 4.73 | 66.78 | 16.14 |      | 130.0 |         |
| 10583-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)       | X | 4.84 | 67.12 | 16.79 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.72 | 66.80 | 16.47 |      | 130.0 |         |
|           |                                                                 | Z | 4.83 | 66.93 | 16.59 |      | 130.0 |         |
| 10584-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)       | X | 4.86 | 67.28 | 16.85 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.75 | 66.95 | 16.53 |      | 130.0 |         |
|           |                                                                 | Z | 4.86 | 67.08 | 16.65 |      | 130.0 |         |
| 10585-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)      | X | 5.09 | 67.60 | 17.02 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.97 | 67.26 | 16.71 |      | 130.0 |         |
|           |                                                                 | Z | 5.10 | 67.41 | 16.83 |      | 130.0 |         |
| 10586-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)      | X | 4.99 | 67.77 | 17.12 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.86 | 67.43 | 16.80 |      | 130.0 |         |
|           |                                                                 | Z | 4.99 | 67.57 | 16.91 |      | 130.0 |         |
| 10587-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)      | X | 4.77 | 67.19 | 16.53 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.64 | 66.77 | 16.15 |      | 130.0 |         |
|           |                                                                 | Z | 4.78 | 67.01 | 16.33 |      | 130.0 |         |
| 10588-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)      | X | 4.81 | 67.17 | 16.53 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.68 | 66.78 | 16.16 |      | 130.0 |         |
|           |                                                                 | Z | 4.82 | 66.97 | 16.32 |      | 130.0 |         |
| 10589-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)      | X | 4.90 | 67.87 | 17.09 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.77 | 67.49 | 16.75 |      | 130.0 |         |
|           |                                                                 | Z | 4.90 | 67.66 | 16.87 |      | 130.0 |         |
| 10590-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)      | X | 4.73 | 66.96 | 16.34 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                                 | Y | 4.59 | 66.53 | 15.94 |      | 130.0 |         |
|           |                                                                 | Z | 4.73 | 66.78 | 16.14 |      | 130.0 |         |

|           |                                                       |   |      |       |       |      |       |         |
|-----------|-------------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10591-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle) | X | 4.98 | 67.15 | 16.87 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.87 | 66.85 | 16.57 |      | 130.0 |         |
|           |                                                       | Z | 4.98 | 66.97 | 16.68 |      | 130.0 |         |
| 10592-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle) | X | 5.15 | 67.50 | 16.99 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.04 | 67.19 | 16.69 |      | 130.0 |         |
|           |                                                       | Z | 5.16 | 67.32 | 16.80 |      | 130.0 |         |
| 10593-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle) | X | 5.09 | 67.46 | 16.91 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.96 | 67.12 | 16.59 |      | 130.0 |         |
|           |                                                       | Z | 5.09 | 67.29 | 16.72 |      | 130.0 |         |
| 10594-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle) | X | 5.14 | 67.60 | 17.04 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.02 | 67.28 | 16.73 |      | 130.0 |         |
|           |                                                       | Z | 5.14 | 67.42 | 16.84 |      | 130.0 |         |
| 10595-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle) | X | 5.11 | 67.58 | 16.95 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.99 | 67.24 | 16.64 |      | 130.0 |         |
|           |                                                       | Z | 5.12 | 67.40 | 16.76 |      | 130.0 |         |
| 10596-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle) | X | 5.05 | 67.59 | 16.96 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.93 | 67.24 | 16.64 |      | 130.0 |         |
|           |                                                       | Z | 5.06 | 67.40 | 16.76 |      | 130.0 |         |
| 10597-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle) | X | 5.00 | 67.53 | 16.87 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.88 | 67.16 | 16.53 |      | 130.0 |         |
|           |                                                       | Z | 5.01 | 67.35 | 16.68 |      | 130.0 |         |
| 10598-AAB | IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle) | X | 4.98 | 67.77 | 17.12 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 4.86 | 67.40 | 16.79 |      | 130.0 |         |
|           |                                                       | Z | 4.99 | 67.58 | 16.92 |      | 130.0 |         |
| 10599-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle) | X | 5.65 | 67.74 | 17.05 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.54 | 67.42 | 16.77 |      | 130.0 |         |
|           |                                                       | Z | 5.65 | 67.58 | 16.87 |      | 130.0 |         |
| 10600-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle) | X | 5.86 | 68.37 | 17.35 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.74 | 68.03 | 17.05 |      | 130.0 |         |
|           |                                                       | Z | 5.87 | 68.25 | 17.19 |      | 130.0 |         |
| 10601-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle) | X | 5.71 | 67.99 | 17.17 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.59 | 67.67 | 16.88 |      | 130.0 |         |
|           |                                                       | Z | 5.71 | 67.84 | 16.99 |      | 130.0 |         |
| 10602-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle) | X | 5.80 | 67.99 | 17.09 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.68 | 67.66 | 16.80 |      | 130.0 |         |
|           |                                                       | Z | 5.80 | 67.87 | 16.93 |      | 130.0 |         |
| 10603-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle) | X | 5.88 | 68.27 | 17.35 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.76 | 67.95 | 17.07 |      | 130.0 |         |
|           |                                                       | Z | 5.91 | 68.22 | 17.22 |      | 130.0 |         |
| 10604-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle) | X | 5.65 | 67.69 | 17.05 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.55 | 67.38 | 16.78 |      | 130.0 |         |
|           |                                                       | Z | 5.65 | 67.55 | 16.88 |      | 130.0 |         |
| 10605-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle) | X | 5.77 | 68.03 | 17.23 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.67 | 67.75 | 16.97 |      | 130.0 |         |
|           |                                                       | Z | 5.76 | 67.86 | 17.04 |      | 130.0 |         |
| 10606-AAB | IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle) | X | 5.54 | 67.48 | 16.82 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                       | Y | 5.42 | 67.14 | 16.52 |      | 130.0 |         |
|           |                                                       | Z | 5.54 | 67.37 | 16.67 |      | 130.0 |         |

|           |                                                   |   |      |       |       |      |       |         |
|-----------|---------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10607-AAB | IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle) | X | 4.81 | 66.46 | 16.48 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.70 | 66.13 | 16.17 |      | 130.0 |         |
|           |                                                   | Z | 4.81 | 66.25 | 16.27 |      | 130.0 |         |
| 10608-AAB | IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle) | X | 5.03 | 66.90 | 16.65 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.90 | 66.55 | 16.34 |      | 130.0 |         |
|           |                                                   | Z | 5.02 | 66.68 | 16.44 |      | 130.0 |         |
| 10609-AAB | IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle) | X | 4.92 | 66.79 | 16.52 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.79 | 66.41 | 16.18 |      | 130.0 |         |
|           |                                                   | Z | 4.92 | 66.57 | 16.31 |      | 130.0 |         |
| 10610-AAB | IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) | X | 4.97 | 66.94 | 16.67 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.84 | 66.57 | 16.34 |      | 130.0 |         |
|           |                                                   | Z | 4.97 | 66.72 | 16.46 |      | 130.0 |         |
| 10611-AAB | IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) | X | 4.89 | 66.78 | 16.54 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.76 | 66.39 | 16.20 |      | 130.0 |         |
|           |                                                   | Z | 4.89 | 66.57 | 16.33 |      | 130.0 |         |
| 10612-AAB | IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) | X | 4.92 | 66.95 | 16.59 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.78 | 66.55 | 16.24 |      | 130.0 |         |
|           |                                                   | Z | 4.91 | 66.73 | 16.37 |      | 130.0 |         |
| 10613-AAB | IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) | X | 4.93 | 66.87 | 16.50 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.79 | 66.46 | 16.14 |      | 130.0 |         |
|           |                                                   | Z | 4.93 | 66.66 | 16.28 |      | 130.0 |         |
| 10614-AAB | IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) | X | 4.85 | 67.03 | 16.71 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.72 | 66.63 | 16.36 |      | 130.0 |         |
|           |                                                   | Z | 4.85 | 66.82 | 16.49 |      | 130.0 |         |
| 10615-AAB | IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) | X | 4.90 | 66.61 | 16.33 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 4.76 | 66.22 | 15.98 |      | 130.0 |         |
|           |                                                   | Z | 4.90 | 66.40 | 16.12 |      | 130.0 |         |
| 10616-AAB | IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) | X | 5.47 | 66.98 | 16.66 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.36 | 66.66 | 16.38 |      | 130.0 |         |
|           |                                                   | Z | 5.46 | 66.82 | 16.47 |      | 130.0 |         |
| 10617-AAB | IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) | X | 5.52 | 67.09 | 16.68 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.42 | 66.80 | 16.41 |      | 130.0 |         |
|           |                                                   | Z | 5.52 | 66.93 | 16.49 |      | 130.0 |         |
| 10618-AAB | IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) | X | 5.42 | 67.18 | 16.74 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.31 | 66.84 | 16.45 |      | 130.0 |         |
|           |                                                   | Z | 5.41 | 67.00 | 16.54 |      | 130.0 |         |
| 10619-AAB | IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) | X | 5.45 | 67.00 | 16.59 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.34 | 66.68 | 16.31 |      | 130.0 |         |
|           |                                                   | Z | 5.44 | 66.82 | 16.40 |      | 130.0 |         |
| 10620-AAB | IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) | X | 5.56 | 67.11 | 16.69 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.44 | 66.75 | 16.39 |      | 130.0 |         |
|           |                                                   | Z | 5.56 | 66.95 | 16.51 |      | 130.0 |         |
| 10621-AAB | IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) | X | 5.53 | 67.13 | 16.81 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.42 | 66.81 | 16.54 |      | 130.0 |         |
|           |                                                   | Z | 5.53 | 66.98 | 16.63 |      | 130.0 |         |
| 10622-AAB | IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) | X | 5.53 | 67.27 | 16.87 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                   | Y | 5.43 | 66.97 | 16.61 |      | 130.0 |         |
|           |                                                   | Z | 5.52 | 67.09 | 16.67 |      | 130.0 |         |

|           |                                                    |   |      |       |       |      |       |         |
|-----------|----------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10623-AAB | IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)  | X | 5.42 | 66.86 | 16.56 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.30 | 66.51 | 16.26 |      | 130.0 |         |
|           |                                                    | Z | 5.42 | 66.73 | 16.39 |      | 130.0 |         |
| 10624-AAB | IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)  | X | 5.61 | 67.03 | 16.70 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.50 | 66.72 | 16.43 |      | 130.0 |         |
|           |                                                    | Z | 5.60 | 66.86 | 16.51 |      | 130.0 |         |
| 10625-AAB | IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)  | X | 6.05 | 68.19 | 17.33 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.94 | 67.90 | 17.07 |      | 130.0 |         |
|           |                                                    | Z | 6.01 | 67.90 | 17.08 |      | 130.0 |         |
| 10626-AAB | IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)  | X | 5.72 | 66.99 | 16.57 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.63 | 66.69 | 16.31 |      | 130.0 |         |
|           |                                                    | Z | 5.71 | 66.84 | 16.40 |      | 130.0 |         |
| 10627-AAB | IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)  | X | 5.99 | 67.59 | 16.82 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.90 | 67.32 | 16.58 |      | 130.0 |         |
|           |                                                    | Z | 5.97 | 67.39 | 16.62 |      | 130.0 |         |
| 10628-AAB | IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)  | X | 5.80 | 67.20 | 16.57 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.69 | 66.85 | 16.29 |      | 130.0 |         |
|           |                                                    | Z | 5.79 | 67.05 | 16.40 |      | 130.0 |         |
| 10629-AAB | IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)  | X | 5.88 | 67.25 | 16.59 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.77 | 66.92 | 16.31 |      | 130.0 |         |
|           |                                                    | Z | 5.87 | 67.12 | 16.43 |      | 130.0 |         |
| 10630-AAB | IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)  | X | 6.51 | 69.31 | 17.62 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.37 | 68.86 | 17.28 |      | 130.0 |         |
|           |                                                    | Z | 6.46 | 69.04 | 17.39 |      | 130.0 |         |
| 10631-AAB | IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)  | X | 6.31 | 68.81 | 17.54 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.17 | 68.39 | 17.24 |      | 130.0 |         |
|           |                                                    | Z | 6.30 | 68.62 | 17.35 |      | 130.0 |         |
| 10632-AAB | IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)  | X | 5.95 | 67.61 | 16.96 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.85 | 67.34 | 16.73 |      | 130.0 |         |
|           |                                                    | Z | 5.94 | 67.45 | 16.78 |      | 130.0 |         |
| 10633-AAB | IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)  | X | 5.89 | 67.42 | 16.71 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.75 | 67.01 | 16.39 |      | 130.0 |         |
|           |                                                    | Z | 5.89 | 67.32 | 16.56 |      | 130.0 |         |
| 10634-AAB | IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)  | X | 5.85 | 67.37 | 16.74 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.73 | 67.02 | 16.46 |      | 130.0 |         |
|           |                                                    | Z | 5.86 | 67.27 | 16.59 |      | 130.0 |         |
| 10635-AAB | IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)  | X | 5.75 | 66.78 | 16.20 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 5.62 | 66.39 | 15.89 |      | 130.0 |         |
|           |                                                    | Z | 5.75 | 66.67 | 16.05 |      | 130.0 |         |
| 10636-AAC | IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle) | X | 6.13 | 67.38 | 16.66 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.05 | 67.09 | 16.42 |      | 130.0 |         |
|           |                                                    | Z | 6.12 | 67.24 | 16.50 |      | 130.0 |         |
| 10637-AAC | IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle) | X | 6.31 | 67.79 | 16.85 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.21 | 67.50 | 16.60 |      | 130.0 |         |
|           |                                                    | Z | 6.29 | 67.65 | 16.68 |      | 130.0 |         |
| 10638-AAC | IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle) | X | 6.31 | 67.76 | 16.81 | 0.46 | 130.0 | ± 9.6 % |
|           |                                                    | Y | 6.21 | 67.47 | 16.56 |      | 130.0 |         |
|           |                                                    | Z | 6.29 | 67.60 | 16.64 |      | 130.0 |         |

|           |                                                        |   |       |        |       |       |       |         |
|-----------|--------------------------------------------------------|---|-------|--------|-------|-------|-------|---------|
| 10639-AAC | IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)     | X | 6.30  | 67.76  | 16.86 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.20  | 67.43  | 16.59 |       | 130.0 |         |
|           |                                                        | Z | 6.29  | 67.63  | 16.70 |       | 130.0 |         |
| 10640-AAC | IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)     | X | 6.34  | 67.87  | 16.86 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.22  | 67.50  | 16.57 |       | 130.0 |         |
|           |                                                        | Z | 6.33  | 67.75  | 16.70 |       | 130.0 |         |
| 10641-AAC | IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)     | X | 6.33  | 67.58  | 16.73 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.23  | 67.29  | 16.48 |       | 130.0 |         |
|           |                                                        | Z | 6.31  | 67.45  | 16.57 |       | 130.0 |         |
| 10642-AAC | IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)     | X | 6.39  | 67.88  | 17.04 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.28  | 67.58  | 16.79 |       | 130.0 |         |
|           |                                                        | Z | 6.38  | 67.76  | 16.88 |       | 130.0 |         |
| 10643-AAC | IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)     | X | 6.22  | 67.60  | 16.81 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.12  | 67.28  | 16.54 |       | 130.0 |         |
|           |                                                        | Z | 6.21  | 67.48  | 16.65 |       | 130.0 |         |
| 10644-AAC | IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)     | X | 6.47  | 68.34  | 17.21 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.34  | 67.93  | 16.89 |       | 130.0 |         |
|           |                                                        | Z | 6.46  | 68.22  | 17.05 |       | 130.0 |         |
| 10645-AAC | IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)     | X | 6.86  | 69.01  | 17.48 | 0.46  | 130.0 | ± 9.6 % |
|           |                                                        | Y | 6.84  | 68.95  | 17.35 |       | 130.0 |         |
|           |                                                        | Z | 6.77  | 68.66  | 17.21 |       | 130.0 |         |
| 10646-AAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)  | X | 39.97 | 118.78 | 39.16 | 9.30  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 36.64 | 117.33 | 38.51 |       | 60.0  |         |
|           |                                                        | Z | 28.19 | 109.42 | 36.13 |       | 60.0  |         |
| 10647-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7) | X | 43.22 | 121.45 | 40.07 | 9.30  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 37.61 | 118.78 | 39.06 |       | 60.0  |         |
|           |                                                        | Z | 29.77 | 111.44 | 36.87 |       | 60.0  |         |
| 10648-AAA | CDMA2000 (1x Advanced)                                 | X | 0.92  | 67.44  | 13.60 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                        | Y | 0.67  | 63.31  | 10.51 |       | 150.0 |         |
|           |                                                        | Z | 0.80  | 64.88  | 12.09 |       | 150.0 |         |
| 10652-AAB | LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)         | X | 4.65  | 69.66  | 17.99 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 4.35  | 68.72  | 17.32 |       | 80.0  |         |
|           |                                                        | Z | 4.56  | 68.93  | 17.55 |       | 80.0  |         |
| 10653-AAB | LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)        | X | 5.05  | 68.61  | 17.89 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 4.81  | 67.90  | 17.37 |       | 80.0  |         |
|           |                                                        | Z | 5.01  | 68.17  | 17.57 |       | 80.0  |         |
| 10654-AAB | LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)        | X | 4.97  | 68.24  | 17.87 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 4.75  | 67.55  | 17.37 |       | 80.0  |         |
|           |                                                        | Z | 4.94  | 67.85  | 17.56 |       | 80.0  |         |
| 10655-AAB | LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)        | X | 5.03  | 68.27  | 17.91 | 2.23  | 80.0  | ± 9.6 % |
|           |                                                        | Y | 4.81  | 67.56  | 17.41 |       | 80.0  |         |
|           |                                                        | Z | 4.99  | 67.90  | 17.61 |       | 80.0  |         |
| 10658-AAA | Pulse Waveform (200Hz, 10%)                            | X | 13.25 | 86.83  | 23.62 | 10.00 | 50.0  | ± 9.6 % |
|           |                                                        | Y | 14.38 | 88.09  | 23.44 |       | 50.0  |         |
|           |                                                        | Z | 11.47 | 83.98  | 22.82 |       | 50.0  |         |
| 10659-AAA | Pulse Waveform (200Hz, 20%)                            | X | 55.89 | 109.63 | 28.77 | 6.99  | 60.0  | ± 9.6 % |
|           |                                                        | Y | 73.21 | 111.71 | 28.47 |       | 60.0  |         |
|           |                                                        | Z | 23.49 | 96.54  | 25.38 |       | 60.0  |         |

|           |                             |   |        |        |       |      |       |         |
|-----------|-----------------------------|---|--------|--------|-------|------|-------|---------|
| 10660-AAA | Pulse Waveform (200Hz, 40%) | X | 100.00 | 116.44 | 28.38 | 3.98 | 80.0  | ± 9.6 % |
|           |                             | Y | 100.00 | 113.18 | 26.58 |      | 80.0  |         |
|           |                             | Z | 100.00 | 116.19 | 28.39 |      | 80.0  |         |
| 10661-AAA | Pulse Waveform (200Hz, 60%) | X | 100.00 | 118.35 | 27.71 | 2.22 | 100.0 | ± 9.6 % |
|           |                             | Y | 100.00 | 112.59 | 24.89 |      | 100.0 |         |
|           |                             | Z | 100.00 | 116.83 | 27.13 |      | 100.0 |         |
| 10662-AAA | Pulse Waveform (200Hz, 80%) | X | 100.00 | 126.67 | 29.16 | 0.97 | 120.0 | ± 9.6 % |
|           |                             | Y | 100.00 | 111.31 | 22.51 |      | 120.0 |         |
|           |                             | Z | 100.00 | 120.40 | 26.63 |      | 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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 Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **PC Test**

Certificate No: **EX3-7357\_Apr18**

## CALIBRATION CERTIFICATE

Object **EX3DV4 - SN:7357**

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

Calibration date: **April 18, 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: **Claudio Leubler** Name: **Claudio Leubler** Function: **Laboratory Technician** Signature:

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

Issued: April 19, 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 $\phi$      | $\phi$ rotation around probe axis                                                                                                                       |
| Polarization $\vartheta$ | $\vartheta$ rotation around an axis that is in the plane normal to probe axis (at measurement center),<br>i.e., $\vartheta = 0$ is normal to probe axis |
| Connector Angle          | information used in DASY system to align probe sensor X to the robot coordinate system                                                                  |

## Calibration is Performed According to the Following Standards:

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

## Methods Applied and Interpretation of Parameters:

- NORM<sub>x,y,z</sub>**: Assessed for E-field polarization  $\vartheta = 0$  ( $f \leq 900$  MHz in TEM-cell;  $f > 1800$  MHz: R22 waveguide). NORM<sub>x,y,z</sub> are only intermediate values, i.e., the uncertainties of NORM<sub>x,y,z</sub> does not affect the E<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:7357

Manufactured: February 5, 2015  
Calibrated: April 18, 2018

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

## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7357

### Basic Calibration Parameters

|                                                           | Sensor X | Sensor Y | Sensor Z | Unc (k=2)     |
|-----------------------------------------------------------|----------|----------|----------|---------------|
| Norm ( $\mu\text{V}/(\text{V}/\text{m})^2$ ) <sup>A</sup> | 0.37     | 0.48     | 0.40     | $\pm 10.1 \%$ |
| DCP (mV) <sup>B</sup>                                     | 89.1     | 99.1     | 96.4     |               |

### 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    | 151.5    | $\pm 2.7 \%$              |
|     |                           | Y | 0.0     | 0.0                          | 1.0 |         | 139.1    |                           |
|     |                           | Z | 0.0     | 0.0                          | 1.0 |         | 158.4    |                           |

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 | 37.91    | 303.3    | 40.25                       | 6.413                               | 0.832                               | 4.998    | 0.00                  | 0.454                 | 1.006 |
| Y | 48.33    | 363.1    | 36.01                       | 10.58                               | 0.113                               | 5.100    | 0.00                  | 0.458                 | 1.004 |
| Z | 39.38    | 305.2    | 38.03                       | 5.76                                | 0.610                               | 5.046    | 0.00                  | 0.461                 | 1.008 |

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:7357

### 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) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 64                   | 54.2                               | 0.75                            | 14.92   | 14.92   | 14.92   | 0.00               | 1.00                    | ± 13.3 %  |
| 150                  | 52.3                               | 0.76                            | 13.49   | 13.49   | 13.49   | 0.00               | 1.00                    | ± 13.3 %  |
| 300                  | 45.3                               | 0.87                            | 12.37   | 12.37   | 12.37   | 0.08               | 1.20                    | ± 13.3 %  |
| 450                  | 43.5                               | 0.87                            | 11.17   | 11.17   | 11.17   | 0.14               | 1.20                    | ± 13.3 %  |
| 750                  | 41.9                               | 0.89                            | 10.50   | 10.50   | 10.50   | 0.45               | 0.85                    | ± 12.0 %  |
| 835                  | 41.5                               | 0.90                            | 10.11   | 10.11   | 10.11   | 0.37               | 0.93                    | ± 12.0 %  |
| 1750                 | 40.1                               | 1.37                            | 8.80    | 8.80    | 8.80    | 0.38               | 0.86                    | ± 12.0 %  |
| 1900                 | 40.0                               | 1.40                            | 8.47    | 8.47    | 8.47    | 0.18               | 0.83                    | ± 12.0 %  |
| 2300                 | 39.5                               | 1.67                            | 7.83    | 7.83    | 7.83    | 0.33               | 0.86                    | ± 12.0 %  |
| 2450                 | 39.2                               | 1.80                            | 7.43    | 7.43    | 7.43    | 0.37               | 0.89                    | ± 12.0 %  |
| 2600                 | 39.0                               | 1.96                            | 7.13    | 7.13    | 7.13    | 0.27               | 0.98                    | ± 12.0 %  |
| 5250                 | 35.9                               | 4.71                            | 5.62    | 5.62    | 5.62    | 0.35               | 1.80                    | ± 13.1 %  |
| 5600                 | 35.5                               | 5.07                            | 4.93    | 4.93    | 4.93    | 0.40               | 1.80                    | ± 13.1 %  |
| 5750                 | 35.4                               | 5.22                            | 5.23    | 5.23    | 5.23    | 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:7357

### Calibration Parameter Determined in Body Tissue Simulating Media

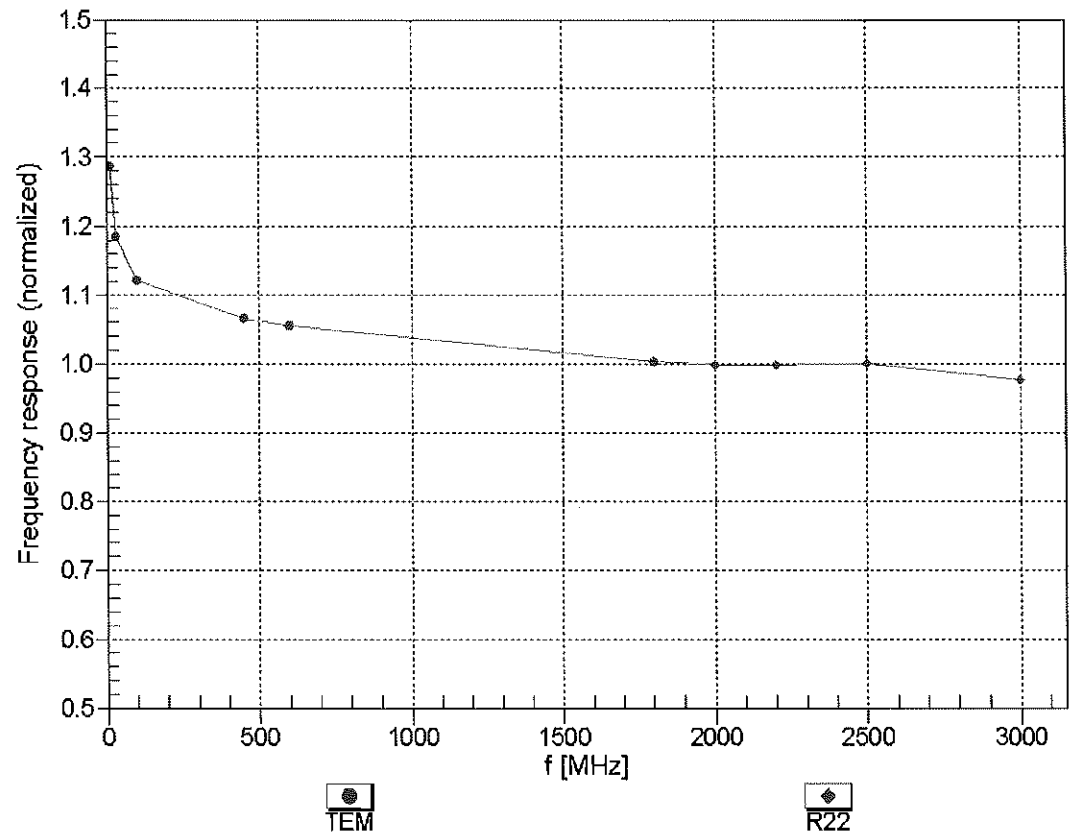
| f (MHz) <sup>C</sup> | Relative Permittivity <sup>F</sup> | Conductivity (S/m) <sup>F</sup> | ConvF X | ConvF Y | ConvF Z | Alpha <sup>G</sup> | Depth <sup>G</sup> (mm) | Unc (k=2) |
|----------------------|------------------------------------|---------------------------------|---------|---------|---------|--------------------|-------------------------|-----------|
| 150                  | 61.9                               | 0.80                            | 12.99   | 12.99   | 12.99   | 0.00               | 1.00                    | ± 13.3 %  |
| 300                  | 58.2                               | 0.92                            | 12.08   | 12.08   | 12.08   | 0.05               | 1.20                    | ± 13.3 %  |
| 450                  | 56.7                               | 0.94                            | 11.52   | 11.52   | 11.52   | 0.08               | 1.20                    | ± 13.3 %  |
| 750                  | 55.5                               | 0.96                            | 10.37   | 10.37   | 10.37   | 0.47               | 0.85                    | ± 12.0 %  |
| 835                  | 55.2                               | 0.97                            | 10.17   | 10.17   | 10.17   | 0.37               | 0.93                    | ± 12.0 %  |
| 1750                 | 53.4                               | 1.49                            | 8.43    | 8.43    | 8.43    | 0.37               | 0.86                    | ± 12.0 %  |
| 1900                 | 53.3                               | 1.52                            | 8.08    | 8.08    | 8.08    | 0.36               | 0.83                    | ± 12.0 %  |
| 2300                 | 52.9                               | 1.81                            | 7.74    | 7.74    | 7.74    | 0.38               | 0.85                    | ± 12.0 %  |
| 2450                 | 52.7                               | 1.95                            | 7.60    | 7.60    | 7.60    | 0.35               | 0.88                    | ± 12.0 %  |
| 2600                 | 52.5                               | 2.16                            | 7.44    | 7.44    | 7.44    | 0.33               | 0.93                    | ± 12.0 %  |
| 5250                 | 48.9                               | 5.36                            | 4.78    | 4.78    | 4.78    | 0.50               | 1.80                    | ± 13.1 %  |
| 5600                 | 48.5                               | 5.77                            | 4.20    | 4.20    | 4.20    | 0.50               | 1.80                    | ± 13.1 %  |
| 5750                 | 48.3                               | 5.94                            | 4.21    | 4.21    | 4.21    | 0.50               | 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.

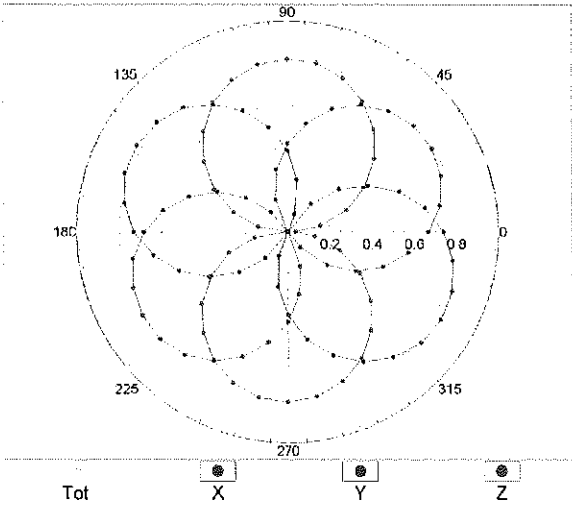
**Frequency Response of E-Field**  
(TEM-Cell:ifi110 EXX, Waveguide: R22)



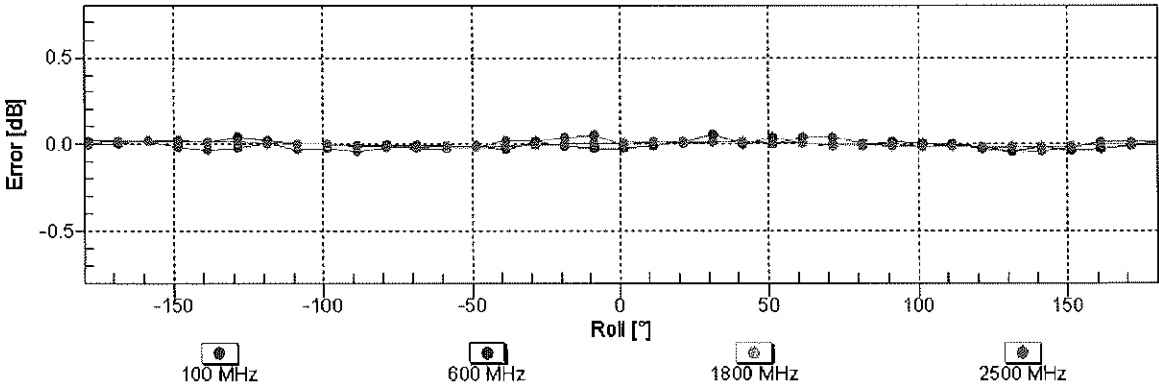
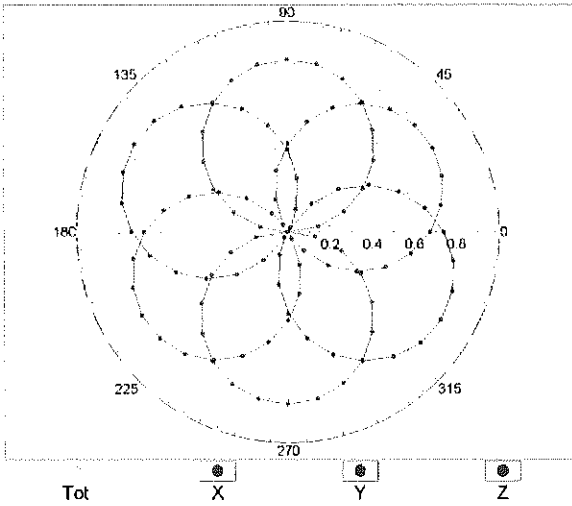
Uncertainty of Frequency Response of E-field:  $\pm 6.3\%$  ( $k=2$ )

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

f=600 MHz,TEM

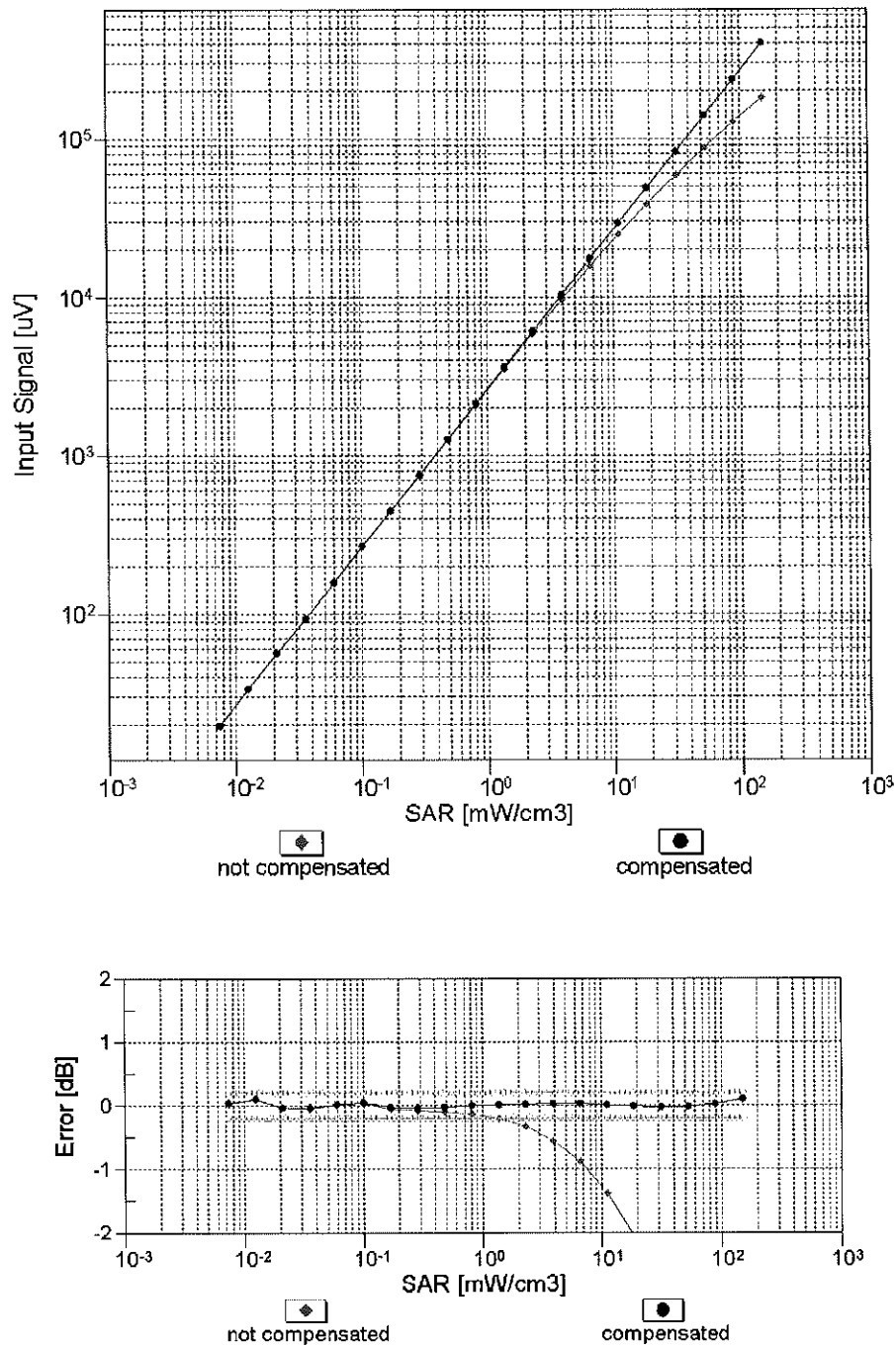


f=1800 MHz,R22



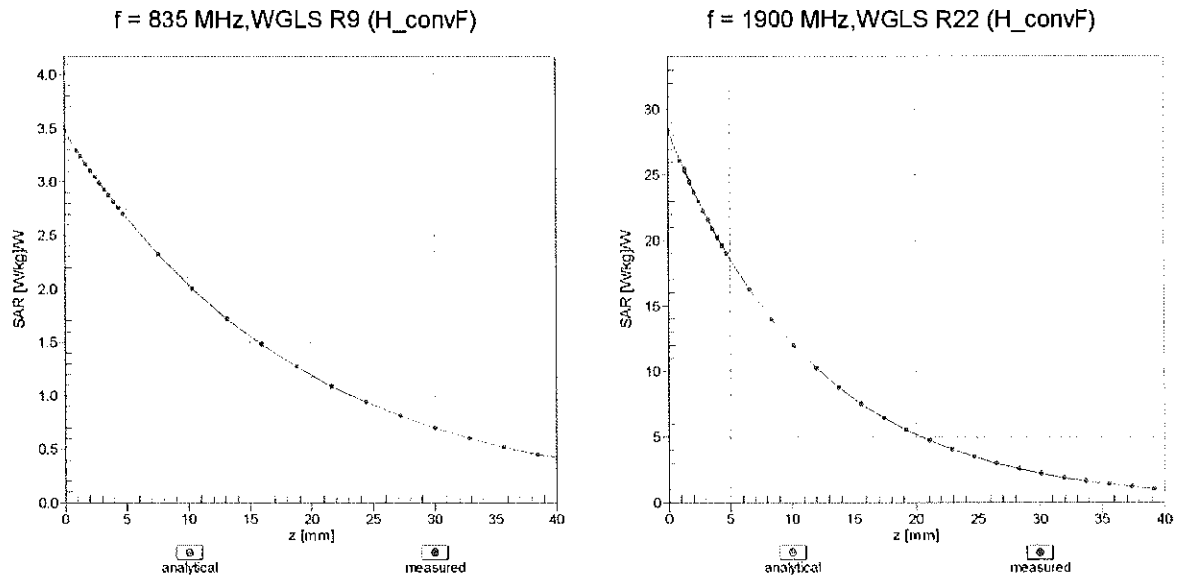
Uncertainty of Axial Isotropy Assessment:  $\pm 0.5\%$  ( $k=2$ )

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



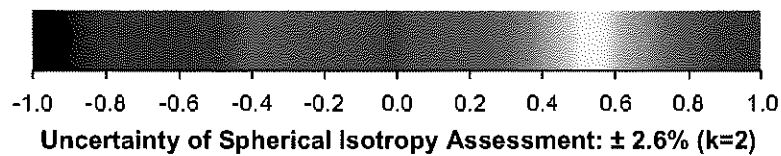
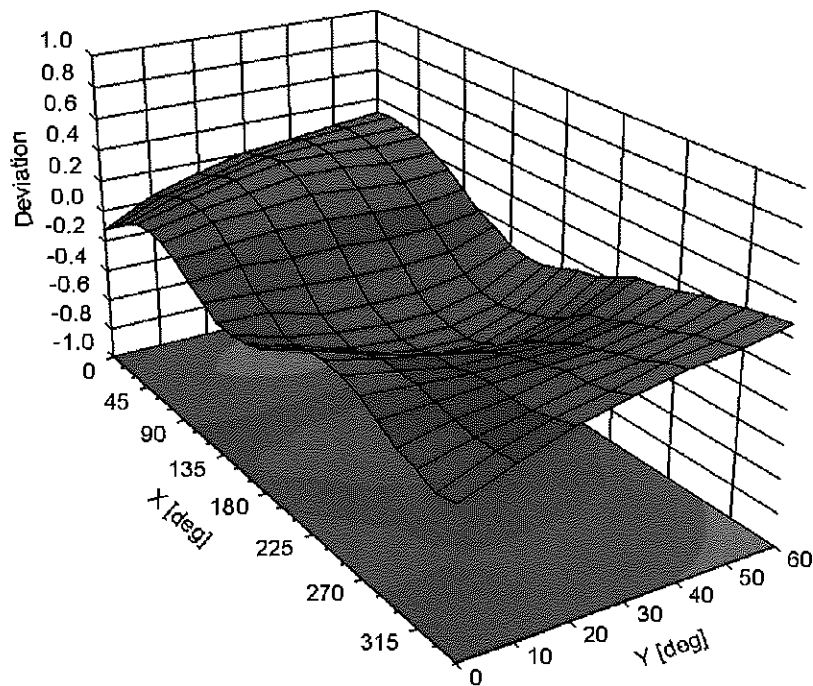
Uncertainty of Linearity Assessment:  $\pm 0.6\%$  ( $k=2$ )

## Conversion Factor Assessment



## Deviation from Isotropy in Liquid

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



## DASY/EASY - Parameters of Probe: EX3DV4 - SN:7357

### Other Probe Parameters

|                                               |            |
|-----------------------------------------------|------------|
| Sensor Arrangement                            | Triangular |
| Connector Angle (°)                           | 11.4       |
| Mechanical Surface Detection Mode             | enabled    |
| Optical Surface Detection Mode                | disabled   |
| Probe Overall Length                          | 337 mm     |
| Probe Body Diameter                           | 10 mm      |
| Tip Length                                    | 9 mm       |
| Tip Diameter                                  | 2.5 mm     |
| Probe Tip to Sensor X Calibration Point       | 1 mm       |
| Probe Tip to Sensor Y Calibration Point       | 1 mm       |
| Probe Tip to Sensor Z Calibration Point       | 1 mm       |
| Recommended Measurement Distance from Surface | 1.4 mm     |

**Appendix: 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    | 151.5    | $\pm 2.7\%$                      |
|               |                                               | Y | 0.00    | 0.00                   | 1.00  |         | 139.1    |                                  |
|               |                                               | Z | 0.00    | 0.00                   | 1.00  |         | 158.4    |                                  |
| 10010-<br>CAA | SAR Validation (Square, 100ms, 10ms)          | X | 1.67    | 61.93                  | 7.65  | 10.00   | 20.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 2.82    | 69.17                  | 11.50 |         | 20.0     |                                  |
|               |                                               | Z | 1.68    | 62.20                  | 7.72  |         | 20.0     |                                  |
| 10011-<br>CAB | UMTS-FDD (WCDMA)                              | X | 0.91    | 67.36                  | 14.64 | 0.00    | 150.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 1.03    | 67.52                  | 15.32 |         | 150.0    |                                  |
|               |                                               | Z | 0.87    | 67.00                  | 14.33 |         | 150.0    |                                  |
| 10012-<br>CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)      | X | 1.03    | 63.20                  | 14.83 | 0.41    | 150.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 1.15    | 63.79                  | 15.34 |         | 150.0    |                                  |
|               |                                               | Z | 1.01    | 63.27                  | 14.81 |         | 150.0    |                                  |
| 10013-<br>CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps) | X | 4.63    | 66.39                  | 16.96 | 1.46    | 150.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 4.87    | 66.69                  | 17.19 |         | 150.0    |                                  |
|               |                                               | Z | 4.64    | 66.53                  | 16.99 |         | 150.0    |                                  |
| 10021-<br>DAC | GSM-FDD (TDMA, GMSK)                          | X | 3.67    | 70.27                  | 12.79 | 9.39    | 50.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 116.17                 | 27.83 |         | 50.0     |                                  |
|               |                                               | Z | 17.04   | 87.58                  | 18.77 |         | 50.0     |                                  |
| 10023-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0)                   | X | 3.48    | 69.40                  | 12.45 | 9.57    | 50.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 115.39                 | 27.52 |         | 50.0     |                                  |
|               |                                               | Z | 8.91    | 80.25                  | 16.55 |         | 50.0     |                                  |
| 10024-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1)                 | X | 1.80    | 66.18                  | 9.84  | 6.56    | 60.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 120.19                 | 28.55 |         | 60.0     |                                  |
|               |                                               | Z | 100.00  | 103.30                 | 20.82 |         | 60.0     |                                  |
| 10025-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0)                   | X | 3.42    | 64.49                  | 22.34 | 12.57   | 50.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 6.04    | 85.62                  | 35.55 |         | 50.0     |                                  |
|               |                                               | Z | 3.44    | 65.04                  | 22.85 |         | 50.0     |                                  |
| 10026-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1)                 | X | 6.25    | 83.47                  | 29.08 | 9.56    | 60.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 9.24    | 95.88                  | 35.47 |         | 60.0     |                                  |
|               |                                               | Z | 6.56    | 85.41                  | 30.17 |         | 60.0     |                                  |
| 10027-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2)               | X | 0.96    | 63.24                  | 7.67  | 4.80    | 80.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 125.59                 | 30.06 |         | 80.0     |                                  |
|               |                                               | Z | 100.00  | 100.14                 | 18.62 |         | 80.0     |                                  |
| 10028-<br>DAC | GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)             | X | 0.48    | 60.36                  | 5.50  | 3.55    | 100.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 132.37                 | 32.13 |         | 100.0    |                                  |
|               |                                               | Z | 99.97   | 95.45                  | 15.98 |         | 100.0    |                                  |
| 10029-<br>DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2)               | X | 4.19    | 75.28                  | 24.64 | 7.80    | 80.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 5.35    | 81.78                  | 28.49 |         | 80.0     |                                  |
|               |                                               | Z | 4.26    | 76.21                  | 25.31 |         | 80.0     |                                  |
| 10030-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH1)           | X | 1.09    | 63.09                  | 7.76  | 5.30    | 70.0     | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 120.14                 | 28.06 |         | 70.0     |                                  |
|               |                                               | Z | 4.93    | 76.05                  | 12.90 |         | 70.0     |                                  |
| 10031-<br>CAA | IEEE 802.15.1 Bluetooth (GFSK, DH3)           | X | 0.27    | 60.00                  | 3.17  | 1.88    | 100.0    | $\pm 9.6\%$                      |
|               |                                               | Y | 100.00  | 135.00                 | 31.47 |         | 100.0    |                                  |
|               |                                               | Z | 0.26    | 60.00                  | 3.07  |         | 100.0    |                                  |

|           |                                                     |   |        |        |       |       |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|-------|-------|---------|
| 10032-CAA | IEEE 802.15.1 Bluetooth (GFSK, DH5)                 | X | 27.08  | 314.20 | 3.36  | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 100.00 | 149.06 | 35.68 |       | 100.0 |         |
|           |                                                     | Z | 1.21   | 330.96 | 55.77 |       | 100.0 |         |
| 10033-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)           | X | 3.08   | 73.10  | 16.00 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 136.30 | 37.75 |       | 70.0  |         |
|           |                                                     | Z | 7.37   | 86.92  | 21.69 |       | 70.0  |         |
| 10034-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)           | X | 1.25   | 65.91  | 11.39 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 5.27   | 87.77  | 22.72 |       | 100.0 |         |
|           |                                                     | Z | 1.70   | 70.42  | 13.93 |       | 100.0 |         |
| 10035-CAA | IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)           | X | 0.99   | 64.64  | 10.52 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 2.59   | 77.96  | 18.88 |       | 100.0 |         |
|           |                                                     | Z | 1.19   | 67.26  | 12.19 |       | 100.0 |         |
| 10036-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH1)               | X | 3.48   | 74.91  | 16.77 | 5.30  | 70.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 136.90 | 38.02 |       | 70.0  |         |
|           |                                                     | Z | 11.33  | 93.27  | 23.71 |       | 70.0  |         |
| 10037-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH3)               | X | 1.18   | 65.50  | 11.18 | 1.88  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 4.66   | 86.12  | 22.16 |       | 100.0 |         |
|           |                                                     | Z | 1.56   | 69.56  | 13.55 |       | 100.0 |         |
| 10038-CAA | IEEE 802.15.1 Bluetooth (8-DPSK, DH5)               | X | 1.00   | 64.92  | 10.78 | 1.17  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 2.61   | 78.41  | 19.18 |       | 100.0 |         |
|           |                                                     | Z | 1.21   | 67.70  | 12.52 |       | 100.0 |         |
| 10039-CAB | CDMA2000 (1xRTT, RC1)                               | X | 0.95   | 64.99  | 10.40 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.84   | 72.12  | 15.71 |       | 150.0 |         |
|           |                                                     | Z | 1.02   | 65.84  | 10.98 |       | 150.0 |         |
| 10042-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate) | X | 1.77   | 64.37  | 9.09  | 7.78  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 113.16 | 25.71 |       | 50.0  |         |
|           |                                                     | Z | 2.56   | 68.32  | 10.93 |       | 50.0  |         |
| 10044-CAA | IS-91/EIA/TIA-553 FDD (FDMA, FM)                    | X | 0.31   | 133.81 | 11.51 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.00   | 104.03 | 5.27  |       | 150.0 |         |
|           |                                                     | Z | 0.33   | 142.49 | 0.98  |       | 150.0 |         |
| 10048-CAA | DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)           | X | 4.01   | 66.51  | 12.74 | 13.80 | 25.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 110.91 | 26.95 |       | 25.0  |         |
|           |                                                     | Z | 5.44   | 70.40  | 14.40 |       | 25.0  |         |
| 10049-CAA | DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)         | X | 3.70   | 68.56  | 12.33 | 10.79 | 40.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 112.50 | 26.54 |       | 40.0  |         |
|           |                                                     | Z | 5.22   | 72.87  | 14.17 |       | 40.0  |         |
| 10056-CAA | UMTS-TDD (TD-SCDMA, 1.28 Mcps)                      | X | 6.09   | 76.95  | 17.81 | 9.03  | 50.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 128.62 | 35.43 |       | 50.0  |         |
|           |                                                     | Z | 13.22  | 89.10  | 22.41 |       | 50.0  |         |
| 10058-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)                   | X | 3.39   | 71.63  | 22.33 | 6.55  | 100.0 | ± 9.6 % |
|           |                                                     | Y | 4.14   | 76.10  | 25.11 |       | 100.0 |         |
|           |                                                     | Z | 3.42   | 72.27  | 22.83 |       | 100.0 |         |
| 10059-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)            | X | 1.03   | 63.98  | 15.22 | 0.61  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 1.18   | 64.90  | 16.05 |       | 110.0 |         |
|           |                                                     | Z | 1.02   | 64.18  | 15.34 |       | 110.0 |         |
| 10060-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)          | X | 5.25   | 93.28  | 23.11 | 1.30  | 110.0 | ± 9.6 % |
|           |                                                     | Y | 100.00 | 145.92 | 38.93 |       | 110.0 |         |
|           |                                                     | Z | 39.44  | 123.36 | 31.22 |       | 110.0 |         |

|           |                                                |   |      |       |       |      |       |         |
|-----------|------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10061-CAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)      | X | 1.80 | 74.31 | 19.24 | 2.04 | 110.0 | ± 9.6 % |
|           |                                                | Y | 3.02 | 83.93 | 24.56 |      | 110.0 |         |
|           |                                                | Z | 2.14 | 78.36 | 21.37 |      | 110.0 |         |
| 10062-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)       | X | 4.44 | 66.41 | 16.45 | 0.49 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.68 | 66.67 | 16.57 |      | 100.0 |         |
|           |                                                | Z | 4.45 | 66.51 | 16.42 |      | 100.0 |         |
| 10063-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)       | X | 4.45 | 66.48 | 16.52 | 0.72 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.69 | 66.78 | 16.69 |      | 100.0 |         |
|           |                                                | Z | 4.46 | 66.59 | 16.51 |      | 100.0 |         |
| 10064-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)      | X | 4.70 | 66.70 | 16.72 | 0.86 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.99 | 67.05 | 16.93 |      | 100.0 |         |
|           |                                                | Z | 4.72 | 66.83 | 16.73 |      | 100.0 |         |
| 10065-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)      | X | 4.56 | 66.53 | 16.77 | 1.21 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.85 | 66.96 | 17.05 |      | 100.0 |         |
|           |                                                | Z | 4.58 | 66.69 | 16.81 |      | 100.0 |         |
| 10066-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)      | X | 4.57 | 66.51 | 16.90 | 1.46 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.87 | 66.98 | 17.22 |      | 100.0 |         |
|           |                                                | Z | 4.60 | 66.69 | 16.96 |      | 100.0 |         |
| 10067-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)      | X | 4.86 | 66.77 | 17.36 | 2.04 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.15 | 67.13 | 17.68 |      | 100.0 |         |
|           |                                                | Z | 4.89 | 66.94 | 17.44 |      | 100.0 |         |
| 10068-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)      | X | 4.88 | 66.65 | 17.49 | 2.55 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.20 | 67.19 | 17.93 |      | 100.0 |         |
|           |                                                | Z | 4.91 | 66.87 | 17.60 |      | 100.0 |         |
| 10069-CAC | IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)      | X | 4.95 | 66.72 | 17.70 | 2.67 | 100.0 | ± 9.6 % |
|           |                                                | Y | 5.28 | 67.17 | 18.11 |      | 100.0 |         |
|           |                                                | Z | 4.99 | 66.91 | 17.80 |      | 100.0 |         |
| 10071-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)  | X | 4.71 | 66.43 | 17.22 | 1.99 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.96 | 66.77 | 17.51 |      | 100.0 |         |
|           |                                                | Z | 4.73 | 66.59 | 17.28 |      | 100.0 |         |
| 10072-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps) | X | 4.67 | 66.65 | 17.37 | 2.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.94 | 67.10 | 17.75 |      | 100.0 |         |
|           |                                                | Z | 4.69 | 66.85 | 17.47 |      | 100.0 |         |
| 10073-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) | X | 4.72 | 66.79 | 17.66 | 2.83 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.99 | 67.24 | 18.08 |      | 100.0 |         |
|           |                                                | Z | 4.75 | 67.01 | 17.79 |      | 100.0 |         |
| 10074-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps) | X | 4.72 | 66.70 | 17.78 | 3.30 | 100.0 | ± 9.6 % |
|           |                                                | Y | 4.95 | 67.09 | 18.23 |      | 100.0 |         |
|           |                                                | Z | 4.74 | 66.91 | 17.92 |      | 100.0 |         |
| 10075-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps) | X | 4.74 | 66.71 | 18.01 | 3.82 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.98 | 67.20 | 18.56 |      | 90.0  |         |
|           |                                                | Z | 4.76 | 66.94 | 18.18 |      | 90.0  |         |
| 10076-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps) | X | 4.77 | 66.58 | 18.17 | 4.15 | 90.0  | ± 9.6 % |
|           |                                                | Y | 4.98 | 66.93 | 18.66 |      | 90.0  |         |
|           |                                                | Z | 4.79 | 66.78 | 18.33 |      | 90.0  |         |
| 10077-CAB | IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps) | X | 4.80 | 66.66 | 18.27 | 4.30 | 90.0  | ± 9.6 % |
|           |                                                | Y | 5.00 | 66.98 | 18.75 |      | 90.0  |         |
|           |                                                | Z | 4.82 | 66.86 | 18.43 |      | 90.0  |         |

|           |                                                     |   |        |        |       |      |       |         |
|-----------|-----------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10081-CAB | CDMA2000 (1xRTT, RC3)                               | X | 0.45   | 61.00  | 7.50  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 0.83   | 65.94  | 12.49 |      | 150.0 |         |
|           |                                                     | Z | 0.46   | 61.34  | 7.83  |      | 150.0 |         |
| 10082-CAB | IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate) | X | 0.68   | 60.00  | 3.10  | 4.77 | 80.0  | ± 9.6 % |
|           |                                                     | Y | 0.78   | 61.11  | 4.54  |      | 80.0  |         |
|           |                                                     | Z | 0.72   | 60.00  | 2.85  |      | 80.0  |         |
| 10090-DAC | GPRS-FDD (TDMA, GMSK, TN 0-4)                       | X | 1.84   | 66.30  | 9.91  | 6.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 100.00 | 120.24 | 28.59 |      | 60.0  |         |
|           |                                                     | Z | 100.00 | 103.44 | 20.90 |      | 60.0  |         |
| 10097-CAB | UMTS-FDD (HSDPA)                                    | X | 1.71   | 67.90  | 15.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.82   | 67.70  | 15.69 |      | 150.0 |         |
|           |                                                     | Z | 1.68   | 67.71  | 15.15 |      | 150.0 |         |
| 10098-CAB | UMTS-FDD (HSUPA, Subtest 2)                         | X | 1.67   | 67.85  | 15.26 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 1.79   | 67.66  | 15.66 |      | 150.0 |         |
|           |                                                     | Z | 1.64   | 67.65  | 15.11 |      | 150.0 |         |
| 10099-DAC | EDGE-FDD (TDMA, 8PSK, TN 0-4)                       | X | 6.29   | 83.56  | 29.10 | 9.56 | 60.0  | ± 9.6 % |
|           |                                                     | Y | 9.34   | 96.14  | 35.56 |      | 60.0  |         |
|           |                                                     | Z | 6.61   | 85.53  | 30.21 |      | 60.0  |         |
| 10100-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 2.90   | 69.76  | 16.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.14   | 70.37  | 16.71 |      | 150.0 |         |
|           |                                                     | Z | 2.89   | 69.82  | 16.39 |      | 150.0 |         |
| 10101-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 3.04   | 67.08  | 15.83 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.24   | 67.51  | 15.94 |      | 150.0 |         |
|           |                                                     | Z | 3.03   | 67.13  | 15.70 |      | 150.0 |         |
| 10102-CAD | LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 3.15   | 67.10  | 15.95 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 3.34   | 67.47  | 16.02 |      | 150.0 |         |
|           |                                                     | Z | 3.13   | 67.15  | 15.83 |      | 150.0 |         |
| 10103-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)            | X | 4.81   | 72.04  | 18.88 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 6.41   | 77.25  | 21.56 |      | 65.0  |         |
|           |                                                     | Z | 5.14   | 73.67  | 19.73 |      | 65.0  |         |
| 10104-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)          | X | 5.09   | 70.84  | 19.13 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 5.94   | 73.69  | 20.83 |      | 65.0  |         |
|           |                                                     | Z | 5.16   | 71.44  | 19.51 |      | 65.0  |         |
| 10105-CAD | LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)          | X | 4.78   | 69.37  | 18.75 | 3.98 | 65.0  | ± 9.6 % |
|           |                                                     | Y | 5.83   | 73.15  | 20.89 |      | 65.0  |         |
|           |                                                     | Z | 4.90   | 70.20  | 19.25 |      | 65.0  |         |
| 10108-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)            | X | 2.51   | 69.24  | 16.41 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.74   | 69.60  | 16.54 |      | 150.0 |         |
|           |                                                     | Z | 2.49   | 69.21  | 16.24 |      | 150.0 |         |
| 10109-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)          | X | 2.68   | 67.06  | 15.67 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.89   | 67.36  | 15.84 |      | 150.0 |         |
|           |                                                     | Z | 2.67   | 67.07  | 15.55 |      | 150.0 |         |
| 10110-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)             | X | 1.99   | 68.49  | 15.84 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.22   | 68.71  | 16.15 |      | 150.0 |         |
|           |                                                     | Z | 1.98   | 68.38  | 15.68 |      | 150.0 |         |
| 10111-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)           | X | 2.41   | 68.19  | 15.80 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                     | Y | 2.61   | 68.17  | 16.11 |      | 150.0 |         |
|           |                                                     | Z | 2.40   | 68.17  | 15.74 |      | 150.0 |         |

|           |                                                |   |      |       |       |      |       |         |
|-----------|------------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10112-CAE | LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)     | X | 2.81 | 67.12 | 15.76 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.02 | 67.35 | 15.89 |      | 150.0 |         |
|           |                                                | Z | 2.80 | 67.12 | 15.64 |      | 150.0 |         |
| 10113-CAE | LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)      | X | 2.56 | 68.40 | 15.97 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.76 | 68.30 | 16.24 |      | 150.0 |         |
|           |                                                | Z | 2.55 | 68.39 | 15.92 |      | 150.0 |         |
| 10114-CAC | IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)  | X | 4.95 | 66.96 | 16.54 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.12 | 67.17 | 16.44 |      | 150.0 |         |
|           |                                                | Z | 4.92 | 66.97 | 16.39 |      | 150.0 |         |
| 10115-CAC | IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)  | X | 5.23 | 67.14 | 16.63 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.41 | 67.31 | 16.52 |      | 150.0 |         |
|           |                                                | Z | 5.18 | 67.06 | 16.45 |      | 150.0 |         |
| 10116-CAC | IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM) | X | 5.04 | 67.18 | 16.57 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.22 | 67.37 | 16.47 |      | 150.0 |         |
|           |                                                | Z | 5.01 | 67.18 | 16.42 |      | 150.0 |         |
| 10117-CAC | IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)       | X | 4.94 | 66.92 | 16.53 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.09 | 67.03 | 16.39 |      | 150.0 |         |
|           |                                                | Z | 4.91 | 66.91 | 16.38 |      | 150.0 |         |
| 10118-CAC | IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)       | X | 5.34 | 67.47 | 16.81 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.50 | 67.52 | 16.63 |      | 150.0 |         |
|           |                                                | Z | 5.27 | 67.32 | 16.58 |      | 150.0 |         |
| 10119-CAC | IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)      | X | 5.06 | 67.24 | 16.61 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 5.20 | 67.31 | 16.45 |      | 150.0 |         |
|           |                                                | Z | 5.01 | 67.18 | 16.43 |      | 150.0 |         |
| 10140-CAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)     | X | 3.17 | 67.11 | 15.85 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.38 | 67.48 | 15.94 |      | 150.0 |         |
|           |                                                | Z | 3.16 | 67.15 | 15.73 |      | 150.0 |         |
| 10141-CAD | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)     | X | 3.30 | 67.28 | 16.06 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 3.50 | 67.57 | 16.11 |      | 150.0 |         |
|           |                                                | Z | 3.29 | 67.32 | 15.94 |      | 150.0 |         |
| 10142-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)        | X | 1.73 | 68.17 | 14.94 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.00 | 68.71 | 15.82 |      | 150.0 |         |
|           |                                                | Z | 1.72 | 68.11 | 14.89 |      | 150.0 |         |
| 10143-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)      | X | 2.15 | 68.15 | 14.63 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.47 | 68.91 | 15.82 |      | 150.0 |         |
|           |                                                | Z | 2.17 | 68.32 | 14.76 |      | 150.0 |         |
| 10144-CAD | LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)      | X | 1.86 | 65.26 | 12.63 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 2.24 | 66.62 | 14.22 |      | 150.0 |         |
|           |                                                | Z | 1.88 | 65.43 | 12.77 |      | 150.0 |         |
| 10145-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)      | X | 0.67 | 60.16 | 6.91  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.22 | 65.11 | 11.80 |      | 150.0 |         |
|           |                                                | Z | 0.71 | 60.61 | 7.39  |      | 150.0 |         |
| 10146-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)    | X | 0.95 | 60.06 | 6.44  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.65 | 64.56 | 10.76 |      | 150.0 |         |
|           |                                                | Z | 1.07 | 61.07 | 7.44  |      | 150.0 |         |
| 10147-CAE | LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)    | X | 0.99 | 60.33 | 6.68  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                | Y | 1.85 | 65.94 | 11.59 |      | 150.0 |         |
|           |                                                | Z | 1.13 | 61.55 | 7.80  |      | 150.0 |         |

|           |                                            |   |      |       |       |      |       |         |
|-----------|--------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10149-CAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 2.69 | 67.13 | 15.72 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.90 | 67.42 | 15.88 |      | 150.0 |         |
|           |                                            | Z | 2.68 | 67.14 | 15.60 |      | 150.0 |         |
| 10150-CAD | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 2.82 | 67.19 | 15.80 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.03 | 67.40 | 15.93 |      | 150.0 |         |
|           |                                            | Z | 2.81 | 67.19 | 15.69 |      | 150.0 |         |
| 10151-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)    | X | 5.01 | 74.56 | 19.93 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 6.65 | 79.71 | 22.70 |      | 65.0  |         |
|           |                                            | Z | 5.36 | 76.27 | 20.86 |      | 65.0  |         |
| 10152-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)  | X | 4.60 | 70.61 | 18.55 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 5.50 | 73.80 | 20.64 |      | 65.0  |         |
|           |                                            | Z | 4.69 | 71.33 | 19.06 |      | 65.0  |         |
| 10153-CAD | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)  | X | 4.95 | 71.72 | 19.46 | 3.98 | 65.0  | ± 9.6 % |
|           |                                            | Y | 5.84 | 74.66 | 21.37 |      | 65.0  |         |
|           |                                            | Z | 5.05 | 72.49 | 19.99 |      | 65.0  |         |
| 10154-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 2.04 | 68.92 | 16.11 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.27 | 69.12 | 16.41 |      | 150.0 |         |
|           |                                            | Z | 2.03 | 68.83 | 15.96 |      | 150.0 |         |
| 10155-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 2.41 | 68.23 | 15.84 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.61 | 68.18 | 16.13 |      | 150.0 |         |
|           |                                            | Z | 2.40 | 68.21 | 15.77 |      | 150.0 |         |
| 10156-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 1.51 | 67.60 | 14.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 1.84 | 68.81 | 15.61 |      | 150.0 |         |
|           |                                            | Z | 1.52 | 67.67 | 14.19 |      | 150.0 |         |
| 10157-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 1.63 | 65.15 | 12.07 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.08 | 67.20 | 14.25 |      | 150.0 |         |
|           |                                            | Z | 1.66 | 65.43 | 12.31 |      | 150.0 |         |
| 10158-CAE | LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 2.57 | 68.50 | 16.04 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.77 | 68.36 | 16.29 |      | 150.0 |         |
|           |                                            | Z | 2.56 | 68.48 | 15.98 |      | 150.0 |         |
| 10159-CAE | LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 1.70 | 65.38 | 12.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.19 | 67.65 | 14.54 |      | 150.0 |         |
|           |                                            | Z | 1.74 | 65.76 | 12.53 |      | 150.0 |         |
| 10160-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)    | X | 2.62 | 68.99 | 16.41 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.74 | 68.65 | 16.32 |      | 150.0 |         |
|           |                                            | Z | 2.56 | 68.70 | 16.16 |      | 150.0 |         |
| 10161-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 2.71 | 67.15 | 15.66 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.92 | 67.34 | 15.86 |      | 150.0 |         |
|           |                                            | Z | 2.70 | 67.15 | 15.57 |      | 150.0 |         |
| 10162-CAD | LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 2.82 | 67.38 | 15.82 | 0.00 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.03 | 67.49 | 15.97 |      | 150.0 |         |
|           |                                            | Z | 2.81 | 67.37 | 15.72 |      | 150.0 |         |
| 10166-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 3.14 | 68.82 | 18.96 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.40 | 68.62 | 18.58 |      | 150.0 |         |
|           |                                            | Z | 3.24 | 69.38 | 19.21 |      | 150.0 |         |
| 10167-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 3.68 | 71.26 | 19.14 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.01 | 70.93 | 18.84 |      | 150.0 |         |
|           |                                            | Z | 3.86 | 71.98 | 19.46 |      | 150.0 |         |

|           |                                            |   |       |        |       |      |       |         |
|-----------|--------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10168-CAE | LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 4.20  | 74.21  | 20.88 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 4.39  | 72.91  | 20.06 |      | 150.0 |         |
|           |                                            | Z | 4.45  | 75.16  | 21.28 |      | 150.0 |         |
| 10169-CAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 2.49  | 66.95  | 18.11 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.73  | 67.59  | 18.14 |      | 150.0 |         |
|           |                                            | Z | 2.58  | 67.69  | 18.47 |      | 150.0 |         |
| 10170-CAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 3.17  | 72.06  | 20.27 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.45  | 72.20  | 20.01 |      | 150.0 |         |
|           |                                            | Z | 3.40  | 73.44  | 20.89 |      | 150.0 |         |
| 10171-AAD | LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 2.61  | 67.98  | 17.29 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.93  | 68.85  | 17.54 |      | 150.0 |         |
|           |                                            | Z | 2.74  | 68.83  | 17.69 |      | 150.0 |         |
| 10172-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)      | X | 3.59  | 76.79  | 22.90 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 7.70  | 92.12  | 29.64 |      | 65.0  |         |
|           |                                            | Z | 4.50  | 82.04  | 25.61 |      | 65.0  |         |
| 10173-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)    | X | 5.40  | 81.69  | 22.80 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 14.31 | 100.07 | 30.15 |      | 65.0  |         |
|           |                                            | Z | 8.60  | 91.21  | 26.84 |      | 65.0  |         |
| 10174-CAD | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)    | X | 3.41  | 73.68  | 19.23 | 6.02 | 65.0  | ± 9.6 % |
|           |                                            | Y | 12.55 | 96.17  | 28.30 |      | 65.0  |         |
|           |                                            | Z | 5.50  | 82.57  | 23.30 |      | 65.0  |         |
| 10175-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)      | X | 2.47  | 66.66  | 17.85 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.70  | 67.34  | 17.92 |      | 150.0 |         |
|           |                                            | Z | 2.55  | 67.36  | 18.19 |      | 150.0 |         |
| 10176-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)    | X | 3.18  | 72.09  | 20.28 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.46  | 72.22  | 20.02 |      | 150.0 |         |
|           |                                            | Z | 3.41  | 73.46  | 20.90 |      | 150.0 |         |
| 10177-CAG | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)       | X | 2.48  | 66.79  | 17.93 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.72  | 67.46  | 18.00 |      | 150.0 |         |
|           |                                            | Z | 2.57  | 67.51  | 18.28 |      | 150.0 |         |
| 10178-CAE | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)     | X | 3.15  | 71.92  | 20.18 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.43  | 72.05  | 19.92 |      | 150.0 |         |
|           |                                            | Z | 3.38  | 73.25  | 20.78 |      | 150.0 |         |
| 10179-CAE | LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)    | X | 2.85  | 69.85  | 18.61 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.17  | 70.44  | 18.65 |      | 150.0 |         |
|           |                                            | Z | 3.03  | 70.94  | 19.12 |      | 150.0 |         |
| 10180-CAE | LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)     | X | 2.61  | 67.94  | 17.25 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.92  | 68.79  | 17.50 |      | 150.0 |         |
|           |                                            | Z | 2.74  | 68.78  | 17.65 |      | 150.0 |         |
| 10181-CAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 2.48  | 66.77  | 17.93 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.71  | 67.45  | 18.00 |      | 150.0 |         |
|           |                                            | Z | 2.56  | 67.49  | 18.28 |      | 150.0 |         |
| 10182-CAD | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)    | X | 3.15  | 71.89  | 20.17 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 3.42  | 72.03  | 19.91 |      | 150.0 |         |
|           |                                            | Z | 3.37  | 73.22  | 20.77 |      | 150.0 |         |
| 10183-AAC | LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 2.60  | 67.92  | 17.24 | 3.01 | 150.0 | ± 9.6 % |
|           |                                            | Y | 2.92  | 68.77  | 17.49 |      | 150.0 |         |
|           |                                            | Z | 2.73  | 68.75  | 17.64 |      | 150.0 |         |

|           |                                               |   |      |       |       |      |       |         |
|-----------|-----------------------------------------------|---|------|-------|-------|------|-------|---------|
| 10184-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)          | X | 2.49 | 66.81 | 17.95 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.72 | 67.49 | 18.02 |      | 150.0 |         |
|           |                                               | Z | 2.57 | 67.53 | 18.30 |      | 150.0 |         |
| 10185-CAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)        | X | 3.16 | 71.97 | 20.21 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.44 | 72.09 | 19.94 |      | 150.0 |         |
|           |                                               | Z | 3.39 | 73.31 | 20.81 |      | 150.0 |         |
| 10186-AAD | LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)        | X | 2.62 | 67.98 | 17.28 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.93 | 68.83 | 17.52 |      | 150.0 |         |
|           |                                               | Z | 2.74 | 68.82 | 17.67 |      | 150.0 |         |
| 10187-CAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)        | X | 2.50 | 66.88 | 18.03 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.73 | 67.53 | 18.08 |      | 150.0 |         |
|           |                                               | Z | 2.58 | 67.61 | 18.38 |      | 150.0 |         |
| 10188-CAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)      | X | 3.26 | 72.60 | 20.60 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 3.53 | 72.62 | 20.27 |      | 150.0 |         |
|           |                                               | Z | 3.51 | 74.04 | 21.24 |      | 150.0 |         |
| 10189-AAE | LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)      | X | 2.67 | 68.35 | 17.55 | 3.01 | 150.0 | ± 9.6 % |
|           |                                               | Y | 2.99 | 69.18 | 17.77 |      | 150.0 |         |
|           |                                               | Z | 2.80 | 69.24 | 17.97 |      | 150.0 |         |
| 10193-CAC | IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)  | X | 4.32 | 66.50 | 16.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.52 | 66.59 | 16.14 |      | 150.0 |         |
|           |                                               | Z | 4.31 | 66.50 | 16.05 |      | 150.0 |         |
| 10194-CAC | IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM) | X | 4.47 | 66.75 | 16.31 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.69 | 66.90 | 16.27 |      | 150.0 |         |
|           |                                               | Z | 4.46 | 66.77 | 16.19 |      | 150.0 |         |
| 10195-CAC | IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM) | X | 4.51 | 66.78 | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.73 | 66.93 | 16.28 |      | 150.0 |         |
|           |                                               | Z | 4.50 | 66.80 | 16.21 |      | 150.0 |         |
| 10196-CAC | IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)       | X | 4.31 | 66.51 | 16.16 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.52 | 66.65 | 16.16 |      | 150.0 |         |
|           |                                               | Z | 4.30 | 66.52 | 16.05 |      | 150.0 |         |
| 10197-CAC | IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)      | X | 4.48 | 66.77 | 16.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.70 | 66.92 | 16.28 |      | 150.0 |         |
|           |                                               | Z | 4.47 | 66.78 | 16.20 |      | 150.0 |         |
| 10198-CAC | IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)      | X | 4.50 | 66.79 | 16.33 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.73 | 66.95 | 16.30 |      | 150.0 |         |
|           |                                               | Z | 4.49 | 66.81 | 16.22 |      | 150.0 |         |
| 10219-CAC | IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)       | X | 4.26 | 66.54 | 16.13 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.47 | 66.66 | 16.12 |      | 150.0 |         |
|           |                                               | Z | 4.25 | 66.55 | 16.01 |      | 150.0 |         |
| 10220-CAC | IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)    | X | 4.47 | 66.73 | 16.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.70 | 66.89 | 16.27 |      | 150.0 |         |
|           |                                               | Z | 4.46 | 66.74 | 16.19 |      | 150.0 |         |
| 10221-CAC | IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)    | X | 4.51 | 66.73 | 16.32 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 4.74 | 66.87 | 16.28 |      | 150.0 |         |
|           |                                               | Z | 4.51 | 66.74 | 16.20 |      | 150.0 |         |
| 10222-CAC | IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)        | X | 4.91 | 66.89 | 16.51 | 0.00 | 150.0 | ± 9.6 % |
|           |                                               | Y | 5.06 | 67.05 | 16.39 |      | 150.0 |         |
|           |                                               | Z | 4.88 | 66.88 | 16.36 |      | 150.0 |         |

|           |                                           |   |       |        |       |      |       |         |
|-----------|-------------------------------------------|---|-------|--------|-------|------|-------|---------|
| 10223-CAC | IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)  | X | 5.21  | 67.18  | 16.67 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.37  | 67.24  | 16.51 |      | 150.0 |         |
|           |                                           | Z | 5.17  | 67.14  | 16.51 |      | 150.0 |         |
| 10224-CAC | IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM) | X | 4.95  | 66.99  | 16.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 5.11  | 67.16  | 16.37 |      | 150.0 |         |
|           |                                           | Z | 4.91  | 66.98  | 16.33 |      | 150.0 |         |
| 10225-CAB | UMTS-FDD (HSPA+)                          | X | 2.57  | 65.87  | 14.82 | 0.00 | 150.0 | ± 9.6 % |
|           |                                           | Y | 2.79  | 66.10  | 15.32 |      | 150.0 |         |
|           |                                           | Z | 2.57  | 65.89  | 14.81 |      | 150.0 |         |
| 10226-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)  | X | 5.70  | 82.73  | 23.27 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 15.45 | 101.64 | 30.73 |      | 65.0  |         |
|           |                                           | Z | 9.36  | 92.89  | 27.50 |      | 65.0  |         |
| 10227-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)  | X | 5.51  | 81.11  | 22.01 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 15.16 | 99.52  | 29.37 |      | 65.0  |         |
|           |                                           | Z | 9.33  | 91.39  | 26.29 |      | 65.0  |         |
| 10228-CAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)    | X | 4.37  | 80.87  | 24.58 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 8.06  | 93.39  | 30.16 |      | 65.0  |         |
|           |                                           | Z | 5.51  | 86.54  | 27.40 |      | 65.0  |         |
| 10229-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)    | X | 5.43  | 81.78  | 22.83 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 14.43 | 100.19 | 30.19 |      | 65.0  |         |
|           |                                           | Z | 8.67  | 91.34  | 26.89 |      | 65.0  |         |
| 10230-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)    | X | 5.22  | 80.18  | 21.60 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 14.07 | 98.09  | 28.85 |      | 65.0  |         |
|           |                                           | Z | 8.56  | 89.82  | 25.70 |      | 65.0  |         |
| 10231-CAB | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)      | X | 4.21  | 80.08  | 24.19 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 7.72  | 92.42  | 29.75 |      | 65.0  |         |
|           |                                           | Z | 5.25  | 85.50  | 26.93 |      | 65.0  |         |
| 10232-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)    | X | 5.42  | 81.76  | 22.83 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 14.40 | 100.18 | 30.19 |      | 65.0  |         |
|           |                                           | Z | 8.65  | 91.31  | 26.89 |      | 65.0  |         |
| 10233-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)    | X | 5.21  | 80.16  | 21.59 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 14.03 | 98.05  | 28.84 |      | 65.0  |         |
|           |                                           | Z | 8.53  | 89.78  | 25.69 |      | 65.0  |         |
| 10234-CAD | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)      | X | 4.09  | 79.41  | 23.80 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 7.46  | 91.57  | 29.34 |      | 65.0  |         |
|           |                                           | Z | 5.06  | 84.64  | 26.49 |      | 65.0  |         |
| 10235-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)   | X | 5.43  | 81.79  | 22.84 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 14.42 | 100.22 | 30.20 |      | 65.0  |         |
|           |                                           | Z | 8.66  | 91.36  | 26.90 |      | 65.0  |         |
| 10236-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)   | X | 5.25  | 80.28  | 21.63 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 14.26 | 98.30  | 28.91 |      | 65.0  |         |
|           |                                           | Z | 8.64  | 89.96  | 25.74 |      | 65.0  |         |
| 10237-CAD | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)     | X | 4.21  | 80.11  | 24.20 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 7.73  | 92.49  | 29.78 |      | 65.0  |         |
|           |                                           | Z | 5.25  | 85.54  | 26.95 |      | 65.0  |         |
| 10238-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)   | X | 5.41  | 81.74  | 22.82 | 6.02 | 65.0  | ± 9.6 % |
|           |                                           | Y | 14.37 | 100.15 | 30.18 |      | 65.0  |         |
|           |                                           | Z | 8.63  | 91.28  | 26.88 |      | 65.0  |         |

|           |                                            |   |       |       |       |      |      |         |
|-----------|--------------------------------------------|---|-------|-------|-------|------|------|---------|
| 10239-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)    | X | 5.19  | 80.13 | 21.58 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 13.97 | 98.01 | 28.83 |      | 65.0 |         |
|           |                                            | Z | 8.50  | 89.73 | 25.67 |      | 65.0 |         |
| 10240-CAD | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)      | X | 4.20  | 80.08 | 24.19 | 6.02 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.71  | 92.44 | 29.76 |      | 65.0 |         |
|           |                                            | Z | 5.24  | 85.50 | 26.94 |      | 65.0 |         |
| 10241-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) | X | 6.28  | 77.75 | 23.74 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.17  | 79.66 | 25.20 |      | 65.0 |         |
|           |                                            | Z | 6.62  | 79.11 | 24.64 |      | 65.0 |         |
| 10242-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM) | X | 5.61  | 75.51 | 22.71 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.01  | 79.22 | 24.95 |      | 65.0 |         |
|           |                                            | Z | 6.04  | 77.21 | 23.74 |      | 65.0 |         |
| 10243-CAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)   | X | 4.77  | 72.80 | 22.43 | 6.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.72  | 75.84 | 24.40 |      | 65.0 |         |
|           |                                            | Z | 4.99  | 73.88 | 23.19 |      | 65.0 |         |
| 10244-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)   | X | 3.08  | 66.71 | 12.88 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.65  | 76.51 | 19.16 |      | 65.0 |         |
|           |                                            | Z | 3.79  | 70.31 | 15.20 |      | 65.0 |         |
| 10245-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)   | X | 3.05  | 66.35 | 12.65 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.47  | 75.72 | 18.77 |      | 65.0 |         |
|           |                                            | Z | 3.68  | 69.62 | 14.83 |      | 65.0 |         |
| 10246-CAB | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)     | X | 2.73  | 68.50 | 14.10 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 6.90  | 84.10 | 22.59 |      | 65.0 |         |
|           |                                            | Z | 3.38  | 72.30 | 16.31 |      | 65.0 |         |
| 10247-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)   | X | 3.32  | 68.16 | 14.83 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.00  | 75.29 | 19.75 |      | 65.0 |         |
|           |                                            | Z | 3.63  | 70.11 | 16.18 |      | 65.0 |         |
| 10248-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)   | X | 3.35  | 67.83 | 14.68 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 4.95  | 74.49 | 19.36 |      | 65.0 |         |
|           |                                            | Z | 3.62  | 69.55 | 15.90 |      | 65.0 |         |
| 10249-CAD | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)     | X | 3.90  | 73.79 | 17.79 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.87  | 86.63 | 24.46 |      | 65.0 |         |
|           |                                            | Z | 4.87  | 78.17 | 20.05 |      | 65.0 |         |
| 10250-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)  | X | 4.46  | 72.43 | 19.10 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.61  | 76.63 | 21.92 |      | 65.0 |         |
|           |                                            | Z | 4.70  | 73.89 | 20.05 |      | 65.0 |         |
| 10251-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)  | X | 4.27  | 70.46 | 17.79 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.36  | 74.41 | 20.57 |      | 65.0 |         |
|           |                                            | Z | 4.43  | 71.53 | 18.56 |      | 65.0 |         |
| 10252-CAD | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)    | X | 4.80  | 76.28 | 20.36 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 7.12  | 83.67 | 24.31 |      | 65.0 |         |
|           |                                            | Z | 5.40  | 79.04 | 21.81 |      | 65.0 |         |
| 10253-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)  | X | 4.54  | 70.25 | 18.29 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.37  | 73.18 | 20.35 |      | 65.0 |         |
|           |                                            | Z | 4.62  | 70.94 | 18.80 |      | 65.0 |         |
| 10254-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)  | X | 4.85  | 71.22 | 19.07 | 3.98 | 65.0 | ± 9.6 % |
|           |                                            | Y | 5.69  | 74.00 | 21.02 |      | 65.0 |         |
|           |                                            | Z | 4.94  | 71.96 | 19.60 |      | 65.0 |         |

|           |                                             |   |      |       |       |      |      |         |
|-----------|---------------------------------------------|---|------|-------|-------|------|------|---------|
| 10255-CAD | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)     | X | 4.83 | 74.07 | 19.88 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.20 | 78.60 | 22.49 |      | 65.0 |         |
|           |                                             | Z | 5.10 | 75.57 | 20.75 |      | 65.0 |         |
| 10256-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) | X | 2.29 | 63.25 | 9.85  | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.33 | 72.34 | 16.30 |      | 65.0 |         |
|           |                                             | Z | 2.61 | 65.28 | 11.48 |      | 65.0 |         |
| 10257-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) | X | 2.28 | 62.96 | 9.60  | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.16 | 71.35 | 15.76 |      | 65.0 |         |
|           |                                             | Z | 2.56 | 64.75 | 11.10 |      | 65.0 |         |
| 10258-CAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)   | X | 1.96 | 64.07 | 10.75 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 4.97 | 78.32 | 19.50 |      | 65.0 |         |
|           |                                             | Z | 2.22 | 66.21 | 12.33 |      | 65.0 |         |
| 10259-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)   | X | 3.77 | 69.86 | 16.44 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.26 | 75.82 | 20.54 |      | 65.0 |         |
|           |                                             | Z | 4.07 | 71.70 | 17.67 |      | 65.0 |         |
| 10260-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)   | X | 3.81 | 69.66 | 16.35 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.26 | 75.42 | 20.36 |      | 65.0 |         |
|           |                                             | Z | 4.10 | 71.41 | 17.53 |      | 65.0 |         |
| 10261-CAB | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)     | X | 4.13 | 74.31 | 18.63 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.91 | 83.89 | 23.89 |      | 65.0 |         |
|           |                                             | Z | 4.85 | 77.73 | 20.46 |      | 65.0 |         |
| 10262-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)   | X | 4.45 | 72.36 | 19.04 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.60 | 76.58 | 21.88 |      | 65.0 |         |
|           |                                             | Z | 4.68 | 73.81 | 19.99 |      | 65.0 |         |
| 10263-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)   | X | 4.26 | 70.44 | 17.79 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.34 | 74.38 | 20.56 |      | 65.0 |         |
|           |                                             | Z | 4.42 | 71.51 | 18.55 |      | 65.0 |         |
| 10264-CAD | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)     | X | 4.75 | 76.08 | 20.25 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 7.04 | 83.44 | 24.20 |      | 65.0 |         |
|           |                                             | Z | 5.33 | 78.79 | 21.68 |      | 65.0 |         |
| 10265-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)  | X | 4.60 | 70.61 | 18.56 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.50 | 73.80 | 20.64 |      | 65.0 |         |
|           |                                             | Z | 4.69 | 71.34 | 19.07 |      | 65.0 |         |
| 10266-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)  | X | 4.95 | 71.71 | 19.45 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 5.83 | 74.64 | 21.36 |      | 65.0 |         |
|           |                                             | Z | 5.05 | 72.48 | 19.97 |      | 65.0 |         |
| 10267-CAD | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)    | X | 5.01 | 74.52 | 19.91 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.63 | 79.66 | 22.68 |      | 65.0 |         |
|           |                                             | Z | 5.35 | 76.22 | 20.84 |      | 65.0 |         |
| 10268-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)  | X | 5.27 | 70.89 | 19.25 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.07 | 73.43 | 20.81 |      | 65.0 |         |
|           |                                             | Z | 5.33 | 71.43 | 19.60 |      | 65.0 |         |
| 10269-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)  | X | 5.29 | 70.58 | 19.15 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.04 | 72.94 | 20.64 |      | 65.0 |         |
|           |                                             | Z | 5.34 | 71.06 | 19.47 |      | 65.0 |         |
| 10270-CAD | LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)    | X | 5.17 | 72.58 | 19.33 | 3.98 | 65.0 | ± 9.6 % |
|           |                                             | Y | 6.28 | 76.09 | 21.29 |      | 65.0 |         |
|           |                                             | Z | 5.35 | 73.62 | 19.93 |      | 65.0 |         |

|           |                                                                    |   |       |       |       |      |       |         |
|-----------|--------------------------------------------------------------------|---|-------|-------|-------|------|-------|---------|
| 10274-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)                          | X | 2.41  | 66.43 | 14.82 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.58  | 66.48 | 15.24 |      | 150.0 |         |
|           |                                                                    | Z | 2.39  | 66.38 | 14.76 |      | 150.0 |         |
| 10275-CAB | UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)                           | X | 1.45  | 67.76 | 15.04 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.61  | 67.98 | 15.58 |      | 150.0 |         |
|           |                                                                    | Z | 1.42  | 67.56 | 14.85 |      | 150.0 |         |
| 10277-CAA | PHS (QPSK)                                                         | X | 1.74  | 59.75 | 5.31  | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 1.81  | 61.19 | 6.71  |      | 50.0  |         |
|           |                                                                    | Z | 1.73  | 59.88 | 5.41  |      | 50.0  |         |
| 10278-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.5)                                 | X | 2.71  | 64.14 | 10.09 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 10.58 | 86.01 | 20.92 |      | 50.0  |         |
|           |                                                                    | Z | 2.95  | 65.66 | 11.11 |      | 50.0  |         |
| 10279-CAA | PHS (QPSK, BW 884MHz, Rolloff 0.38)                                | X | 2.77  | 64.34 | 10.25 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 10.86 | 86.33 | 21.10 |      | 50.0  |         |
|           |                                                                    | Z | 3.03  | 65.92 | 11.30 |      | 50.0  |         |
| 10290-AAB | CDMA2000, RC1, SO55, Full Rate                                     | X | 0.78  | 62.91 | 9.04  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.44  | 68.67 | 13.91 |      | 150.0 |         |
|           |                                                                    | Z | 0.82  | 63.50 | 9.52  |      | 150.0 |         |
| 10291-AAB | CDMA2000, RC3, SO55, Full Rate                                     | X | 0.44  | 60.90 | 7.41  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 0.81  | 65.70 | 12.35 |      | 150.0 |         |
|           |                                                                    | Z | 0.46  | 61.22 | 7.73  |      | 150.0 |         |
| 10292-AAB | CDMA2000, RC3, SO32, Full Rate                                     | X | 0.52  | 62.90 | 8.81  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.08  | 70.34 | 14.96 |      | 150.0 |         |
|           |                                                                    | Z | 0.54  | 63.47 | 9.26  |      | 150.0 |         |
| 10293-AAB | CDMA2000, RC3, SO3, Full Rate                                      | X | 0.85  | 67.98 | 11.75 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.81  | 77.73 | 18.47 |      | 150.0 |         |
|           |                                                                    | Z | 0.93  | 69.19 | 12.44 |      | 150.0 |         |
| 10295-AAB | CDMA2000, RC1, SO3, 1/8th Rate 25 fr.                              | X | 10.59 | 83.36 | 20.91 | 9.03 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 13.63 | 95.28 | 28.15 |      | 50.0  |         |
|           |                                                                    | Z | 12.33 | 87.48 | 22.99 |      | 50.0  |         |
| 10297-AAC | LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)                            | X | 2.52  | 69.36 | 16.49 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.75  | 69.70 | 16.61 |      | 150.0 |         |
|           |                                                                    | Z | 2.51  | 69.33 | 16.32 |      | 150.0 |         |
| 10298-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)                             | X | 1.02  | 63.71 | 10.46 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.56  | 67.65 | 14.07 |      | 150.0 |         |
|           |                                                                    | Z | 1.06  | 64.21 | 10.86 |      | 150.0 |         |
| 10299-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)                           | X | 1.41  | 63.10 | 9.49  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 2.20  | 67.48 | 13.20 |      | 150.0 |         |
|           |                                                                    | Z | 1.66  | 65.04 | 10.89 |      | 150.0 |         |
| 10300-AAC | LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)                           | X | 1.19  | 60.99 | 7.64  | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                    | Y | 1.75  | 63.96 | 10.73 |      | 150.0 |         |
|           |                                                                    | Z | 1.30  | 61.89 | 8.49  |      | 150.0 |         |
| 10301-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)                 | X | 4.40  | 65.21 | 17.25 | 4.17 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 4.79  | 65.64 | 17.57 |      | 50.0  |         |
|           |                                                                    | Z | 4.51  | 65.62 | 17.36 |      | 50.0  |         |
| 10302-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols) | X | 4.89  | 66.01 | 18.10 | 4.96 | 50.0  | ± 9.6 % |
|           |                                                                    | Y | 5.23  | 66.10 | 18.21 |      | 50.0  |         |
|           |                                                                    | Z | 4.90  | 65.76 | 17.79 |      | 50.0  |         |

|           |                                                                     |   |      |       |       |       |       |         |
|-----------|---------------------------------------------------------------------|---|------|-------|-------|-------|-------|---------|
| 10303-AAA | IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)                 | X | 4.65 | 65.68 | 17.92 | 4.96  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.97 | 65.72 | 18.04 |       | 50.0  |         |
|           |                                                                     | Z | 4.66 | 65.38 | 17.59 |       | 50.0  |         |
| 10304-AAA | IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)                 | X | 4.43 | 65.21 | 17.19 | 4.17  | 50.0  | ± 9.6 % |
|           |                                                                     | Y | 4.78 | 65.59 | 17.51 |       | 50.0  |         |
|           |                                                                     | Z | 4.47 | 65.30 | 17.12 |       | 50.0  |         |
| 10305-AAA | IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)    | X | 4.15 | 67.54 | 18.96 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.30 | 67.06 | 19.45 |       | 35.0  |         |
|           |                                                                     | Z | 4.22 | 67.78 | 19.08 |       | 35.0  |         |
| 10306-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)    | X | 4.43 | 66.43 | 18.72 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.66 | 66.30 | 19.12 |       | 35.0  |         |
|           |                                                                     | Z | 4.49 | 66.64 | 18.78 |       | 35.0  |         |
| 10307-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)     | X | 4.32 | 66.52 | 18.64 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.55 | 66.42 | 19.07 |       | 35.0  |         |
|           |                                                                     | Z | 4.38 | 66.74 | 18.71 |       | 35.0  |         |
| 10308-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)                | X | 4.30 | 66.75 | 18.79 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.52 | 66.60 | 19.20 |       | 35.0  |         |
|           |                                                                     | Z | 4.37 | 66.98 | 18.86 |       | 35.0  |         |
| 10309-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols) | X | 4.46 | 66.55 | 18.83 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.72 | 66.54 | 19.28 |       | 35.0  |         |
|           |                                                                     | Z | 4.52 | 66.77 | 18.90 |       | 35.0  |         |
| 10310-AAA | IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)  | X | 4.39 | 66.51 | 18.71 | 6.02  | 35.0  | ± 9.6 % |
|           |                                                                     | Y | 4.60 | 66.34 | 19.08 |       | 35.0  |         |
|           |                                                                     | Z | 4.45 | 66.72 | 18.77 |       | 35.0  |         |
| 10311-AAC | LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)                            | X | 2.88 | 68.46 | 16.13 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 3.11 | 68.97 | 16.25 |       | 150.0 |         |
|           |                                                                     | Z | 2.86 | 68.50 | 15.98 |       | 150.0 |         |
| 10313-AAA | iDEN 1:3                                                            | X | 1.87 | 66.02 | 12.37 | 6.99  | 70.0  | ± 9.6 % |
|           |                                                                     | Y | 5.52 | 82.21 | 20.17 |       | 70.0  |         |
|           |                                                                     | Z | 2.06 | 67.90 | 13.38 |       | 70.0  |         |
| 10314-AAA | iDEN 1:6                                                            | X | 2.66 | 70.48 | 16.99 | 10.00 | 30.0  | ± 9.6 % |
|           |                                                                     | Y | 9.77 | 95.91 | 27.98 |       | 30.0  |         |
|           |                                                                     | Z | 4.14 | 77.84 | 20.07 |       | 30.0  |         |
| 10315-AAB | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)           | X | 0.95 | 63.27 | 14.86 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 1.06 | 63.68 | 15.21 |       | 150.0 |         |
|           |                                                                     | Z | 0.93 | 63.28 | 14.78 |       | 150.0 |         |
| 10316-AAB | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)       | X | 4.35 | 66.42 | 16.23 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.58 | 66.66 | 16.32 |       | 150.0 |         |
|           |                                                                     | Z | 4.34 | 66.49 | 16.17 |       | 150.0 |         |
| 10317-AAC | IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)             | X | 4.35 | 66.42 | 16.23 | 0.17  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.58 | 66.66 | 16.32 |       | 150.0 |         |
|           |                                                                     | Z | 4.34 | 66.49 | 16.17 |       | 150.0 |         |
| 10400-AAD | IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)                 | X | 4.44 | 66.78 | 16.30 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 4.68 | 66.96 | 16.27 |       | 150.0 |         |
|           |                                                                     | Z | 4.43 | 66.80 | 16.17 |       | 150.0 |         |
| 10401-AAD | IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)                 | X | 5.15 | 66.76 | 16.42 | 0.00  | 150.0 | ± 9.6 % |
|           |                                                                     | Y | 5.39 | 67.16 | 16.44 |       | 150.0 |         |
|           |                                                                     | Z | 5.17 | 66.92 | 16.36 |       | 150.0 |         |

|           |                                                                                 |   |        |        |       |      |       |         |
|-----------|---------------------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10402-AAD | IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)                             | X | 5.46   | 67.17  | 16.51 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.63   | 67.44  | 16.43 |      | 150.0 |         |
|           |                                                                                 | Z | 5.43   | 67.19  | 16.37 |      | 150.0 |         |
| 10403-AAB | CDMA2000 (1xEV-DO, Rev. 0)                                                      | X | 0.78   | 62.91  | 9.04  | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                 | Y | 1.44   | 68.67  | 13.91 |      | 115.0 |         |
|           |                                                                                 | Z | 0.82   | 63.50  | 9.52  |      | 115.0 |         |
| 10404-AAB | CDMA2000 (1xEV-DO, Rev. A)                                                      | X | 0.78   | 62.91  | 9.04  | 0.00 | 115.0 | ± 9.6 % |
|           |                                                                                 | Y | 1.44   | 68.67  | 13.91 |      | 115.0 |         |
|           |                                                                                 | Z | 0.82   | 63.50  | 9.52  |      | 115.0 |         |
| 10406-AAB | CDMA2000, RC3, SO32, SCH0, Full Rate                                            | X | 100.00 | 119.25 | 28.40 | 0.00 | 100.0 | ± 9.6 % |
|           |                                                                                 | Y | 9.50   | 91.59  | 22.98 |      | 100.0 |         |
|           |                                                                                 | Z | 100.00 | 122.00 | 29.77 |      | 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 | 3.12   | 77.42  | 16.90 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                                 | Y | 100.00 | 127.40 | 32.46 |      | 80.0  |         |
|           |                                                                                 | Z | 100.00 | 125.01 | 30.73 |      | 80.0  |         |
| 10415-AAA | IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)                       | X | 0.90   | 62.74  | 14.48 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 1.00   | 62.96  | 14.62 |      | 150.0 |         |
|           |                                                                                 | Z | 0.88   | 62.66  | 14.28 |      | 150.0 |         |
| 10416-AAA | IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)                   | X | 4.32   | 66.51  | 16.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.52   | 66.62  | 16.21 |      | 150.0 |         |
|           |                                                                                 | Z | 4.30   | 66.52  | 16.13 |      | 150.0 |         |
| 10417-AAB | IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)                       | X | 4.32   | 66.51  | 16.25 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.52   | 66.62  | 16.21 |      | 150.0 |         |
|           |                                                                                 | Z | 4.30   | 66.52  | 16.13 |      | 150.0 |         |
| 10418-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preamble)   | X | 4.31   | 66.71  | 16.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.51   | 66.79  | 16.23 |      | 150.0 |         |
|           |                                                                                 | Z | 4.30   | 66.71  | 16.18 |      | 150.0 |         |
| 10419-AAA | IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble)  | X | 4.33   | 66.64  | 16.29 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.53   | 66.73  | 16.23 |      | 150.0 |         |
|           |                                                                                 | Z | 4.32   | 66.65  | 16.17 |      | 150.0 |         |
| 10422-AAB | IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)                                    | X | 4.44   | 66.62  | 16.30 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.65   | 66.73  | 16.25 |      | 150.0 |         |
|           |                                                                                 | Z | 4.43   | 66.63  | 16.18 |      | 150.0 |         |
| 10423-AAB | IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)                                 | X | 4.57   | 66.89  | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.81   | 67.05  | 16.36 |      | 150.0 |         |
|           |                                                                                 | Z | 4.56   | 66.90  | 16.28 |      | 150.0 |         |
| 10424-AAB | IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)                                 | X | 4.50   | 66.84  | 16.37 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 4.73   | 67.00  | 16.33 |      | 150.0 |         |
|           |                                                                                 | Z | 4.49   | 66.86  | 16.25 |      | 150.0 |         |
| 10425-AAB | IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)                                     | X | 5.17   | 67.18  | 16.65 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.33   | 67.30  | 16.51 |      | 150.0 |         |
|           |                                                                                 | Z | 5.13   | 67.14  | 16.48 |      | 150.0 |         |
| 10426-AAB | IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)                                   | X | 5.23   | 67.40  | 16.76 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                                 | Y | 5.34   | 67.33  | 16.52 |      | 150.0 |         |
|           |                                                                                 | Z | 5.16   | 67.27  | 16.54 |      | 150.0 |         |

|           |                                                                |   |        |        |       |      |       |         |
|-----------|----------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10427-AAB | IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)                 | X | 5.16   | 67.07  | 16.58 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.35   | 67.30  | 16.51 |      | 150.0 |         |
|           |                                                                | Z | 5.13   | 67.07  | 16.44 |      | 150.0 |         |
| 10430-AAB | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)                               | X | 4.20   | 72.13  | 18.43 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.22   | 70.70  | 18.10 |      | 150.0 |         |
|           |                                                                | Z | 4.22   | 72.19  | 18.46 |      | 150.0 |         |
| 10431-AAB | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)                              | X | 3.93   | 67.10  | 16.09 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.20   | 67.18  | 16.20 |      | 150.0 |         |
|           |                                                                | Z | 3.93   | 67.10  | 16.01 |      | 150.0 |         |
| 10432-AAB | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)                              | X | 4.26   | 66.93  | 16.28 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.50   | 67.05  | 16.28 |      | 150.0 |         |
|           |                                                                | Z | 4.25   | 66.94  | 16.17 |      | 150.0 |         |
| 10433-AAB | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)                              | X | 4.52   | 66.87  | 16.39 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.75   | 67.03  | 16.35 |      | 150.0 |         |
|           |                                                                | Z | 4.51   | 66.89  | 16.27 |      | 150.0 |         |
| 10434-AAA | W-CDMA (BS Test Model 1, 64 DPCH)                              | X | 4.28   | 72.84  | 18.10 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.33   | 71.56  | 18.07 |      | 150.0 |         |
|           |                                                                | Z | 4.34   | 73.06  | 18.24 |      | 150.0 |         |
| 10435-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) | X | 2.96   | 76.73  | 16.60 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                | Y | 100.00 | 127.17 | 32.36 |      | 80.0  |         |
|           |                                                                | Z | 100.00 | 124.69 | 30.58 |      | 80.0  |         |
| 10447-AAB | LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)                 | X | 3.15   | 66.77  | 14.81 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.49   | 67.18  | 15.50 |      | 150.0 |         |
|           |                                                                | Z | 3.17   | 66.84  | 14.85 |      | 150.0 |         |
| 10448-AAB | LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)                | X | 3.79   | 66.88  | 15.96 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.04   | 66.96  | 16.06 |      | 150.0 |         |
|           |                                                                | Z | 3.79   | 66.88  | 15.87 |      | 150.0 |         |
| 10449-AAB | LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)                | X | 4.09   | 66.75  | 16.17 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.31   | 66.88  | 16.18 |      | 150.0 |         |
|           |                                                                | Z | 4.08   | 66.77  | 16.07 |      | 150.0 |         |
| 10450-AAB | LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)                | X | 4.31   | 66.64  | 16.24 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 4.51   | 66.80  | 16.21 |      | 150.0 |         |
|           |                                                                | Z | 4.30   | 66.66  | 16.12 |      | 150.0 |         |
| 10451-AAA | W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)                | X | 2.94   | 66.45  | 13.98 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.38   | 67.33  | 15.10 |      | 150.0 |         |
|           |                                                                | Z | 2.98   | 66.61  | 14.10 |      | 150.0 |         |
| 10456-AAB | IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)           | X | 6.17   | 67.89  | 16.91 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 6.20   | 67.84  | 16.66 |      | 150.0 |         |
|           |                                                                | Z | 6.10   | 67.86  | 16.74 |      | 150.0 |         |
| 10457-AAA | UMTS-FDD (DC-HSDPA)                                            | X | 3.65   | 65.21  | 15.97 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.78   | 65.27  | 15.92 |      | 150.0 |         |
|           |                                                                | Z | 3.63   | 65.21  | 15.85 |      | 150.0 |         |
| 10458-AAA | CDMA2000 (1xEV-DO, Rev. B, 2 carriers)                         | X | 3.63   | 70.67  | 16.50 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 3.97   | 70.83  | 17.45 |      | 150.0 |         |
|           |                                                                | Z | 3.75   | 71.23  | 16.87 |      | 150.0 |         |
| 10459-AAA | CDMA2000 (1xEV-DO, Rev. B, 3 carriers)                         | X | 4.91   | 69.28  | 18.19 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                | Y | 5.06   | 68.34  | 18.09 |      | 150.0 |         |
|           |                                                                | Z | 4.97   | 69.44  | 18.31 |      | 150.0 |         |

|           |                                                                   |   |        |        |       |      |       |         |
|-----------|-------------------------------------------------------------------|---|--------|--------|-------|------|-------|---------|
| 10460-AAA | UMTS-FDD (WCDMA, AMR)                                             | X | 0.82   | 68.91  | 15.77 | 0.00 | 150.0 | ± 9.6 % |
|           |                                                                   | Y | 0.90   | 68.29  | 16.15 |      | 150.0 |         |
|           |                                                                   | Z | 0.77   | 68.38  | 15.37 |      | 150.0 |         |
| 10461-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 2.32   | 75.39  | 17.14 | 3.29 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 131.59 | 34.49 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 129.59 | 32.92 |      | 80.0  |         |
| 10462-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 0.76   | 60.00  | 7.09  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 4.63   | 77.57  | 16.00 |      | 80.0  |         |
|           |                                                                   | Z | 0.74   | 60.00  | 7.79  |      | 80.0  |         |
| 10463-AAA | LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 0.79   | 60.00  | 6.50  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 1.49   | 65.34  | 10.90 |      | 80.0  |         |
|           |                                                                   | Z | 0.76   | 60.00  | 7.16  |      | 80.0  |         |
| 10464-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 1.48   | 69.57  | 14.21 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 128.72 | 32.98 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 125.35 | 30.81 |      | 80.0  |         |
| 10465-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.76   | 60.00  | 7.02  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 2.92   | 72.75  | 14.31 |      | 80.0  |         |
|           |                                                                   | Z | 0.74   | 60.00  | 7.72  |      | 80.0  |         |
| 10466-AAA | LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.79   | 60.00  | 6.46  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 1.30   | 63.97  | 10.25 |      | 80.0  |         |
|           |                                                                   | Z | 0.76   | 60.00  | 7.11  |      | 80.0  |         |
| 10467-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 1.57   | 70.35  | 14.56 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 129.06 | 33.13 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 125.82 | 31.02 |      | 80.0  |         |
| 10468-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.76   | 60.00  | 7.04  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 3.25   | 73.90  | 14.73 |      | 80.0  |         |
|           |                                                                   | Z | 0.74   | 60.00  | 7.74  |      | 80.0  |         |
| 10469-AAC | LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 0.79   | 60.00  | 6.46  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 1.30   | 64.00  | 10.26 |      | 80.0  |         |
|           |                                                                   | Z | 0.76   | 60.00  | 7.11  |      | 80.0  |         |
| 10470-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 1.56   | 70.33  | 14.55 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 129.11 | 33.14 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 125.84 | 31.01 |      | 80.0  |         |
| 10471-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.76   | 60.00  | 7.03  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 3.21   | 73.75  | 14.66 |      | 80.0  |         |
|           |                                                                   | Z | 0.74   | 60.00  | 7.73  |      | 80.0  |         |
| 10472-AAC | LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.79   | 60.00  | 6.44  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 1.29   | 63.92  | 10.21 |      | 80.0  |         |
|           |                                                                   | Z | 0.76   | 60.00  | 7.09  |      | 80.0  |         |
| 10473-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 1.56   | 70.28  | 14.52 | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 100.00 | 129.06 | 33.12 |      | 80.0  |         |
|           |                                                                   | Z | 100.00 | 125.78 | 30.99 |      | 80.0  |         |
| 10474-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.76   | 60.00  | 7.02  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 3.17   | 73.64  | 14.62 |      | 80.0  |         |
|           |                                                                   | Z | 0.74   | 60.00  | 7.73  |      | 80.0  |         |
| 10475-AAC | LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 0.78   | 60.00  | 6.45  | 3.23 | 80.0  | ± 9.6 % |
|           |                                                                   | Y | 1.29   | 63.89  | 10.20 |      | 80.0  |         |
|           |                                                                   | Z | 0.76   | 60.00  | 7.09  |      | 80.0  |         |

|           |                                                                     |   |       |        |       |      |      |         |
|-----------|---------------------------------------------------------------------|---|-------|--------|-------|------|------|---------|
| 10477-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)    | X | 0.76  | 60.00  | 7.00  | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 2.91  | 72.72  | 14.27 |      | 80.0 |         |
|           |                                                                     | Z | 0.74  | 60.00  | 7.70  |      | 80.0 |         |
| 10478-AAC | LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)    | X | 0.79  | 60.00  | 6.43  | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 1.28  | 63.82  | 10.16 |      | 80.0 |         |
|           |                                                                     | Z | 0.76  | 60.00  | 7.08  |      | 80.0 |         |
| 10479-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 4.36  | 78.87  | 19.25 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 6.72  | 85.93  | 23.37 |      | 80.0 |         |
|           |                                                                     | Z | 31.53 | 108.71 | 28.80 |      | 80.0 |         |
| 10480-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 2.01  | 65.44  | 11.92 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 7.23  | 81.86  | 20.03 |      | 80.0 |         |
|           |                                                                     | Z | 6.32  | 79.43  | 17.87 |      | 80.0 |         |
| 10481-AAA | LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.64  | 62.93  | 10.36 | 3.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 5.72  | 78.02  | 18.32 |      | 80.0 |         |
|           |                                                                     | Z | 3.41  | 71.49  | 14.62 |      | 80.0 |         |
| 10482-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 1.29  | 62.41  | 10.80 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.64  | 76.21  | 18.93 |      | 80.0 |         |
|           |                                                                     | Z | 1.66  | 65.83  | 12.91 |      | 80.0 |         |
| 10483-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.52  | 61.14  | 9.55  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 4.09  | 73.43  | 17.03 |      | 80.0 |         |
|           |                                                                     | Z | 2.32  | 66.35  | 12.70 |      | 80.0 |         |
| 10484-AAA | LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.52  | 60.89  | 9.42  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.80  | 72.18  | 16.53 |      | 80.0 |         |
|           |                                                                     | Z | 2.19  | 65.41  | 12.27 |      | 80.0 |         |
| 10485-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 1.96  | 67.14  | 14.58 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.64  | 76.20  | 19.95 |      | 80.0 |         |
|           |                                                                     | Z | 2.47  | 70.93  | 16.63 |      | 80.0 |         |
| 10486-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.93  | 63.65  | 12.21 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.34  | 71.00  | 17.20 |      | 80.0 |         |
|           |                                                                     | Z | 2.25  | 65.99  | 13.71 |      | 80.0 |         |
| 10487-AAC | LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 1.95  | 63.41  | 12.07 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.31  | 70.45  | 16.94 |      | 80.0 |         |
|           |                                                                     | Z | 2.25  | 65.61  | 13.50 |      | 80.0 |         |
| 10488-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 2.57  | 68.84  | 16.72 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.64  | 73.87  | 19.67 |      | 80.0 |         |
|           |                                                                     | Z | 2.88  | 71.05  | 17.92 |      | 80.0 |         |
| 10489-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 2.71  | 66.42  | 15.54 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.41  | 69.51  | 17.78 |      | 80.0 |         |
|           |                                                                     | Z | 2.89  | 67.77  | 16.40 |      | 80.0 |         |
| 10490-AAC | LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)  | X | 2.80  | 66.35  | 15.53 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.50  | 69.28  | 17.68 |      | 80.0 |         |
|           |                                                                     | Z | 2.97  | 67.63  | 16.34 |      | 80.0 |         |
| 10491-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 2.93  | 68.13  | 16.75 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.79  | 71.78  | 18.88 |      | 80.0 |         |
|           |                                                                     | Z | 3.14  | 69.61  | 17.57 |      | 80.0 |         |
| 10492-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.14  | 66.26  | 16.05 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                     | Y | 3.72  | 68.46  | 17.58 |      | 80.0 |         |
|           |                                                                     | Z | 3.26  | 67.14  | 16.60 |      | 80.0 |         |

|           |                                                                      |   |      |       |       |      |      |         |
|-----------|----------------------------------------------------------------------|---|------|-------|-------|------|------|---------|
| 10493-AAC | LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.20 | 66.19 | 16.02 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.78 | 68.30 | 17.52 |      | 80.0 |         |
|           |                                                                      | Z | 3.32 | 67.03 | 16.55 |      | 80.0 |         |
| 10494-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 3.09 | 69.16 | 17.09 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.18 | 73.66 | 19.49 |      | 80.0 |         |
|           |                                                                      | Z | 3.38 | 70.96 | 18.01 |      | 80.0 |         |
| 10495-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.16 | 66.52 | 16.26 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.75 | 68.86 | 17.79 |      | 80.0 |         |
|           |                                                                      | Z | 3.28 | 67.44 | 16.81 |      | 80.0 |         |
| 10496-AAC | LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 3.25 | 66.39 | 16.25 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.82 | 68.54 | 17.67 |      | 80.0 |         |
|           |                                                                      | Z | 3.36 | 67.23 | 16.76 |      | 80.0 |         |
| 10497-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)   | X | 0.98 | 60.00 | 8.08  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 2.67 | 71.65 | 16.05 |      | 80.0 |         |
|           |                                                                      | Z | 0.96 | 60.00 | 8.56  |      | 80.0 |         |
| 10498-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.18 | 60.00 | 7.01  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.73 | 63.28 | 11.10 |      | 80.0 |         |
|           |                                                                      | Z | 1.15 | 60.00 | 7.42  |      | 80.0 |         |
| 10499-AAA | LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) | X | 1.20 | 60.00 | 6.87  | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 1.65 | 62.50 | 10.55 |      | 80.0 |         |
|           |                                                                      | Z | 1.17 | 60.00 | 7.27  |      | 80.0 |         |
| 10500-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.22 | 67.95 | 15.51 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.54 | 74.72 | 19.65 |      | 80.0 |         |
|           |                                                                      | Z | 2.63 | 70.95 | 17.16 |      | 80.0 |         |
| 10501-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.29 | 65.10 | 13.66 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.38 | 70.39 | 17.41 |      | 80.0 |         |
|           |                                                                      | Z | 2.58 | 67.13 | 14.94 |      | 80.0 |         |
| 10502-AAA | LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.32 | 64.94 | 13.52 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.43 | 70.21 | 17.27 |      | 80.0 |         |
|           |                                                                      | Z | 2.61 | 66.92 | 14.77 |      | 80.0 |         |
| 10503-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)     | X | 2.54 | 68.66 | 16.62 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.60 | 73.66 | 19.57 |      | 80.0 |         |
|           |                                                                      | Z | 2.84 | 70.82 | 17.80 |      | 80.0 |         |
| 10504-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.69 | 66.32 | 15.48 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.40 | 69.42 | 17.73 |      | 80.0 |         |
|           |                                                                      | Z | 2.87 | 67.65 | 16.32 |      | 80.0 |         |
| 10505-AAC | LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)   | X | 2.78 | 66.26 | 15.46 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.48 | 69.19 | 17.63 |      | 80.0 |         |
|           |                                                                      | Z | 2.96 | 67.52 | 16.27 |      | 80.0 |         |
| 10506-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)    | X | 3.07 | 69.03 | 17.01 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 4.15 | 73.51 | 19.42 |      | 80.0 |         |
|           |                                                                      | Z | 3.35 | 70.80 | 17.93 |      | 80.0 |         |
| 10507-AAC | LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)  | X | 3.15 | 66.46 | 16.22 | 2.23 | 80.0 | ± 9.6 % |
|           |                                                                      | Y | 3.73 | 68.80 | 17.76 |      | 80.0 |         |
|           |                                                                      | Z | 3.26 | 67.37 | 16.77 |      | 80.0 |         |

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

## 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        | 835   | 1750 | 1900  | 2450 | 5200-5800 |
|---------------------------|------------|-------|------|-------|------|-----------|
| Tissue                    | Body       | Body  | Body | Body  | Body | Body      |
| Ingredients (% by weight) |            |       |      |       |      |           |
| Bactericide               | See page 2 | 0.1   |      |       |      |           |
| DGBE                      |            |       | 31   | 29.44 | 26.7 |           |
| HEC                       |            | 1     |      |       |      |           |
| NaCl                      |            | 0.94  | 0.2  | 0.39  | 0.1  |           |
| Sucrose                   |            | 44.9  |      |       |      |           |
| Polysorbate (Tween) 80    |            |       |      |       |      | 20        |
| Water                     |            | 53.06 | 68.8 | 70.17 | 73.2 | 80        |

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMT837A                 |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>06/20/18 - 07/05/18 | DUT Type:<br>Portable Tablet                                                        |                       |                                                                                       | APPENDIX D:<br>Page 1 of 2      |

## 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 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.

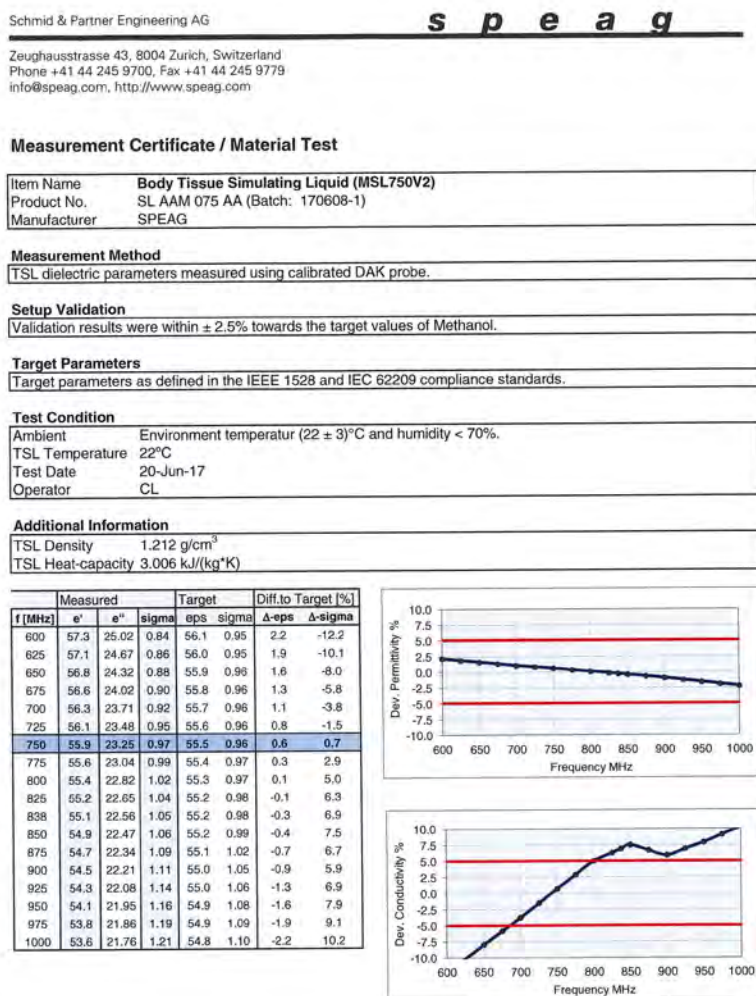


Figure D-2

### 750MHz Body Tissue Equivalent Matter

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMT837A                 |  | SAR EVALUATION REPORT |  | Approved by:<br>Quality Manager |
| Test Dates:<br>06/20/18 - 07/05/18 | DUT Type:<br>Portable Tablet                                                        |                       |                                                                                       | APPENDIX D:<br>Page 2 of 2      |

## 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**

| SAR SYSTEM # | FREQ. [MHz] | DATE       | PROBE SN | PROBE TYPE | PROBE CAL. POINT |      | COND. | PERM.  | CW VALIDATION |                 |                | MOD. VALIDATION |             |      |
|--------------|-------------|------------|----------|------------|------------------|------|-------|--------|---------------|-----------------|----------------|-----------------|-------------|------|
|              |             |            |          |            |                  |      | (σ)   | (εr)   | SENSITIVITY   | PROBE LINEARITY | PROBE ISOTROPY | MOD. TYPE       | DUTY FACTOR | PAR. |
| J            | 750         | 6/25/2018  | 3914     | EX3DV4     | 750              | Body | 0.987 | 53.645 | PASS          | PASS            | PASS           | N/A             | N/A         | N/A  |
| J            | 835         | 3/4/2018   | 3914     | EX3DV4     | 835              | Body | 0.998 | 52.865 | PASS          | PASS            | PASS           | GMSK            | PASS        | N/A  |
| G            | 1750        | 8/31/2017  | 3332     | ES3DV3     | 1750             | Body | 1.532 | 51.024 | PASS          | PASS            | PASS           | N/A             | N/A         | N/A  |
| I            | 1900        | 6/18/2018  | 7406     | EX3DV4     | 1900             | Body | 1.575 | 51.579 | PASS          | PASS            | PASS           | GMSK            | PASS        | N/A  |
| G            | 2300        | 10/10/2017 | 3332     | ES3DV3     | 2300             | Body | 1.828 | 51.620 | PASS          | PASS            | PASS           | N/A             | N/A         | N/A  |
| K            | 2450        | 4/3/2018   | 3319     | ES3DV3     | 2450             | Body | 2.043 | 51.130 | PASS          | PASS            | PASS           | OFDM/TDD        | PASS        | PASS |
| G            | 2450        | 10/10/2017 | 3332     | ES3DV3     | 2450             | Body | 2.040 | 51.023 | PASS          | PASS            | PASS           | OFDM/TDD        | PASS        | PASS |
| K            | 2600        | 4/3/2018   | 3319     | ES3DV3     | 2600             | Body | 2.225 | 50.665 | PASS          | PASS            | PASS           | TDD             | PASS        | N/A  |
| D            | 5250        | 6/11/2018  | 7357     | EX3DV4     | 5250             | Body | 5.529 | 48.096 | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |
| D            | 5600        | 6/11/2018  | 7357     | EX3DV4     | 5600             | Body | 6.007 | 47.521 | PASS          | PASS            | PASS           | OFDM            | N/A         | PASS |
| D            | 5750        | 6/11/2018  | 7357     | EX3DV4     | 5750             | Body | 6.214 | 47.275 | 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.

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
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## 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.

### 1.1 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.

### 1.2 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.

|                                           |                                                                                                                                                                                                        |                                        |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
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| <b>Test Dates:</b><br>06/20/18 – 07/05/18 | <b>DUT Type:</b><br>Portable Tablet                                                                                                                                                                    | <b>APPENDIX G:</b><br>Page 1 of 3      |

### 1.3 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) |
| Grip         | UMTS B5   | 24.23                 | 16.54                  |
| Grip         | UMTS B4   | 24.06                 | 13.5                   |
| Grip         | UMTS B2   | 23.86                 | 13.31                  |
| Grip         | LTE B12   | 23.27                 | 13.22                  |
| Grip         | LTE B14   | 23.2                  | 15.15                  |
| Grip         | LTE B5    | 23.44                 | 15.42                  |
| Grip         | LTE B4    | 23.12                 | 12.11                  |
| Grip         | LTE B66   | 23.11                 | 13.1                   |
| Grip         | LTE B2    | 22.64                 | 12.64                  |
| Grip         | LTE B30   | 22.78                 | 13.95                  |
| Grip         | LTE B7    | 23                    | 11.98                  |

**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 |                                        |
| Grip         | Body - Back Side | Low  | 22                         | 24          | 17                                     |
| Grip         | Body - Back Side | Mid  | 22                         | 24          | 17                                     |
| Grip         | Body - Back Side | High | 23                         | 25          | 17                                     |
| Grip         | Body - Top Edge  | Low  | 20                         | 22          | 17                                     |
| Grip         | Body - Top Edge  | Mid  | 21                         | 22          | 17                                     |
| Grip         | Body - Top Edge  | High | 20                         | 22          | 17                                     |

\*Note: Low band refers to: UMTS B5, LTE B5/12/14; Mid band refers to: UMTS B4/2, LTE B2/4/66; High band refers to: LTE B30/7

|                                           |                                                                                                                                                                                                        |                                        |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
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| <b>Test Dates:</b><br>06/20/18 – 07/05/18 | <b>DUT Type:</b><br>Portable Tablet                                                                                                                                                                    | <b>APPENDIX G:</b><br>Page 2 of 3      |

## 1.4 WIFI Verification Summary

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

| Mechanism(s) | Mode/Band                | Conducted Power (dBm) |                        |
|--------------|--------------------------|-----------------------|------------------------|
|              |                          | Un-triggered (Max)    | Mechanism #1 (Reduced) |
| Grip         | 802.11b                  | 12.73                 | 12.7                   |
| Grip         | 802.11g                  | 12.88                 | 12.8                   |
| Grip         | 802.11n (2.4GHz)         | 13.21                 | 12.52                  |
| Grip         | 802.11a                  | 12.5                  | 9.96                   |
| Grip         | 802.11n (5GHz, 20MHz BW) | 13.05                 | 9.9                    |
| Grip         | 802.11ac (20MHz BW)      | 11.07                 | 9.95                   |
| Grip         | 802.11n (5GHz, 40MHz BW) | 11.17                 | 9.93                   |
| Grip         | 802.11ac (40MHz BW)      | 12.24                 | 9.91                   |
| Grip         | 802.11ac (80MHz BW)      | 11.41                 | 9.97                   |

Note: Per the manufacturer, the above measurements are within the expected target power and tolerances of the power reduction mechanism.

**Table G-4**  
**Distance Measurement Verification for WIFI**

| Mechanism(s) | Test Condition   | Band          | Distance Measurements (mm) |             | Minimum Distance per Manufacturer (mm) |
|--------------|------------------|---------------|----------------------------|-------------|----------------------------------------|
|              |                  |               | Moving Toward              | Moving Away |                                        |
| Grip         | Body - Back Side | 2.4GHz (Ant1) | 6                          | 8           | 6                                      |
| Grip         | Body - Back Side | 2.4GHz (Ant2) | 6                          | 8           | 6                                      |
| Grip         | Body - Back Side | 5GHz (Ant1)   | 6                          | 8           | 6                                      |
| Grip         | Body - Back Side | 5GHz (Ant2)   | 6                          | 8           | 6                                      |

|                                           |                                                                                                                                                                                                        |                                        |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
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## 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

| Table 2 - Example Registration Data by Measurement Support |             |            |                                   |              |                                            | Table 3 - Example Registration Data by Measurement Support |             |            |            |            |      |              |                                            |
|------------------------------------------------------------|-------------|------------|-----------------------------------|--------------|--------------------------------------------|------------------------------------------------------------|-------------|------------|------------|------------|------|--------------|--------------------------------------------|
| Index                                                      |             | ICC        | Registration Charge Returned (\$) | Registration | Completely Covered by Measurement Support? | Index                                                      |             | ICC        | ICC        | ICC        | ICC  | Registration | Completely Covered by Measurement Support? |
|                                                            |             | ICC        | ICC                               | ICC          | ICC                                        |                                                            |             | ICC        | ICC        | ICC        | ICC  | Registration | Completely Covered by Measurement Support? |
| ICC-01                                                     | JA-20       | 5.10, 5.20 | 5.10, 5.20                        | ICC-01       | ICC-01                                     | ICC-01                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-01       | ICC-01                                     |
| ICC-02                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-02       | ICC-02                                     | ICC-02                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-02       | ICC-02                                     |
| ICC-03                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-03       | ICC-03                                     | ICC-03                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-03       | ICC-03                                     |
| ICC-04                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-04       | ICC-04                                     | ICC-04                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-04       | ICC-04                                     |
| ICC-05                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-05       | ICC-05                                     | ICC-05                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-05       | ICC-05                                     |
| ICC-06                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-06       | ICC-06                                     | ICC-06                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-06       | ICC-06                                     |
| ICC-07                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-07       | ICC-07                                     | ICC-07                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-07       | ICC-07                                     |
| ICC-08                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-08       | ICC-08                                     | ICC-08                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-08       | ICC-08                                     |
| ICC-09                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-09       | ICC-09                                     | ICC-09                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-09       | ICC-09                                     |
| ICC-10                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-10       | ICC-10                                     | ICC-10                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-10       | ICC-10                                     |
| ICC-11                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-11       | ICC-11                                     | ICC-11                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-11       | ICC-11                                     |
| ICC-12                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-12       | ICC-12                                     | ICC-12                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-12       | ICC-12                                     |
| ICC-13                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-13       | ICC-13                                     | ICC-13                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-13       | ICC-13                                     |
| ICC-14                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-14       | ICC-14                                     | ICC-14                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-14       | ICC-14                                     |
| ICC-15                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-15       | ICC-15                                     | ICC-15                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-15       | ICC-15                                     |
| ICC-16                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-16       | ICC-16                                     | ICC-16                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-16       | ICC-16                                     |
| ICC-17                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-17       | ICC-17                                     | ICC-17                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-17       | ICC-17                                     |
| ICC-18                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-18       | ICC-18                                     | ICC-18                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-18       | ICC-18                                     |
| ICC-19                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-19       | ICC-19                                     | ICC-19                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-19       | ICC-19                                     |
| ICC-20                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-20       | ICC-20                                     | ICC-20                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-20       | ICC-20                                     |
| ICC-21                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-21       | ICC-21                                     | ICC-21                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-21       | ICC-21                                     |
| ICC-22                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-22       | ICC-22                                     | ICC-22                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-22       | ICC-22                                     |
| ICC-23                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-23       | ICC-23                                     | ICC-23                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-23       | ICC-23                                     |
| ICC-24                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-24       | ICC-24                                     | ICC-24                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-24       | ICC-24                                     |
| ICC-25                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-25       | ICC-25                                     | ICC-25                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-25       | ICC-25                                     |
| ICC-26                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-26       | ICC-26                                     | ICC-26                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-26       | ICC-26                                     |
| ICC-27                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-27       | ICC-27                                     | ICC-27                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-27       | ICC-27                                     |
| ICC-28                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-28       | ICC-28                                     | ICC-28                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-28       | ICC-28                                     |
| ICC-29                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-29       | ICC-29                                     | ICC-29                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-29       | ICC-29                                     |
| ICC-30                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-30       | ICC-30                                     | ICC-30                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-30       | ICC-30                                     |
| ICC-31                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-31       | ICC-31                                     | ICC-31                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-31       | ICC-31                                     |
| ICC-32                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-32       | ICC-32                                     | ICC-32                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-32       | ICC-32                                     |
| ICC-33                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-33       | ICC-33                                     | ICC-33                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-33       | ICC-33                                     |
| ICC-34                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-34       | ICC-34                                     | ICC-34                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-34       | ICC-34                                     |
| ICC-35                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-35       | ICC-35                                     | ICC-35                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-35       | ICC-35                                     |
| ICC-36                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-36       | ICC-36                                     | ICC-36                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-36       | ICC-36                                     |
| ICC-37                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-37       | ICC-37                                     | ICC-37                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-37       | ICC-37                                     |
| ICC-38                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-38       | ICC-38                                     | ICC-38                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-38       | ICC-38                                     |
| ICC-39                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-39       | ICC-39                                     | ICC-39                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-39       | ICC-39                                     |
| ICC-40                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-40       | ICC-40                                     | ICC-40                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-40       | ICC-40                                     |
| ICC-41                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-41       | ICC-41                                     | ICC-41                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-41       | ICC-41                                     |
| ICC-42                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-42       | ICC-42                                     | ICC-42                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-42       | ICC-42                                     |
| ICC-43                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-43       | ICC-43                                     | ICC-43                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-43       | ICC-43                                     |
| ICC-44                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-44       | ICC-44                                     | ICC-44                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-44       | ICC-44                                     |
| ICC-45                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-45       | ICC-45                                     | ICC-45                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-45       | ICC-45                                     |
| ICC-46                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-46       | ICC-46                                     | ICC-46                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-46       | ICC-46                                     |
| ICC-47                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-47       | ICC-47                                     | ICC-47                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-47       | ICC-47                                     |
| ICC-48                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-48       | ICC-48                                     | ICC-48                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-48       | ICC-48                                     |
| ICC-49                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-49       | ICC-49                                     | ICC-49                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-49       | ICC-49                                     |
| ICC-50                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-50       | ICC-50                                     | ICC-50                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-50       | ICC-50                                     |
| ICC-51                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-51       | ICC-51                                     | ICC-51                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-51       | ICC-51                                     |
| ICC-52                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-52       | ICC-52                                     | ICC-52                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-52       | ICC-52                                     |
| ICC-53                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-53       | ICC-53                                     | ICC-53                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-53       | ICC-53                                     |
| ICC-54                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-54       | ICC-54                                     | ICC-54                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-54       | ICC-54                                     |
| ICC-55                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-55       | ICC-55                                     | ICC-55                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-55       | ICC-55                                     |
| ICC-56                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-56       | ICC-56                                     | ICC-56                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-56       | ICC-56                                     |
| ICC-57                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-57       | ICC-57                                     | ICC-57                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-57       | ICC-57                                     |
| ICC-58                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-58       | ICC-58                                     | ICC-58                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-58       | ICC-58                                     |
| ICC-59                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-59       | ICC-59                                     | ICC-59                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-59       | ICC-59                                     |
| ICC-60                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-60       | ICC-60                                     | ICC-60                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-60       | ICC-60                                     |
| ICC-61                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-61       | ICC-61                                     | ICC-61                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-61       | ICC-61                                     |
| ICC-62                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-62       | ICC-62                                     | ICC-62                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-62       | ICC-62                                     |
| ICC-63                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-63       | ICC-63                                     | ICC-63                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-63       | ICC-63                                     |
| ICC-64                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-64       | ICC-64                                     | ICC-64                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-64       | ICC-64                                     |
| ICC-65                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-65       | ICC-65                                     | ICC-65                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-65       | ICC-65                                     |
| ICC-66                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-66       | ICC-66                                     | ICC-66                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-66       | ICC-66                                     |
| ICC-67                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-67       | ICC-67                                     | ICC-67                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-67       | ICC-67                                     |
| ICC-68                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-68       | ICC-68                                     | ICC-68                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-68       | ICC-68                                     |
| ICC-69                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-69       | ICC-69                                     | ICC-69                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-69       | ICC-69                                     |
| ICC-70                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-70       | ICC-70                                     | ICC-70                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-70       | ICC-70                                     |
| ICC-71                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-71       | ICC-71                                     | ICC-71                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-71       | ICC-71                                     |
| ICC-72                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-72       | ICC-72                                     | ICC-72                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-72       | ICC-72                                     |
| ICC-73                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-73       | ICC-73                                     | ICC-73                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-73       | ICC-73                                     |
| ICC-74                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-74       | ICC-74                                     | ICC-74                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-74       | ICC-74                                     |
| ICC-75                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-75       | ICC-75                                     | ICC-75                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-75       | ICC-75                                     |
| ICC-76                                                     | JA-20-00-00 | 5.10       | 5.10                              | ICC-76       | ICC-76                                     | ICC-76                                                     | JA-20-00-00 | 5.10, 5.20 | 5.10, 5.20 | 5.10, 5.20 | 5.10 | ICC-76       | ICC-76                                     |

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

| Table 2: Example Channel Bandwidths (MHz) |                  |                                   |               |               |               |               |                                            | Table 3: Example Channel Bandwidths (MHz) |                 |                                   |               |               |           |              |                                            |                |               |       |               |               |               |    |
|-------------------------------------------|------------------|-----------------------------------|---------------|---------------|---------------|---------------|--------------------------------------------|-------------------------------------------|-----------------|-----------------------------------|---------------|---------------|-----------|--------------|--------------------------------------------|----------------|---------------|-------|---------------|---------------|---------------|----|
| 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           | CC4       |              |                                            |                |               |       |               |               |               |    |
| ACC #M01                                  | CA [2C]          | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | ACC #M01                                  | CA [2A] 2A-4A   | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10     | No           | ACC #M01                                   | CA [2A] 2A-66A | 5, 10, 15, 20 | 5, 10 | 5, 10         | 5, 10, 15, 20 | 5, 10, 15, 20 | No |
| ACC #M02                                  | CA [2A]          | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | ACC #M02                                  | CA [2A] 2A-5A   | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10     | No           | ACC #M02                                   | CA 2A-5B [66A] | 5, 10, 15, 20 | 5, 10 | 5, 10         | 5, 10, 15, 20 | 5, 10, 15, 20 | No |
| ACC #M03                                  | CA [2A] 2A-2A    | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | ACC #M03                                  | CA [2A] 2A-12A  | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10     | No           | ACC #M03                                   | CA [2A] 5A-66B | 5, 10, 15, 20 | 5, 10 | 5, 10, 15     | 5, 10, 15     | 5, 10, 15     | No |
| ACC #M04                                  | CA [2A] 4A [2]   | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | ACC #M04                                  | CA [2A] 2A-17A  | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10     | No           | ACC #M04                                   | CA 2A-5A [66B] | 5, 10, 15, 20 | 5, 10 | 5, 10, 15     | 5, 10, 15     | 5, 10, 15     | No |
| ACC #M05                                  | CA [2A] 4A [2]   | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | ACC #M05                                  | CA [2A] 2A-30A  | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10     | No           | ACC #M05                                   | CA [2A] 5A-66C | 5, 10, 15, 20 | 5, 10 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | No |
| ACC #M06                                  | CA [2A] 5A       | 5, 10, 15, 20                     | 5, 10         | 5, 10         | 5, 10         | 5, 10         | 5, 10                                      | ACC #M06                                  | CA [2C] 46A     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10     | No           | ACC #M06                                   | CA 2A-5A [66C] | 5, 10, 15, 20 | 5, 10 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | No |
| ACC #M07                                  | CA [2A] 12A [1]  | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | ACC #M07                                  | CA [2C] 46B     | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10     | No           |                                            |                |               |       |               |               |               |    |
| ACC #M08                                  | CA [2A] 17A      | 5, 10, 15, 20                     | 5, 10         | 5, 10         | 5, 10         | 5, 10         | 5, 10                                      | ACC #M08                                  | CA [2C] 166A    | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10     | No           |                                            |                |               |       |               |               |               |    |
| ACC #M09                                  | CA [2A] 17A      | 5, 10                             | 5, 10         | 5, 10         | 5, 10         | 5, 10         | 5, 10                                      | ACC #M09                                  | CA [2A] 2A-66A  | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10     | No           |                                            |                |               |       |               |               |               |    |
| ACC #M10                                  | CA [2A] 29A [2]  | 5, 10, 15, 20                     | 5, 10         | 5, 10         | 5, 10         | 5, 10         | 5, 10                                      | ACC #M10                                  | CA 2A-6A [66A]  | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10     | No           |                                            |                |               |       |               |               |               |    |
| ACC #M11                                  | CA [2A] 39A      | 5, 10, 15, 20                     | 5, 10         | 5, 10         | 5, 10         | 5, 10         | 5, 10                                      | ACC #M11                                  | CA [2A] 2A-71A  | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10     | No           |                                            |                |               |       |               |               |               |    |
| ACC #M12                                  | CA [2A] 66A [2]  | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | ACC #M12                                  | CA [2A] 4A-29A  | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10     | B79 SCC Only |                                            |                |               |       |               |               |               |    |
| ACC #M13                                  | CA 2A-[66A] [2]  | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | ACC #M13                                  | CA [2A] 4A-71A  | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10     | No           |                                            |                |               |       |               |               |               |    |
| ACC #M14                                  | CA [2A] 66A [2]  | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | ACC #M14                                  | CA [2A] 5B      | 5, 10, 15, 20                     | 5, 10         | 5, 10         | 5, 10     | ACC #M14     |                                            |                |               |       |               |               |               |    |
| ACC #M15                                  | CA [2A] 72A      | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | ACC #M15                                  | CA [2A] 5B-66A  | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10     | No           |                                            |                |               |       |               |               |               |    |
| ACC #M16                                  | CA 5A-[66A]      | 5, 10                             | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | ACC #M16                                  | CA 2A-5A [66A]  | 5, 10, 15, 20                     | 5, 10         | 5, 10, 15, 20 | 5, 10     | No           |                                            |                |               |       |               |               |               |    |
| ACC #M17                                  | CA 12A-[66A] [4] | 5, 10                             | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | ACC #M17                                  | CA 2A-12A [66A] | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10     | No           |                                            |                |               |       |               |               |               |    |
| ACC #M18                                  | CA 13A-[66A]     | 5, 10                             | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | ACC #M18                                  | CA [2A] 12A-66A | 5, 10, 15, 20                     | 5, 10         | 5, 10, 15, 20 | 5, 10     | No           |                                            |                |               |       |               |               |               |    |
| ACC #M19                                  | CA 30A-[66A]     | 5, 10                             | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | ACC #M19                                  | CA 2A-13A [66A] | 5, 10, 15, 20                     | 5, 10         | 5, 10, 15, 20 | 5, 10     | No           |                                            |                |               |       |               |               |               |    |
| ACC #M20                                  | CA [66B]         | 5, 10, 15                         | 5, 10, 15     | 5, 10, 15     | 5, 10, 15     | 5, 10, 15     | 5, 10, 15                                  | ACC #M20                                  | CA 2A-30A [66A] | 5, 10, 15, 20                     | 5, 10         | 5, 10, 15, 20 | 5, 10     | No           |                                            |                |               |       |               |               |               |    |
| ACC #M21                                  | CA [66C]         | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | ACC #M21                                  | CA [2A] 46B     | 5, 10, 15, 20                     | 5, 10, 15     | 5, 10, 15     | 5, 10, 15 | ACC #M21     |                                            |                |               |       |               |               |               |    |
| ACC #M22                                  | CA [66D]         | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | ACC #M22                                  | CA 2A-[66B]     | 5, 10, 15, 20                     | 5, 10, 15     | 5, 10, 15     | 5, 10, 15 | ACC #M22     |                                            |                |               |       |               |               |               |    |
| ACC #M23                                  | CA [66E] [66A]   | 5, 10, 15, 20                     | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20 | 5, 10, 15, 20                              | ACC #M23                                  | CA [66E] [66B]  | 5, 10, 15, 20                     | 5, 10, 15     | 5, 10, 15     | 5, 10, 15 | ACC #M23     |                                            |                |               |       |               |               |               |    |

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

|                                           |                                                                                                                                                                           |                                                                        |
|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| FCC ID: A3LSMT837A                        |   | <b>SAR EVALUATION REPORT</b><br><b>Reviewed by:</b><br>Quality Manager |
| <b>Test Dates:</b><br>06/20/18 – 07/05/18 | <b>DUT Type:</b><br>Portable Tablet                                                                                                                                       | APPENDIX H:<br>Page 1 of 10                                            |

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

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

Per FCC KDB Publication 941225 D05Av01r02, no SAR measurements are required for carrier aggregation configurations when the 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.

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.
- When a device supports LTE capabilities with overlapping transmission frequency ranges, the standalone powers from the band with a larger transmission frequency range can be used to select measurement configurations for the band with the fully covered transmission frequency range.

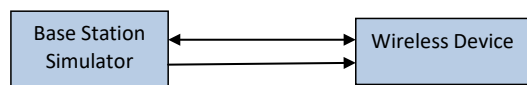


**Figure 1**  
**DL CA Power Measurement Setup**

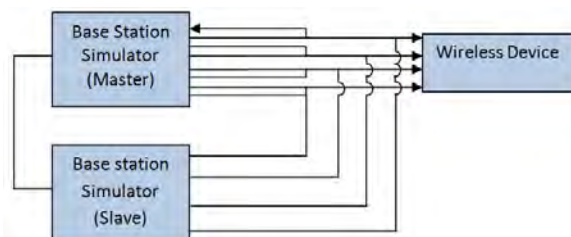


**Figure 2**  
**DL CA with DL 4x4 MIMO Power Measurement Setup**

|                                    |                                                                                                                                   |                       |                                                                                       |                                 |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMT837A                 |  <b>PCTEST</b><br>ENGINEERING LABORATORY, INC. | SAR EVALUATION REPORT |  | Reviewed by:<br>Quality Manager |
| Test Dates:<br>06/20/18 – 07/05/18 | DUT Type:<br>Portable Tablet                                                                                                      |                       |                                                                                       | APPENDIX H:<br>Page 2 of 10     |

## 1.3 Downlink Carrier Aggregation RF Conducted Powers

### 1.3.1 LTE Band 12 as PCC

Table 1  
Maximum Output Powers

| Combination        | PCC Band | PCC BW [MHz] | PCC          |                      |      |            | PCC (DL) Channel | PCC (DL) Freq. [MHz] | SCC Band | SCC 1             |              |                  | SCC 2                |          |              | SCC 3            |                      |          | Power        |                  |                      |                                       |                                   |
|--------------------|----------|--------------|--------------|----------------------|------|------------|------------------|----------------------|----------|-------------------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|
|                    |          |              | PCC (UL) Ch. | PCC (UL) Freq. [MHz] | Mod. | PCC UL# RB |                  |                      |          | PCC UL# RB Offset | 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-12A(1)       | LTE B12  | 3            | 23025        | 700.5                | QPSK | 1          | 7                | 5025                 | 730.5    | LTE B2            | 20           | 900              | 1960                 | -        | -            | -                | -                    | -        | -            | -                | 24.06                | 24.14                                 |                                   |
| CA_12A-66A(1)      | LTE B12  | 5            | 23035        | 701.5                | QPSK | 1          | 0                | 5035                 | 731.5    | LTE B66           | 20           | 66786            | 2145                 | -        | -            | -                | -                    | -        | -            | -                | 23.98                | 23.95                                 |                                   |
| CA_12A-66A(2)      | LTE B12  | 3            | 23025        | 700.5                | QPSK | 1          | 7                | 5025                 | 730.5    | LTE B66           | 20           | 66786            | 2145                 | -        | -            | -                | -                    | -        | -            | -                | 24.05                | 24.14                                 |                                   |
| CA_2A-2A-12A-30A   | LTE B12  | 5            | 23035        | 701.5                | QPSK | 1          | 0                | 5035                 | 731.5    | LTE B2            | 20           | 900              | 1960                 | LTE B2   | 20           | 700              | 1940                 | LTE B30  | 10           | 9820             | 2355                 | 23.94                                 | 23.95                             |
| CA_2A-2A-12A-66A   | LTE B12  | 5            | 23035        | 701.5                | QPSK | 1          | 0                | 5035                 | 731.5    | LTE B2            | 20           | 900              | 1960                 | LTE B2   | 20           | 700              | 1940                 | LTE B66  | 20           | 66786            | 2145                 | 23.97                                 | 23.95                             |
| CA_2A-12A-30A-66A  | LTE B12  | 5            | 23035        | 701.5                | QPSK | 1          | 0                | 5035                 | 731.5    | LTE B2            | 20           | 900              | 1960                 | LTE B30  | 10           | 9820             | 2355                 | LTE B66  | 20           | 66786            | 2145                 | 23.88                                 | 23.95                             |
| CA_2A-12A-66A-66A  | LTE B12  | 5            | 23035        | 701.5                | QPSK | 1          | 0                | 5035                 | 731.5    | LTE B2            | 20           | 900              | 1960                 | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 67236            | 2190                 | 23.97                                 | 23.95                             |
| CA_12A-30A-66A-66A | LTE B12  | 5            | 23035        | 701.5                | QPSK | 1          | 0                | 5035                 | 731.5    | LTE B30           | 10           | 9820             | 2355                 | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 67236            | 2190                 | 23.88                                 | 23.95                             |

Table 2  
Reduced Output Powers

| Combination        | PCC Band | PCC BW [MHz] | PCC (UL) Ch. | PCC                  |       |            |                  | SCC 1            |                      |          |              | SCC 2            |                      |          |              | SCC 3            |                      |          |              | Power            |                      |                                       |                                   |
|--------------------|----------|--------------|--------------|----------------------|-------|------------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|
|                    |          |              |              | 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-12A (1)      | LTE B12  | 3            | 23025        | 700.5                | 64QAM | 1          | 7                | 5025             | 730.5                | LTE B2   | 20           | 900              | 1960                 | -        | -            | -                | -                    | -        | -            | -                | -                    | 13.68                                 | 13.64                             |
| CA_12A-66A (1)     | LTE B12  | 10           | 23095        | 707.5                | 64QAM | 1          | 0                | 5095             | 737.5                | LTE B66  | 20           | 66786            | 2145                 | -        | -            | -                | -                    | -        | -            | -                | -                    | 13.72                                 | 13.62                             |
| CA_12A-66A (2)     | LTE B12  | 3            | 23025        | 700.5                | 64QAM | 1          | 7                | 5025             | 730.5                | LTE B66  | 20           | 66786            | 2145                 | -        | -            | -                | -                    | -        | -            | -                | -                    | 13.65                                 | 13.64                             |
| CA_2A-2A-12A-30A   | LTE B12  | 10           | 23095        | 707.5                | 64QAM | 1          | 0                | 5095             | 737.5                | LTE B2   | 20           | 900              | 1960                 | LTE B2   | 20           | 700              | 1940                 | LTE B30  | 10           | 9820             | 2355                 | 13.39                                 | 13.62                             |
| CA_2A-2A-12A-66A   | LTE B12  | 10           | 23095        | 707.5                | 64QAM | 1          | 0                | 5095             | 737.5                | LTE B2   | 20           | 900              | 1960                 | LTE B2   | 20           | 700              | 1940                 | LTE B66  | 20           | 66786            | 2145                 | 13.43                                 | 13.62                             |
| CA_2A-12A-30A-66A  | LTE B12  | 10           | 23095        | 707.5                | 64QAM | 1          | 0                | 5095             | 737.5                | LTE B2   | 20           | 900              | 1960                 | LTE B30  | 10           | 9820             | 2355                 | LTE B66  | 20           | 66786            | 2145                 | 13.41                                 | 13.62                             |
| CA_2A-12A-66A-66A  | LTE B12  | 10           | 23095        | 707.5                | 64QAM | 1          | 0                | 5095             | 737.5                | LTE B2   | 20           | 900              | 1960                 | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 67236            | 2190                 | 13.43                                 | 13.62                             |
| CA_12A-30A-66A-66A | LTE B12  | 10           | 23095        | 707.5                | 64QAM | 1          | 0                | 5095             | 737.5                | LTE B30  | 10           | 9820             | 2355                 | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 67236            | 2190                 | 13.37                                 | 13.62                             |

### 1.3.2 LTE Band 14 as PCC

Table 3  
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 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] | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |  |
| CA_2A-14A-30A  | LTE B14  | 10           | 23330        | 793                  | QPSK | 1         | 0                | 5330             | 763                  | LTE B2   | 20           | 900              | 1960                 | LTE B30  | 10           | 9820             | 2355                 | 23.79                                 | 23.91                             |  |
| CA_2A-14A-66A  | LTE B14  | 10           | 23330        | 793                  | QPSK | 1         | 0                | 5330             | 763                  | LTE B2   | 20           | 900              | 1960                 | LTE B66  | 20           | 66786            | 2145                 | 23.85                                 | 23.91                             |  |
| CA_14A-30A-66A | LTE B14  | 10           | 23330        | 793                  | QPSK | 1         | 0                | 5330             | 763                  | LTE B30  | 10           | 9820             | 2355                 | LTE B66  | 20           | 66786            | 2145                 | 23.86                                 | 23.91                             |  |
| CA_14A-66A-66A | LTE B14  | 10           | 23330        | 793                  | QPSK | 1         | 0                | 5330             | 763                  | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 67236            | 2190                 | 23.88                                 | 23.91                             |  |

Table 4  
Reduced Output Powers

| Combination    | PCC      |              |              |                      |       |            |                  |                  |                      | SCC 1    |              |                  |                      | SCC 2    |              |                  |                      | 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] | LTE Tx.Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_2A-14A-30A  | LTE B14  | 10           | 23330        | 793                  | 16QAM | 1          | 0                | 5330             | 763                  | LTE B2   | 20           | 900              | 1960                 | LTE B30  | 10           | 9820             | 2355                 | 15.01                                 | 15.32                             |
| CA_2A-14A-66A  | LTE B14  | 10           | 23330        | 793                  | 16QAM | 1          | 0                | 5330             | 763                  | LTE B2   | 20           | 900              | 1960                 | LTE B66  | 20           | 66786            | 2145                 | 15.02                                 | 15.32                             |
| CA_14A-30A-66A | LTE B14  | 10           | 23330        | 793                  | 16QAM | 1          | 0                | 5330             | 763                  | LTE B30  | 10           | 9820             | 2355                 | LTE B66  | 20           | 66786            | 2145                 | 15.03                                 | 15.32                             |
| CA_14A-66A-66A | LTE B14  | 10           | 23330        | 793                  | 16QAM | 1          | 0                | 5330             | 763                  | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 67236            | 2190                 | 15.00                                 | 15.32                             |

### 1.3.3 LTE Band 5 as PCC

Table 5  
Maximum Output Powers

| Combination       | PCC Band | PCC BW [MHz] | PCC (UL) Ch. | PCC   |            |                  |          | PCC (DL) Channel | PCC (DL) Freq. [MHz] | SCC 1        |                  |                      | SCC 2    |              |                  | SCC 3                |          |              | Power            |                      |                                       |                                   |       |
|-------------------|----------|--------------|--------------|-------|------------|------------------|----------|------------------|----------------------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|-------|
|                   |          |              |              | Mod.  | 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] | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |       |
| CA_2A-2A-5A-30A   | LTE B5   | 10           | 20525        | 836.5 | QPSK       | 1                | 0        | 2525             | 881.5                | LTE B2       | 20               | 900                  | 1960     | LTE B2       | 20               | 700                  | 1940     | LTE B30      | 10               | 9820                 | 2355                                  | 24.12                             | 24.15 |
| CA_2A-2A-5A-66A   | LTE B5   | 10           | 20525        | 836.5 | QPSK       | 1                | 0        | 2525             | 881.5                | LTE B2       | 20               | 900                  | 1960     | LTE B2       | 20               | 700                  | 1940     | LTE B66      | 20               | 66786                | 2145                                  | 24.10                             | 24.15 |
| CA_2A-5A-30A-66A  | LTE B5   | 10           | 20525        | 836.5 | QPSK       | 1                | 0        | 2525             | 881.5                | LTE B2       | 20               | 900                  | 1960     | LTE B30      | 10               | 9820                 | 2355     | LTE B66      | 20               | 66786                | 2145                                  | 24.10                             | 24.15 |
| CA_2A-5A-66A-66A  | LTE B5   | 10           | 20525        | 836.5 | QPSK       | 1                | 0        | 2525             | 881.5                | LTE B2       | 20               | 900                  | 1960     | LTE B66      | 20               | 66786                | 2145     | LTE B66      | 20               | 67236                | 2190                                  | 24.15                             | 24.15 |
| CA_2A-5B-30A      | LTE B5   | 10           | 20525        | 836.5 | QPSK       | 1                | 0        | 2525             | 881.5                | LTE B5       | 5                | 2453                 | 874.3    | LTE B2       | 20               | 900                  | 1960     | LTE B30      | 10               | 9820                 | 2355                                  | 24.18                             | 24.15 |
| CA_2A-5B-66A      | LTE B5   | 10           | 20525        | 836.5 | QPSK       | 1                | 0        | 2525             | 881.5                | LTE B5       | 5                | 2453                 | 874.3    | LTE B2       | 20               | 900                  | 1960     | LTE B66      | 20               | 66786                | 2145                                  | 24.18                             | 24.15 |
| CA_5A-30A-66A-66A | LTE B5   | 10           | 20525        | 836.5 | QPSK       | 1                | 0        | 2525             | 881.5                | LTE B30      | 10               | 9820                 | 2355     | LTE B66      | 20               | 66786                | 2145     | LTE B66      | 20               | 67236                | 2190                                  | 24.15                             | 24.15 |
| CA_5B-30A-66A     | LTE B5   | 10           | 20525        | 836.5 | QPSK       | 1                | 0        | 2525             | 881.5                | LTE B5       | 5                | 2453                 | 874.3    | LTE B30      | 10               | 9820                 | 2355     | LTE B66      | 20               | 7720                 | 2145                                  | 24.16                             | 24.15 |
| CA_5B-66A-66A     | LTE B5   | 10           | 20525        | 836.5 | QPSK       | 1                | 0        | 2525             | 881.5                | LTE B5       | 5                | 2453                 | 874.3    | LTE B66      | 20               | 66786                | 2145     | LTE B66      | 20               | 67236                | 2190                                  | 24.11                             | 24.15 |

|                                    |                                                                                     |                             |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMT837A                 |  | SAR EVALUATION REPORT       |  | Reviewed by:<br>Quality Manager |
| Test Dates:<br>06/20/18 – 07/05/18 | DUT Type:<br>Portable Tablet                                                        | APPENDIX H:<br>Page 3 of 10 |                                                                                       |                                 |

**Table 6**  
**Reduced 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 2A-2A-5A-30A   | LTE B5   | 10           | 20525        | 836.5                | 16QAM | 1         | 0                | 2525             | 881.5                | LTE B2   | 20           | 900              | 1960                 | LTE B2   | 20           | 700              | 1960                 | LTE B30  | 10           | 9820             | 2355                 | 15.58                                 | 15.67                             |  |
| CA 2A-2A-5A-66A   | LTE B5   | 10           | 20525        | 836.5                | 16QAM | 1         | 0                | 2525             | 881.5                | LTE B2   | 20           | 900              | 1960                 | LTE B2   | 20           | 700              | 1960                 | LTE B66  | 20           | 66786            | 2145                 | 15.60                                 | 15.67                             |  |
| CA 2A-5A-30A-66A  | LTE B5   | 10           | 20525        | 836.5                | 16QAM | 1         | 0                | 2525             | 881.5                | LTE B2   | 20           | 900              | 1960                 | LTE B30  | 10           | 9820             | 2355                 | LTE B66  | 20           | 66786            | 2145                 | 15.56                                 | 15.67                             |  |
| CA 2A-5A-66A-66A  | LTE B5   | 10           | 20525        | 836.5                | 16QAM | 1         | 0                | 2525             | 881.5                | LTE B2   | 20           | 900              | 1960                 | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 67236            | 2190                 | 15.59                                 | 15.67                             |  |
| CA 2A-5B-30A      | LTE B5   | 10           | 20525        | 836.5                | 16QAM | 1         | 0                | 2525             | 881.5                | LTE B5   | 5            | 2453             | 874.3                | LTE B2   | 20           | 900              | 1960                 | LTE B30  | 10           | 9820             | 2355                 | 15.63                                 | 15.67                             |  |
| CA 2A-5B-66A      | LTE B5   | 10           | 20525        | 836.5                | 16QAM | 1         | 0                | 2525             | 881.5                | LTE B5   | 5            | 2453             | 874.3                | LTE B2   | 20           | 900              | 1960                 | LTE B66  | 20           | 66786            | 2145                 | 15.58                                 | 15.67                             |  |
| CA 5A-30A-66A-66A | LTE B5   | 10           | 20525        | 836.5                | 16QAM | 1         | 0                | 2525             | 881.5                | LTE B30  | 10           | 9820             | 2355                 | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 67236            | 2190                 | 15.55                                 | 15.67                             |  |
| CA 5B-30A-66A     | LTE B5   | 10           | 20525        | 836.5                | 16QAM | 1         | 0                | 2525             | 881.5                | LTE B5   | 5            | 2453             | 874.3                | LTE B30  | 10           | 9820             | 2355                 | LTE B66  | 20           | 7720             | 2145                 | 15.60                                 | 15.67                             |  |
| CA 5B-66A-66A     | LTE B5   | 10           | 20525        | 836.5                | 16QAM | 1         | 0                | 2525             | 881.5                | LTE B5   | 5            | 2453             | 874.3                | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 67236            | 2190                 | 15.61                                 | 15.67                             |  |

### 1.3.4 LTE Band 66 as PCC

**Table 7**  
**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] | 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-66A          | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086            | 2175                 | LTE B2   | 20           | 900              | 1960                 | -        | -            | -                | -                    | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 24.53                             | 24.46 |
| CA 2A-66A (1)      | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086            | 2175                 | LTE B12  | 10           | 5095             | 737.5                | -        | -            | -                | -                    | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 24.47                             | 24.46 |
| CA 12A-66A         | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086            | 2175                 | LTE B12  | 10           | 5095             | 737.5                | -        | -            | -                | -                    | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 24.47                             | 24.46 |
| CA 2A-14A-66A      | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086            | 2175                 | LTE B2   | 20           | 900              | 1960                 | LTE B14  | 10           | 5330             | 763                  | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 24.50                             | 24.46 |
| CA 14A-30A-66A     | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086            | 2175                 | LTE B14  | 10           | 5330             | 763                  | LTE B30  | 10           | 9820             | 2355                 | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 24.43                             | 24.46 |
| CA 14A-66A-66A     | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086            | 2175                 | LTE B66  | 20           | 66536            | 2120                 | LTE B14  | 10           | 5330             | 763                  | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 24.57                             | 24.46 |
| CA 2A-2A-5A-66A    | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086            | 2175                 | LTE B2   | 20           | 900              | 1960                 | LTE B2   | 20           | 700              | 1960                 | LTE B5   | 10           | 2525             | 881.5                | -        | -            | -                | -                    | -                                     | 24.47                             | 24.46 |
| CA 2A-2A-12A-66A   | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086            | 2175                 | LTE B2   | 20           | 900              | 1960                 | LTE B2   | 20           | 700              | 1960                 | LTE B12  | 10           | 5095             | 737.5                | -        | -            | -                | -                    | -                                     | 24.53                             | 24.46 |
| CA 2A-5A-30A-66A   | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086            | 2175                 | LTE B2   | 20           | 900              | 1960                 | LTE B5   | 10           | 2525             | 881.5                | LTE B30  | 10           | 9820             | 2355                 | -        | -            | -                | -                    | -                                     | 24.52                             | 24.46 |
| CA 2A-5A-66A-66A   | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086            | 2175                 | LTE B66  | 20           | 66536            | 2120                 | LTE B2   | 20           | 900              | 1960                 | LTE B5   | 10           | 2525             | 881.5                | -        | -            | -                | -                    | -                                     | 24.54                             | 24.46 |
| CA 2A-5B-66A       | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086            | 2175                 | LTE B2   | 20           | 900              | 1960                 | LTE B5   | 10           | 2525             | 881.5                | LTE B5   | 5            | 2453             | 874.3                | -        | -            | -                | -                    | -                                     | 24.51                             | 24.46 |
| CA 2A-12A-30A-66A  | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086            | 2175                 | LTE B2   | 20           | 900              | 1960                 | LTE B12  | 10           | 5095             | 737.5                | LTE B30  | 10           | 9820             | 2355                 | -        | -            | -                | -                    | -                                     | 24.53                             | 24.46 |
| CA 2A-12A-66A-66A  | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086            | 2175                 | LTE B66  | 20           | 66536            | 2120                 | LTE B2   | 20           | 900              | 1960                 | LTE B12  | 10           | 5095             | 737.5                | -        | -            | -                | -                    | -                                     | 24.48                             | 24.46 |
| CA 2A-2A-30A-66A   | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086            | 2175                 | LTE B2   | 20           | 900              | 1960                 | LTE B29  | 10           | 9715             | 722.5                | LTE B30  | 10           | 9820             | 2355                 | -        | -            | -                | -                    | -                                     | 24.46                             | 24.46 |
| CA 5A-30A-66A-66A  | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086            | 2175                 | LTE B66  | 20           | 66536            | 2120                 | LTE B5   | 10           | 2525             | 881.5                | LTE B30  | 10           | 9820             | 2355                 | -        | -            | -                | -                    | -                                     | 24.49                             | 24.46 |
| CA 5A-66A-66A      | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086            | 2175                 | LTE B66  | 20           | 66536            | 2120                 | LTE B5   | 10           | 2525             | 881.5                | LTE B30  | 10           | 9820             | 2355                 | -        | -            | -                | -                    | -                                     | 24.48                             | 24.46 |
| CA 5B-66A-66A      | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086            | 2175                 | LTE B66  | 20           | 66536            | 2120                 | LTE B5   | 10           | 2525             | 881.5                | LTE B5   | 5            | 2453             | 874.3                | -        | -            | -                | -                    | -                                     | 24.50                             | 24.46 |
| CA 12A-30A-66A-66A | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086            | 2175                 | LTE B66  | 20           | 66536            | 2120                 | LTE B12  | 10           | 5095             | 737.5                | LTE B30  | 10           | 9820             | 2355                 | -        | -            | -                | -                    | -                                     | 24.46                             | 24.46 |

**Table 8**  
**Reduced Output Powers**

|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

**Table 10**  
**Reduced Output Powers**

| Combination       | PCC Band | PCC BW [MHz] | PCC (UL) Ch. | PCC                  |       |           |                  | SCC 1            |                      |          |              | SCC 2            |                      |          |              | SCC 3            |                      |          |              | Power            |                      |                                       |                                   |       |
|-------------------|----------|--------------|--------------|----------------------|-------|-----------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|-----------------------------------|-------|
|                   |          |              |              | 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-12A(1)      | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100             | 1980                 | LTE B12  | 10           | 5095             | 737.5                | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 13.45                             | 13.50 |
| CA 2A-29A         | LTE B2   | 10           | 19150        | 1905                 | 64QAM | 1         | 0                | 1150             | 1985                 | LTE B29  | 10           | 9715             | 722.5                | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 13.50                             | 13.50 |
| CA 2A-66A         | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100             | 1980                 | LTE B66  | 20           | 66786            | 2145                 | -        | -            | -                | -                    | -        | -            | -                | -                    | -                                     | 13.50                             | 13.50 |
| CA 2A-14A-30A     | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100             | 1980                 | LTE B14  | 10           | 5330             | 763                  | LTE B30  | 10           | 9820             | 2355                 | -        | -            | -                | -                    | -                                     | 13.44                             | 13.50 |
| CA 2A-14A-66A     | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100             | 1980                 | LTE B14  | 10           | 5330             | 763                  | LTE B66  | 20           | 66786            | 2145                 | -        | -            | -                | -                    | -                                     | 13.40                             | 13.50 |
| CA 2A-2A-5A-30A   | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100             | 1980                 | LTE B2   | 20           | 700              | 1940                 | LTE B5   | 10           | 2525             | 881.5                | LTE B30  | 10           | 9820             | 2355                 | 13.27                                 | 13.50                             |       |
| CA 2A-2A-5A-66A   | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100             | 1980                 | LTE B2   | 20           | 700              | 1940                 | LTE B5   | 10           | 2525             | 881.5                | LTE B66  | 20           | 66786            | 2145                 | 13.31                                 | 13.50                             |       |
| CA 2A-2A-12A-30A  | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100             | 1980                 | LTE B2   | 20           | 700              | 1940                 | LTE B12  | 10           | 5095             | 737.5                | LTE B30  | 10           | 9820             | 2355                 | 13.30                                 | 13.50                             |       |
| CA 2A-2A-12A-66A  | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100             | 1980                 | LTE B2   | 20           | 700              | 1940                 | LTE B12  | 10           | 5095             | 737.5                | LTE B66  | 20           | 66786            | 2145                 | 13.26                                 | 13.50                             |       |
| CA 2A-2A-29A-30A  | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100             | 1980                 | LTE B2   | 20           | 700              | 1940                 | LTE B29  | 10           | 9715             | 722.5                | LTE B30  | 10           | 9820             | 2355                 | 13.27                                 | 13.50                             |       |
| CA 2A-5A-30A-66A  | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100             | 1980                 | LTE B5   | 10           | 2525             | 881.5                | LTE B30  | 10           | 9820             | 2355                 | LTE B66  | 20           | 66786            | 2145                 | 13.28                                 | 13.50                             |       |
| CA 2A-5A-66A-66A  | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100             | 1980                 | LTE B5   | 10           | 2525             | 881.5                | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 67236            | 2190                 | 13.22                                 | 13.50                             |       |
| CA 2A-5B-30A      | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100             | 1980                 | LTE B5   | 10           | 2525             | 881.5                | LTE B5   | 5            | 2453             | 874.3                | LTE B30  | 10           | 9820             | 2355                 | 13.26                                 | 13.50                             |       |
| CA 2A-5B-66A      | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100             | 1980                 | LTE B5   | 10           | 2525             | 881.5                | LTE B5   | 5            | 2453             | 874.3                | LTE B66  | 20           | 66786            | 2145                 | 13.24                                 | 13.50                             |       |
| CA 2A-12A-30A-66A | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100             | 1980                 | LTE B12  | 10           | 5095             | 737.5                | LTE B30  | 10           | 9820             | 2355                 | LTE B66  | 20           | 66786            | 2145                 | 13.23                                 | 13.50                             |       |
| CA 2A-12A-66A-66A | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100             | 1980                 | LTE B12  | 10           | 5095             | 737.5                | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 67236            | 2190                 | 13.22                                 | 13.50                             |       |
| CA 2A-29A-30A-66A | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100             | 1980                 | LTE B29  | 10           | 9715             | 722.5                | LTE B30  | 10           | 9820             | 2355                 | LTE B66  | 20           | 66786            | 2145                 | 13.26                                 | 13.50                             |       |

### 1.3.6 LTE Band 30 as PCC

**Table 11**  
**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 2A-14A-30A      | LTE B30  | 10           | 27710        | 2310                 | QPSK | 1         | 0                | 9820             | 2355                 | LTE B2   | 20           | 900              | 1960                 | LTE B14  | 10           | 5330             | 763                  | -        | -            | -                | -                    | 22.94                                 | 24.09                             |  |
| CA 14A-30A-66A     | LTE B30  | 10           | 27710        | 2310                 | QPSK | 1         | 0                | 9820             | 2355                 | LTE B14  | 10           | 5330             | 763                  | LTE B66  | 20           | 66786            | 2145                 | -        | -            | -                | -                    | 22.95                                 | 24.09                             |  |
| CA 2A-2A-5A-30A    | LTE B30  | 10           | 27710        | 2310                 | QPSK | 1         | 0                | 9820             | 2355                 | LTE B2   | 20           | 900              | 1960                 | LTE B2   | 20           | 700              | 1940                 | LTE B5   | 10           | 2525             | 881.5                | 23.02                                 | 24.09                             |  |
| CA 2A-2A-12A-30A   | LTE B30  | 10           | 27710        | 2310                 | QPSK | 1         | 0                | 9820             | 2355                 | LTE B2   | 20           | 900              | 1960                 | LTE B2   | 20           | 700              | 1940                 | LTE B12  | 10           | 5095             | 737.5                | 23.05                                 | 24.09                             |  |
| CA 2A-2A-29A-30A   | LTE B30  | 10           | 27710        | 2310                 | QPSK | 1         | 0                | 9820             | 2355                 | LTE B2   | 20           | 900              | 1960                 | LTE B2   | 20           | 700              | 1940                 | LTE B29  | 10           | 9715             | 722.5                | 23.04                                 | 24.09                             |  |
| CA 2A-5A-30A-66A   | LTE B30  | 10           | 27710        | 2310                 | QPSK | 1         | 0                | 9820             | 2355                 | LTE B2   | 20           | 900              | 1960                 | LTE B5   | 10           | 2525             | 881.5                | LTE B66  | 20           | 66786            | 2145                 | 23.04                                 | 24.09                             |  |
| CA 2A-5B-30A       | LTE B30  | 10           | 27710        | 2310                 | QPSK | 1         | 0                | 9820             | 2355                 | LTE B2   | 20           | 900              | 1960                 | LTE B5   | 10           | 2525             | 881.5                | LTE B5   | 5            | 2453             | 874.3                | 23.03                                 | 24.09                             |  |
| CA 2A-12A-30A-66A  | LTE B30  | 10           | 27710        | 2310                 | QPSK | 1         | 0                | 9820             | 2355                 | LTE B2   | 20           | 900              | 1960                 | LTE B12  | 10           | 5095             | 737.5                | LTE B66  | 20           | 66786            | 2145                 | 23.06                                 | 24.09                             |  |
| CA 2A-2A-30A-66A   | LTE B30  | 10           | 27710        | 2310                 | QPSK | 1         | 0                | 9820             | 2355                 | LTE B2   | 20           | 900              | 1960                 | LTE B29  | 10           | 9715             | 722.5                | LTE B66  | 20           | 66786            | 2145                 | 23.02                                 | 24.09                             |  |
| CA 5A-30A-66A      | LTE B30  | 10           | 27710        | 2310                 | QPSK | 1         | 0                | 9820             | 2355                 | LTE B5   | 10           | 2525             | 881.5                | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 67236            | 2190                 | 23.01                                 | 24.09                             |  |
| CA 5B-30A-66A      | LTE B30  | 10           | 27710        | 2310                 | QPSK | 1         | 0                | 9820             | 2355                 | LTE B5   | 10           | 2525             | 881.5                | LTE B5   | 5            | 2453             | 874.3                | LTE B66  | 20           | 66786            | 2145                 | 23.03                                 | 24.09                             |  |
| CA 12A-30A-66A-66A | LTE B30  | 10           | 27710        | 2310                 | QPSK | 1         | 0                | 9820             | 2355                 | LTE B12  | 10           | 5095             | 737.5                | LTE B66  | 20           | 66786            | 2145                 | LTE B66  | 20           | 67236            | 2190                 | 23.06                                 | 24.09                             |  |

**Table 12**  
**Reduced Output Powers**

| Combination        | PCC Band | PCC BW [MHz] | PCC (UL) Ch. | PCC                  |       |           |                      | PCC (UL) RB | PCC UL RB Offset | PCC (DL) Channel | PCC (DL) Freq. [MHz] | SCC Band | SCC 1        |                  |                      | SCC 2    |              |                  | SCC 3                |          |              | Power            |                      |                                       |
|--------------------|----------|--------------|--------------|----------------------|-------|-----------|----------------------|-------------|------------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|----------|--------------|------------------|----------------------|---------------------------------------|
|                    |          |              |              | PCC (UL) Freq. [MHz] | Mod.  | PCC UL RB | PCC (DL) Freq. [MHz] |             |                  |                  |                      |          | 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 2A-14A-30A      | LTE B30  | 10           | 27710        | 2310                 | 16QAM | 1         | 49                   | 9820        | 2355             | LTE B2           | 20                   | 900      | 1960         | LTE B14          | 10                   | 5330     | 763          | -                | -                    | -        | -            | -                | 13.66                | 14.49                                 |
| CA 14A-30A-66A     | LTE B30  | 10           | 27710        | 2310                 | 16QAM | 1         | 49                   | 9820        | 2355             | LTE B14          | 10                   | 5330     | 763          | LTE B66          | 20                   | 66786    | 2145         | -                | -                    | -        | -            | -                | 13.72                | 14.49                                 |
| CA 2A-2A-5A-30A    | LTE B30  | 10           | 27710        | 2310                 | 16QAM | 1         | 49                   | 9820        | 2355             | LTE B2           | 20                   | 900      | 1960         | LTE B2           | 20                   | 700      | 1940         | LTE B5           | 10                   | 2525     | 881.5        | 13.72            | 14.49                |                                       |
| CA 2A-2A-12A-30A   | LTE B30  | 10           | 27710        | 2310                 | 16QAM | 1         | 49                   | 9820        | 2355             | LTE B2           | 20                   | 900      | 1960         | LTE B2           | 20                   | 700      | 1940         | LTE B12          | 10                   | 5095     | 737.5        | 13.71            | 14.49                |                                       |
| CA 2A-2A-29A-30A   | LTE B30  | 10           | 27710        | 2310                 | 16QAM | 1         | 49                   | 9820        | 2355             | LTE B2           | 20                   | 900      | 1960         | LTE B2           | 20                   | 700      | 1940         | LTE B29          | 10                   | 9715     | 722.5        | 13.67            | 14.49                |                                       |
| CA 2A-5A-30A-66A   | LTE B30  | 10           | 27710        | 2310                 | 16QAM | 1         | 49                   | 9820        | 2355             | LTE B2           | 20                   | 900      | 1960         | LTE B5           | 10                   | 2525     | 881.5        | LTE B66          | 20                   | 66786    | 2145         | 13.72            | 14.49                |                                       |
| CA 2A-5B-30A       | LTE B30  | 10           | 27710        | 2310                 | 16QAM | 1         | 49                   | 9820        | 2355             | LTE B2           | 20                   | 900      | 1960         | LTE B5           | 10                   | 2525     | 881.5        | LTE B5           | 5                    | 2453     | 874.3        | 13.68            | 14.49                |                                       |
| CA 2A-12A-30A-66A  | LTE B30  | 10           | 27710        | 2310                 | 16QAM | 1         | 49                   | 9820        | 2355             | LTE B2           | 20                   | 900      | 1960         | LTE B12          | 10                   | 5095     | 737.5        | LTE B66          | 20                   | 66786    | 2145         | 13.74            | 14.49                |                                       |
| CA 2A-2A-30A-66A   | LTE B30  | 10           | 27710        | 2310                 | 16QAM | 1         | 49                   | 9820        | 2355             | LTE B2           | 20                   | 900      | 1960         | LTE B29          | 10                   | 9715     | 722.5        | LTE B66          | 20                   | 66786    | 2145         | 13.69            | 14.49                |                                       |
| CA 5A-30A-66A-66A  | LTE B30  | 10           | 27710        | 2310                 | 16QAM | 1         | 49                   | 9820        | 2355             | LTE B5           | 10                   | 2525     | 881.5        | LTE B66          | 20                   | 66786    | 2145         | LTE B66          | 20                   | 67236    | 2190         | 13.75            | 14.49                |                                       |
| CA 5B-30A-66A      | LTE B30  | 10           | 27710        | 2310                 | 16QAM | 1         | 49                   | 9820        | 2355             | LTE B5           | 10                   | 2525     | 881.5        | LTE B5           | 5                    | 2453     | 874.3        | LTE B66          | 20                   | 66786    | 2145         | 13.71            | 14.49                |                                       |
| CA 12A-30A-66A-66A | LTE B30  | 10           | 27710        | 2310                 | 16QAM | 1         | 49                   | 9820        | 2355             | LTE B12          | 10                   | 5095     | 737.5        | LTE B66          | 20                   | 66786    | 2145         | LTE B66          | 20                   | 67236    | 2190         | 13.74            | 14.49                |                                       |

## 1.4 4x4 Downlink MIMO RF Conducted 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.

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMT837A                 |  | SAR EVALUATION REPORT |  | Reviewed by:<br>Quality Manager |
| Test Dates:<br>06/20/18 – 07/05/18 | DUT Type:<br>Portable Tablet                                                        |                       |                                                                                       | APPENDIX H:<br>Page 5 of 10     |

### 1.4.1 LTE 4x4 MIMO DL Standalone Powers

Table 13  
Maximum Output Powers

| LTE Band | Bandwidth [MHz] | Channel | Frequency [MHz] | Modulation | RB Size | RB Offset | 4x4 DL MIMO Tx. Power [dBm] | Single Antenna Tx. Power [dBm] | Target Power [dBm] |
|----------|-----------------|---------|-----------------|------------|---------|-----------|-----------------------------|--------------------------------|--------------------|
| 66       | 10              | 132622  | 1775            | QPSK       | 1       | 0         | 24.51                       | 24.46                          | 24.0               |
| 2        | 15              | 19125   | 1902.5          | QPSK       | 1       | 0         | 24.26                       | 24.27                          | 24.0               |

Table 14  
Reduced Output Powers

| LTE Band | Bandwidth [MHz] | Channel | Frequency [MHz] | Modulation | RB Size | RB Offset | 4x4 DL MIMO Tx. Power [dBm] | Single Antenna Tx. Power [dBm] | Target Power [dBm] |
|----------|-----------------|---------|-----------------|------------|---------|-----------|-----------------------------|--------------------------------|--------------------|
| 66       | 20              | 132322  | 1745            | 64QAM      | 1       | 0         | 13.65                       | 13.72                          | 13.0               |
| 2        | 20              | 19100   | 1900            | 64QAM      | 1       | 0         | 13.49                       | 13.50                          | 12.5               |

|                                    |                                                                                                                                   |                             |                                                                                       |                                 |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMT837A                 |  <b>PCTEST</b><br>ENGINEERING LABORATORY, INC. | SAR EVALUATION REPORT       |  | Reviewed by:<br>Quality Manager |
| Test Dates:<br>06/20/18 – 07/05/18 | DUT Type:<br>Portable Tablet                                                                                                      | APPENDIX H:<br>Page 6 of 10 |                                                                                       |                                 |

## 1.4.2 LTE Band 12 as PCC

**Table 15**  
**Maximum Output Powers**

| Combination      | PCC      |              |              |                      |      |            |                  |              |                      |                 | SCC 1    |              |              |                      |                 | SCC 2    |              |              |                      |                 | Power                                 |                                   |
|------------------|----------|--------------|--------------|----------------------|------|------------|------------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|---------------------------------------|-----------------------------------|
|                  | 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 Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA [2A]-12A (1)  | LTE B12  | 3            | 23025        | 700.5                | QPSK | 1          | 7                | 5025         | 730.5                | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | -        | -            | -            | -                    | -               | 24.08                                 | 24.14                             |
| CA 12A-[66A] (1) | LTE B12  | 5            | 23035        | 701.5                | QPSK | 1          | 0                | 5035         | 731.5                | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 4x4 MIMO        | -        | -            | -            | -                    | -               | 23.91                                 | 23.95                             |
| CA 12A-[66A] (2) | LTE B12  | 3            | 23025        | 700.5                | QPSK | 1          | 7                | 5025         | 730.5                | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 4x4 MIMO        | -        | -            | -            | -                    | -               | 24.11                                 | 24.14                             |
| CA [2A]-2A-12A   | LTE B12  | 5            | 23035        | 701.5                | QPSK | 1          | 0                | 5035         | 731.5                | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | LTE B2   | 20           | 700          | 1940                 | 2x2 MIMO        | 23.92                                 | 23.95                             |
| CA [2A]-12A-66A  | LTE B12  | 5            | 23035        | 701.5                | QPSK | 1          | 0                | 5035         | 731.5                | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 2x2 MIMO        | 23.94                                 | 23.95                             |
| CA 2A-12A-[66A]  | LTE B12  | 5            | 23035        | 701.5                | QPSK | 1          | 0                | 5035         | 731.5                | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 4x4 MIMO        | 23.95                                 | 23.95                             |

**Table 16**  
**Reduced Output Powers**

| Combination      | PCC      |              |              |                      |       |            |                  |              |                      |                 | SCC 1    |              |              |                      |                 | SCC 2    |              |              |                      |                 | Power                                 |                                   |
|------------------|----------|--------------|--------------|----------------------|-------|------------|------------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|---------------------------------------|-----------------------------------|
|                  | 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 Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA [2A]-12A (1)  | LTE B12  | 3            | 23025        | 700.5                | 64QAM | 1          | 7                | 5025         | 730.5                | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | -        | -            | -            | -                    | -               | 13.51                                 | 13.64                             |
| CA 12A-[66A] (1) | LTE B12  | 10           | 23095        | 707.5                | 64QAM | 1          | 0                | 5095         | 737.5                | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 4x4 MIMO        | -        | -            | -            | -                    | -               | 13.46                                 | 13.62                             |
| CA 12A-[66A] (2) | LTE B12  | 3            | 23025        | 700.5                | 64QAM | 1          | 7                | 5025         | 730.5                | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 4x4 MIMO        | -        | -            | -            | -                    | -               | 13.44                                 | 13.64                             |
| CA [2A]-2A-12A   | LTE B12  | 10           | 23095        | 707.5                | 64QAM | 1          | 0                | 5095         | 737.5                | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | LTE B2   | 20           | 700          | 1940                 | 2x2 MIMO        | 13.44                                 | 13.62                             |
| CA [2A]-12A-66A  | LTE B12  | 10           | 23095        | 707.5                | 64QAM | 1          | 0                | 5095         | 737.5                | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 2x2 MIMO        | 13.42                                 | 13.62                             |
| CA 2A-12A-[66A]  | LTE B12  | 10           | 23095        | 707.5                | 64QAM | 1          | 0                | 5095         | 737.5                | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 4x4 MIMO        | 13.47                                 | 13.62                             |

## 1.4.3 LTE Band 5 as PCC

**Table 17**  
**Maximum Output Powers**

| Combination     | PCC      |              |              |                      |      |            |                  |              |                      |                 | SCC 1    |              |              |                      |                 | SCC 2    |              |              |                      |                 | Power                                 |                                   |
|-----------------|----------|--------------|--------------|----------------------|------|------------|------------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|---------------------------------------|-----------------------------------|
|                 | 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 Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA [2A]-5A-66A  | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 0                | 2525         | 881.5                | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 2x2 MIMO        | 24.14                                 | 24.15                             |
| CA 2A-5A-[66A]  | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 0                | 2525         | 881.5                | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 4x4 MIMO        | 24.21                                 | 24.15                             |
| CA 5A-[66A]-66A | LTE B5   | 10           | 20525        | 836.5                | QPSK | 1          | 0                | 2525         | 881.5                | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 4x4 MIMO        | LTE B66  | 20           | 67236        | 2190                 | 2x2 MIMO        | 24.21                                 | 24.15                             |

**Table 18**  
**Reduced Output Powers**

| Combination     | PCC      |              |              |                      |       |            |                  |              |                      |                 | SCC 1    |              |              |                      |                 | SCC 2    |              |              |                      |                 | Power                                 |                                   |
|-----------------|----------|--------------|--------------|----------------------|-------|------------|------------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|---------------------------------------|-----------------------------------|
|                 | 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 Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA [2A]-5A-66A  | LTE B5   | 10           | 20525        | 836.5                | 16QAM | 1          | 0                | 2525         | 881.5                | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 2x2 MIMO        | 15.61                                 | 15.67                             |
| CA 2A-5A-[66A]  | LTE B5   | 10           | 20525        | 836.5                | 16QAM | 1          | 0                | 2525         | 881.5                | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 4x4 MIMO        | 15.46                                 | 15.67                             |
| CA 5A-[66A]-66A | LTE B5   | 10           | 20525        | 836.5                | 16QAM | 1          | 0                | 2525         | 881.5                | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 4x4 MIMO        | LTE B66  | 20           | 67236        | 2190                 | 2x2 MIMO        | 15.60                                 | 15.67                             |

## 1.4.4 LTE Band 66 as PCC

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

| Combination      | PCC      |              |              |                      |      |            |                  |              |                      |                 | SCC 1    |              |              |                      |                 | SCC 2    |              |              |                      |                 | Power                                 |                                   |
|------------------|----------|--------------|--------------|----------------------|------|------------|------------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|---------------------------------------|-----------------------------------|
|                  | 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 Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA [2A]-66A      | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1          | 0                | 67086        | 2175                 | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | -        | -            | -            | -                    | -               | 24.52                                 | 24.46                             |
| CA 2A-[66A]      | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1          | 0                | 67086        | 2175                 | 4x4 MIMO        | LTE B2   | 20           | 900          | 1960                 | 2x2 MIMO        | -        | -            | -            | -                    | -               | 24.50                                 | 24.46                             |
| CA [2A]-[66A]    | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1          | 0                | 67086        | 2175                 | 4x4 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | -        | -            | -            | -                    | -               | 24.49                                 | 24.46                             |
| CA 12A-[66A] (1) | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1          | 0                | 67086        | 2175                 | 4x4 MIMO        | LTE B12  | 10           | 5095         | 737.5                | 2x2 MIMO        | -        | -            | -            | -                    | -               | 24.52                                 | 24.46                             |
| CA 12A-[66A] (2) | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1          | 0                | 67086        | 2175                 | 4x4 MIMO        | LTE B12  | 10           | 5095         | 737.5                | 2x2 MIMO        | -        | -            | -            | -                    | -               | 24.52                                 | 24.46                             |
| CA [66A]-[66A]   | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1          | 0                | 67086        | 2175                 | 4x4 MIMO        | LTE B66  | 20           | 66536        | 2120                 | 4x4 MIMO        | -        | -            | -            | -                    | -               | 24.51                                 | 24.46                             |
| CA [2A]-5A-66A   | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1          | 0                | 67086        | 2175                 | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | LTE B5   | 10           | 2525         | 881.5                | 2x2 MIMO        | 24.59                                 | 24.46                             |
| CA 2A-5A-[66A]   | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1          | 0                | 67086        | 2175                 | 4x4 MIMO        | LTE B2   | 20           | 900          | 1960                 | 2x2 MIMO        | LTE B5   | 10           | 2525         | 881.5                | 2x2 MIMO        | 24.50                                 | 24.46                             |
| CA [2A]-12A-66A  | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1          | 0                | 67086        | 2175                 | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | LTE B12  | 10           | 5095         | 737.5                | 2x2 MIMO        | 24.55                                 | 24.46                             |
| CA 2A-12A-[66A]  | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1          | 0                | 67086        | 2175                 | 4x4 MIMO        | LTE B2   | 20           | 900          | 1960                 | 2x2 MIMO        | LTE B12  | 10           | 5095         | 737.5                | 2x2 MIMO        | 24.52                                 | 24.46                             |
| CA 2A-[66A]-66A  | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1          | 0                | 67086        | 2175                 | 4x4 MIMO        | LTE B66  | 20           | 66536        | 2120                 | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 2x2 MIMO        | 24.48                                 | 24.46                             |
| CA 2A-[66A]-66A  | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1          | 0                | 67086        | 2175                 | 2x2 MIMO        | LTE B66  | 20           | 66536        | 2120                 | 4x4 MIMO        | LTE B2   | 20           | 900          | 1960                 | 2x2 MIMO        | 24.55                                 | 24.46                             |
| CA 5A-[66A]-66A  | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1          | 0                | 67086        | 2175                 | 4x4 MIMO        | LTE B66  | 20           | 66536        | 2120                 | 2x2 MIMO        | LTE B5   | 10           | 2525         | 881.5                | 2x2 MIMO        | 24.50                                 | 24.46                             |
| CA 5A-[66A]-66A  | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1          | 0                | 67086        | 2175                 | 2x2 MIMO        | LTE B66  | 20           | 66536        | 2120                 | 4x4 MIMO        | LTE B5   | 10           | 2525         | 881.5                | 2x2 MIMO        | 24.52                                 | 24.46                             |

FCC ID: A3LSMT837A



SAR EVALUATION REPORT



Reviewed by:

Quality Manager

Test Dates:

06/20/18 – 07/05/18

DUT Type:

Portable Tablet

APPENDIX H:

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**Table 20**  
**Reduced Output Powers**

| Combination     | PCC      |              |              |                      |       |            |                  |              |                      |                 | SCC 1    |              |              |                      | SCC 2           |          |              |              | Power                |                 |                                       |                                   |
|-----------------|----------|--------------|--------------|----------------------|-------|------------|------------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|---------------------------------------|-----------------------------------|
|                 | 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 Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA [2A]-66A     | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1          | 0                | 66786        | 2145                 | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | -        | -            | -            | -                    | -               | 13.58                                 | 13.72                             |
| CA 2A-66A       | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1          | 0                | 66786        | 2145                 | 4x4 MIMO        | LTE B2   | 20           | 900          | 1960                 | 2x2 MIMO        | -        | -            | -            | -                    | -               | 13.68                                 | 13.72                             |
| CA [2A]-66A     | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1          | 0                | 66786        | 2145                 | 4x4 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | -        | -            | -            | -                    | -               | 13.70                                 | 13.72                             |
| CA 12A-66A (1)  | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1          | 0                | 66786        | 2145                 | 4x4 MIMO        | LTE B12  | 10           | 5095         | 737.5                | 2x2 MIMO        | -        | -            | -            | -                    | -               | 13.64                                 | 13.72                             |
| CA 12A-66A (2)  | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1          | 0                | 66786        | 2145                 | 4x4 MIMO        | LTE B12  | 10           | 5095         | 737.5                | 2x2 MIMO        | -        | -            | -            | -                    | -               | 13.64                                 | 13.72                             |
| CA [66A]-66A    | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1          | 0                | 66786        | 2145                 | 4x4 MIMO        | LTE B66  | 20           | 67236        | 2190                 | 4x4 MIMO        | -        | -            | -            | -                    | -               | 13.60                                 | 13.72                             |
| CA [2A]-5A-66A  | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1          | 0                | 66786        | 2145                 | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | LTE B5   | 10           | 2525         | 881.5                | 2x2 MIMO        | 13.61                                 | 13.72                             |
| CA 2A-5A-66A    | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1          | 0                | 66786        | 2145                 | 4x4 MIMO        | LTE B2   | 20           | 900          | 1960                 | 2x2 MIMO        | LTE B5   | 10           | 2525         | 881.5                | 2x2 MIMO        | 13.56                                 | 13.72                             |
| CA [2A]-12A-66A | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1          | 0                | 66786        | 2145                 | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 4x4 MIMO        | LTE B12  | 10           | 5095         | 737.5                | 2x2 MIMO        | 13.58                                 | 13.72                             |
| CA 2A-12A-66A   | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1          | 0                | 66786        | 2145                 | 4x4 MIMO        | LTE B2   | 20           | 900          | 1960                 | 2x2 MIMO        | LTE B12  | 10           | 5095         | 737.5                | 2x2 MIMO        | 13.54                                 | 13.72                             |
| CA 2A-66A-66A   | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1          | 0                | 66786        | 2145                 | 4x4 MIMO        | LTE B66  | 20           | 67236        | 2190                 | 2x2 MIMO        | LTE B2   | 20           | 900          | 1960                 | 2x2 MIMO        | 13.59                                 | 13.72                             |
| CA 2A-66A-66A   | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1          | 0                | 66786        | 2145                 | 2x2 MIMO        | LTE B66  | 20           | 67236        | 2190                 | 4x4 MIMO        | LTE B2   | 20           | 900          | 1960                 | 2x2 MIMO        | 13.54                                 | 13.72                             |
| CA 5A-66A-66A   | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1          | 0                | 66786        | 2145                 | 4x4 MIMO        | LTE B66  | 20           | 67236        | 2190                 | 2x2 MIMO        | LTE B5   | 10           | 2525         | 881.5                | 2x2 MIMO        | 13.56                                 | 13.72                             |
| CA 5A-66A-66A   | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1          | 0                | 66786        | 2145                 | 2x2 MIMO        | LTE B66  | 20           | 67236        | 2190                 | 4x4 MIMO        | LTE B5   | 10           | 2525         | 881.5                | 2x2 MIMO        | 13.53                                 | 13.72                             |

## 1.4.5 LTE Band 2 as PCC

**Table 21**  
**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           |          |              |              | 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. | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA [2A]-[2A]    | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1          | 0                | 1125         | 1982.5               | 4x4 MIMO        | LTE B2   | 20           | 700          | 1940                 | 4x4 MIMO        | -        | -            | -            | -                    | -               | 24.24                                 | 24.27                             |
| CA [2A]-12A (1) | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1          | 0                | 1125         | 1982.5               | 4x4 MIMO        | LTE B12  | 10           | 5095         | 737.5                | 2x2 MIMO        | -        | -            | -            | -                    | -               | 24.23                                 | 24.27                             |
| CA [2A]-66A     | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1          | 0                | 1125         | 1982.5               | 4x4 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 2x2 MIMO        | -        | -            | -            | -                    | -               | 24.26                                 | 24.27                             |
| CA 2A-66A       | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1          | 0                | 1125         | 1982.5               | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 4x4 MIMO        | -        | -            | -            | -                    | -               | 24.27                                 | 24.27                             |
| CA [2A]-66A     | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1          | 0                | 1125         | 1982.5               | 4x4 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 4x4 MIMO        | -        | -            | -            | -                    | -               | 24.22                                 | 24.27                             |
| CA [2A]-2A-12A  | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1          | 0                | 1125         | 1982.5               | 4x4 MIMO        | LTE B2   | 20           | 700          | 1940                 | 2x2 MIMO        | LTE B12  | 10           | 5095         | 737.5                | 2x2 MIMO        | 24.25                                 | 24.27                             |
| CA [2A]-2A-12A  | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1          | 0                | 1125         | 1982.5               | 2x2 MIMO        | LTE B2   | 20           | 700          | 1940                 | 4x4 MIMO        | LTE B12  | 10           | 5095         | 737.5                | 2x2 MIMO        | 24.26                                 | 24.27                             |
| CA [2A]-5A-66A  | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1          | 0                | 1125         | 1982.5               | 4x4 MIMO        | LTE B5   | 10           | 2525         | 881.5                | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 2x2 MIMO        | 24.28                                 | 24.27                             |
| CA 2A-5A-66A    | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1          | 0                | 1125         | 1982.5               | 2x2 MIMO        | LTE B5   | 10           | 2525         | 881.5                | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 4x4 MIMO        | 24.20                                 | 24.27                             |
| CA [2A]-12A-66A | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1          | 0                | 1125         | 1982.5               | 4x4 MIMO        | LTE B12  | 10           | 5095         | 737.5                | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 2x2 MIMO        | 24.28                                 | 24.27                             |
| CA 2A-12A-66A   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1          | 0                | 1125         | 1982.5               | 2x2 MIMO        | LTE B12  | 10           | 5095         | 737.5                | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 4x4 MIMO        | 24.28                                 | 24.27                             |
| CA 2A-66A-66A   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1          | 0                | 1125         | 1982.5               | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 4x4 MIMO        | LTE B66  | 20           | 67236        | 2190                 | 2x2 MIMO        | 24.27                                 | 24.27                             |

**Table 22**  
**Reduced Output Powers**

| Combination     | PCC      |              |              |                      |       |            |                  |              |                      |                 | SCC 1    |              |              |                      | SCC 2           |          |              |              | Power                |                 |                                       |                                   |
|-----------------|----------|--------------|--------------|----------------------|-------|------------|------------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|----------|--------------|--------------|----------------------|-----------------|---------------------------------------|-----------------------------------|
|                 | 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 Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | DL Ant. Config. | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA [2A]-[2A]    | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1          | 0                | 1100         | 1980                 | 4x4 MIMO        | LTE B2   | 20           | 700          | 1940                 | 4x4 MIMO        | -        | -            | -            | -                    | -               | 13.26                                 | 13.50                             |
| CA [2A]-12A (1) | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1          | 0                | 1100         | 1980                 | 4x4 MIMO        | LTE B12  | 10           | 5095         | 737.5                | 2x2 MIMO        | -        | -            | -            | -                    | -               | 13.28                                 | 13.50                             |
| CA [2A]-66A     | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1          | 0                | 1100         | 1980                 | 4x4 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 2x2 MIMO        | -        | -            | -            | -                    | -               | 13.23                                 | 13.50                             |
| CA 2A-66A       | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1          | 0                | 1100         | 1980                 | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 4x4 MIMO        | -        | -            | -            | -                    | -               | 13.35                                 | 13.50                             |
| CA [2A]-66A     | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1          | 0                | 1100         | 1980                 | 4x4 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 4x4 MIMO        | -        | -            | -            | -                    | -               | 13.34                                 | 13.50                             |
| CA [2A]-2A-12A  | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1          | 0                | 1100         | 1980                 | 4x4 MIMO        | LTE B2   | 20           | 700          | 1940                 | 2x2 MIMO        | LTE B12  | 10           | 5095         | 737.5                | 2x2 MIMO        | 13.37                                 | 13.50                             |
| CA [2A]-2A-12A  | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1          | 0                | 1100         | 1980                 | 2x2 MIMO        | LTE B2   | 20           | 700          | 1940                 | 4x4 MIMO        | LTE B12  | 10           | 5095         | 737.5                | 2x2 MIMO        | 13.22                                 | 13.50                             |
| CA [2A]-5A-66A  | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1          | 0                | 1100         | 1980                 | 4x4 MIMO        | LTE B5   | 10           | 2525         | 881.5                | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 2x2 MIMO        | 13.34                                 | 13.50                             |
| CA 2A-5A-66A    | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1          | 0                | 1100         | 1980                 | 2x2 MIMO        | LTE B5   | 10           | 2525         | 881.5                | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 4x4 MIMO        | 13.36                                 | 13.50                             |
| CA [2A]-12A-66A | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1          | 0                | 1100         | 1980                 | 4x4 MIMO        | LTE B12  | 10           | 5095         | 737.5                | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 2x2 MIMO        | 13.25                                 | 13.50                             |
| CA 2A-12A-66A   | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1          | 0                | 1100         | 1980                 | 2x2 MIMO        | LTE B12  | 10           | 5095         | 737.5                | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 4x4 MIMO        | 13.35                                 | 13.50                             |
| CA 2A-66A-66A   | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1          | 0                | 1100         | 1980                 | 2x2 MIMO        | LTE B66  | 20           | 66786        | 2145                 | 4x4 MIMO        | LTE B66  | 20           | 67236        | 2190                 | 2x2 MIMO        | 13.24                                 | 13.50                             |

|                                    |                                                                                     |                       |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMT837A                 |  | SAR EVALUATION REPORT |  | Reviewed by:<br>Quality Manager |
| Test Dates:<br>06/20/18 – 07/05/18 | DUT Type:<br>Portable Tablet                                                        |                       |                                                                                       | APPENDIX H:<br>Page 8 of 10     |

## 1.5 LAA Downlink Carrier Aggregation

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. Due to the wide downlink bandwidth, each Band 46 sub-band, represented by subscripts A, B, C, and D, was evaluated independently. The general test selection and setup procedures described in Section 1.2 were applied.

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

### 1.5.1 LAA Downlink Carrier Aggregation RF Conducted Powers

#### 1.5.1.1 LTE Band 66 as PCC

Table 23  
Maximum Output Powers

| Combination | PCC Band | PCC BW [MHz] | PCC [UL] Ch. | PCC                  |      |           |                  | SCC 1        |                      |          |              | SCC 2        |                      |          |              | SCC 3        |                      |          |              | Power        |                      |                                       |                                   |
|-------------|----------|--------------|--------------|----------------------|------|-----------|------------------|--------------|----------------------|----------|--------------|--------------|----------------------|----------|--------------|--------------|----------------------|----------|--------------|--------------|----------------------|---------------------------------------|-----------------------------------|
|             |          |              |              | PCC [UL] Freq. [MHz] | Mod. | PCC UL RB | PCC UL RB Offset | PCC [DL] Ch. | PCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_46A-66A  | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | LTE B46A | 20           | 47290        | 5300                 | -        | -            | -            | -                    | -        | -            | -            | -                    | 24.31                                 | 24.46                             |
| CA_46A-66A  | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | LTE B46B | 20           | 48290        | 5300                 | -        | -            | -            | -                    | -        | -            | -            | -                    | 24.33                                 | 24.46                             |
| CA_46A-66A  | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | LTE B46C | 20           | 51290        | 5600                 | -        | -            | -            | -                    | -        | -            | -            | -                    | 24.35                                 | 24.46                             |
| CA_46A-66A  | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | LTE B46D | 20           | 53140        | 5785                 | -        | -            | -            | -                    | -        | -            | -            | -                    | 24.32                                 | 24.46                             |
| CA_46C-66A  | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | LTE B46A | 20           | 47290        | 5200                 | LTE B46B | 20           | 47488        | 5219.8               | -        | -            | -            | -                    | 24.33                                 | 24.46                             |
| CA_46C-66A  | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | LTE B46B | 20           | 48290        | 5300                 | LTE B46C | 20           | 48488        | 5319.8               | -        | -            | -            | -                    | 24.35                                 | 24.46                             |
| CA_46C-66A  | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | LTE B46C | 20           | 51290        | 5600                 | LTE B46D | 20           | 51488        | 5619.8               | -        | -            | -            | -                    | 24.35                                 | 24.46                             |
| CA_46C-66A  | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | LTE B46D | 20           | 53140        | 5785                 | LTE B46A | 20           | 53338        | 5804.8               | -        | -            | -            | -                    | 24.33                                 | 24.46                             |
| CA_46D-66A  | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | LTE B46A | 20           | 47290        | 5200                 | LTE B46B | 20           | 47488        | 5219.8               | LTE B46C | 20           | 47092        | 5180.2               | 24.31                                 | 24.46                             |
| CA_46D-66A  | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | LTE B46B | 20           | 48290        | 5300                 | LTE B46C | 20           | 48488        | 5319.8               | LTE B46D | 20           | 48092        | 5280.2               | 24.36                                 | 24.46                             |
| CA_46D-66A  | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | LTE B46C | 20           | 51290        | 5600                 | LTE B46D | 20           | 51488        | 5619.8               | LTE B46A | 20           | 51092        | 5580.2               | 24.38                                 | 24.46                             |
| CA_46D-66A  | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | LTE B46D | 20           | 53140        | 5785                 | LTE B46A | 20           | 53338        | 5804.8               | LTE B46B | 20           | 52942        | 5765.2               | 24.36                                 | 24.46                             |

Table 24  
Reduced 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] Ch. | PCC [DL] Freq. [MHz] | SCC Band             | SCC BW [MHz] | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | SCC Band             | SCC BW [MHz] | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | SCC Band             | SCC BW [MHz] | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | LTE Tx.Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |  |
| CA_46A-66A  | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | LTE B46 <sub>A</sub> | 20           | 47290        | 5200                 | -                    | -            | -            | -                    | -                    | -            | -            | -                    | 13.68                                 | 13.72                             |  |
| CA_46A-66A  | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | LTE B46 <sub>B</sub> | 20           | 48290        | 5300                 | -                    | -            | -            | -                    | -                    | -            | -            | -                    | 13.71                                 | 13.72                             |  |
| CA_46A-66A  | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | LTE B46 <sub>C</sub> | 20           | 51290        | 5600                 | -                    | -            | -            | -                    | -                    | -            | -            | -                    | 13.72                                 | 13.72                             |  |
| CA_46A-66A  | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | LTE B46 <sub>D</sub> | 20           | 53140        | 5785                 | -                    | -            | -            | -                    | -                    | -            | -            | -                    | 13.69                                 | 13.72                             |  |
| CA_46C-66A  | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | LTE B46 <sub>A</sub> | 20           | 47290        | 5200                 | LTE B46 <sub>B</sub> | 20           | 47488        | 5219.8               | -                    | -            | -            | -                    | 13.46                                 | 13.72                             |  |
| CA_46C-66A  | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | LTE B46 <sub>B</sub> | 20           | 48290        | 5300                 | LTE B46 <sub>C</sub> | 20           | 48488        | 5319.8               | -                    | -            | -            | -                    | 13.49                                 | 13.72                             |  |
| CA_46C-66A  | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | LTE B46 <sub>C</sub> | 20           | 51290        | 5600                 | LTE B46 <sub>D</sub> | 20           | 51488        | 5619.8               | -                    | -            | -            | -                    | 13.50                                 | 13.72                             |  |
| CA_46C-66A  | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | LTE B46 <sub>D</sub> | 20           | 53140        | 5785                 | LTE B46 <sub>A</sub> | 20           | 53338        | 5804.8               | -                    | -            | -            | -                    | 13.46                                 | 13.72                             |  |
| CA_46D-66A  | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | LTE B46 <sub>A</sub> | 20           | 47290        | 5200                 | LTE B46 <sub>B</sub> | 20           | 47488        | 5219.8               | LTE B46 <sub>C</sub> | 20           | 47092        | 5180.2               | 13.50                                 | 13.72                             |  |
| CA_46D-66A  | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | LTE B46 <sub>B</sub> | 20           | 48290        | 5300                 | LTE B46 <sub>C</sub> | 20           | 48488        | 5319.8               | LTE B46 <sub>D</sub> | 20           | 48092        | 5280.2               | 13.45                                 | 13.72                             |  |
| CA_46D-66A  | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | LTE B46 <sub>C</sub> | 20           | 51290        | 5600                 | LTE B46 <sub>D</sub> | 20           | 51488        | 5619.8               | LTE B46 <sub>A</sub> | 20           | 51092        | 5580.2               | 13.44                                 | 13.72                             |  |
| CA_46D-66A  | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | LTE B46 <sub>D</sub> | 20           | 53140        | 5785                 | LTE B46 <sub>A</sub> | 20           | 53338        | 5804.8               | LTE B46 <sub>B</sub> | 20           | 52942        | 5765.2               | 13.48                                 | 13.72                             |  |

#### 1.5.1.2 LTE Band 2 as PCC

Table 25  
Maximum Output Powers

| Combination | PCC Band | PCC BW [MHz] | PCC (UL) Ch. | PCC                  |      |           |                  | SCC 1        |                      |          |              | SCC 2        |                      |          |              | SCC 3        |                      |          |              | Power        |                      |                                       |                                   |
|-------------|----------|--------------|--------------|----------------------|------|-----------|------------------|--------------|----------------------|----------|--------------|--------------|----------------------|----------|--------------|--------------|----------------------|----------|--------------|--------------|----------------------|---------------------------------------|-----------------------------------|
|             |          |              |              | PCC (UL) Freq. [MHz] | Mod. | PCC UL RB | PCC UL RB Offset | PCC (DL) Ch. | PCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | SCC Band | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_2A-46A   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | LTE B46A | 20           | 47290        | 5300                 | -        | -            | -            | -                    | -        | -            | -            | -                    | 24.32                                 | 24.27                             |
| CA_2A-46A   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | LTE B46A | 20           | 48290        | 5300                 | -        | -            | -            | -                    | -        | -            | -            | -                    | 24.35                                 | 24.27                             |
| CA_2A-46A   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | LTE B46A | 20           | 51290        | 5600                 | -        | -            | -            | -                    | -        | -            | -            | -                    | 24.31                                 | 24.27                             |
| CA_2A-46A   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | LTE B46A | 20           | 53140        | 5785                 | -        | -            | -            | -                    | -        | -            | -            | -                    | 24.35                                 | 24.27                             |
| CA_2A-46C   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | LTE B46A | 20           | 47290        | 5300                 | LTE B46A | 20           | 47488        | 5219.8               | -        | -            | -            | -                    | 24.33                                 | 24.27                             |
| CA_2A-46C   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | LTE B46A | 20           | 48290        | 5300                 | LTE B46A | 20           | 48488        | 5319.8               | -        | -            | -            | -                    | 24.31                                 | 24.27                             |
| CA_2A-46C   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | LTE B46A | 20           | 51290        | 5600                 | LTE B46A | 20           | 51488        | 5619.8               | -        | -            | -            | -                    | 24.31                                 | 24.27                             |
| CA_2A-46C   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | LTE B46A | 20           | 53140        | 5785                 | LTE B46A | 20           | 53338        | 5804.8               | -        | -            | -            | -                    | 24.37                                 | 24.27                             |
| CA_2A-46D   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | LTE B46A | 20           | 47290        | 5300                 | LTE B46A | 20           | 47488        | 5219.8               | LTE B46A | 20           | 47092        | 5180.2               | 24.36                                 | 24.27                             |
| CA_2A-46D   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | LTE B46A | 20           | 48290        | 5300                 | LTE B46A | 20           | 48488        | 5319.8               | LTE B46A | 20           | 48092        | 5280.2               | 24.35                                 | 24.27                             |
| CA_2A-46D   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | LTE B46A | 20           | 51290        | 5600                 | LTE B46A | 20           | 51488        | 5619.8               | LTE B46A | 20           | 51092        | 5580.2               | 24.38                                 | 24.27                             |
| CA_2A-46D   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | LTE B46A | 20           | 53140        | 5785                 | LTE B46A | 20           | 53338        | 5804.8               | LTE B46A | 20           | 52942        | 5765.2               | 24.37                                 | 24.27                             |

|                                    |                                                                                     |                             |                                                                                       |                                 |
|------------------------------------|-------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| FCC ID: A3LSMT837A                 |  | SAR EVALUATION REPORT       |  | Reviewed by:<br>Quality Manager |
| Test Dates:<br>06/20/18 – 07/05/18 | DUT Type:<br>Portable Tablet                                                        | APPENDIX H:<br>Page 9 of 10 |                                                                                       |                                 |

**Table 26**  
**Reduced 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) Ch. | PCC (DL) Freq. [MHz] | SCC Band             | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | SCC Band             | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | SCC Band             | SCC BW [MHz] | SCC (DL) Ch. | SCC (DL) Freq. [MHz] | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |
| CA_2A-46A   | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100         | 1980                 | LTE B46 <sub>5</sub> | 20           | 47290        | 5200                 | -                    | -            | -            | -                    | -                    | -            | -            | -                    | 13.50                                 | 13.50                             |
| CA_2A-46A   | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100         | 1980                 | LTE B46 <sub>5</sub> | 20           | 48290        | 5300                 | -                    | -            | -            | -                    | -                    | -            | -            | -                    | 13.49                                 | 13.50                             |
| CA_2A-46A   | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100         | 1980                 | LTE B46 <sub>5</sub> | 20           | 51290        | 5600                 | -                    | -            | -            | -                    | -                    | -            | -            | -                    | 13.50                                 | 13.50                             |
| CA_2A-46A   | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100         | 1980                 | LTE B46 <sub>5</sub> | 20           | 53140        | 5785                 | -                    | -            | -            | -                    | -                    | -            | -            | -                    | 13.49                                 | 13.50                             |
| CA_2A-46C   | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100         | 1980                 | LTE B46 <sub>5</sub> | 20           | 47290        | 5200                 | LTE B46 <sub>5</sub> | 20           | 47488        | 5219.8               | -                    | -            | -            | -                    | 13.42                                 | 13.50                             |
| CA_2A-46C   | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100         | 1980                 | LTE B46 <sub>5</sub> | 20           | 48290        | 5300                 | LTE B46 <sub>5</sub> | 20           | 48488        | 5319.8               | -                    | -            | -            | -                    | 13.40                                 | 13.50                             |
| CA_2A-46C   | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100         | 1980                 | LTE B46 <sub>5</sub> | 20           | 51290        | 5600                 | LTE B46 <sub>5</sub> | 20           | 51488        | 5619.8               | -                    | -            | -            | -                    | 13.41                                 | 13.50                             |
| CA_2A-46C   | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100         | 1980                 | LTE B46 <sub>5</sub> | 20           | 53140        | 5785                 | LTE B46 <sub>5</sub> | 20           | 53338        | 5804.8               | -                    | -            | -            | -                    | 13.39                                 | 13.50                             |
| CA_2A-46D   | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100         | 1980                 | LTE B46 <sub>5</sub> | 20           | 47290        | 5200                 | LTE B46 <sub>5</sub> | 20           | 47488        | 5219.8               | LTE B46 <sub>5</sub> | 20           | 47092        | 5180.2               | 13.41                                 | 13.50                             |
| CA_2A-46D   | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100         | 1980                 | LTE B46 <sub>5</sub> | 20           | 48290        | 5300                 | LTE B46 <sub>5</sub> | 20           | 48488        | 5319.8               | LTE B46 <sub>5</sub> | 20           | 48092        | 5280.2               | 13.41                                 | 13.50                             |
| CA_2A-46D   | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100         | 1980                 | LTE B46 <sub>5</sub> | 20           | 51290        | 5600                 | LTE B46 <sub>5</sub> | 20           | 51488        | 5619.8               | LTE B46 <sub>5</sub> | 20           | 51092        | 5580.2               | 13.43                                 | 13.50                             |
| CA_2A-46D   | LTE B2   | 20           | 19100        | 1900                 | 64QAM | 1         | 0                | 1100         | 1980                 | LTE B46 <sub>5</sub> | 20           | 53140        | 5785                 | LTE B46 <sub>5</sub> | 20           | 53338        | 5804.8               | LTE B46 <sub>5</sub> | 20           | 52942        | 5765.2               | 13.40                                 | 13.50                             |

## 1.5.2 LAA 4x4 MIMO Downlink Carrier Aggregation RF Conducted Powers

### 1.5.2.1 LTE Band 66 as PCC

**Table 27**  
**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] Ch. | PCC [DL] Freq. [MHz] | DL Ant. Config. | SCC Band             | SCC BW [MHz] | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | DL Ant. Config. | SCC Band             | SCC BW [MHz] | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | DL Ant. Config. | SCC Band             | SCC BW [MHz] | SCC [DL] Ch. | SCC [DL] Freq. [MHz] | DL Ant. Config. | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |       |       |
| CA_46A-166A | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 47290        | 5200                 | 2x2 MIMO        | -                    | -            | -            | -                    | -               | -                    | -            | -            | -                    | -               | -                                     | 24.31                             | 24.46 |       |
| CA_46A-166A | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 48290        | 5300                 | 2x2 MIMO        | -                    | -            | -            | -                    | -               | -                    | -            | -            | -                    | -               | -                                     | 24.31                             | 24.46 |       |
| CA_46A-166A | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 51290        | 5600                 | 2x2 MIMO        | -                    | -            | -            | -                    | -               | -                    | -            | -            | -                    | -               | -                                     | 24.31                             | 24.46 |       |
| CA_46A-166A | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 53140        | 5785                 | 2x2 MIMO        | -                    | -            | -            | -                    | -               | -                    | -            | -            | -                    | -               | -                                     | 24.31                             | 24.46 |       |
| CA_46C-166A | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 47290        | 5200                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 47488        | 5219.8               | 2x2 MIMO        | -                    | -            | -            | -                    | -               | -                                     | -                                 | 24.34 | 24.46 |
| CA_46C-166A | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 48290        | 5300                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 48488        | 5319.8               | 2x2 MIMO        | -                    | -            | -            | -                    | -               | -                                     | -                                 | 24.41 | 24.46 |
| CA_46C-166A | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 51290        | 5600                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 51488        | 5619.8               | 2x2 MIMO        | -                    | -            | -            | -                    | -               | -                                     | -                                 | 24.42 | 24.46 |
| CA_46C-166A | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 53140        | 5785                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 53338        | 5804.8               | 2x2 MIMO        | -                    | -            | -            | -                    | -               | -                                     | -                                 | 24.40 | 24.46 |
| CA_46D-166A | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 47290        | 5200                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 47488        | 5219.8               | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 47092        | 5180.2               | 2x2 MIMO        | 24.40                                 | 24.46                             |       |       |
| CA_46D-166A | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 48290        | 5300                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 48488        | 5319.8               | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 48092        | 5280.2               | 2x2 MIMO        | 24.36                                 | 24.46                             |       |       |
| CA_46D-166A | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 51290        | 5600                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 51488        | 5619.8               | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 51092        | 5580.2               | 2x2 MIMO        | 24.43                                 | 24.46                             |       |       |
| CA_46D-166A | LTE B66  | 10           | 132622       | 1775                 | QPSK | 1         | 0                | 67086        | 2175                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 53140        | 5785                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 53338        | 5804.8               | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 52942        | 5765.2               | 2x2 MIMO        | 24.35                                 | 24.46                             |       |       |

**Table 28**  
**Reduced Output Powers**

| Combination | PCC Band | PCC BW [MHz] | PCC [UL] Ch. | PCC                  |       |           |                  | SCC 1        |                      |                 |                      | SCC 2        |              |                      |                 | SCC 3                |              |              |                      | Power           |                      |              |              |                      |                 |                                       |                                   |       |       |
|-------------|----------|--------------|--------------|----------------------|-------|-----------|------------------|--------------|----------------------|-----------------|----------------------|--------------|--------------|----------------------|-----------------|----------------------|--------------|--------------|----------------------|-----------------|----------------------|--------------|--------------|----------------------|-----------------|---------------------------------------|-----------------------------------|-------|-------|
|             |          |              |              | 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 (dBm) | LTE Single Carrier Tx Power (dBm) |       |       |
| CA 46A-166A | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 47290        | 5200                 | 2x2 MIMO        | -                    | -            | -            | -                    | -               | -                    | -            | -            | -                    | -               | -                                     | 13.44                             | 13.72 |       |
| CA 46A-166A | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 48290        | 5300                 | 2x2 MIMO        | -                    | -            | -            | -                    | -               | -                    | -            | -            | -                    | -               | -                                     | 13.48                             | 13.72 |       |
| CA 46A-166A | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 51290        | 5600                 | 2x2 MIMO        | -                    | -            | -            | -                    | -               | -                    | -            | -            | -                    | -               | -                                     | 13.49                             | 13.72 |       |
| CA 46A-166A | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 53140        | 5785                 | 2x2 MIMO        | -                    | -            | -            | -                    | -               | -                    | -            | -            | -                    | -               | -                                     | 13.43                             | 13.72 |       |
| CA 46C-166A | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 47290        | 5200                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 47488        | 5219.8               | 2x2 MIMO        | -                    | -            | -            | -                    | -               | -                                     | -                                 | 13.45 | 13.72 |
| CA 46C-166A | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 48290        | 5300                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 48488        | 5319.8               | 2x2 MIMO        | -                    | -            | -            | -                    | -               | -                                     | -                                 | 13.47 | 13.72 |
| CA 46C-166A | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 51290        | 5600                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 51488        | 5619.8               | 2x2 MIMO        | -                    | -            | -            | -                    | -               | -                                     | -                                 | 13.46 | 13.72 |
| CA 46C-166A | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 53140        | 5785                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 53338        | 5804.8               | 2x2 MIMO        | -                    | -            | -            | -                    | -               | -                                     | -                                 | 13.46 | 13.72 |
| CA 46D-166A | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 47290        | 5200                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 47488        | 5219.8               | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 47092        | 5180.2               | 2x2 MIMO        | 13.40                                 | 13.72                             |       |       |
| CA 46D-166A | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 48290        | 5300                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 48488        | 5319.8               | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 48092        | 5280.2               | 2x2 MIMO        | 13.48                                 | 13.72                             |       |       |
| CA 46D-166A | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 51290        | 5600                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 51488        | 5619.8               | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 51092        | 5580.2               | 2x2 MIMO        | 13.45                                 | 13.72                             |       |       |
| CA 46D-166A | LTE B66  | 20           | 132322       | 1745                 | 64QAM | 1         | 0                | 66786        | 2145                 | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 53140        | 5785                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 53338        | 5804.8               | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 52942        | 5765.2               | 2x2 MIMO        | 13.45                                 | 13.72                             |       |       |

### 1.5.2.2 LTE Band 2 as PCC

**Table 29**  
**Maximum Output Powers**

| Combination | PCC Band | PCC BW [MHz] | PCC [UL] Ch. | PCC                  |      |           |                  | SCC 1        |                      |                 |                      | SCC 2        |              |                      |                 | SCC 3                |              |              |                      | Power           |                                       |                                   |       |        |          |       |       |       |       |
|-------------|----------|--------------|--------------|----------------------|------|-----------|------------------|--------------|----------------------|-----------------|----------------------|--------------|--------------|----------------------|-----------------|----------------------|--------------|--------------|----------------------|-----------------|---------------------------------------|-----------------------------------|-------|--------|----------|-------|-------|-------|-------|
|             |          |              |              | PCC [DL] 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. | LTE Tx Power with DL CA Enabled (dBm) | LTE Single Carrier Tx Power (dBm) |       |        |          |       |       |       |       |
| CA_2A-46A   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 47290        | 5200                 | 2x2 MIMO        | -                    | -            | -            | -                    | -               | -                                     | -                                 | -     | -      | -        | 24.31 | 24.27 |       |       |
| CA_2A-46A   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 48290        | 5300                 | 2x2 MIMO        | -                    | -            | -            | -                    | -               | -                                     | -                                 | -     | -      | -        | 24.31 | 24.27 |       |       |
| CA_2A-46A   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 51290        | 5600                 | 2x2 MIMO        | -                    | -            | -            | -                    | -               | -                                     | -                                 | -     | -      | -        | 24.31 | 24.27 |       |       |
| CA_2A-46A   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 53140        | 5785                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 53290        | 5880                 | 2x2 MIMO        | -                                     | -                                 | -     | -      | -        | -     | 24.35 | 24.27 |       |
| CA_2A-46A   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 47290        | 5200                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 47488        | 5219.8               | 2x2 MIMO        | -                                     | -                                 | -     | -      | -        | -     | 24.36 | 24.27 |       |
| CA_2A-46C   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 48290        | 5300                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 48488        | 5319.8               | 2x2 MIMO        | -                                     | -                                 | -     | -      | -        | -     | 24.34 | 24.27 |       |
| CA_2A-46C   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 51290        | 5600                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 51488        | 5619.8               | 2x2 MIMO        | -                                     | -                                 | -     | -      | -        | -     | 24.35 | 24.27 |       |
| CA_2A-46C   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 53140        | 5785                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 53338        | 5804.8               | 2x2 MIMO        | -                                     | -                                 | -     | -      | -        | -     | 24.35 | 24.27 |       |
| CA_2A-46D   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 47290        | 5200                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 47488        | 5219.8               | 2x2 MIMO        | LTE B46 <sub>5</sub>                  | 20                                | 47092 | 5180.2 | 2x2 MIMO | -     | -     | 24.33 | 24.27 |
| CA_2A-46D   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 48290        | 5300                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 48488        | 5319.8               | 2x2 MIMO        | LTE B46 <sub>5</sub>                  | 20                                | 48092 | 5290.2 | 2x2 MIMO | -     | -     | 24.33 | 24.27 |
| CA_2A-46D   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 51290        | 5600                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 51488        | 5619.8               | 2x2 MIMO        | LTE B46 <sub>5</sub>                  | 20                                | 51092 | 5580.2 | 2x2 MIMO | -     | -     | 24.33 | 24.27 |
| CA_2A-46D   | LTE B2   | 15           | 19125        | 1902.5               | QPSK | 1         | 0                | 1125         | 1982.5               | 4x4 MIMO        | LTE B46 <sub>5</sub> | 20           | 53140        | 5785                 | 2x2 MIMO        | LTE B46 <sub>5</sub> | 20           | 53338        | 5804.8               | 2x2 MIMO        | LTE B46 <sub>5</sub>                  | 20                                | 52942 | 5765.2 | 2x2 MIMO | -     | -     | 24.33 | 24.27 |