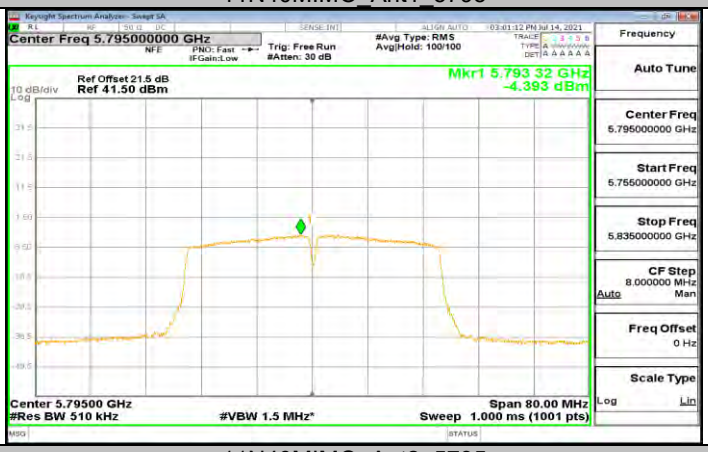
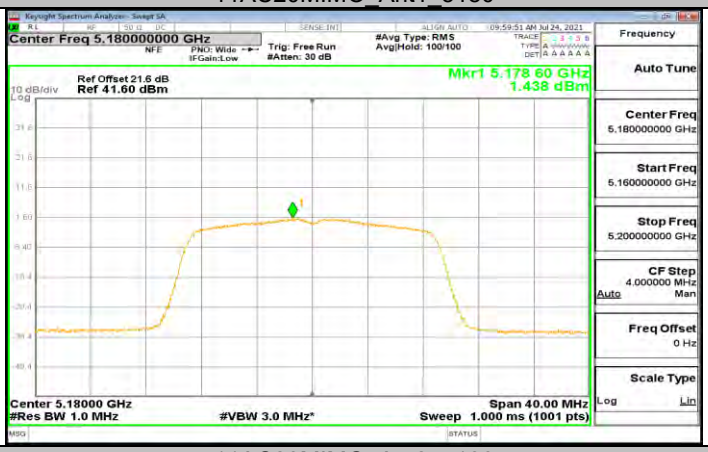

11N40MIMO_Ant2_5755


11N40MIMO_Ant1_5795




11N40MIMO_Ant2_5795


11AC20MIMO_Ant1_5180

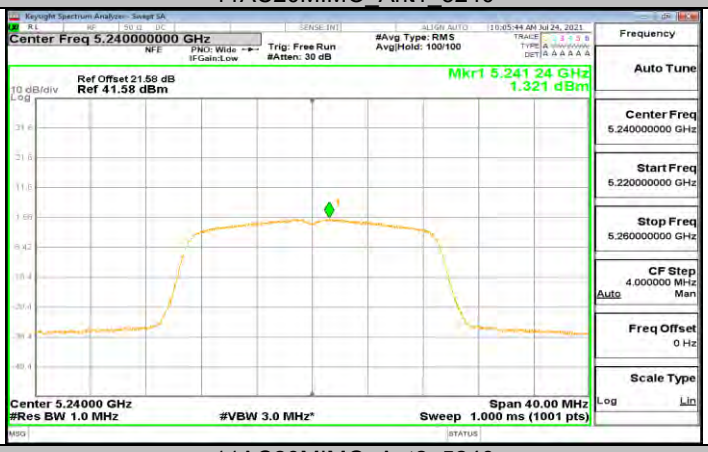



11AC20MIMO_Ant2_5180


11AC20MIMO_Ant1_5200


11AC20MIMO_Ant2_5200

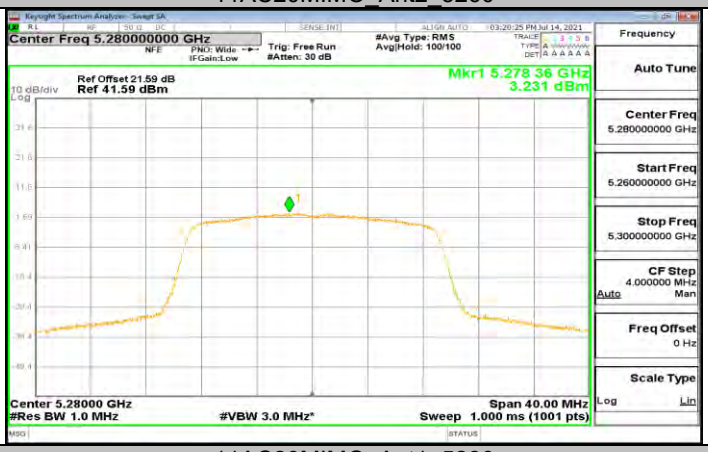

11AC20MIMO_Ant1_5240




11AC20MIMO_Ant2_5240

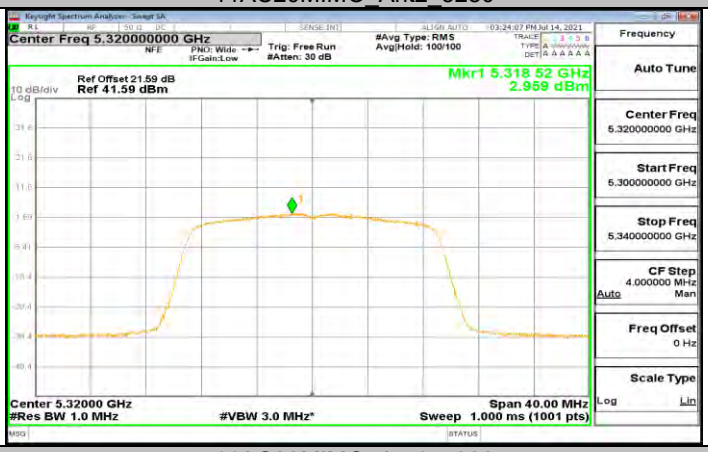

11AC20MIMO_Ant1_5260


11AC20MIMO_Ant2_5260

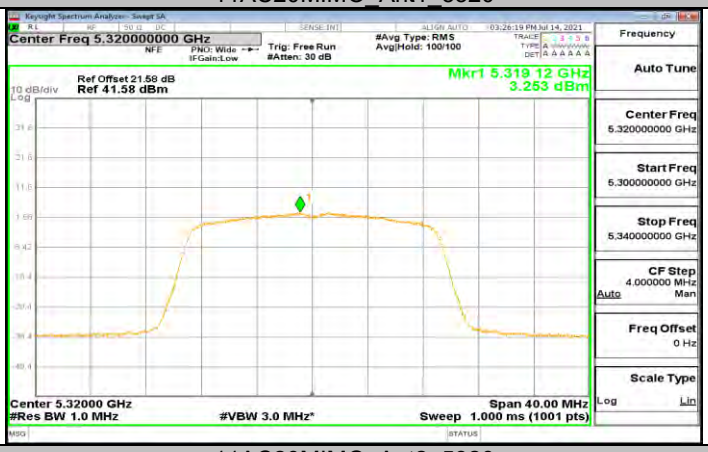



11AC20MIMO_Ant1_5280


11AC20MIMO_Ant2_5280

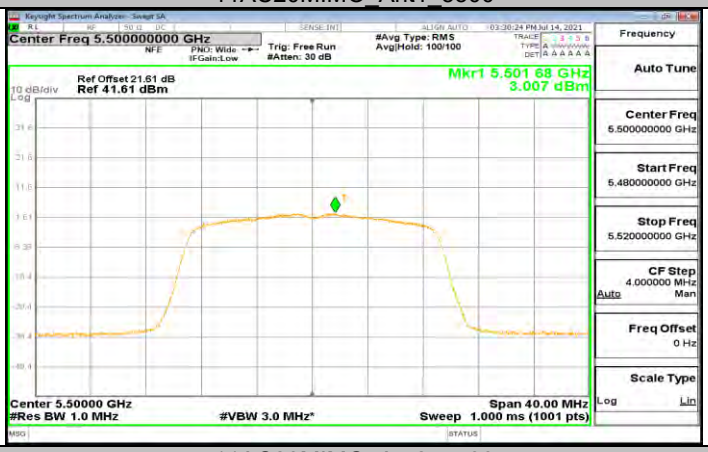



11AC20MIMO_Ant1_5320




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


11AC20MIMO_Ant1_5745

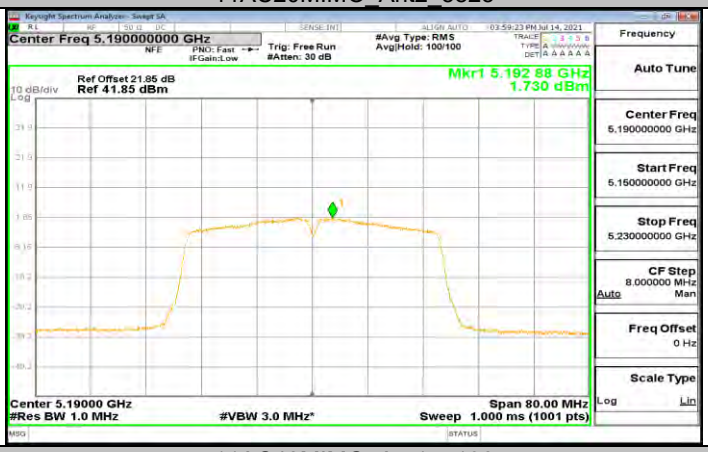

11AC20MIMO_Ant2_5745


11AC20MIMO_Ant1_5785

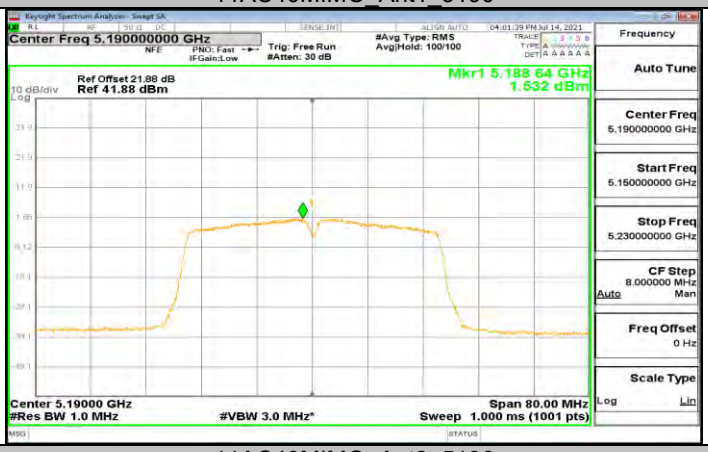

11AC20MIMO_Ant2_5785


11AC20MIMO_Ant1_5825


11AC20MIMO_Ant2_5825

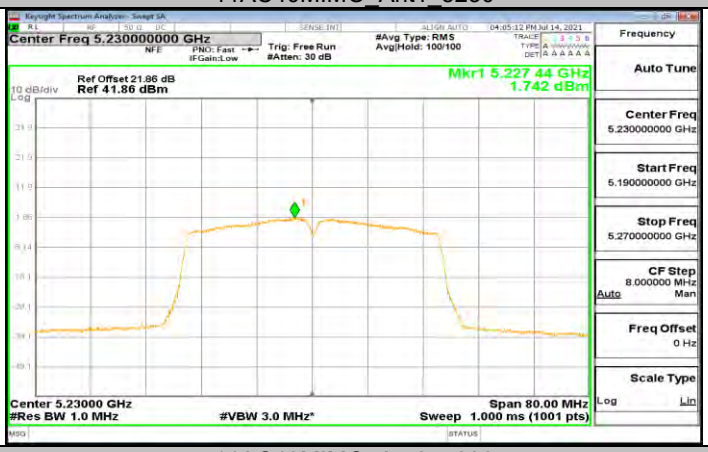



11AC40MIMO_Ant1_5190

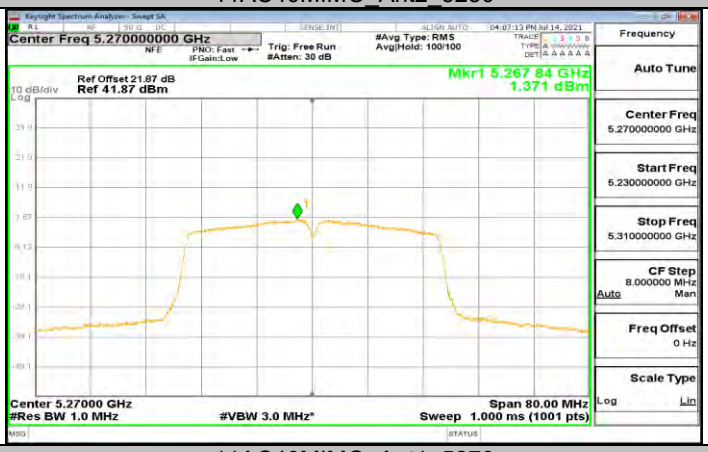



11AC40MIMO_Ant2_5190


11AC40MIMO_Ant1_5230

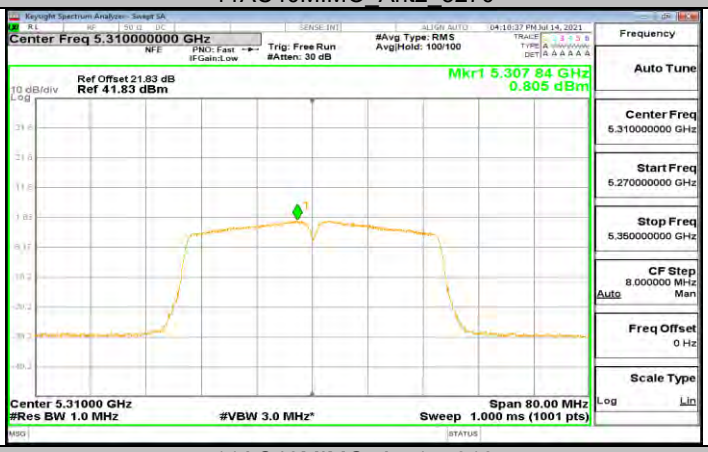



11AC40MIMO_Ant2_5230

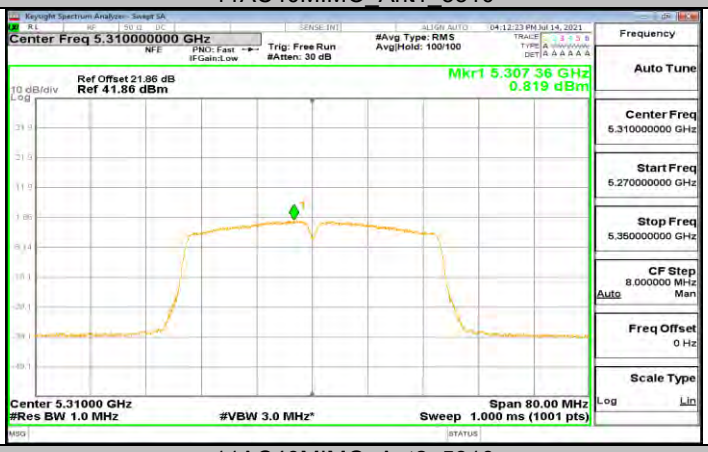



11AC40MIMO_Ant1_5270


11AC40MIMO_Ant2_5270



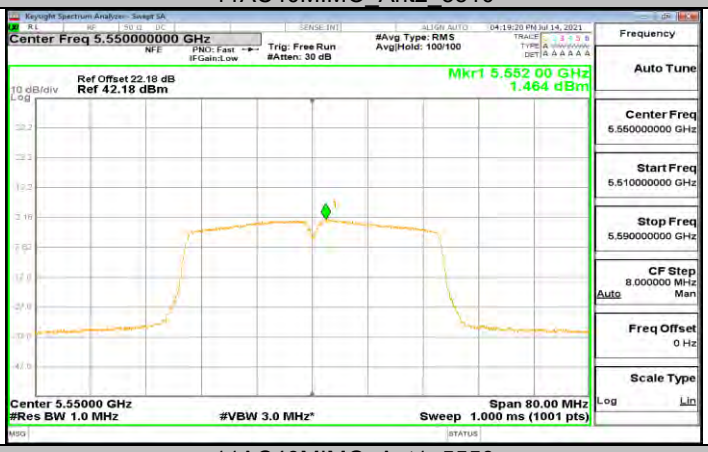

11AC40MIMO_Ant1_5310




11AC40MIMO_Ant2_5310

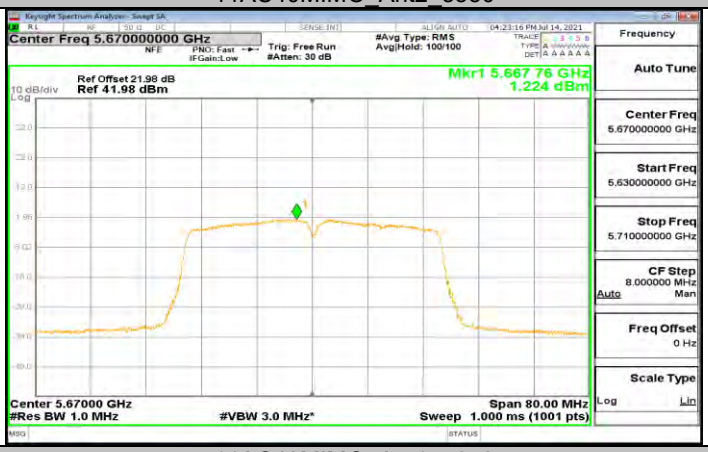

11AC40MIMO_Ant1_5510


11AC40MIMO_Ant2_5510

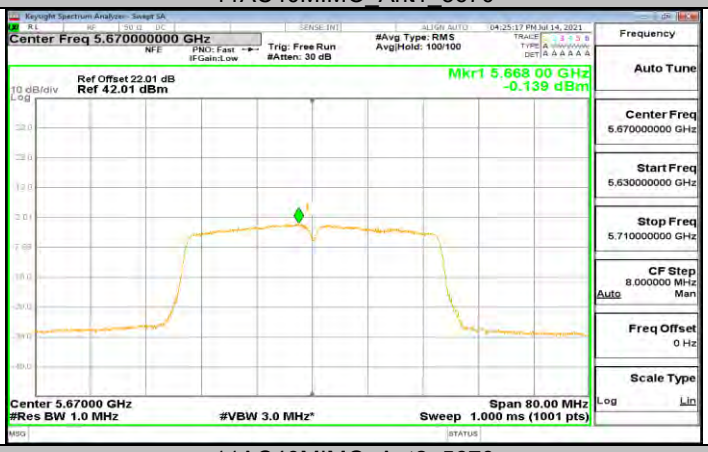



11AC40MIMO_Ant1_5550

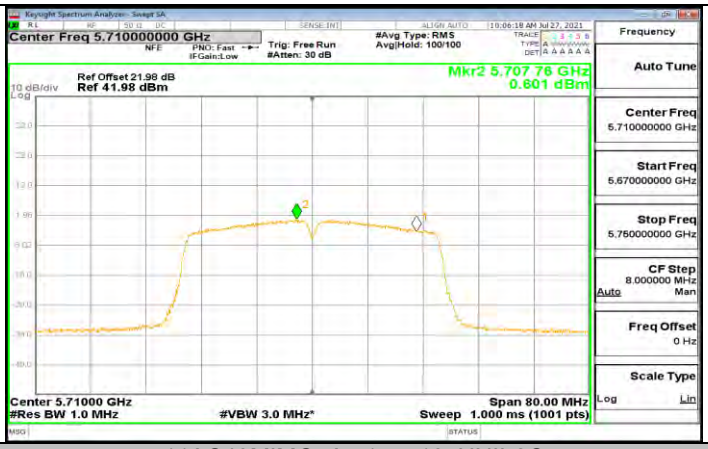

11AC40MIMO_Ant2_5550




11AC40MIMO_Ant1_5670




11AC40MIMO_Ant2_5670

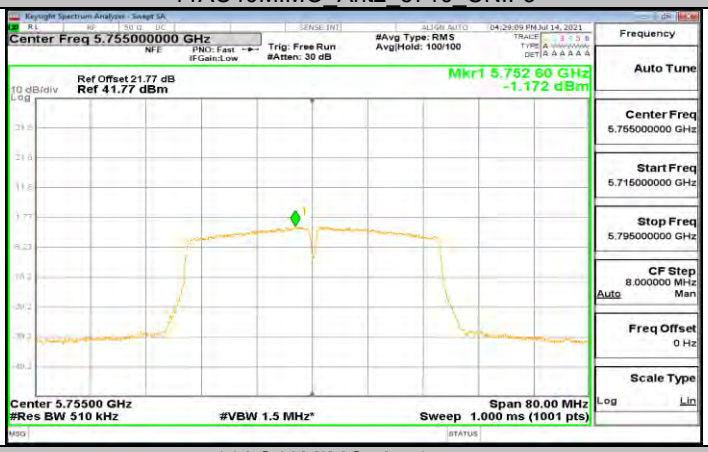



11AC40MIMO_Ant1_5710_UNII-2C

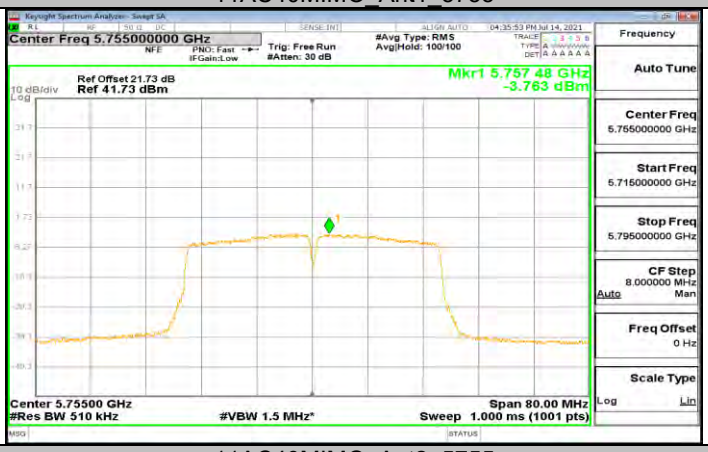

11AC40MIMO_Ant2_5710_UNII-2C


11AC40MIMO_Ant1_5710_UNII-3

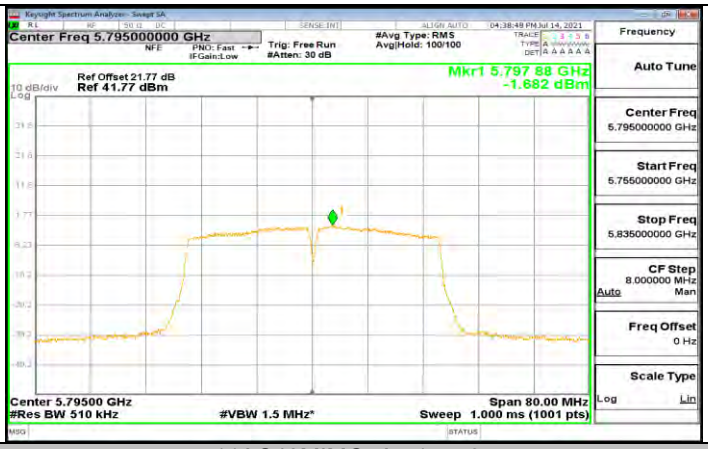

11AC40MIMO_Ant2_5710_UNII-3



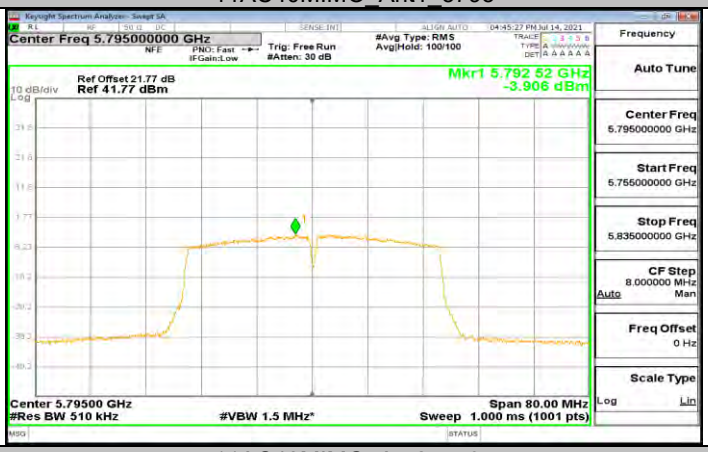

11AC40MIMO_Ant1_5755



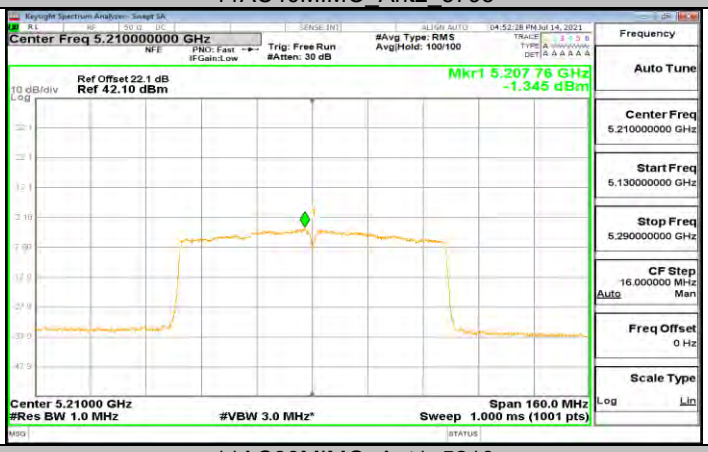

11AC40MIMO_Ant2_5755



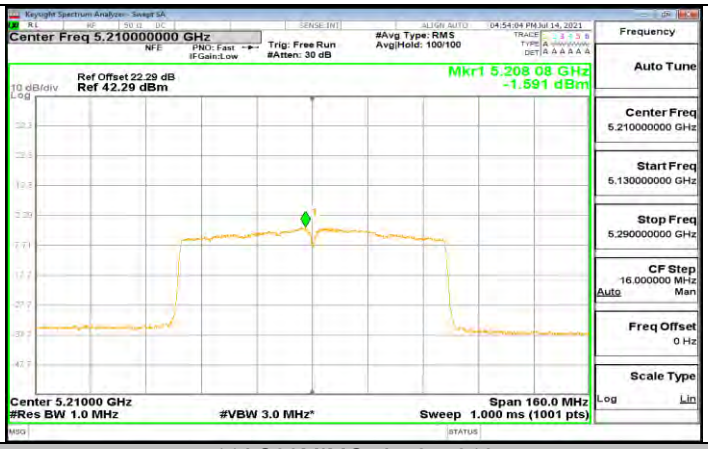

11AC40MIMO_Ant1_5795



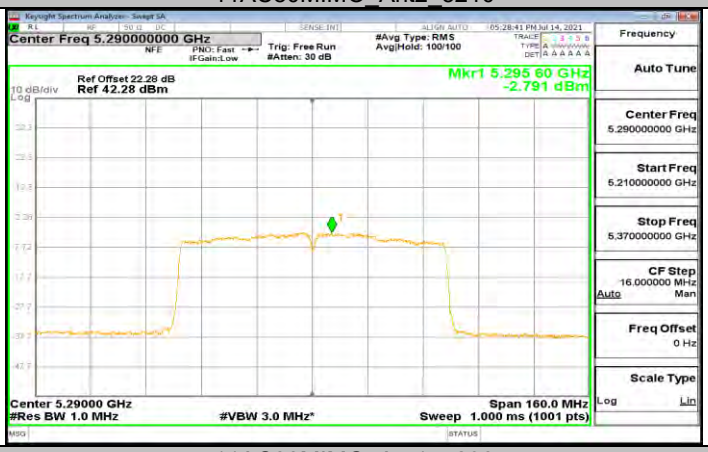

11AC40MIMO_Ant2_5795



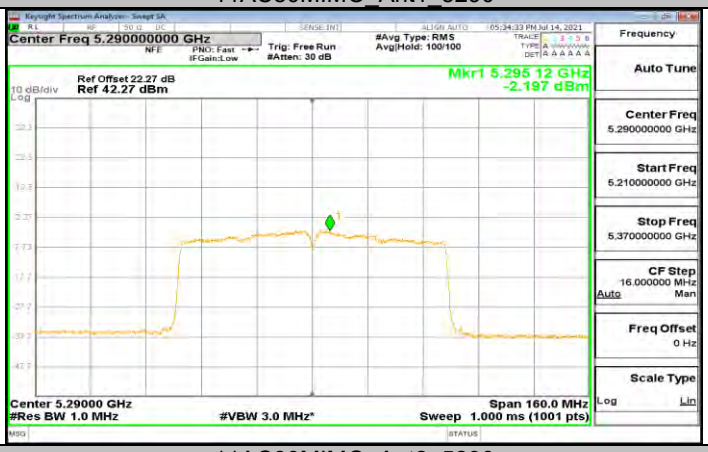

11AC80MIMO_Ant1_5210




11AC80MIMO_Ant2_5210

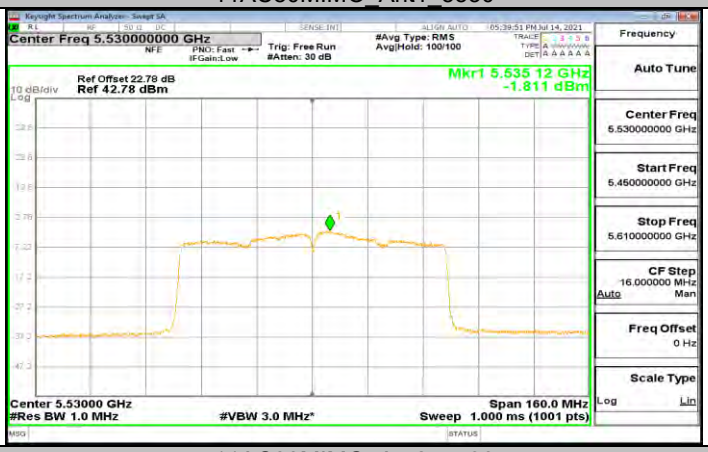



11AC80MIMO_Ant1_5290

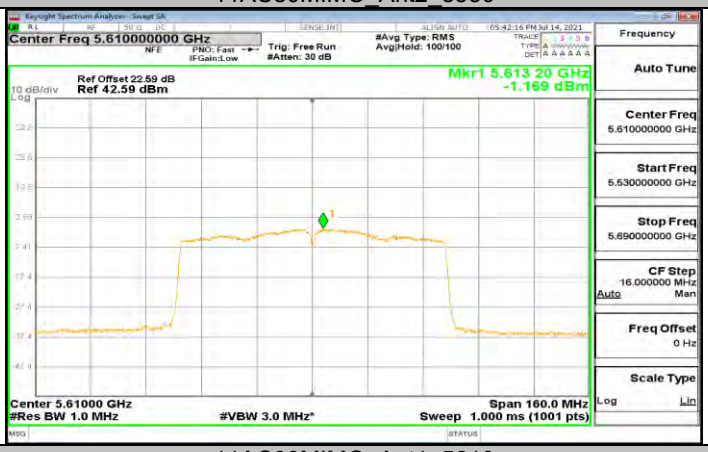



11AC80MIMO_Ant2_5290


11AC80MIMO_Ant1_5530



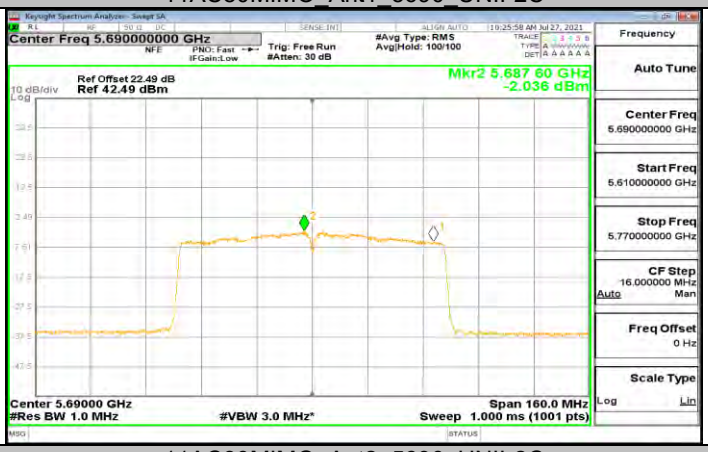

11AC80MIMO_Ant2_5530



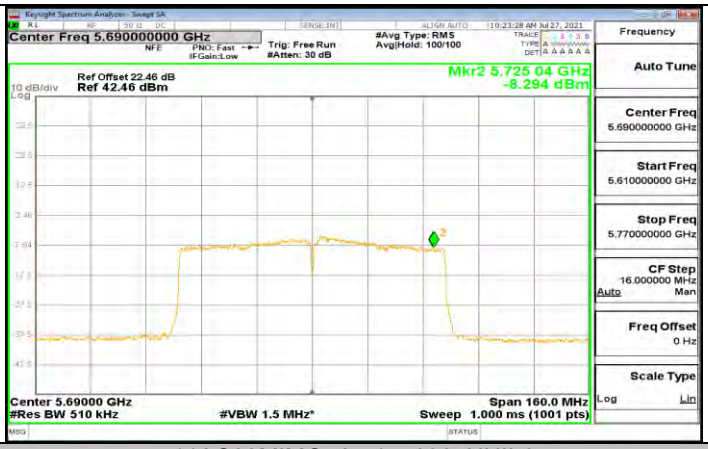

11AC80MIMO_Ant1_5610


11AC80MIMO_Ant2_5610

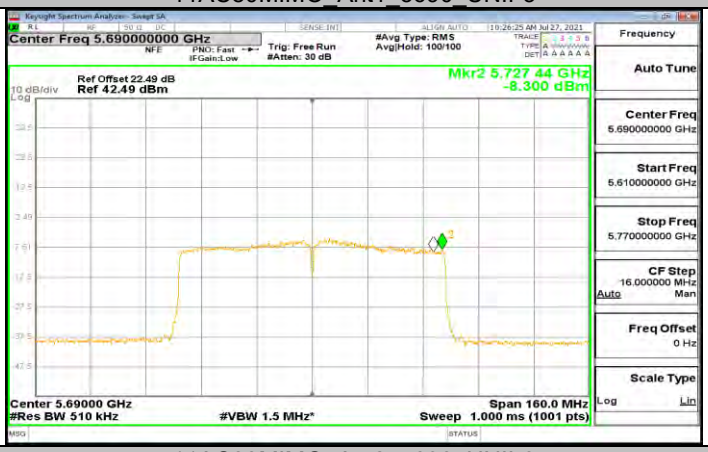

11AC80MIMO_Ant1_5690_UNII-2C



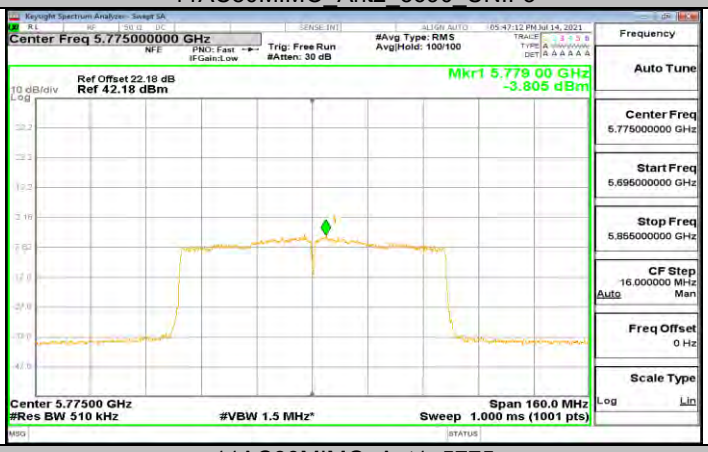

11AC80MIMO_Ant2_5690_UNII-2C




11AC80MIMO_Ant1_5690_UNII-3




11AC80MIMO_Ant2_5690_UNII-3




11AC80MIMO_Ant1_5775


11AC80MIMO_Ant2_5775

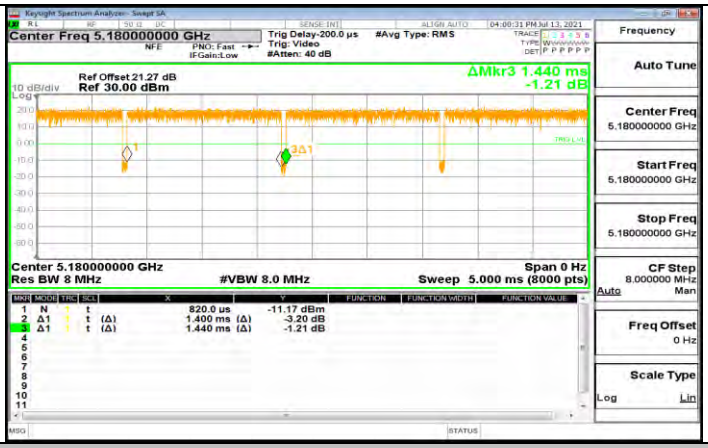
## 12.6. Appendix D: Duty Cycle

### 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) |
|---|---|---|---|---|---|---|---|
| 11A | 1.40 | 1.44 | 0.9722 | 97.22 | 0.12 | 0.71 | 1 |
| 11N20MIMO | 1.30 | 1.34 | 0.9701 | 97.01 | 0.13 | 0.77 | 1 |
| 11N40MIMO | 0.64 | 0.69 | 0.9275 | 92.75 | 0.33 | 1.56 | 2 |
| 11AC20MIMO | 0.68 | 0.72 | 0.9444 | 94.44 | 0.25 | 1.47 | 2 |
| 11AC40MIMO | 0.35 | 0.40 | 0.8750 | 87.50 | 0.58 | 2.86 | 3 |
| 11AC80MIMO | 0.19 | 0.23 | 0.8261 | 82.61 | 0.83 | 5.26 | 6 |

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




11A_Ant1_5180


11N20MIMO_Ant1_5180


11N40MIMO_Ant1_5190


11AC20MIMO_Ant1_5180


11AC40MIMO_Ant1_5190


11AC80MIMO_Ant1_5210

## 12.7. Appendix E: Frequency Stability
### Test Result

| Frequency Error vs. Voltage | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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) |
| TN | VL | 5199.9850 | -2.88 | 5199.9929 | -1.37 | 5200.0065 | 1.24 | 5200.0217 | 4.16 |
| TN | VN | 5200.0088 | 1.70 | 5199.9925 | -1.43 | 5200.0244 | 4.69 | 5200.0046 | 0.88 |
| TN | VH | 5199.9778 | -4.26 | 5199.9849 | -2.91 | 5200.0088 | 1.69 | 5200.0029 | 0.56 |
| 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) |
| 40 | VN | 5199.9856 | -2.78 | 5199.9768 | -4.46 | 5199.9784 | -4.15 | 5199.9936 | -1.23 |
| 30 | VN | 5199.9812 | -3.61 | 5200.0026 | 0.50 | 5199.9964 | -0.69 | 5200.0238 | 4.58 |
| 20 | VN | 5199.9852 | -2.85 | 5199.9941 | -1.14 | 5199.9881 | -2.29 | 5200.0180 | 3.46 |
| 10 | VN | 5199.9830 | -3.26 | 5200.0186 | 3.58 | 5200.0060 | 1.15 | 5200.0194 | 3.72 |
| 0 | VN | 5200.0078 | 1.50 | 5200.0152 | 2.93 | 5200.0060 | 1.16 | 5199.9861 | -2.67 |

| 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 | 5825.0092 | 1.57 | 5825.0134 | 2.30 | 5825.0201 | 3.45 | 5825.0003 | 0.05 |
| TN | VN | 5824.9985 | -0.25 | 5825.0076 | 1.31 | 5825.0062 | 1.06 | 5824.9963 | -0.64 |
| TN | VH | 5825.0246 | 4.22 | 5825.0059 | 1.02 | 5824.9908 | -1.57 | 5824.9771 | -3.93 |
| 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) |
| 40 | VN | 5824.9974 | -0.45 | 5825.0200 | 3.44 | 5825.0012 | 0.20 | 5825.0140 | 2.41 |
| 30 | VN | 5824.9879 | -2.08 | 5825.0147 | 2.52 | 5824.9941 | -1.02 | 5824.9903 | -1.66 |
| 20 | VN | 5824.9913 | -1.49 | 5824.9896 | -1.78 | 5824.9778 | -3.82 | 5825.0027 | 0.47 |
| 10 | VN | 5825.0008 | 0.13 | 5825.0143 | 2.46 | 5825.0025 | 0.43 | 5824.9779 | -3.79 |
| 0 | VN | 5825.0068 | 1.16 | 5825.0001 | 0.01 | 5824.9823 | -3.04 | 5825.0033 | 0.57 |

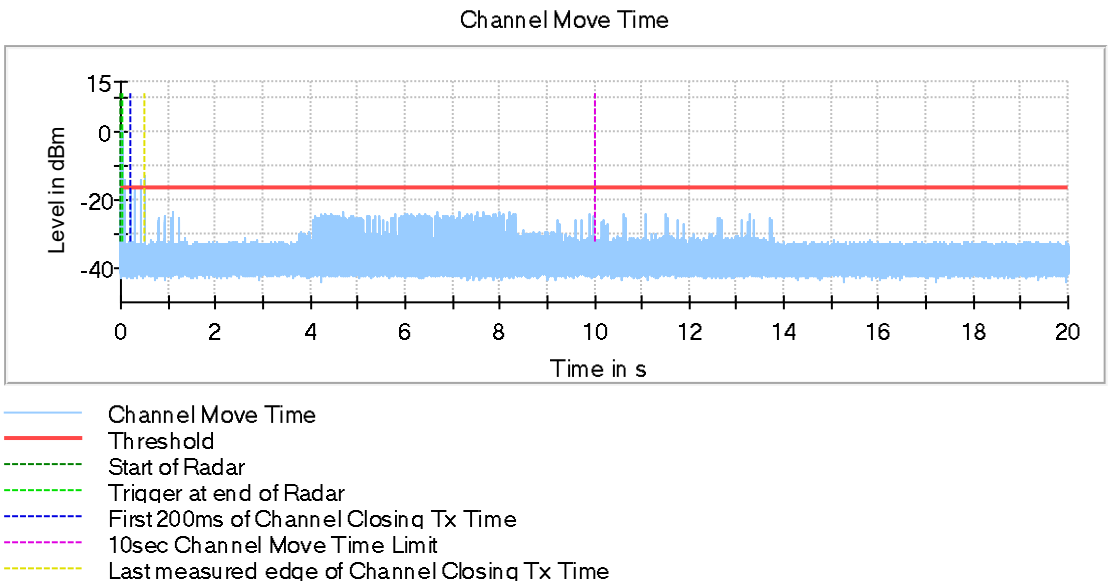
Note: All antennas and test modes have been tested, only the worst data record in the report.

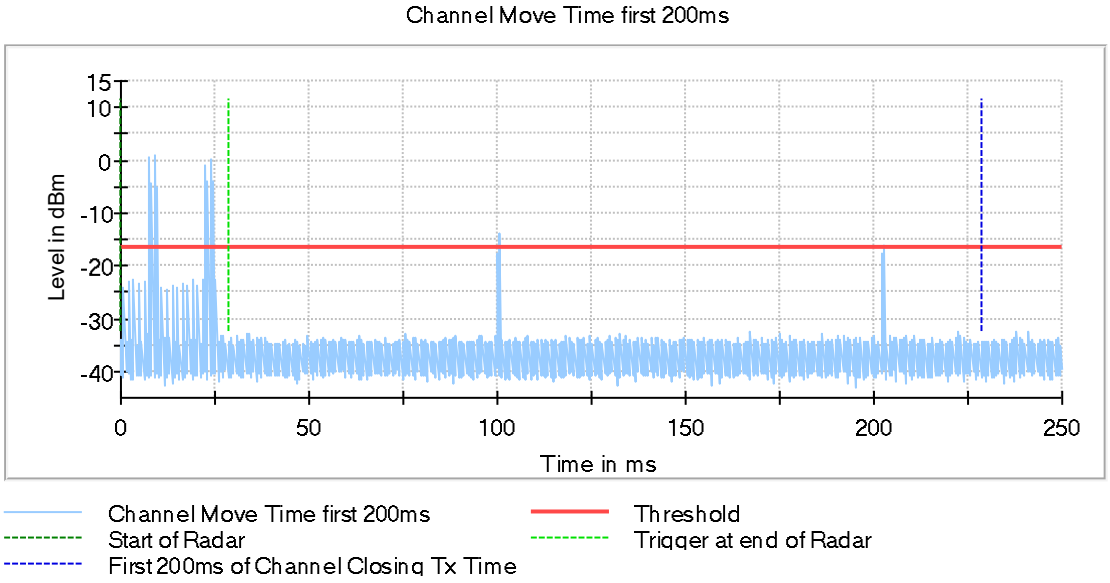
## 12.8. Appendix F DYNAMIC FREQUENCY SELECTION

### 802.11n HT40 Mode

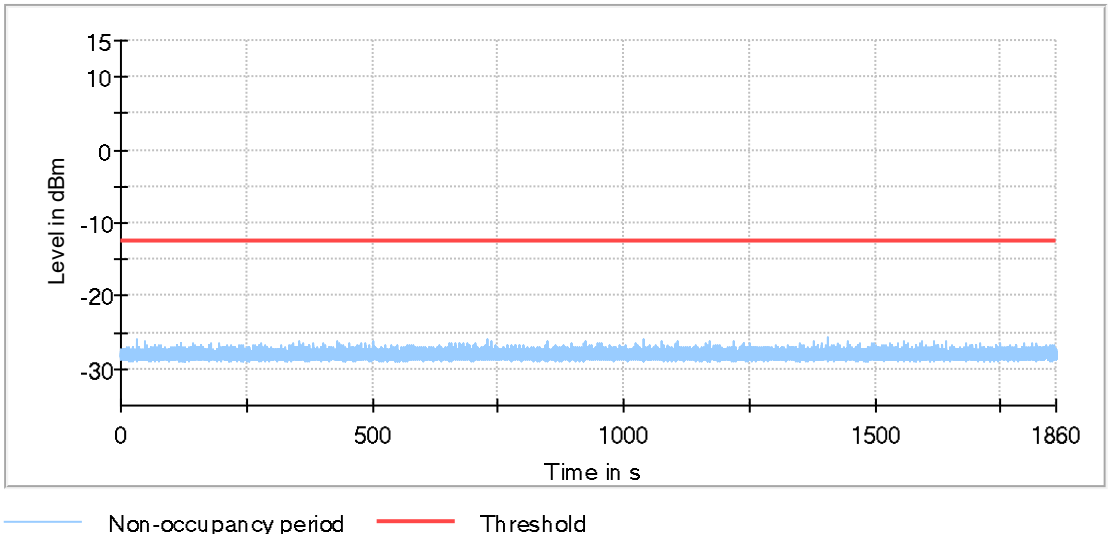
| BW/Channel | Test Item | Test Result | Limit | Results |
|---|---|---|---|---|
| 80MHz / 5530MHz | Channel Move Time | 0.482S | ＜10 s | pass |
| | Channel Closing Transmission Time | 0.024S | 200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. | pass |
| | Non-Occupancy 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






Non-Occupancy Period




**END OF REPORT**