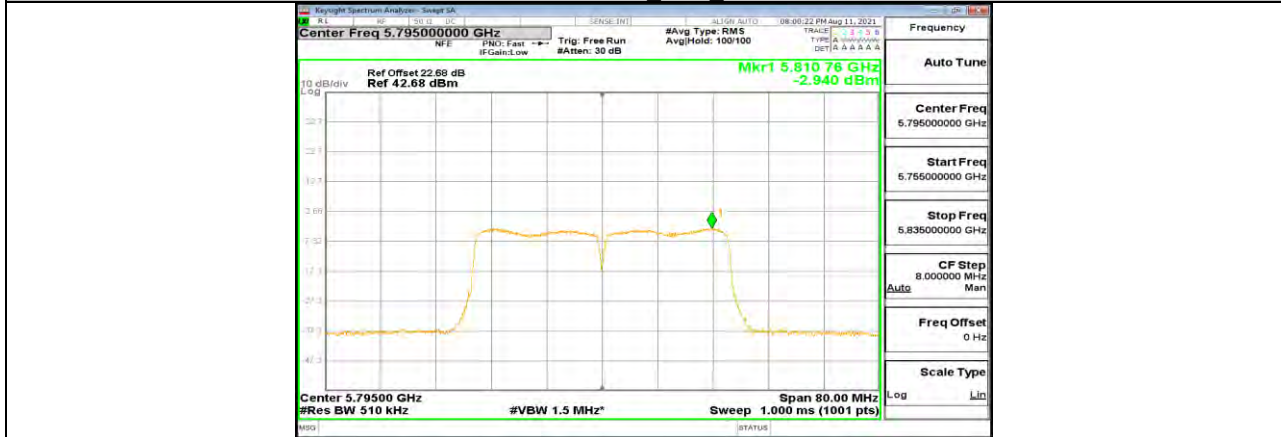


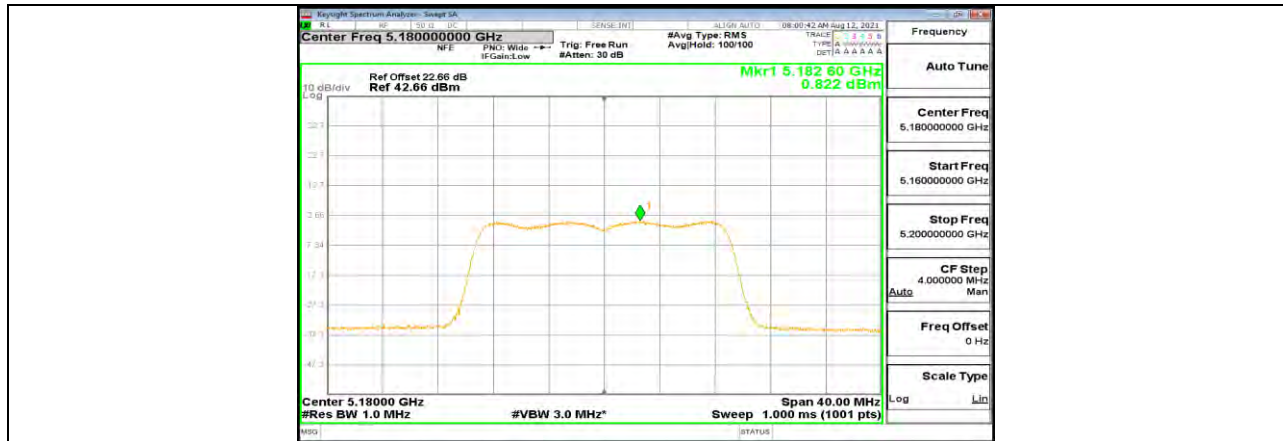
11N40MIMO Ant2 5755



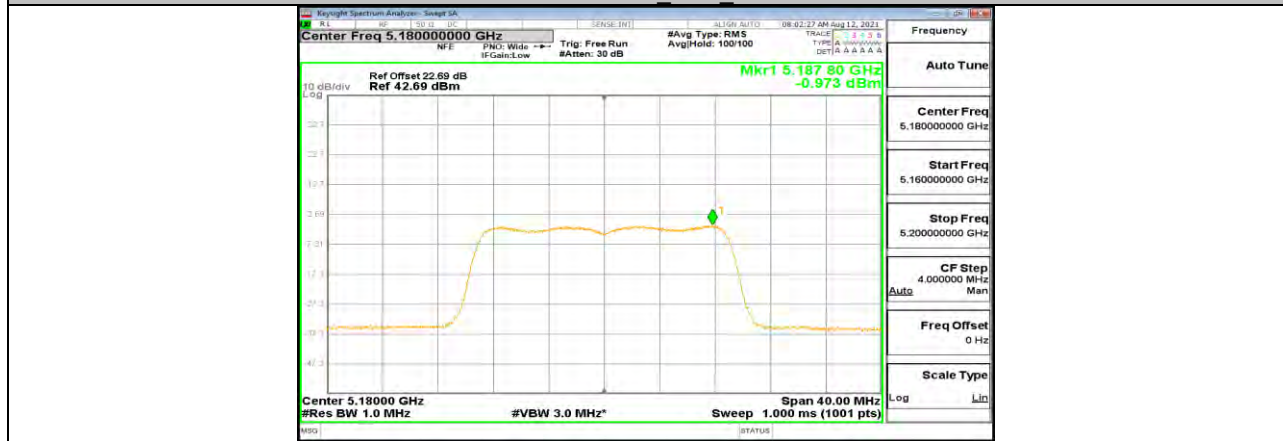
11N40MIMO Ant1 5795



11N40MIMO Ant2 5795



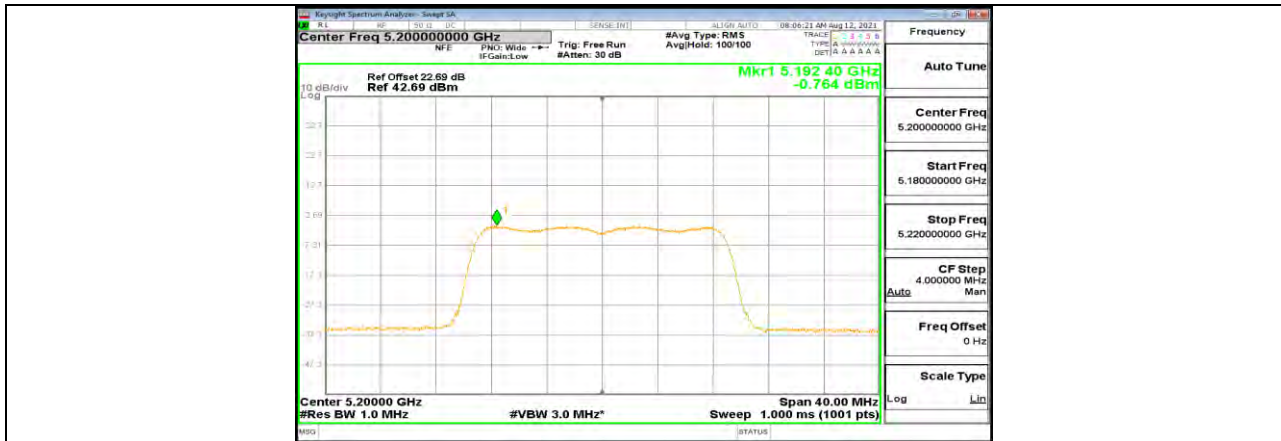
11AC20MIMO Ant1 5180



11AC20MIMO Ant2 5180



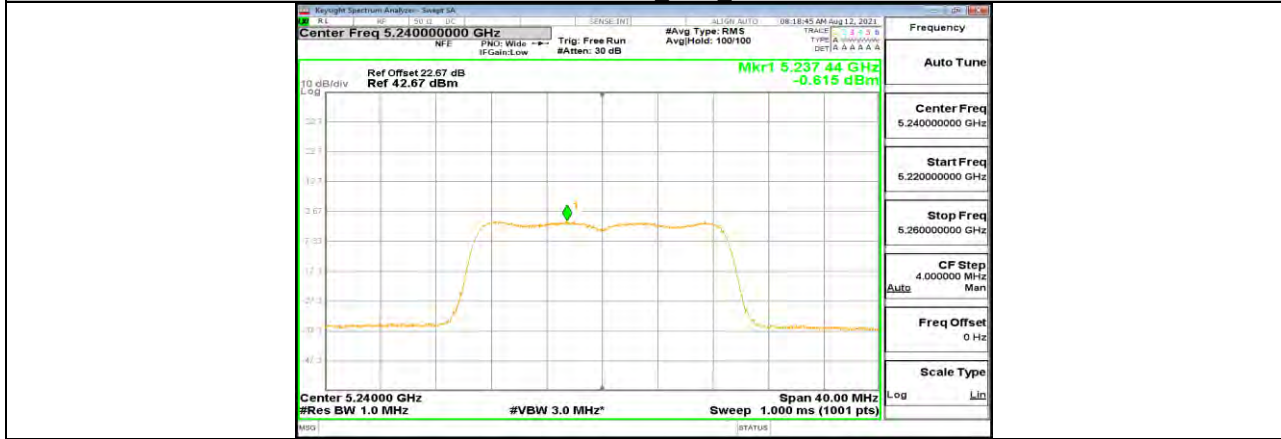
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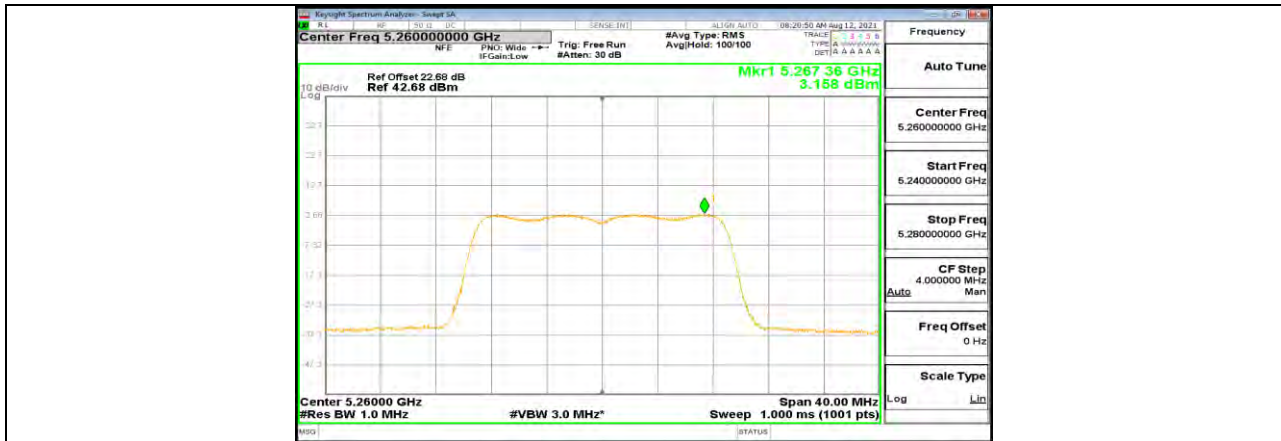
11AC20MIMO_Ant2_5200



11AC20MIMO_Ant1_5240



11AC20MIMO_Ant2_5240



11AC20MIMO Ant1 5260



11AC20MIMO Ant2 5260



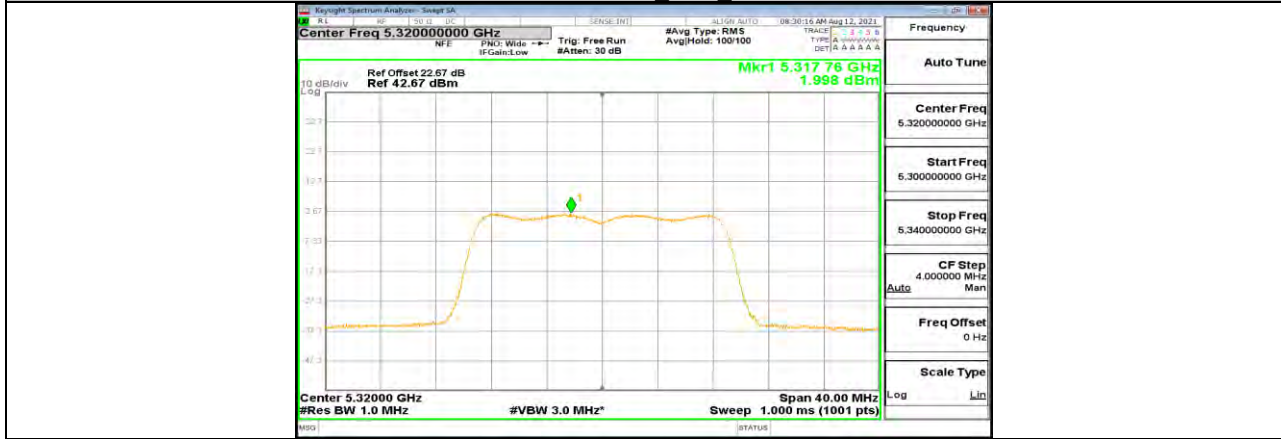
11AC20MIMO Ant1 5280



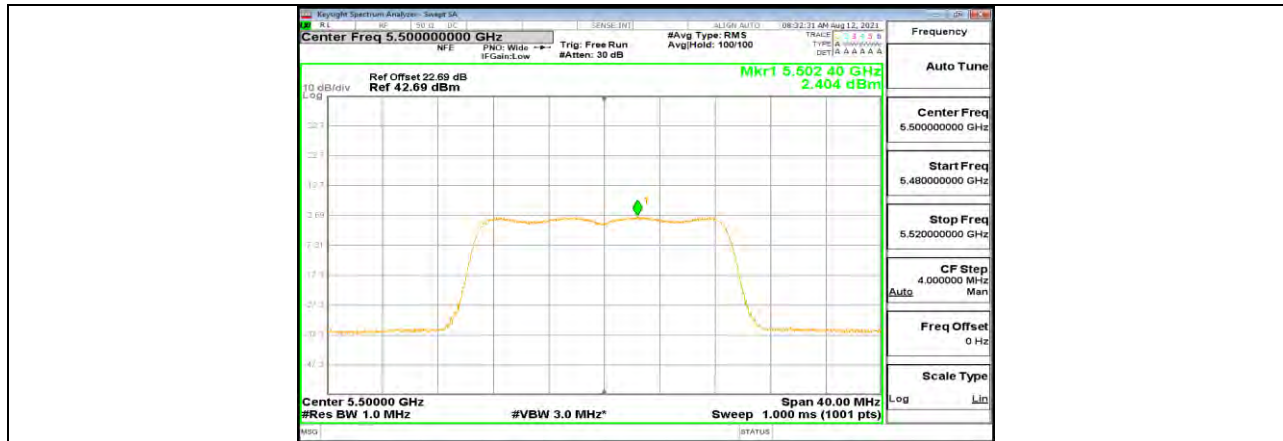
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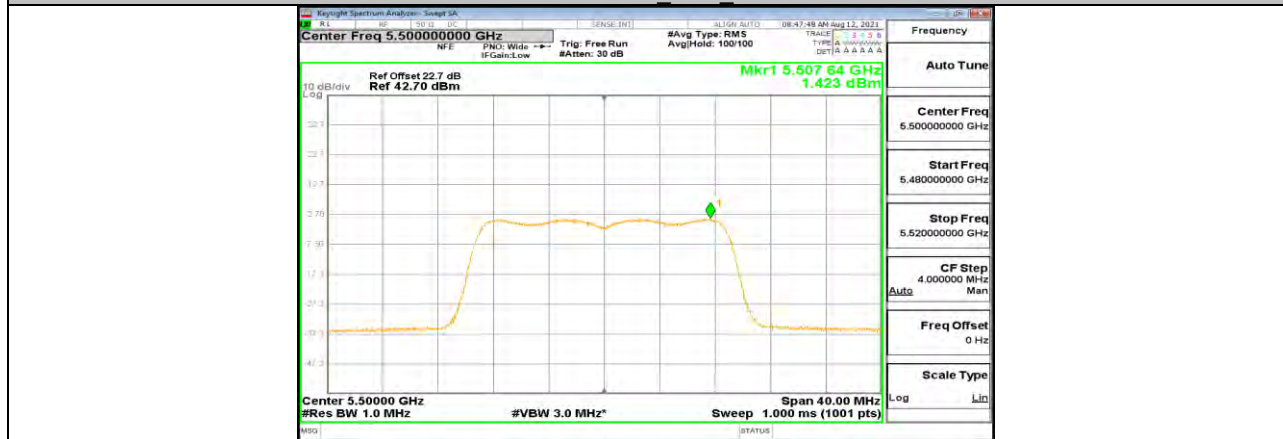
11AC20MIMO_Ant1_5320



11AC20MIMO_Ant2_5320



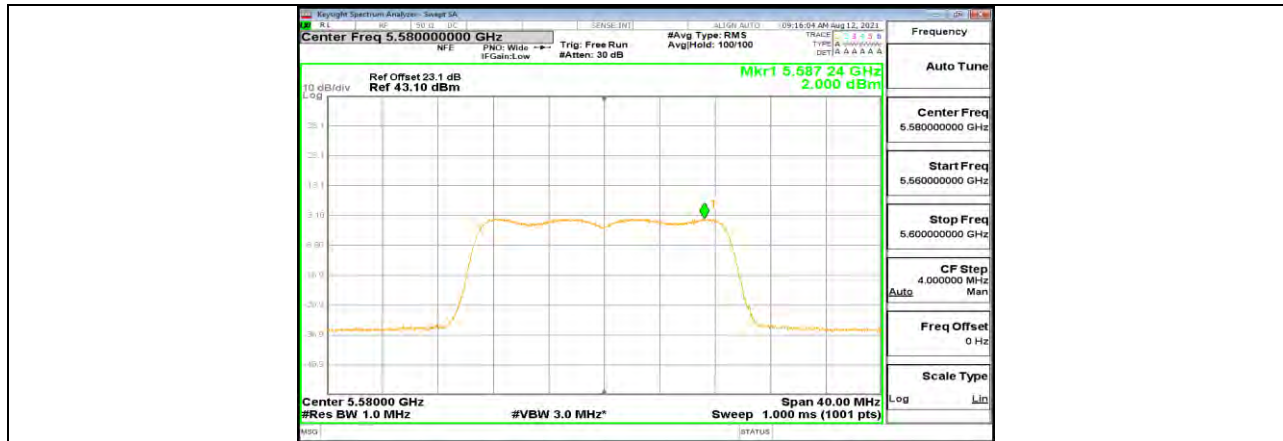
11AC20MIMO Ant1 5500



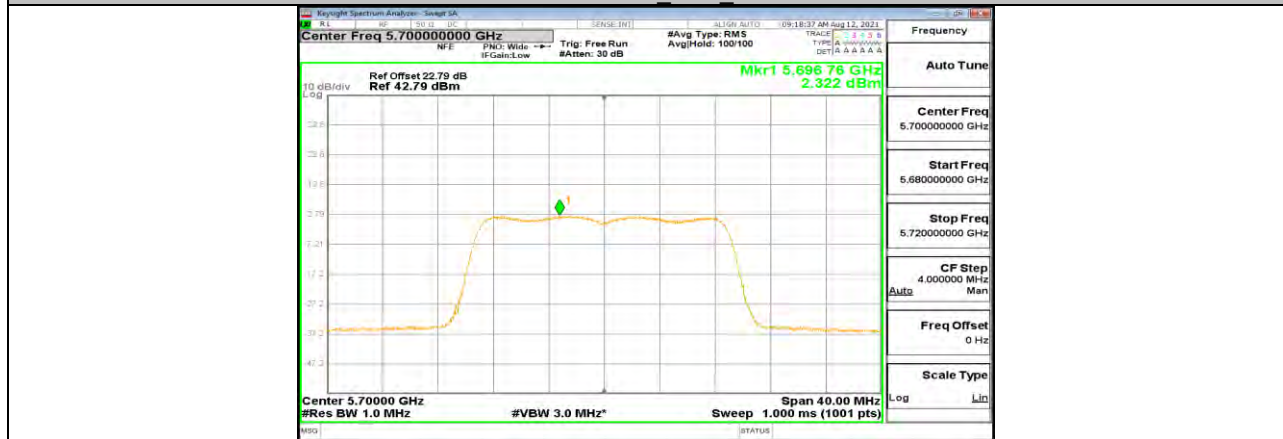
11AC20MIMO Ant2 5500



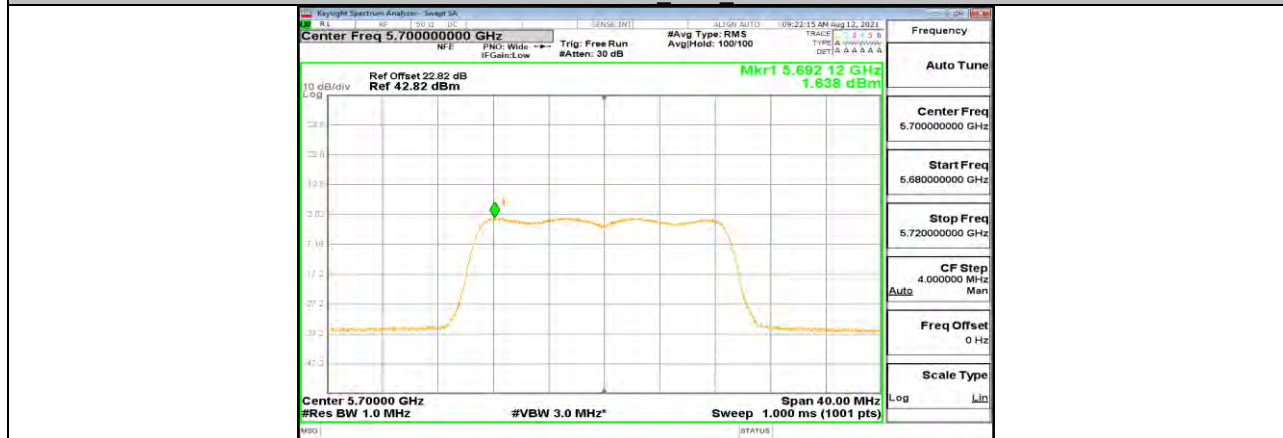
11AC20MIMO Ant1 5580



11AC20MIMO_Ant2_5580



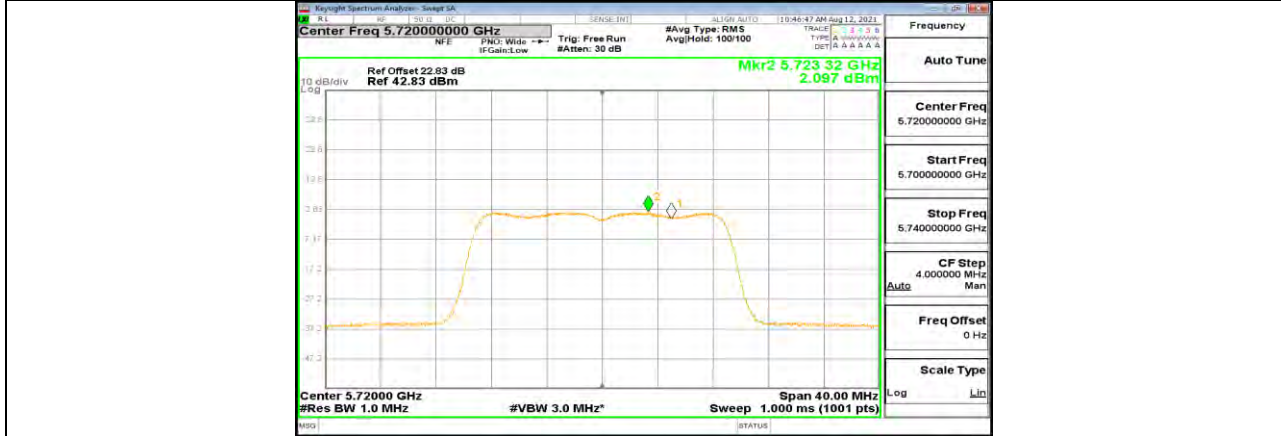
11AC20MIMO_Ant1_5700



11AC20MIMO_Ant2_5700



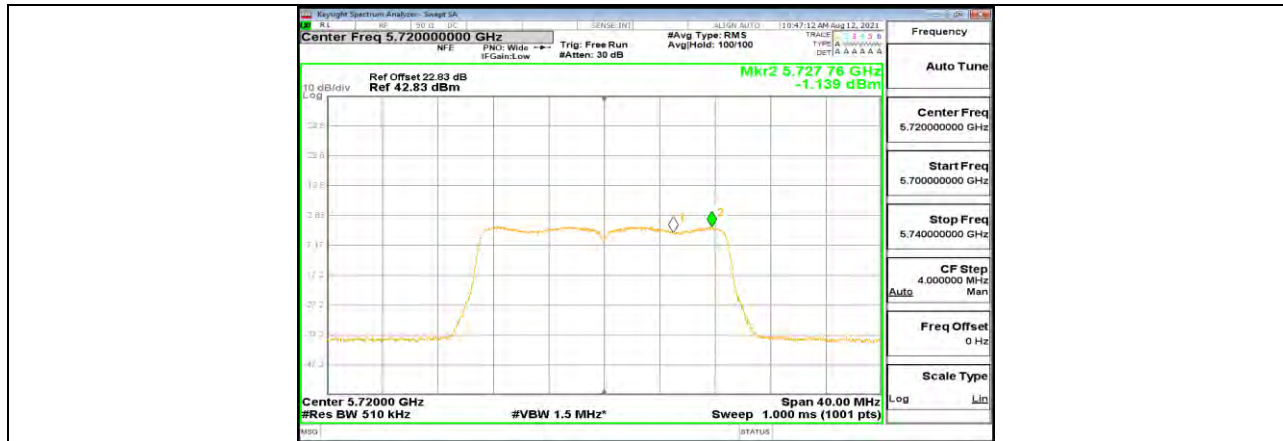
11AC20MIMO Ant1 5720 UNII-2C



11AC20MIMO Ant2 5720 UNII-2C



11AC20MIMO Ant1 5720 UNII-3



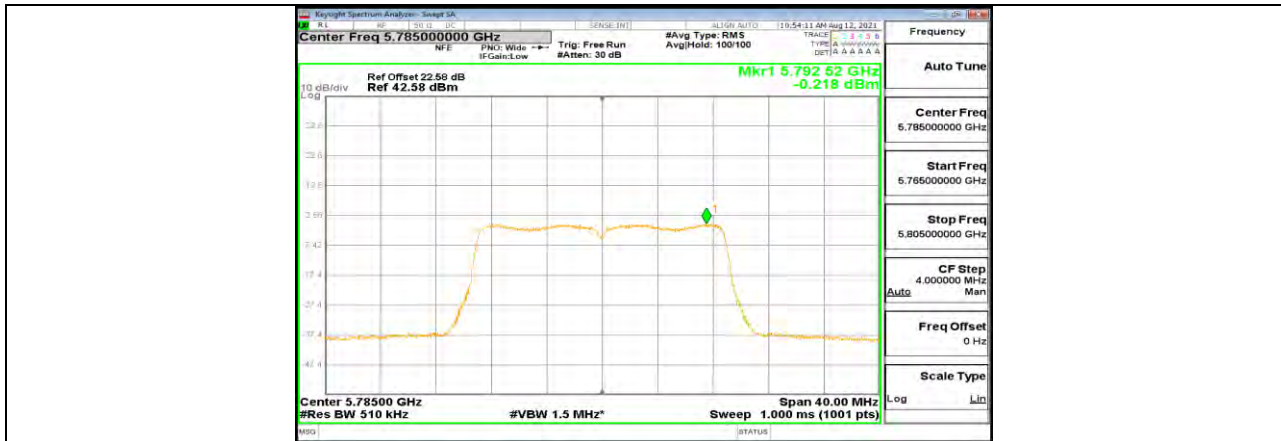
11AC20MIMO Ant2 5720 UNII-3



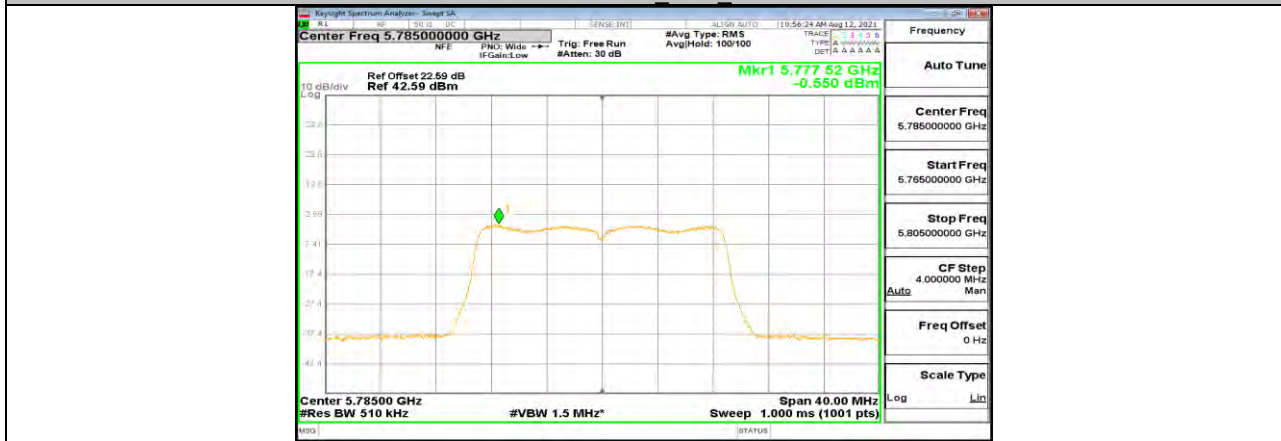
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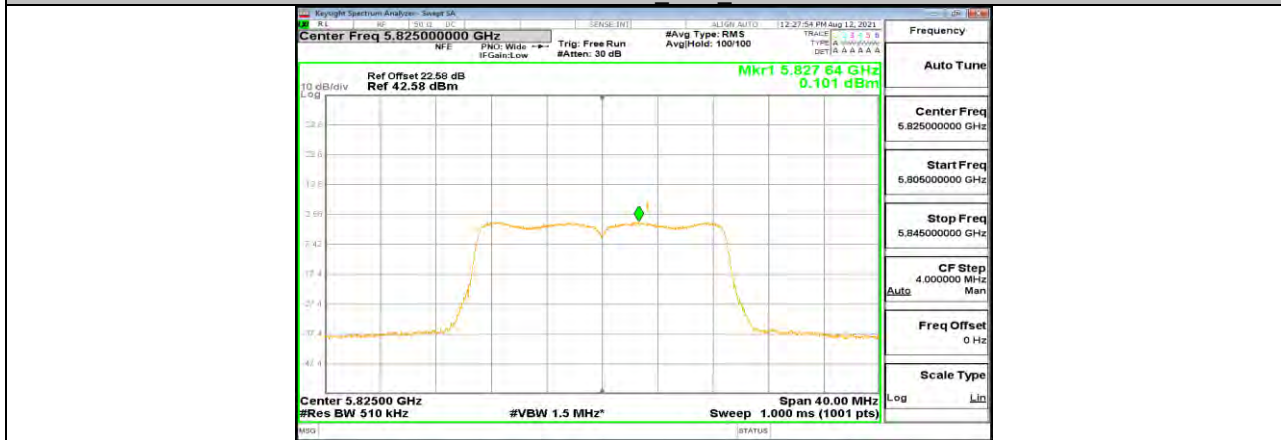
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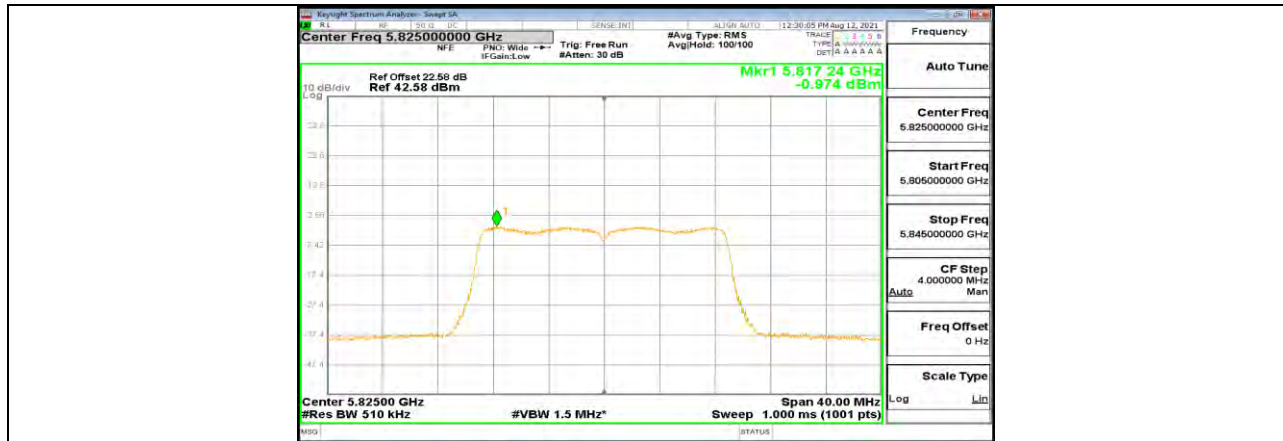
11AC20MIMO Ant1 5785

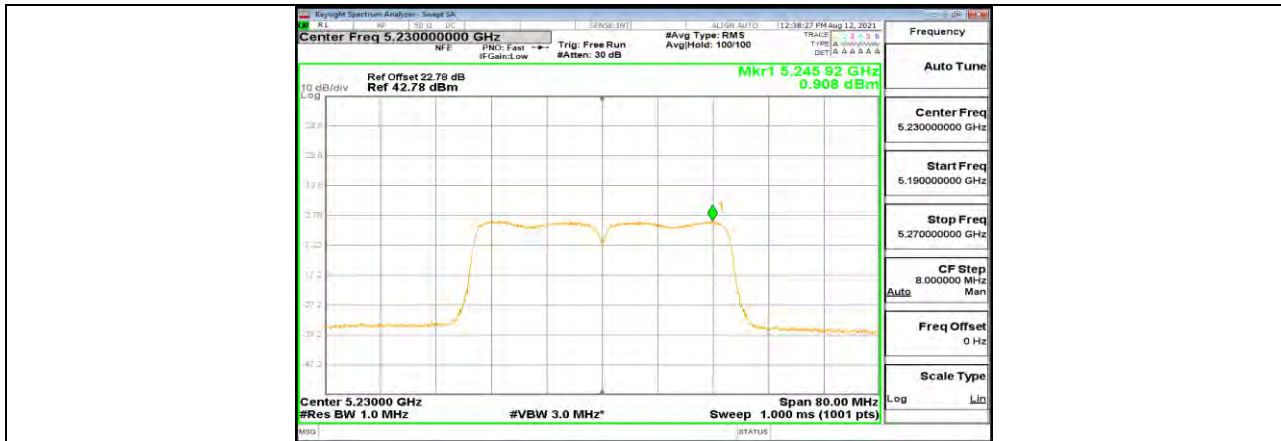


11AC20MIMO Ant2 5785



11AC20MIMO Ant1 5825

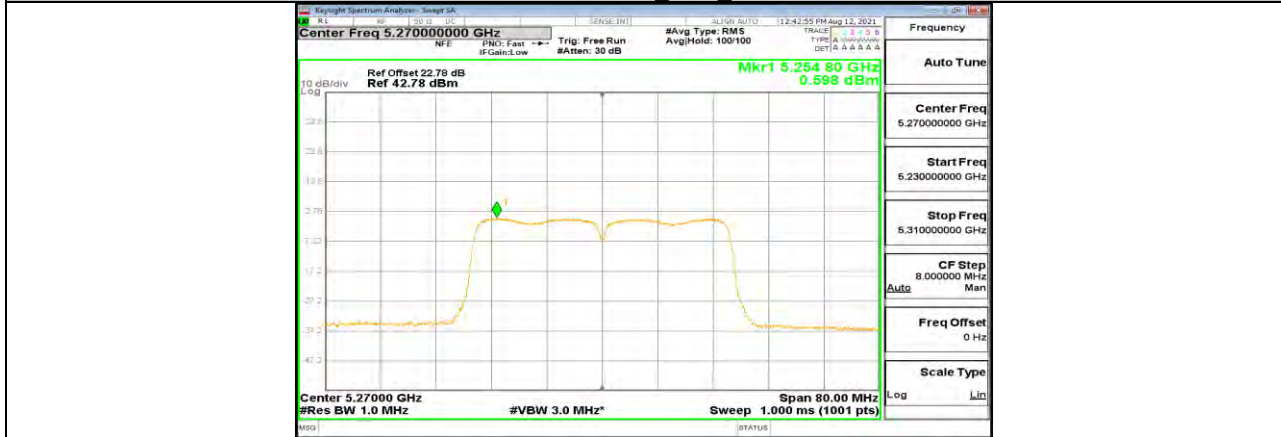




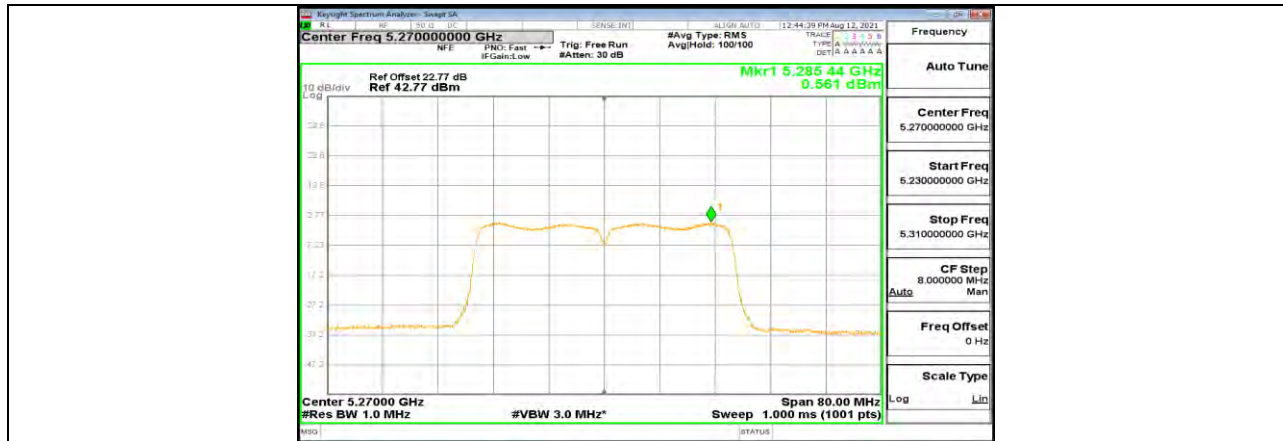
11AC40MIMO Ant1 5230



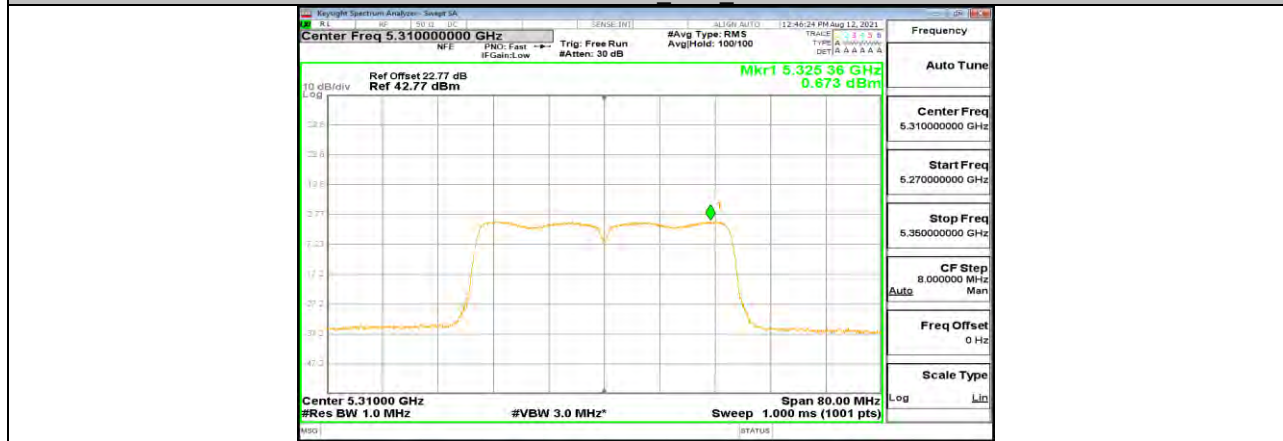
11AC40MIMO Ant2 5230



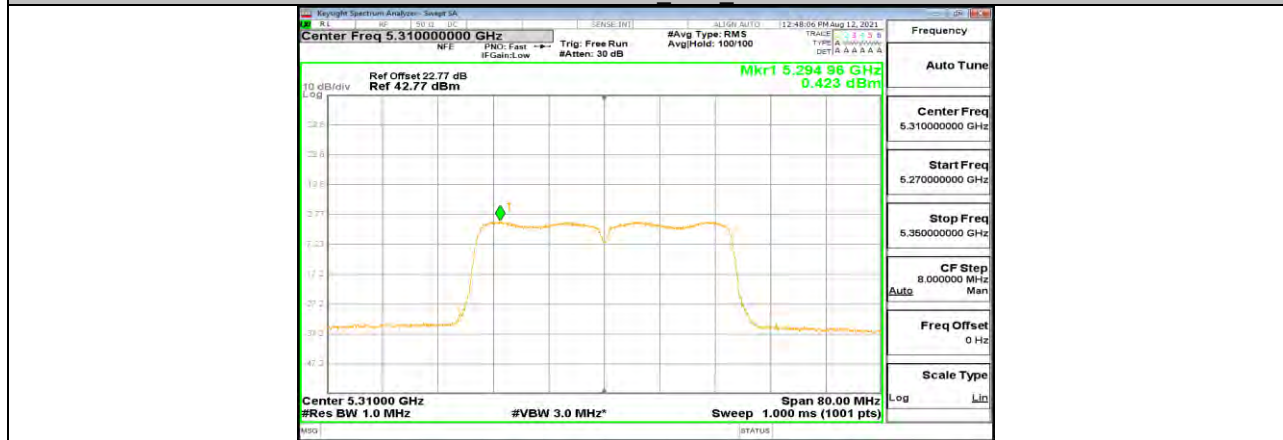
11AC40MIMO Ant1 5270



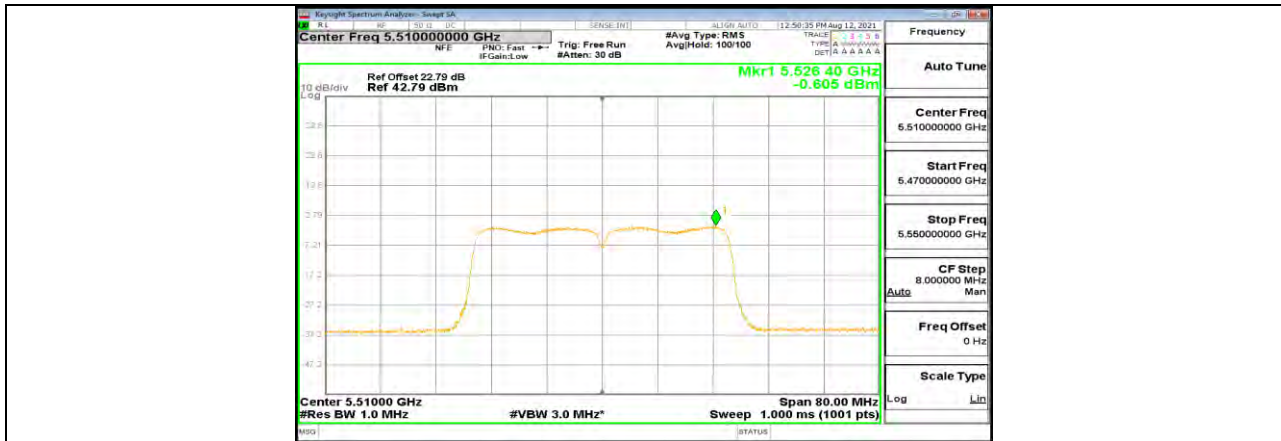
11AC40MIMO_Ant2_5270



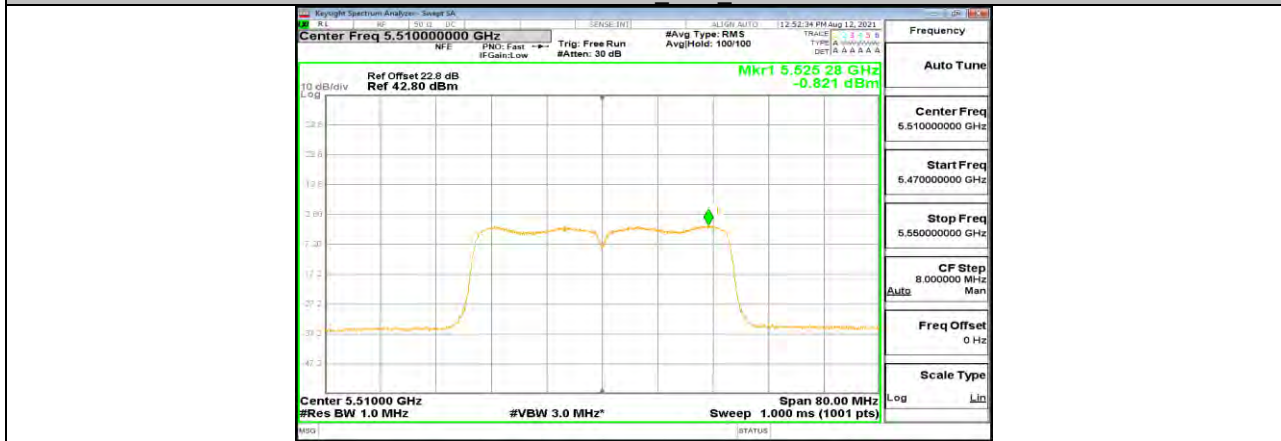
11AC40MIMO_Ant1_5310



11AC40MIMO_Ant2_5310



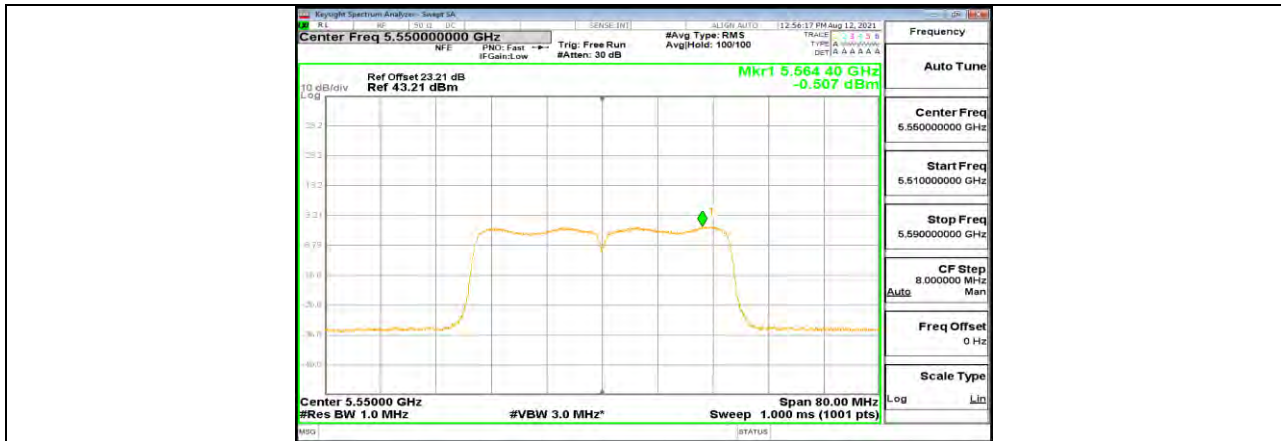
11AC40MIMO Ant1 5510



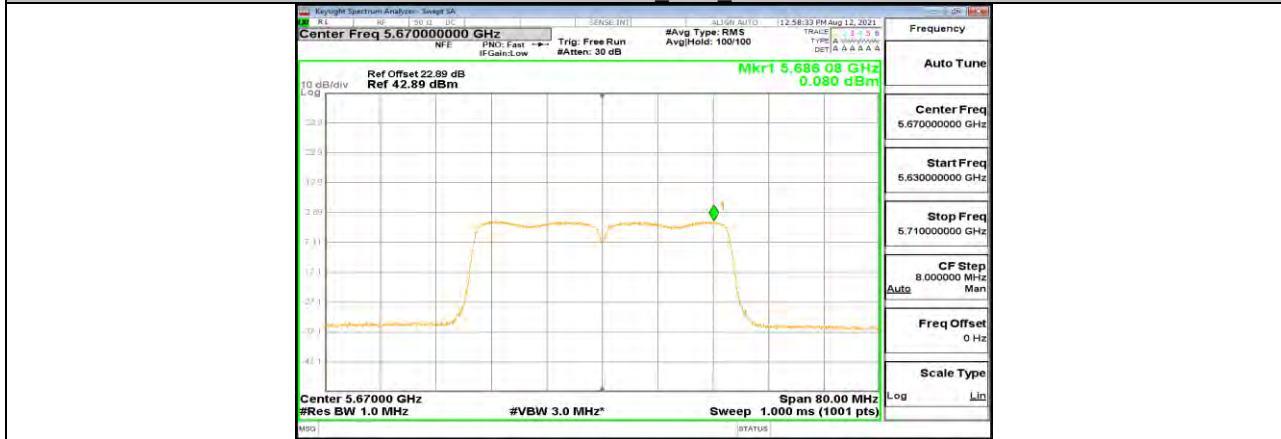
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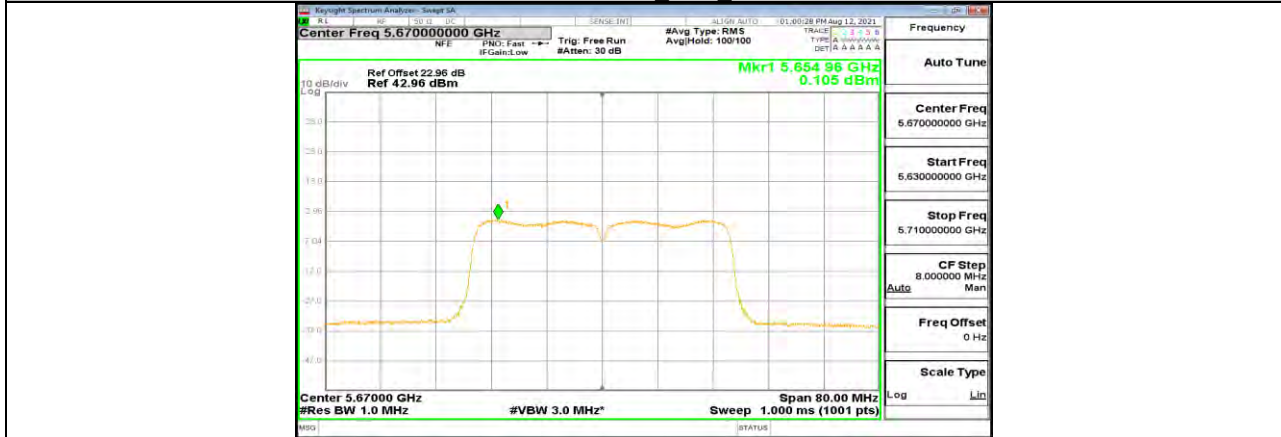
11AC40MIMO Ant1 5550



11AC40MIMO_Ant2_5550



11AC40MIMO_Ant1_5670



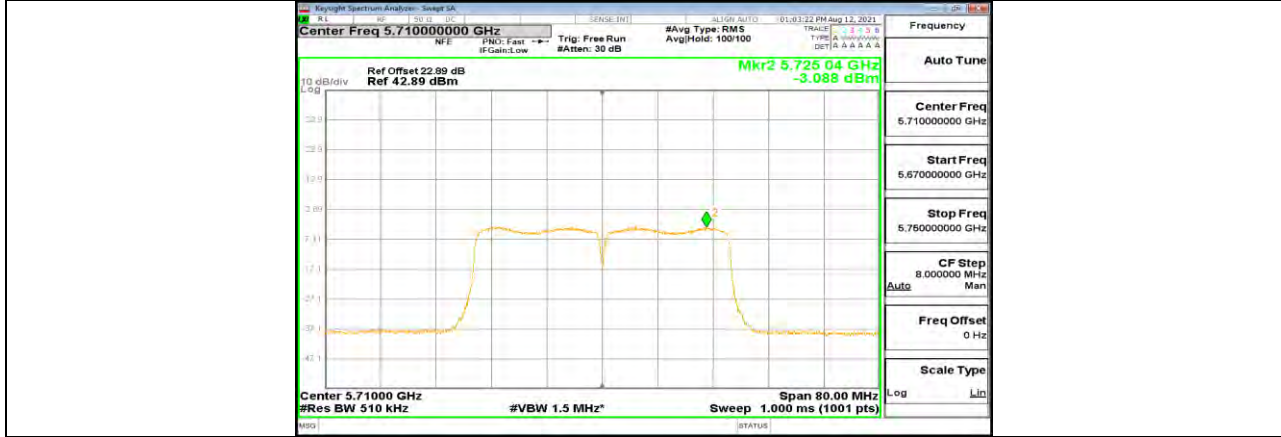
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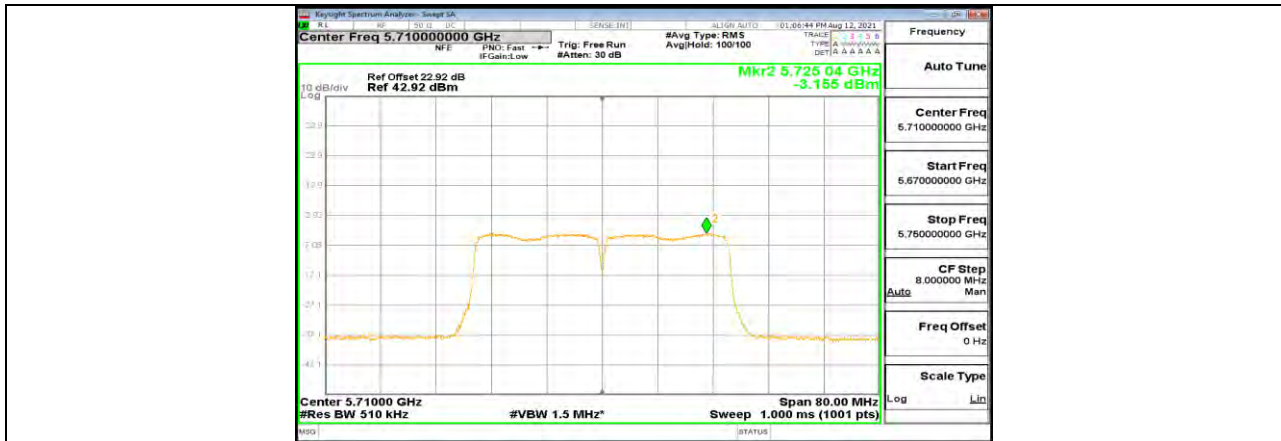
11AC40MIMO Ant1 5710 UNII-2C



11AC40MIMO Ant2 5710 UNII-2C



11AC40MIMO Ant1 5710 UNII-3



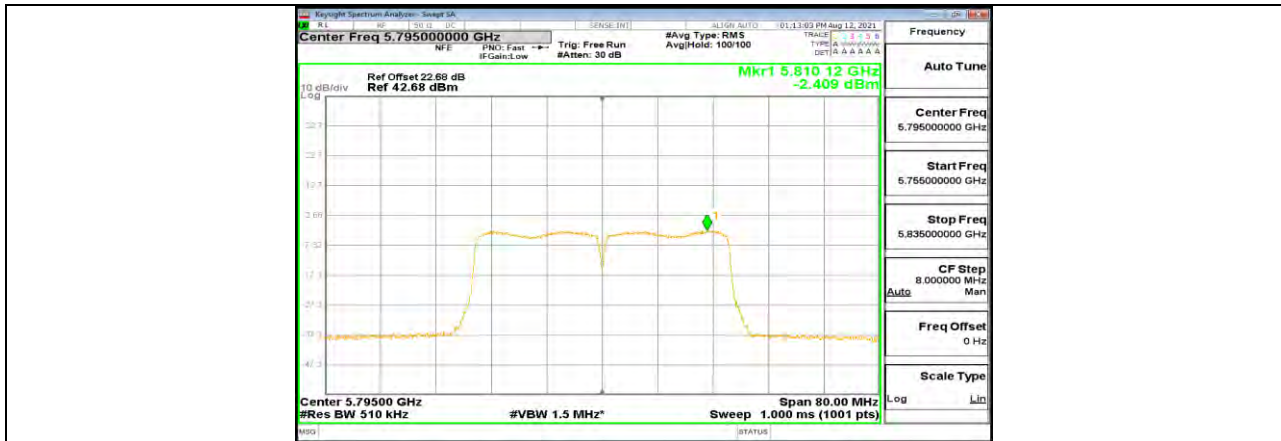
11AC40MIMO Ant2 5710 UNII-3



11AC40MIMO Ant1 5755



11AC40MIMO Ant2 5755



11AC40MIMO Ant1 5795



11AC40MIMO Ant2 5795



11AC80MIMO Ant1 5210



11AC80MIMO_Ant2_5210



11AC80MIMO_Ant1_5290



11AC80MIMO_Ant2_5290



11AC80MIMO Ant1 5530



11AC80MIMO Ant2 5530



11AC80MIMO Ant1 5610



11AC80MIMO Ant2_5610



11AC80MIMO Ant1_5690 UNII-2C



11AC80MIMO Ant2_5690 UNII-2C



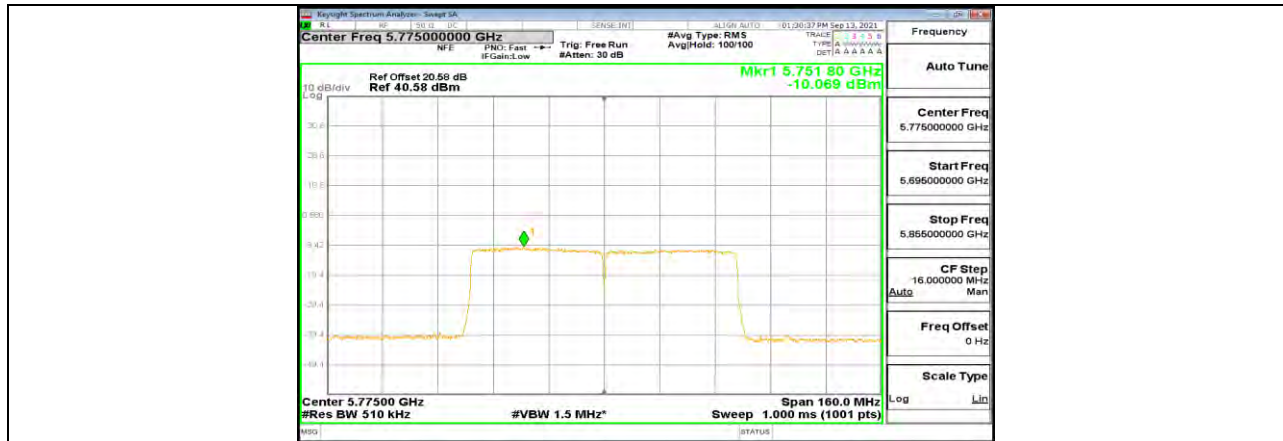
11AC80MIMO Ant1 5690 UNII-3



11AC80MIMO Ant2 5690 UNII-3



11AC80MIMO Ant1 5775



11AC80MIMO_Ant2_5775



12.6. Appendix D: Duty Cycle

12.6.1. Test Result

| Mode | On Time (msec) | Period (msec) | Duty Cycle x (Linear) | Duty Cycle (%) | Duty Cycle Correction Factor (dB) | 1/T Minimum VBW (kHz) | Final setting For VBW (kHz) |
|------------|----------------|---------------|-----------------------|----------------|-----------------------------------|-----------------------|-----------------------------|
| 11A20 | 3.11 | 3.21 | 0.9688 | 96.88 | 0.14 | 0.32 | 1 |
| 11N20MIMO | 4.76 | 4.87 | 0.9774 | 97.74 | 0.10 | 0.21 | 1 |
| 11N40MIMO | 2.32 | 2.42 | 0.9587 | 95.87 | 0.18 | 0.43 | 1 |
| 11AC20MIMO | 4.78 | 4.88 | 0.9795 | 97.95 | 0.09 | 0.21 | 1 |
| 11AC40MIMO | 2.33 | 2.42 | 0.9628 | 96.28 | 0.16 | 0.43 | 1 |
| 11AC80MIMO | 1.09 | 1.19 | 0.9160 | 91.60 | 0.38 | 0.92 | 1 |

Note:

Duty Cycle Correction Factor=10log (1/x).

Where: x is Duty Cycle (Linear)

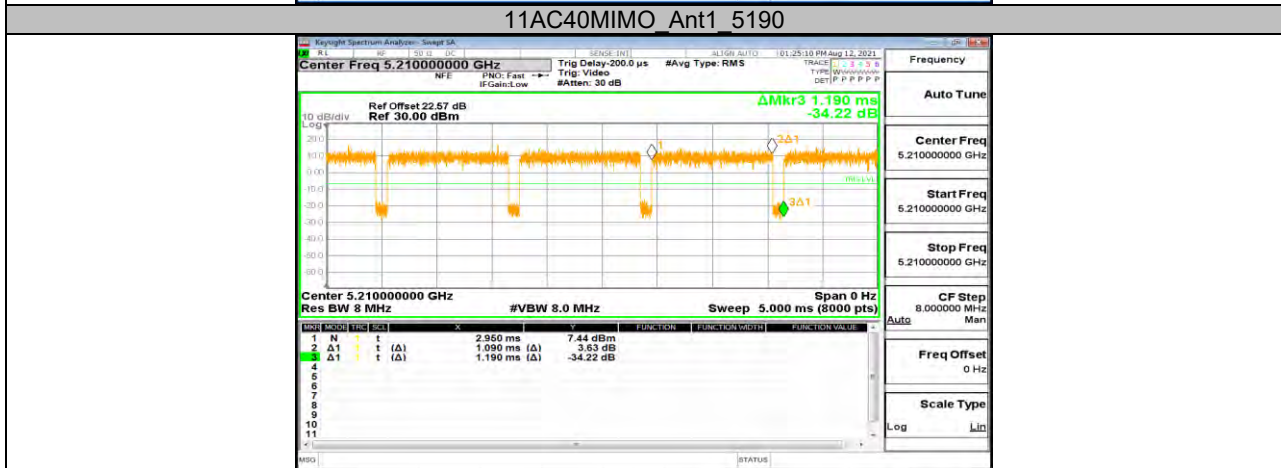
Where: T is On Time

If that calculated VBW is not available on the analyzer then the next higher value should be used.



12.6.2. Test Graphs





**12.7. Appendix E: Frequency Stability****12.7.1. Test Result**

| Frequency Error vs. Voltage | | | | | | | | | |
|---------------------------------|-------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|
| 802.11a20:5200MHz | | | | | | | | | |
| Temp. | Volt. | 0 Minute | | 2 Minute | | 5 Minute | | 10 Minute | |
| | | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) |
| TN | VL | 5200.0096 | 1.84 | 5200.0105 | 2.02 | 5199.9805 | -3.75 | 5200.0235 | 4.52 |
| TN | VN | 5200.0071 | 1.36 | 5199.9967 | -0.64 | 5199.9967 | -0.63 | 5199.9865 | -2.59 |
| TN | VH | 5200.0232 | 4.45 | 5199.9851 | -2.86 | 5200.0123 | 2.37 | 5200.0202 | 3.89 |
| Frequency Error vs. Temperature | | | | | | | | | |
| 802.11a:5200MHz | | | | | | | | | |
| Temp. | Volt. | 0 Minute | | 2 Minute | | 5 Minute | | 10 Minute | |
| | | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) |
| 85 | VN | 5200.0082 | 1.57 | 5200.0194 | 3.74 | 5200.0123 | 2.36 | 5200.0182 | 3.50 |
| 80 | VN | 5200.0123 | 2.36 | 5199.9993 | -0.13 | 5199.9840 | -3.08 | 5199.9880 | -2.31 |
| 70 | VN | 5200.0027 | 0.52 | 5199.9999 | -0.01 | 5199.9971 | -0.55 | 5199.9809 | -3.67 |
| 60 | VN | 5200.0204 | 3.92 | 5200.0097 | 1.87 | 5199.9931 | -1.33 | 5199.9885 | -2.22 |
| 50 | VN | 5199.9938 | -1.20 | 5199.9754 | -4.74 | 5199.9875 | -2.41 | 5199.9796 | -3.93 |
| 40 | VN | 5199.9857 | -2.75 | 5199.9881 | -2.29 | 5199.9869 | -2.52 | 5199.9798 | -3.88 |
| 30 | VN | 5200.0131 | 2.52 | 5199.9934 | -1.27 | 5199.9962 | -0.73 | 5200.0151 | 2.91 |
| 20 | VN | 5200.0205 | 3.94 | 5199.9906 | -1.81 | 5200.0240 | 4.62 | 5199.9811 | -3.63 |
| 10 | VN | 5199.9978 | -0.41 | 5200.0178 | 3.42 | 5200.0219 | 4.22 | 5200.0027 | 0.53 |
| 0 | VN | 5200.0176 | 3.38 | 5199.9777 | -4.28 | 5199.9841 | -3.05 | 5200.0243 | 4.68 |
| -10 | VN | 5200.0029 | 0.56 | 5199.9940 | -1.15 | 5200.0024 | 0.46 | 5199.9887 | -2.18 |
| -20 | VN | 5200.0200 | 3.84 | 5199.9995 | -0.09 | 5199.9830 | -3.27 | 5200.0233 | 4.49 |
| -30 | VN | 5199.9920 | -1.53 | 5200.0042 | 0.81 | 5199.9977 | -0.44 | 5199.9779 | -4.24 |



| Frequency Error vs. Voltage | | | | | | | | | |
|-----------------------------|-------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|
| 802.11a:5825MHz | | | | | | | | | |
| Temp. | Volt. | 0 Minute | | 2 Minute | | 5 Minute | | 10 Minute | |
| | | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) |
| TN | VL | 5824.9991 | -0.16 | 5824.9859 | -2.42 | 5825.0207 | 3.56 | 5825.0200 | 3.43 |
| TN | VN | 5824.9995 | -0.08 | 5825.0120 | 2.06 | 5824.9988 | -0.21 | 5825.0079 | 1.35 |
| TN | VH | 5825.0159 | 2.73 | 5824.9944 | -0.95 | 5824.9862 | -2.37 | 5825.0164 | 2.82 |

| Frequency Error vs. Temperature | | | | | | | | | |
|---------------------------------|-------|------------------|-----------------|------------------|-----------------|------------------|-----------------|------------------|-----------------|
| 802.11a:5825MHz | | | | | | | | | |
| Temp. | Volt. | 0 Minute | | 2 Minute | | 5 Minute | | 10 Minute | |
| | | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) | Freq.Error (MHz) | Tolerance (ppm) |
| 85 | VN | 5824.9872 | -2.20 | 5825.0044 | 0.75 | 5824.9765 | -4.04 | 5825.0158 | 2.71 |
| 80 | VN | 5825.0024 | 0.42 | 5824.9804 | -3.36 | 5824.9933 | -1.15 | 5825.0176 | 3.02 |
| 70 | VN | 5825.0180 | 3.09 | 5824.9781 | -3.76 | 5824.9863 | -2.35 | 5824.9846 | -2.64 |
| 60 | VN | 5824.9901 | -1.69 | 5825.0215 | 3.70 | 5825.0074 | 1.27 | 5824.9995 | -0.08 |
| 50 | VN | 5825.0033 | 0.56 | 5824.9949 | -0.88 | 5824.9857 | -2.46 | 5825.0183 | 3.15 |
| 40 | VN | 5825.0154 | 2.65 | 5825.0024 | 0.41 | 5825.0046 | 0.80 | 5825.0005 | 0.09 |
| 30 | VN | 5825.0218 | 3.74 | 5824.9959 | -0.70 | 5824.9776 | -3.85 | 5825.0023 | 0.39 |
| 20 | VN | 5824.9908 | -1.57 | 5824.9845 | -2.66 | 5825.0198 | 3.40 | 5825.0160 | 2.75 |
| 10 | VN | 5825.0006 | 0.10 | 5824.9876 | -2.12 | 5824.9844 | -2.67 | 5824.9906 | -1.61 |
| 0 | VN | 5824.9900 | -1.71 | 5825.0041 | 0.70 | 5824.9864 | -2.33 | 5825.0097 | 1.66 |
| -10 | VN | 5824.9974 | -0.45 | 5825.0180 | 3.09 | 5824.9763 | -4.06 | 5825.0139 | 2.39 |
| -20 | VN | 5825.0115 | 1.98 | 5824.9753 | -4.25 | 5824.9905 | -1.64 | 5824.9905 | -1.63 |
| -30 | VN | 5824.9861 | -2.39 | 5825.0179 | 3.07 | 5825.0036 | 0.61 | 5825.0041 | 0.70 |

Note: All antennas and test modes have been tested, only the worst data record in the report.



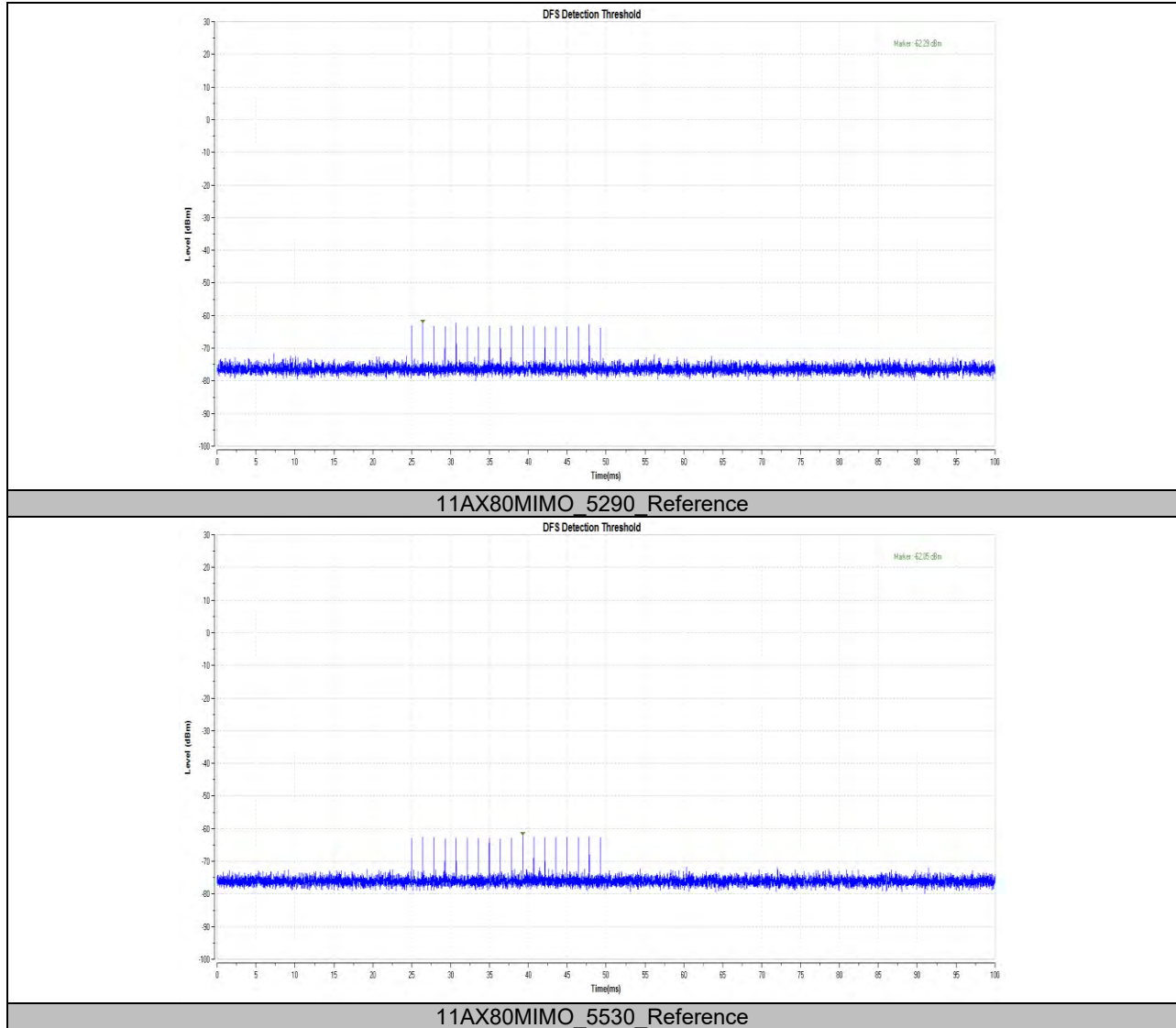
12.8. Appendix F: DFS Detection Thresholds

12.8.1. Test Result

| Test Mode | Channel | Radar Type | Result | Verdict |
|------------|---------|------------|--------|---------|
| 11AX80MIMO | 5290 | Reference | -62.29 | PASS |
| | 5530 | Reference | -62.05 | PASS |



12.8.1. Test Graphs





12.9. Appendix G: DYNAMIC FREQUENCY SELECTION

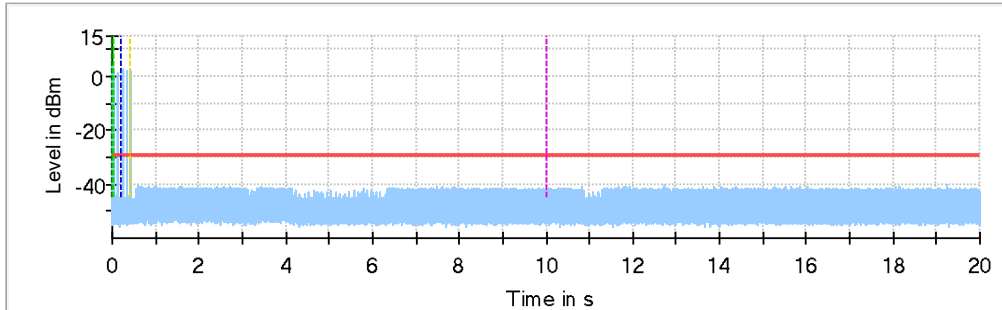
12.9.1. Test Result

802.11ac VHT80 Mode

| BW/Channel | Test Item | Test Result (ms) | Limit | Results |
|-----------------|-----------------------------------|------------------|---|---------|
| 80MHz / 5290MHz | Channel Move Time | 0.414 | < 10 s | pass |
| | Channel Closing Transmission Time | 0.900 | 200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. | pass |
| | Non-Occupancy Period | Nothing appears | If the client moves with the master, the device is considered compliant if nothing appears in the client non-occupancy period test. For devices that shut down (rather than moving channels), no beacons should appear. | pass |

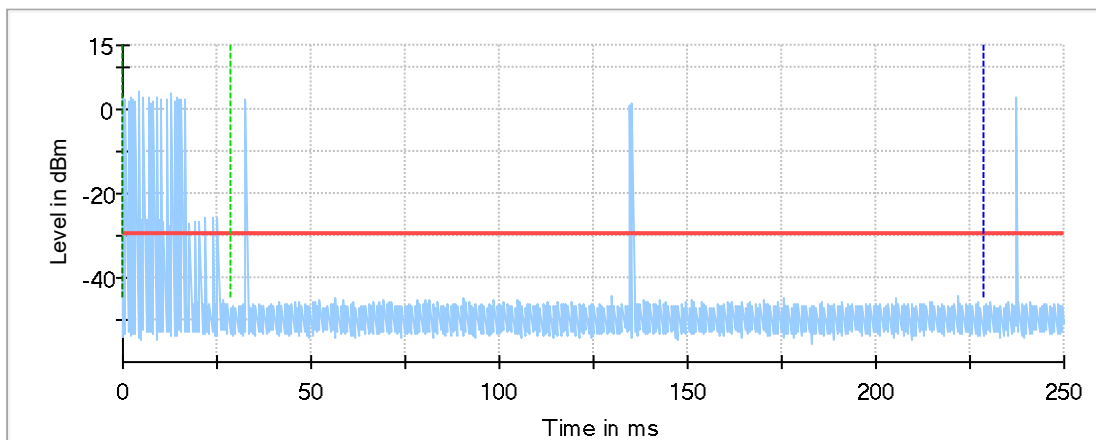
Channel Move Time & Channel Closing Transmission Time

Channel Move Time



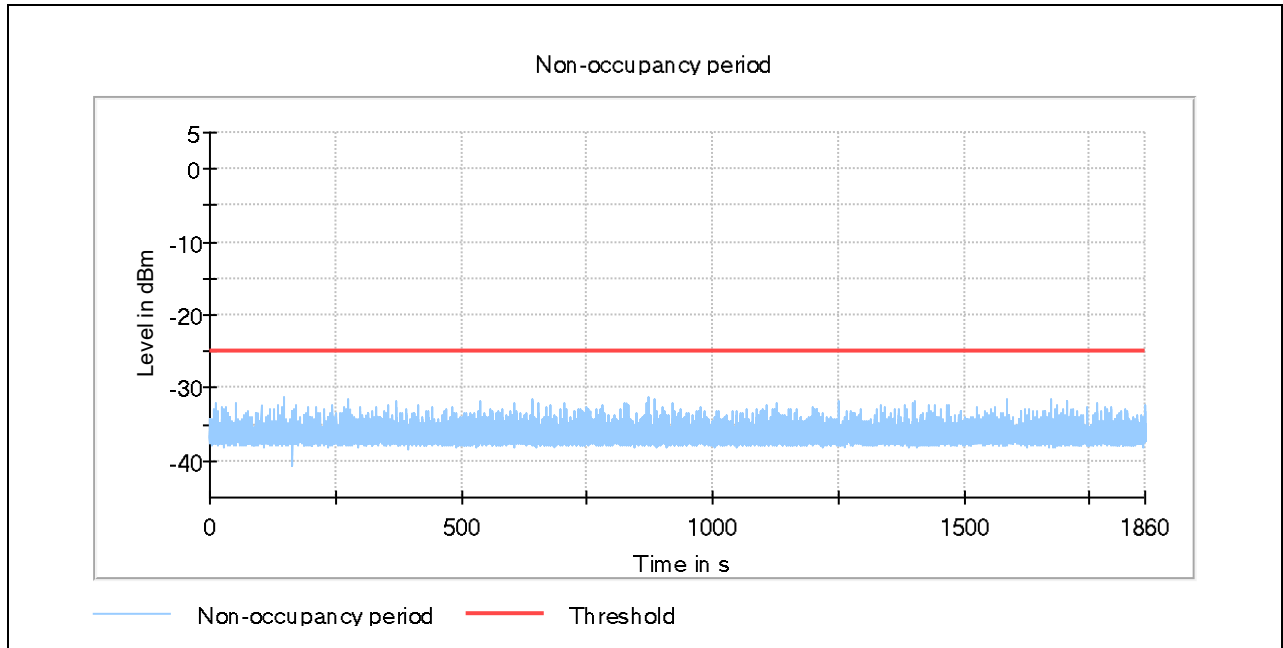
- Channel Move Time
- Threshold
- - - Start of Radar
- - - Triquer at end of Radar
- - - First 200ms of Channel Closing Tx Time
- 10sec Channel Move Time Limit
- - - Last measured edge of Channel Closing Tx Time

Channel Move Time first 200ms

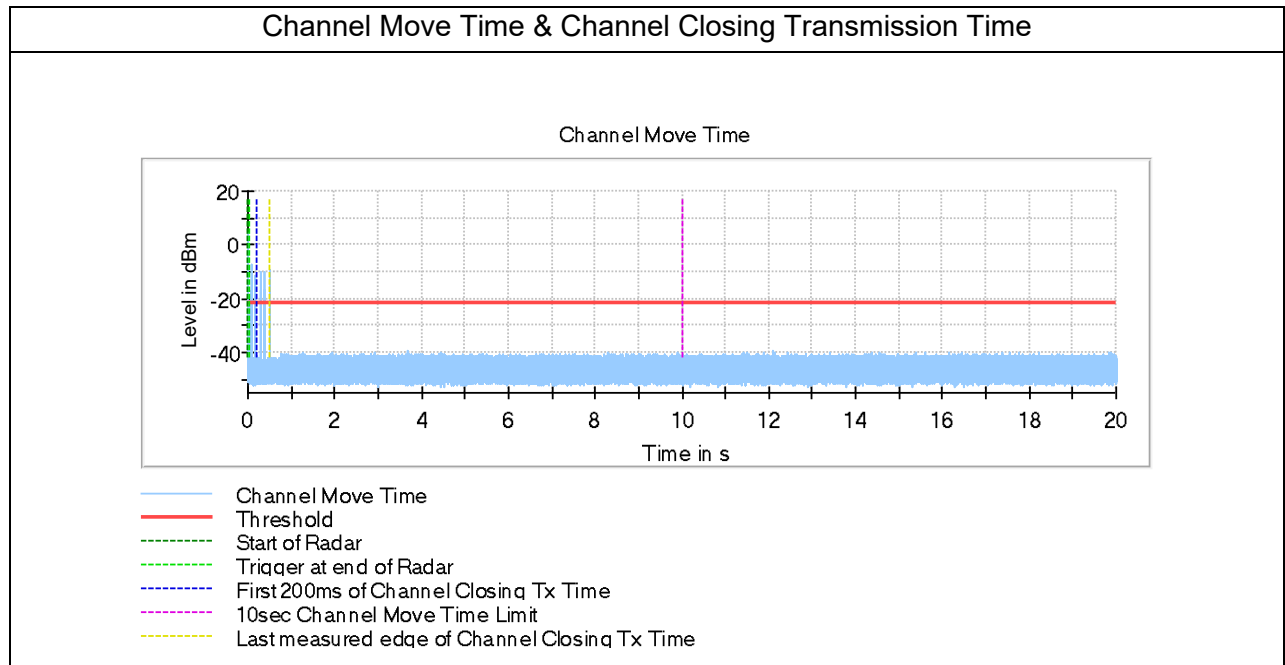


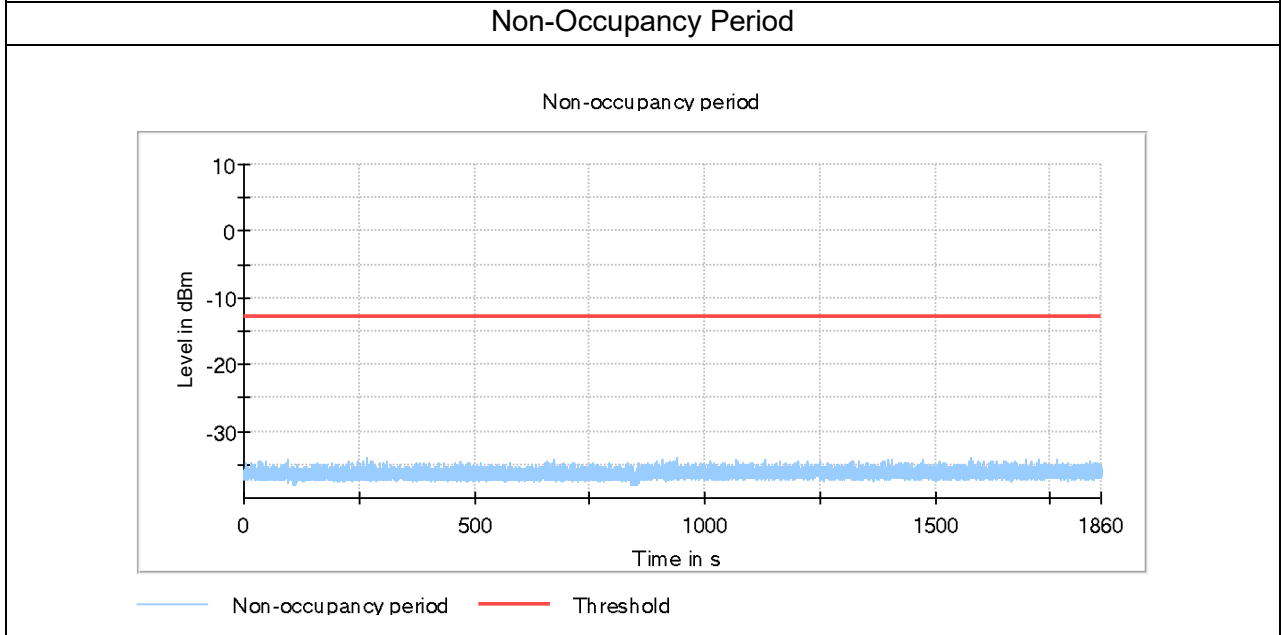
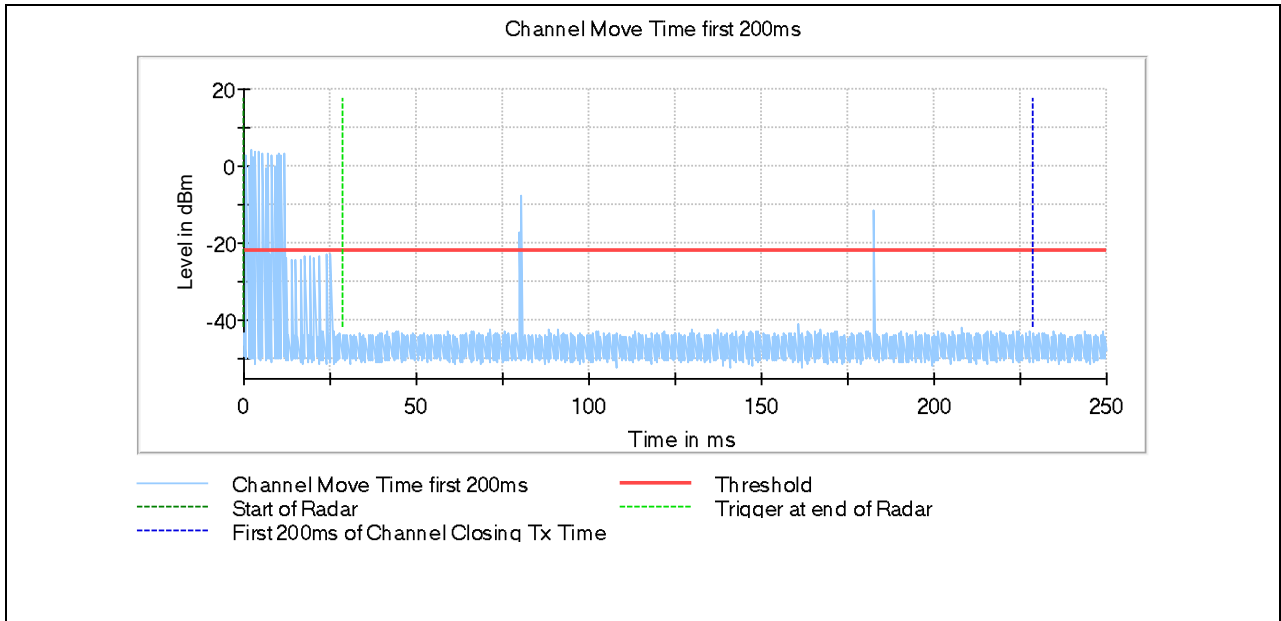
- Channel Move Time first 200ms
- Threshold
- - - Start of Radar
- - - Triquer at end of Radar
- - - First 200ms of Channel Closing Tx Time

Non-Occupancy Period



| BW/Channel | Test Item | Test Result | Limit | Results |
|-----------------|-----------------------------------|-----------------|---|---------|
| 80MHz / 5530MHz | Channel Move Time | 0.461 | < 10 s | pass |
| | Channel Closing Transmission Time | 1.476 | 200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. | pass |
| | Non-Occupancy Period | Nothing appears | If the client moves with the master, the device is considered compliant if nothing appears in the client non-occupancy period test. For devices that shut down (rather than moving channels), no beacons should appear. | pass |





END OF REPORT