

12.7. Appendix F: Frequency Stability Test Result

| Frequency Error vs. Voltage | | | | | | | | | |
|---------------------------------|-------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|
| 802.11ax HE20: 6195 MHz | | | | | | | | | |
| Temp. | Volt. | 0 Minute | | 2 Minute | | 5 Minute | | 10 Minute | |
| | | Freq.Error (MHz) | Tolerance (ppm) |
| TN | VL | 6195.0097 | 1.56 | 6195.0232 | 3.74 | 6195.0170 | 2.74 | 6195.0105 | 1.70 |
| TN | VN | 6195.0055 | 0.89 | 6195.0097 | 1.56 | 6195.0208 | 3.35 | 6194.9944 | -0.91 |
| TN | VH | 6194.9943 | -0.91 | 6194.9880 | -1.94 | 6194.9940 | -0.97 | 6195.0159 | 2.57 |
| Frequency Error vs. Temperature | | | | | | | | | |
| 802.11ax HE20: 6195 MHz | | | | | | | | | |
| Temp. | Volt. | 0 Minute | | 2 Minute | | 5 Minute | | 10 Minute | |
| | | Freq.Error (MHz) | Tolerance (ppm) |
| 70 | VN | 6194.9824 | -2.85 | 6194.9827 | -2.79 | 6195.0238 | 3.84 | 6194.9939 | -0.98 |
| 60 | VN | 6194.9957 | -0.70 | 6194.9898 | -1.65 | 6194.9863 | -2.22 | 6194.9766 | -3.78 |
| 40 | VN | 6194.9983 | -0.27 | 6194.9786 | -3.46 | 6195.0053 | 0.85 | 6194.9814 | -3.01 |
| 30 | VN | 6194.9926 | -1.20 | 6195.0146 | 2.35 | 6195.0178 | 2.88 | 6195.0091 | 1.47 |
| 20 | VN | 6195.0183 | 2.95 | 6195.0212 | 3.42 | 6195.0161 | 2.60 | 6195.0197 | 3.19 |
| 10 | VN | 6195.0071 | 1.15 | 6195.0009 | 0.15 | 6195.0048 | 0.78 | 6195.0236 | 3.82 |
| 0 | VN | 6194.9979 | -0.33 | 6194.9870 | -2.10 | 6195.0015 | 0.24 | 6194.9940 | -0.97 |

| Frequency Error vs. Voltage | | | | | | | | | |
|---------------------------------|-------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|
| 802.11ax HE20: 6995 MHz | | | | | | | | | |
| Temp. | Volt. | 0 Minute | | 2 Minute | | 5 Minute | | 10 Minute | |
| | | Freq.Error (MHz) | Tolerance (ppm) |
| TN | VL | 6695.0112 | 1.67 | 6695.0059 | 0.88 | 6694.9984 | -0.24 | 6695.0100 | 1.49 |
| TN | VN | 6695.0189 | 2.82 | 6694.9946 | -0.80 | 6695.0036 | 0.54 | 6695.0165 | 2.46 |
| TN | VH | 6694.9966 | -0.50 | 6695.0099 | 1.48 | 6695.0131 | 1.95 | 6695.0249 | 3.72 |
| Frequency Error vs. Temperature | | | | | | | | | |
| 802.11ax HE20: 6995 MHz | | | | | | | | | |
| Temp. | Volt. | 0 Minute | | 2 Minute | | 5 Minute | | 10 Minute | |
| | | Freq.Error (MHz) | Tolerance (ppm) |
| 70 | VN | 6694.9924 | -1.14 | 6694.9955 | -0.67 | 6695.0159 | 2.37 | 6695.0126 | 1.88 |
| 60 | VN | 6695.0112 | 1.68 | 6694.9768 | -3.46 | 6694.9786 | -3.19 | 6694.9906 | -1.41 |
| 40 | VN | 6695.0065 | 0.96 | 6694.9855 | -2.16 | 6694.9803 | -2.94 | 6694.9938 | -0.93 |
| 30 | VN | 6694.9811 | -2.82 | 6695.0099 | 1.47 | 6694.9937 | -0.95 | 6695.0178 | 2.65 |
| 20 | VN | 6695.0024 | 0.35 | 6695.0185 | 2.77 | 6694.9830 | -2.54 | 6695.0022 | 0.33 |
| 10 | VN | 6694.9918 | -1.22 | 6694.9836 | -2.46 | 6695.0023 | 0.35 | 6694.9770 | -3.44 |
| 0 | VN | 6694.9913 | -1.30 | 6695.0008 | 0.13 | 6695.0101 | 1.51 | 6694.9886 | -1.70 |

Note: All the mode had been tested, but only the worst data was recorded in the report.

12.8. Appendix G: Contention Based Protocol

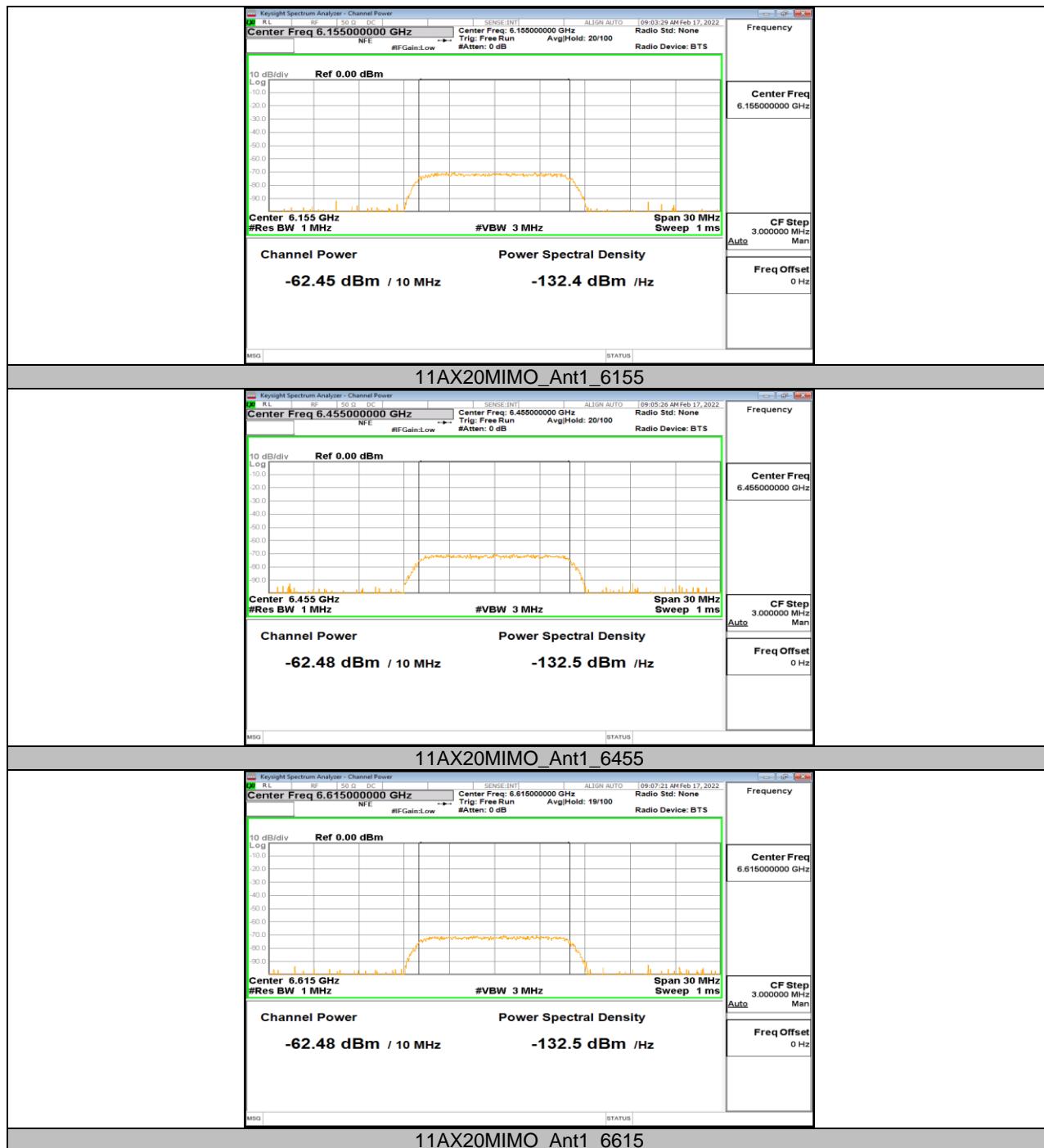
| Test Mode | Antenna | Channel | Frequency [MHz] | Result [dBm] | Limit[dBm] | Verdict |
|------------|---------|---------|-----------------|--------------|------------|---------|
| 11AX20MIMO | Ant1 | 6155 | 6155 | -62.39 | -62 | PASS |
| | | 6455 | 6455 | -62.4996 | -62 | PASS |
| | | 6615 | 6615 | -62.4794 | -62 | PASS |
| | | 7015 | 7015 | -62.2596 | -62 | PASS |
| 11AX80MIMO | Ant1 | 6145 | 6110 | -62.4869 | -62 | PASS |
| | | | 6145 | -62.3684 | -62 | PASS |
| | | | 6180 | -62.3997 | -62 | PASS |
| | | 6465 | 6430 | -62.2901 | -62 | PASS |
| | | | 6465 | -62.4776 | -62 | PASS |
| | | | 6500 | -62.3996 | -62 | PASS |
| | | 6705 | 6670 | -62.2377 | -62 | PASS |
| | | | 6705 | -62.3314 | -62 | PASS |
| | | | 6740 | -62.487 | -62 | PASS |
| | | 6945 | 6910 | -62.4779 | -62 | PASS |
| | | | 6945 | -62.2365 | -62 | PASS |
| | | | 6980 | -62.4623 | -62 | PASS |

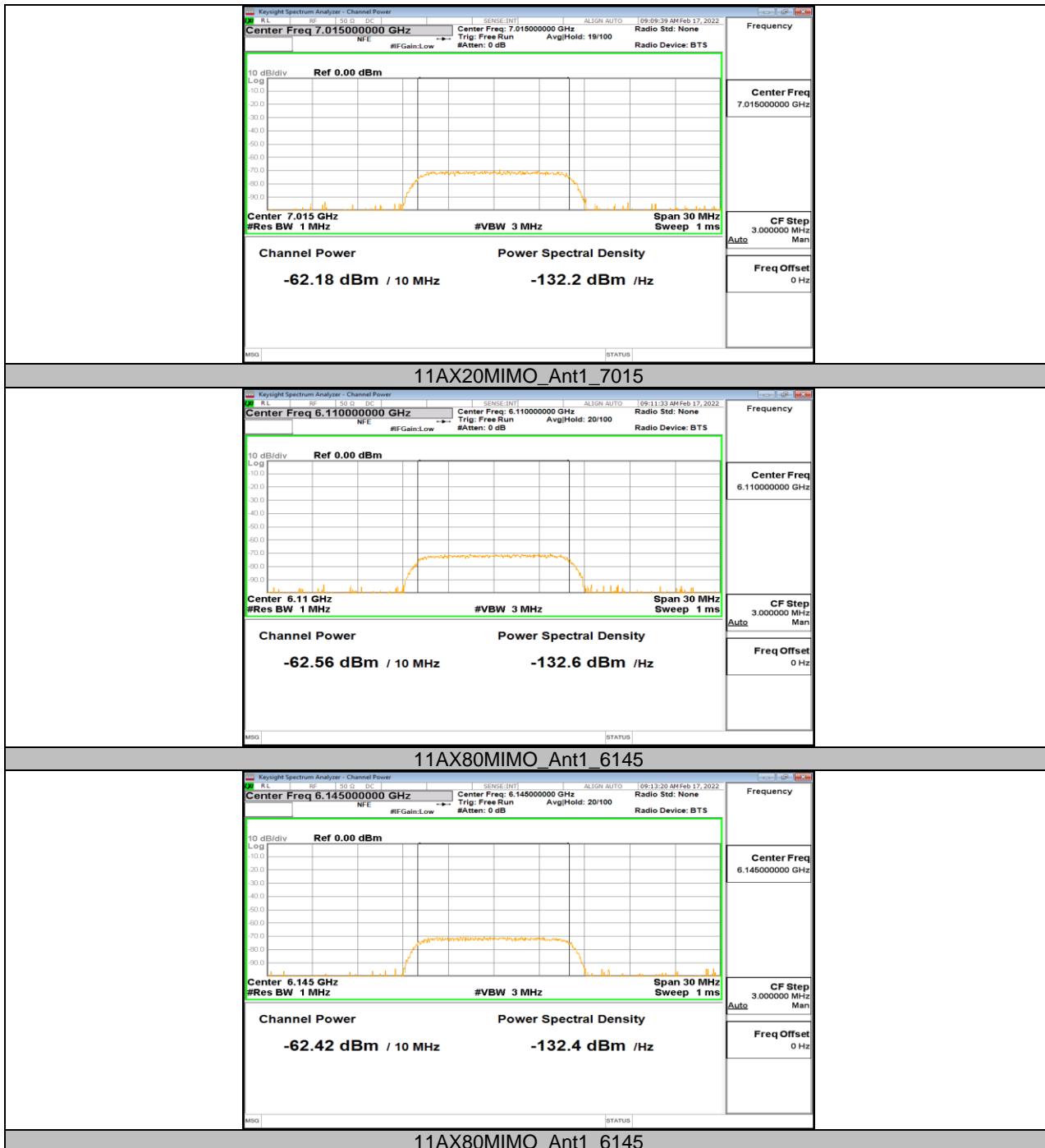
| Test Mode | Antenna | Channel | Interference Frequency [MHz] | | Test Time | Is Detected | Verdict |
|------------|---------|---------|------------------------------|------|-----------|-------------|---------|
| 11AX20MIMO | Ant1 | 6155 | Center | 6155 | 1 | Yes | PASS |
| | | | Center | 6155 | 2 | Yes | PASS |
| | | | Center | 6155 | 3 | Yes | PASS |
| | | | Center | 6155 | 4 | Yes | PASS |
| | | | Center | 6155 | 5 | Yes | PASS |
| | | | Center | 6155 | 6 | Yes | PASS |
| | | | Center | 6155 | 7 | Yes | PASS |
| | | | Center | 6155 | 8 | Yes | PASS |
| | | | Center | 6155 | 9 | Yes | PASS |
| | | | Center | 6155 | 10 | Yes | PASS |
| | | 6455 | Center | 6455 | 1 | Yes | PASS |
| | | | Center | 6455 | 2 | Yes | PASS |
| | | | Center | 6455 | 3 | Yes | PASS |
| | | | Center | 6455 | 4 | Yes | PASS |
| | | | Center | 6455 | 5 | Yes | PASS |
| | | | Center | 6455 | 6 | Yes | PASS |
| | | | Center | 6455 | 7 | No | FAIL |
| | | | Center | 6455 | 8 | Yes | PASS |
| | | | Center | 6455 | 9 | Yes | PASS |
| | | | Center | 6455 | 10 | Yes | PASS |
| 11AX80MIMO | Ant1 | 6615 | Center | 6615 | 1 | Yes | PASS |
| | | | Center | 6615 | 2 | Yes | PASS |
| | | | Center | 6615 | 3 | Yes | PASS |
| | | | Center | 6615 | 4 | Yes | PASS |
| | | | Center | 6615 | 5 | Yes | PASS |
| | | | Center | 6615 | 6 | Yes | PASS |
| | | | Center | 6615 | 7 | No | FAIL |
| | | | Center | 6615 | 8 | Yes | PASS |
| | | | Center | 6615 | 9 | Yes | PASS |
| | | | Center | 6615 | 10 | Yes | PASS |
| | | 7015 | Center | 7015 | 1 | Yes | PASS |
| | | | Center | 7015 | 2 | Yes | PASS |
| | | | Center | 7015 | 3 | Yes | PASS |
| | | | Center | 7015 | 4 | Yes | PASS |
| | | | Center | 7015 | 5 | Yes | PASS |
| | | | Center | 7015 | 6 | Yes | PASS |
| | | | Center | 7015 | 7 | Yes | PASS |
| | | | Center | 7015 | 8 | Yes | PASS |
| | | | Center | 7015 | 9 | Yes | PASS |
| | | | Center | 7015 | 10 | Yes | PASS |
| 11AX80MIMO | Ant1 | 6145 | High | 6110 | 1 | Yes | PASS |
| | | | High | 6110 | 2 | Yes | PASS |
| | | | High | 6110 | 3 | Yes | PASS |
| | | | High | 6110 | 4 | Yes | PASS |
| | | | High | 6110 | 5 | Yes | PASS |
| | | | High | 6110 | 6 | Yes | PASS |
| | | | High | 6110 | 7 | Yes | PASS |
| | | | High | 6110 | 8 | Yes | PASS |
| | | | High | 6110 | 9 | Yes | PASS |
| | | | High | 6110 | 10 | Yes | PASS |
| | | | Center | 6145 | 1 | Yes | PASS |
| | | | Center | 6145 | 2 | Yes | PASS |
| | | | Center | 6145 | 3 | Yes | PASS |
| | | | Center | 6145 | 4 | Yes | PASS |
| | | | Center | 6145 | 5 | Yes | PASS |
| | | | Center | 6145 | 6 | Yes | PASS |

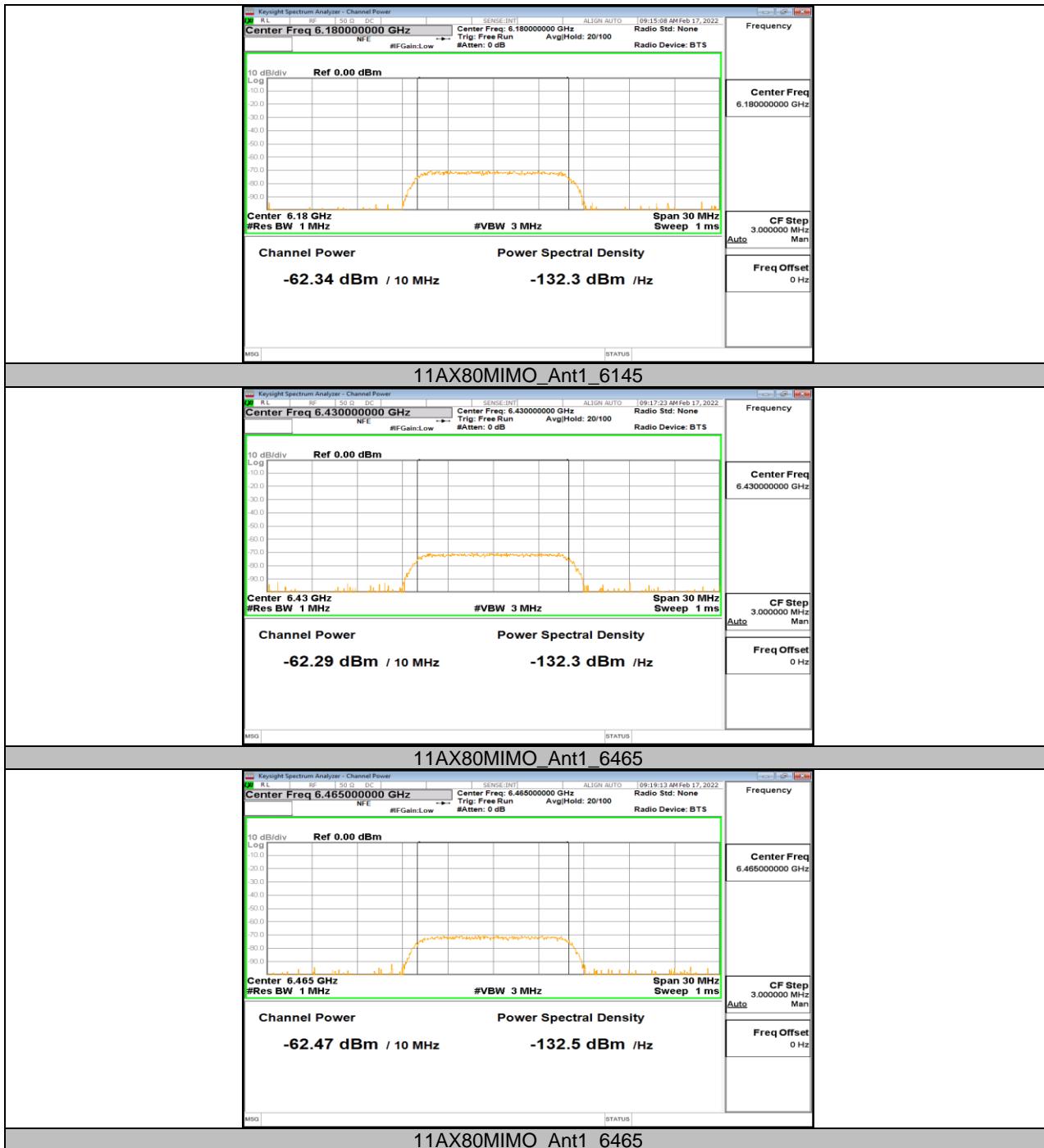
| | | | | | | | |
|--|--|------|--------|------|----|-----|------|
| | | | Center | 6145 | 7 | Yes | PASS |
| | | | Center | 6145 | 8 | Yes | PASS |
| | | | Center | 6145 | 9 | Yes | PASS |
| | | | Center | 6145 | 10 | Yes | PASS |
| | | | Low | 6180 | 1 | Yes | PASS |
| | | | Low | 6180 | 2 | Yes | PASS |
| | | | Low | 6180 | 3 | Yes | PASS |
| | | | Low | 6180 | 4 | Yes | PASS |
| | | | Low | 6180 | 5 | Yes | PASS |
| | | | Low | 6180 | 6 | Yes | PASS |
| | | | Low | 6180 | 7 | Yes | PASS |
| | | | Low | 6180 | 8 | Yes | PASS |
| | | | Low | 6180 | 9 | Yes | PASS |
| | | | Low | 6180 | 10 | Yes | PASS |
| | | | High | 6430 | 1 | Yes | PASS |
| | | | High | 6430 | 2 | Yes | PASS |
| | | | High | 6430 | 3 | Yes | PASS |
| | | | High | 6430 | 4 | Yes | PASS |
| | | | High | 6430 | 5 | Yes | PASS |
| | | | High | 6430 | 6 | Yes | PASS |
| | | | High | 6430 | 7 | Yes | PASS |
| | | | High | 6430 | 8 | Yes | PASS |
| | | | High | 6430 | 9 | Yes | PASS |
| | | | High | 6430 | 10 | Yes | PASS |
| | | 6465 | Center | 6465 | 1 | Yes | PASS |
| | | 6465 | Center | 6465 | 2 | Yes | PASS |
| | | 6465 | Center | 6465 | 3 | Yes | PASS |
| | | 6465 | Center | 6465 | 4 | Yes | PASS |
| | | 6465 | Center | 6465 | 5 | Yes | PASS |
| | | 6465 | Center | 6465 | 6 | Yes | PASS |
| | | 6465 | Center | 6465 | 7 | Yes | PASS |
| | | 6465 | Center | 6465 | 8 | Yes | PASS |
| | | 6465 | Center | 6465 | 9 | Yes | PASS |
| | | 6465 | Center | 6465 | 10 | Yes | PASS |
| | | | Low | 6500 | 1 | Yes | PASS |
| | | | Low | 6500 | 2 | Yes | PASS |
| | | | Low | 6500 | 3 | Yes | PASS |
| | | | Low | 6500 | 4 | Yes | PASS |
| | | | Low | 6500 | 5 | Yes | PASS |
| | | | Low | 6500 | 6 | Yes | PASS |
| | | | Low | 6500 | 7 | Yes | PASS |
| | | | Low | 6500 | 8 | Yes | PASS |
| | | | Low | 6500 | 9 | Yes | PASS |
| | | | Low | 6500 | 10 | Yes | PASS |
| | | 6705 | High | 6670 | 1 | Yes | PASS |
| | | 6705 | High | 6670 | 2 | Yes | PASS |
| | | 6705 | High | 6670 | 3 | Yes | PASS |
| | | 6705 | High | 6670 | 4 | Yes | PASS |
| | | 6705 | High | 6670 | 5 | Yes | PASS |
| | | 6705 | High | 6670 | 6 | Yes | PASS |
| | | 6705 | High | 6670 | 7 | Yes | PASS |
| | | 6705 | High | 6670 | 8 | Yes | PASS |
| | | 6705 | High | 6670 | 9 | Yes | PASS |
| | | 6705 | High | 6670 | 10 | Yes | PASS |
| | | | Center | 6705 | 1 | Yes | PASS |
| | | | Center | 6705 | 2 | Yes | PASS |
| | | | Center | 6705 | 3 | Yes | PASS |
| | | | Center | 6705 | 4 | Yes | PASS |
| | | | Center | 6705 | 5 | Yes | PASS |
| | | | Center | 6705 | 6 | Yes | PASS |
| | | | Center | 6705 | 7 | Yes | PASS |

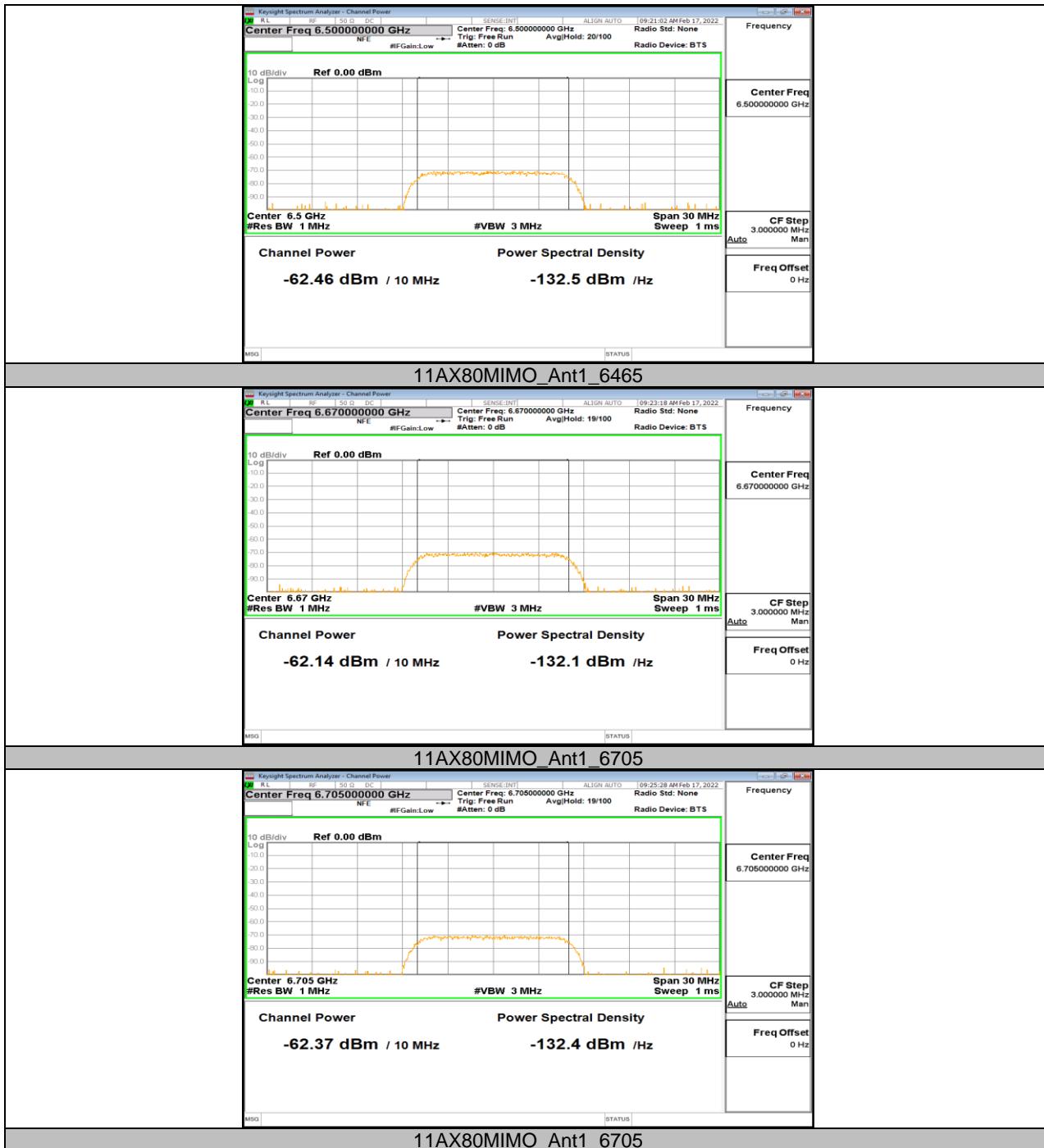
| | | | | | | |
|--|------|--------|------|----|-----|------|
| | | Center | 6705 | 8 | Yes | PASS |
| | | Center | 6705 | 9 | Yes | PASS |
| | | Center | 6705 | 10 | Yes | PASS |
| | | Low | 6740 | 1 | Yes | PASS |
| | | Low | 6740 | 2 | Yes | PASS |
| | | Low | 6740 | 3 | Yes | PASS |
| | | Low | 6740 | 4 | Yes | PASS |
| | | Low | 6740 | 5 | Yes | PASS |
| | | Low | 6740 | 6 | Yes | PASS |
| | | Low | 6740 | 7 | Yes | PASS |
| | | Low | 6740 | 8 | Yes | PASS |
| | | Low | 6740 | 9 | Yes | PASS |
| | | Low | 6740 | 10 | Yes | PASS |
| | 6945 | High | 6910 | 1 | Yes | PASS |
| | | High | 6910 | 2 | Yes | PASS |
| | | High | 6910 | 3 | Yes | PASS |
| | | High | 6910 | 4 | Yes | PASS |
| | | High | 6910 | 5 | Yes | PASS |
| | | High | 6910 | 6 | Yes | PASS |
| | | High | 6910 | 7 | Yes | PASS |
| | | High | 6910 | 8 | Yes | PASS |
| | | High | 6910 | 9 | Yes | PASS |
| | | High | 6910 | 10 | Yes | PASS |
| | | Center | 6945 | 1 | Yes | PASS |
| | | Center | 6945 | 2 | Yes | PASS |
| | | Center | 6945 | 3 | Yes | PASS |
| | | Center | 6945 | 4 | Yes | PASS |
| | | Center | 6945 | 5 | Yes | PASS |
| | | Center | 6945 | 6 | Yes | PASS |
| | | Center | 6945 | 7 | Yes | PASS |
| | | Center | 6945 | 8 | Yes | PASS |
| | | Center | 6945 | 9 | Yes | PASS |
| | | Center | 6945 | 10 | Yes | PASS |
| | | Low | 6980 | 1 | Yes | PASS |
| | | Low | 6980 | 2 | Yes | PASS |
| | | Low | 6980 | 3 | Yes | PASS |
| | | Low | 6980 | 4 | Yes | PASS |
| | | Low | 6980 | 5 | Yes | PASS |
| | | Low | 6980 | 6 | Yes | PASS |
| | | Low | 6980 | 7 | Yes | PASS |
| | | Low | 6980 | 8 | Yes | PASS |
| | | Low | 6980 | 9 | Yes | PASS |
| | | Low | 6980 | 10 | Yes | PASS |

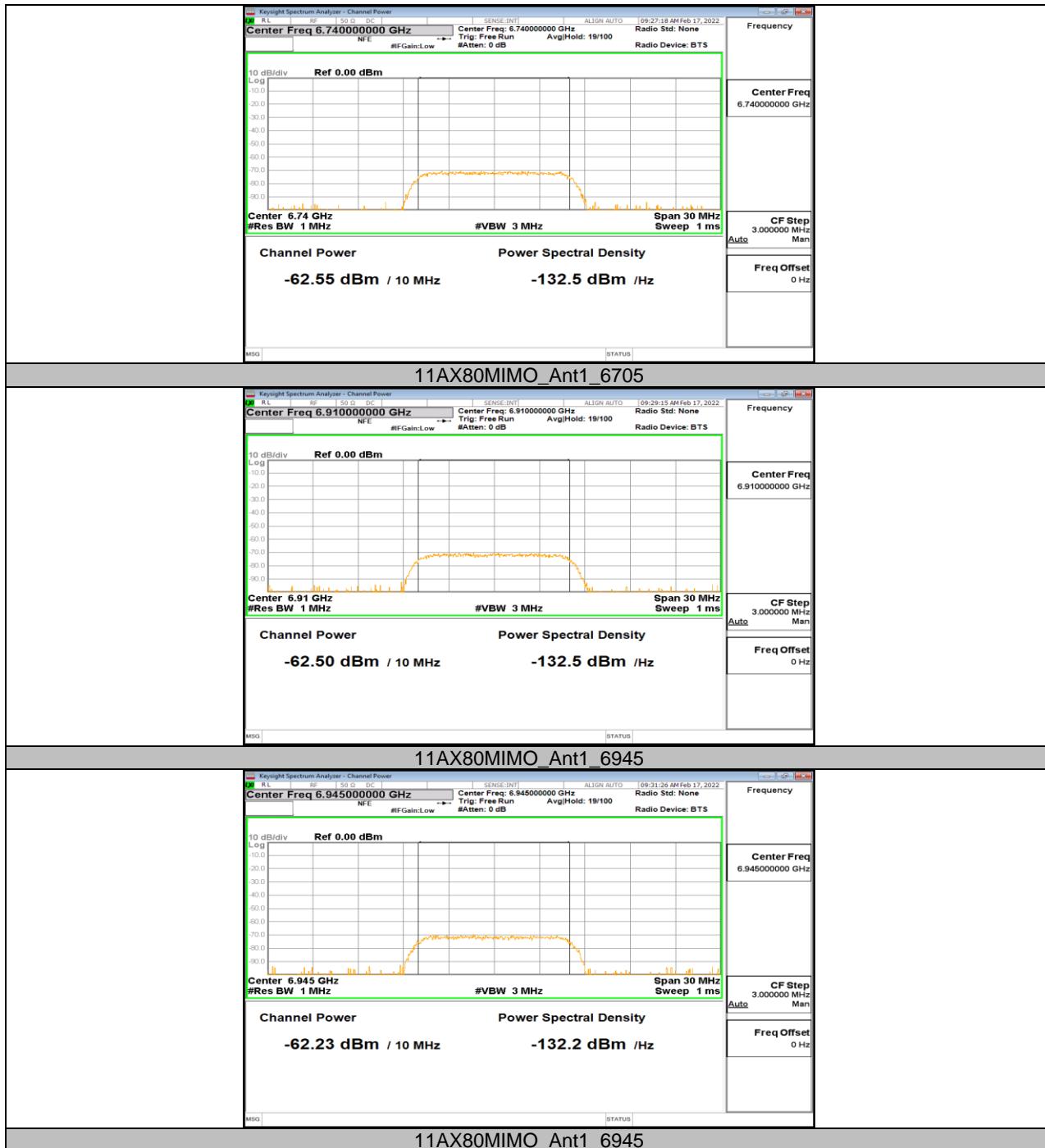
12.8.1. Test Graphs

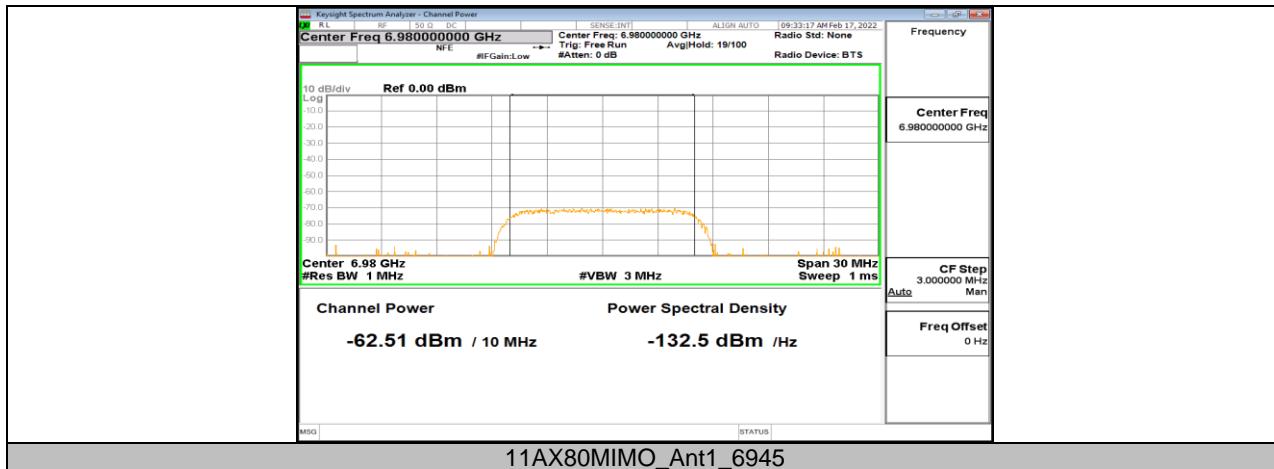








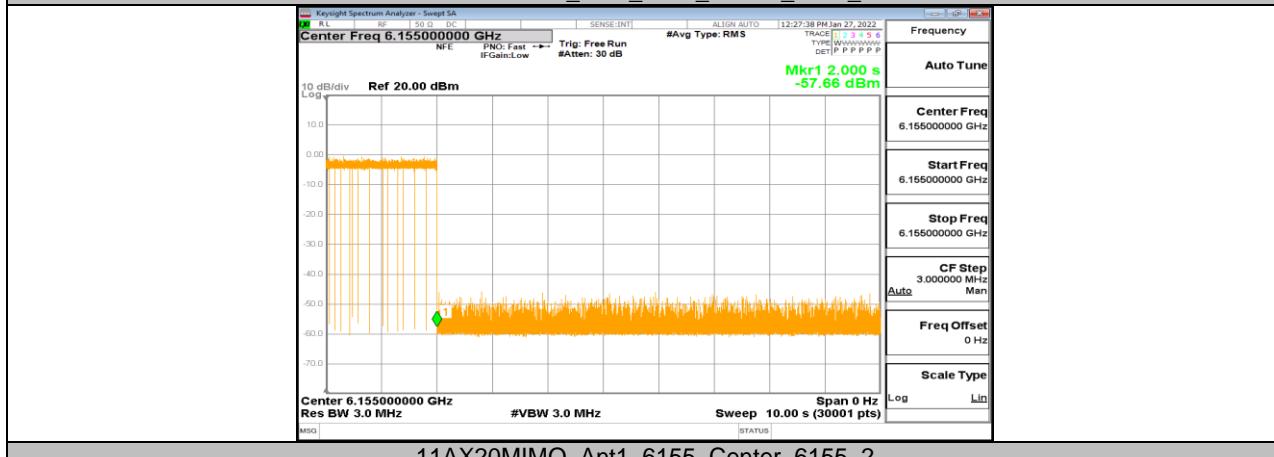




11AX80MIMO_Ant1_6945



11AX20MIMO_Ant1_6155_Center_6155_1



11AX20MIMO_Ant1_6155_Center_6155_2





