



**CTC Laboratories, Inc.**

1-2/F., Building 2, Jiaquan Building, Guanlan High-Tech Park, Shenzhen, Guangdong, China  
Tel: +86-755- 27521059 Fax: +86-755- 27521011 [Http://www.sz-ctc.org.cn](http://www.sz-ctc.org.cn)

## **Appendix for 5GHz WIFI**

**Applicant: WETEK SOLUCOES TECNOLOGICAS SA**

**Address: R PONTE PEDRA 240 EDIFICIO LOSA ESPACO DE2,  
PORTUGAL**

**Product Name: Android Hybrid TV Box**

**FCC Model: V5.0A, V5.1A, V5.2A, V5.3A, V5.4A, V5.5A, V5.6A,  
V5.7A, V5.8A, V5.9A**

**IC Model: V5.0A**

**FCC ID: 2A9TGHV50A**

**IC: 29850-HV50A**

## TABLE OF CONTENTS

|                                                  |     |
|--------------------------------------------------|-----|
| Appendix A1: Emission Bandwidth .....            | 3   |
| Appendix A2: Occupied channel bandwidth.....     | 46  |
| Appendix A3: Min emission bandwidth .....        | 89  |
| Appendix B: Maximum conducted output power.....  | 100 |
| Appendix C: Maximum power spectral density ..... | 104 |
| Appendix D: Frequency Stability .....            | 148 |
| Appendix E: Duty Cycle .....                     | 158 |

## Appendix A1: Emission Bandwidth

### Test Result

| TestMode      | Antenna | Freq[MHz] | 26db EBW [MHz] | FL[MHz]  | FH[MHz]  | Verdict |
|---------------|---------|-----------|----------------|----------|----------|---------|
| 802.11a       | Ant1    | 5180      | 25.000         | 5169.280 | 5194.280 | PASS    |
|               | Ant2    | 5180      | 23.040         | 5167.880 | 5190.920 | PASS    |
|               | Ant1    | 5200      | 22.160         | 5189.280 | 5211.440 | PASS    |
|               | Ant2    | 5200      | 22.400         | 5189.040 | 5211.440 | PASS    |
|               | Ant1    | 5240      | 25.160         | 5226.880 | 5252.040 | PASS    |
|               | Ant2    | 5240      | 23.560         | 5227.160 | 5250.720 | PASS    |
|               | Ant1    | 5260      | 21.000         | 5249.400 | 5270.400 | PASS    |
|               | Ant2    | 5260      | 21.800         | 5248.840 | 5270.640 | PASS    |
|               | Ant1    | 5280      | 23.040         | 5269.360 | 5292.400 | PASS    |
|               | Ant2    | 5280      | 21.040         | 5269.320 | 5290.360 | PASS    |
|               | Ant1    | 5320      | 23.080         | 5309.440 | 5332.520 | PASS    |
|               | Ant2    | 5320      | 21.360         | 5309.120 | 5330.480 | PASS    |
|               | Ant1    | 5500      | 24.000         | 5489.200 | 5513.200 | PASS    |
|               | Ant2    | 5500      | 21.000         | 5489.560 | 5510.560 | PASS    |
|               | Ant1    | 5580      | 22.760         | 5569.400 | 5592.160 | PASS    |
|               | Ant2    | 5580      | 21.240         | 5569.280 | 5590.520 | PASS    |
|               | Ant1    | 5700      | 23.720         | 5689.160 | 5712.880 | PASS    |
|               | Ant2    | 5700      | 21.320         | 5689.360 | 5710.680 | PASS    |
|               | Ant1    | 5745      | 27.040         | 5732.000 | 5759.040 | PASS    |
|               | Ant2    | 5745      | 21.840         | 5734.440 | 5756.280 | PASS    |
|               | Ant1    | 5785      | 22.520         | 5774.520 | 5797.040 | PASS    |
|               | Ant2    | 5785      | 24.360         | 5774.120 | 5798.480 | PASS    |
|               | Ant1    | 5825      | 24.720         | 5813.920 | 5838.640 | PASS    |
|               | Ant2    | 5825      | 23.760         | 5814.280 | 5838.040 | PASS    |
| 802.11n(HT20) | Ant1    | 5180      | 21.120         | 5169.320 | 5190.440 | PASS    |
|               | Ant2    | 5180      | 21.240         | 5169.360 | 5190.600 | PASS    |
|               | Ant1    | 5200      | 21.280         | 5189.400 | 5210.680 | PASS    |
|               | Ant2    | 5200      | 21.600         | 5189.200 | 5210.800 | PASS    |
|               | Ant1    | 5240      | 21.240         | 5229.320 | 5250.560 | PASS    |
|               | Ant2    | 5240      | 21.400         | 5229.320 | 5250.720 | PASS    |
|               | Ant1    | 5260      | 23.120         | 5247.760 | 5270.880 | PASS    |
|               | Ant2    | 5260      | 21.120         | 5249.440 | 5270.560 | PASS    |
|               | Ant1    | 5280      | 21.400         | 5269.160 | 5290.560 | PASS    |
|               | Ant2    | 5280      | 32.120         | 5264.160 | 5296.280 | PASS    |
|               | Ant1    | 5320      | 21.280         | 5309.360 | 5330.640 | PASS    |
|               | Ant2    | 5320      | 21.240         | 5309.320 | 5330.560 | PASS    |
|               | Ant1    | 5500      | 21.320         | 5489.280 | 5510.600 | PASS    |
|               | Ant2    | 5500      | 21.480         | 5489.160 | 5510.640 | PASS    |
|               | Ant1    | 5580      | 21.880         | 5568.720 | 5590.600 | PASS    |
|               | Ant2    | 5580      | 21.800         | 5568.840 | 5590.640 | PASS    |
|               | Ant1    | 5700      | 21.480         | 5689.200 | 5710.680 | PASS    |

|                 |      |      |        |          |          |      |
|-----------------|------|------|--------|----------|----------|------|
|                 | Ant2 | 5700 | 21.280 | 5689.360 | 5710.640 | PASS |
|                 | Ant1 | 5745 | 22.360 | 5734.400 | 5756.760 | PASS |
|                 | Ant2 | 5745 | 21.320 | 5734.360 | 5755.680 | PASS |
|                 | Ant1 | 5785 | 21.480 | 5774.280 | 5795.760 | PASS |
|                 | Ant2 | 5785 | 21.280 | 5774.200 | 5795.480 | PASS |
|                 | Ant1 | 5825 | 21.360 | 5814.320 | 5835.680 | PASS |
|                 | Ant2 | 5825 | 21.240 | 5814.240 | 5835.480 | PASS |
| 802.11n(HT40)   | Ant1 | 5190 | 40.000 | 5170.000 | 5210.000 | PASS |
|                 | Ant2 | 5190 | 39.920 | 5169.920 | 5209.840 | PASS |
|                 | Ant1 | 5230 | 39.840 | 5210.080 | 5249.920 | PASS |
|                 | Ant2 | 5230 | 39.600 | 5210.240 | 5249.840 | PASS |
|                 | Ant1 | 5270 | 40.240 | 5249.760 | 5290.000 | PASS |
|                 | Ant2 | 5270 | 50.640 | 5247.200 | 5297.840 | PASS |
|                 | Ant1 | 5310 | 40.160 | 5289.840 | 5330.000 | PASS |
|                 | Ant2 | 5310 | 39.520 | 5290.240 | 5329.760 | PASS |
|                 | Ant1 | 5510 | 41.840 | 5489.920 | 5531.760 | PASS |
|                 | Ant2 | 5510 | 39.520 | 5490.240 | 5529.760 | PASS |
|                 | Ant1 | 5550 | 40.240 | 5529.680 | 5569.920 | PASS |
|                 | Ant2 | 5550 | 39.840 | 5530.080 | 5569.920 | PASS |
|                 | Ant1 | 5670 | 39.840 | 5650.160 | 5690.000 | PASS |
|                 | Ant2 | 5670 | 39.360 | 5650.240 | 5689.600 | PASS |
|                 | Ant1 | 5755 | 40.320 | 5734.920 | 5775.240 | PASS |
|                 | Ant2 | 5755 | 39.760 | 5735.160 | 5774.920 | PASS |
|                 | Ant1 | 5795 | 44.720 | 5772.680 | 5817.400 | PASS |
|                 | Ant2 | 5795 | 40.880 | 5775.240 | 5816.120 | PASS |
| 802.11ac(VHT20) | Ant1 | 5180 | 21.160 | 5169.400 | 5190.560 | PASS |
|                 | Ant2 | 5180 | 21.320 | 5169.280 | 5190.600 | PASS |
|                 | Ant1 | 5200 | 21.480 | 5189.200 | 5210.680 | PASS |
|                 | Ant2 | 5200 | 23.160 | 5187.600 | 5210.760 | PASS |
|                 | Ant1 | 5240 | 21.360 | 5229.320 | 5250.680 | PASS |
|                 | Ant2 | 5240 | 21.600 | 5229.080 | 5250.680 | PASS |
|                 | Ant1 | 5260 | 24.200 | 5247.160 | 5271.360 | PASS |
|                 | Ant2 | 5260 | 21.240 | 5249.320 | 5270.560 | PASS |
|                 | Ant1 | 5280 | 21.200 | 5269.240 | 5290.440 | PASS |
|                 | Ant2 | 5280 | 30.480 | 5264.600 | 5295.080 | PASS |
|                 | Ant1 | 5320 | 21.240 | 5309.280 | 5330.520 | PASS |
|                 | Ant2 | 5320 | 21.360 | 5309.280 | 5330.640 | PASS |
|                 | Ant1 | 5500 | 21.680 | 5489.360 | 5511.040 | PASS |
|                 | Ant2 | 5500 | 21.120 | 5489.360 | 5510.480 | PASS |
|                 | Ant1 | 5580 | 25.960 | 5565.600 | 5591.560 | PASS |
|                 | Ant2 | 5580 | 21.720 | 5568.920 | 5590.640 | PASS |
|                 | Ant1 | 5700 | 21.560 | 5689.200 | 5710.760 | PASS |
|                 | Ant2 | 5700 | 21.160 | 5689.360 | 5710.520 | PASS |
|                 | Ant1 | 5745 | 21.200 | 5734.280 | 5755.480 | PASS |
|                 | Ant2 | 5745 | 21.400 | 5734.320 | 5755.720 | PASS |
|                 | Ant1 | 5785 | 21.600 | 5774.240 | 5795.840 | PASS |

|                 |      |      |        |          |          |      |
|-----------------|------|------|--------|----------|----------|------|
|                 | Ant2 | 5785 | 21.400 | 5774.360 | 5795.760 | PASS |
|                 | Ant1 | 5825 | 22.680 | 5813.560 | 5836.240 | PASS |
|                 | Ant2 | 5825 | 22.320 | 5813.880 | 5836.200 | PASS |
| 802.11ac(VHT40) | Ant1 | 5190 | 39.680 | 5170.080 | 5209.760 | PASS |
|                 | Ant2 | 5190 | 39.840 | 5169.760 | 5209.600 | PASS |
|                 | Ant1 | 5230 | 40.560 | 5209.840 | 5250.400 | PASS |
|                 | Ant2 | 5230 | 40.080 | 5209.760 | 5249.840 | PASS |
|                 | Ant1 | 5270 | 40.080 | 5249.920 | 5290.000 | PASS |
|                 | Ant2 | 5270 | 39.600 | 5250.000 | 5289.600 | PASS |
|                 | Ant1 | 5310 | 40.080 | 5289.840 | 5329.920 | PASS |
|                 | Ant2 | 5310 | 39.760 | 5289.840 | 5329.600 | PASS |
|                 | Ant1 | 5510 | 40.160 | 5489.680 | 5529.840 | PASS |
|                 | Ant2 | 5510 | 39.920 | 5489.760 | 5529.680 | PASS |
|                 | Ant1 | 5550 | 39.840 | 5530.000 | 5569.840 | PASS |
|                 | Ant2 | 5550 | 39.760 | 5530.000 | 5569.760 | PASS |
|                 | Ant1 | 5670 | 39.680 | 5650.160 | 5689.840 | PASS |
|                 | Ant2 | 5670 | 39.360 | 5650.320 | 5689.680 | PASS |
|                 | Ant1 | 5755 | 46.160 | 5734.600 | 5780.760 | PASS |
|                 | Ant2 | 5755 | 39.600 | 5735.000 | 5774.600 | PASS |
|                 | Ant1 | 5795 | 47.760 | 5774.760 | 5822.520 | PASS |
|                 | Ant2 | 5795 | 39.520 | 5775.080 | 5814.600 | PASS |
| 802.11ac(VHT80) | Ant1 | 5210 | 81.280 | 5169.680 | 5250.960 | PASS |
|                 | Ant2 | 5210 | 84.800 | 5168.560 | 5253.360 | PASS |
|                 | Ant1 | 5290 | 81.120 | 5249.520 | 5330.640 | PASS |
|                 | Ant2 | 5290 | 81.120 | 5249.200 | 5330.320 | PASS |
|                 | Ant1 | 5530 | 80.640 | 5490.000 | 5570.640 | PASS |
|                 | Ant2 | 5530 | 84.800 | 5489.680 | 5574.480 | PASS |
|                 | Ant1 | 5610 | 81.120 | 5569.680 | 5650.800 | PASS |
|                 | Ant2 | 5610 | 80.480 | 5570.160 | 5650.640 | PASS |
|                 | Ant1 | 5775 | 80.800 | 5734.680 | 5815.480 | PASS |
|                 | Ant2 | 5775 | 80.160 | 5735.160 | 5815.320 | PASS |

## Test Graphs

802.11a\_Ant1\_5180



802.11a\_Ant2\_5180



802.11a\_Ant1\_5200



802.11a\_Ant2\_5200



802.11a\_Ant1\_5240



802.11a\_Ant2\_5240



802.11a\_Ant1\_5260



802.11a\_Ant2\_5260



802.11a\_Ant1\_5280



802.11a\_Ant2\_5280



802.11a\_Ant1\_5320



802.11a\_Ant2\_5320



802.11a\_Ant1\_5500



802.11a\_Ant2\_5500



802.11a\_Ant1\_5580



802.11a\_Ant2\_5580



802.11a\_Ant1\_5700



802.11a\_Ant2\_5700



802.11a\_Ant1\_5745



802.11a\_Ant2\_5745



802.11a\_Ant1\_5785



802.11a\_Ant2\_5785



802.11a\_Ant1\_5825



802.11a\_Ant2\_5825



802.11n(HT20)\_Ant1\_5180



802.11n(HT20)\_Ant2\_5180



802.11n(HT20)\_Ant1\_5200



802.11n(HT20)\_Ant2\_5200



802.11n(HT20)\_Ant1\_5240



802.11n(HT20)\_Ant2\_5240



802.11n(HT20)\_Ant1\_5260



802.11n(HT20)\_Ant2\_5260



802.11n(HT20)\_Ant1\_5280



802.11n(HT20)\_Ant2\_5280



802.11n(HT20)\_Ant1\_5320



802.11n(HT20)\_Ant2\_5320



802.11n(HT20)\_Ant1\_5500



802.11n(HT20)\_Ant2\_5500



802.11n(HT20)\_Ant1\_5580



802.11n(HT20)\_Ant2\_5580



802.11n(HT20)\_Ant1\_5700



802.11n(HT20)\_Ant2\_5700



802.11n(HT20)\_Ant1\_5745



802.11n(HT20)\_Ant2\_5745



802.11n(HT20)\_Ant1\_5785



802.11n(HT20)\_Ant2\_5785



802.11n(HT20)\_Ant1\_5825



802.11n(HT20)\_Ant2\_5825



802.11n(HT40)\_Ant1\_5190



802.11n(HT40)\_Ant2\_5190



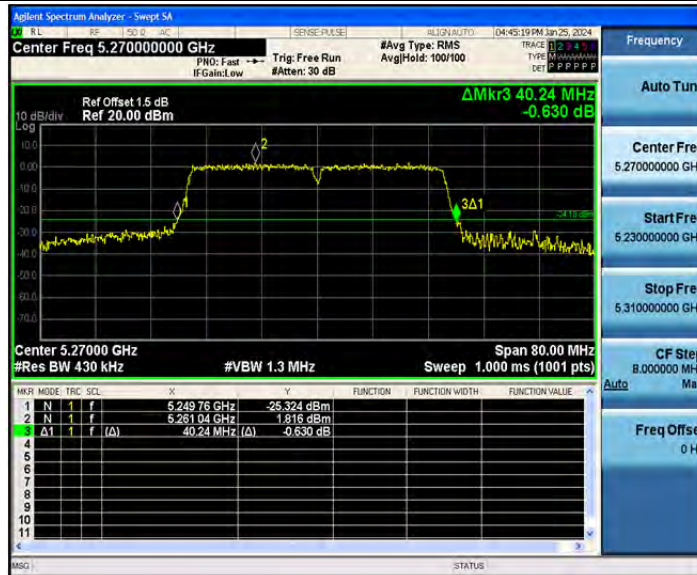
802.11n(HT40)\_Ant1\_5230



802.11n(HT40)\_Ant2\_5230



802.11n(HT40)\_Ant1\_5270



802.11n(HT40)\_Ant2\_5270



802.11n(HT40)\_Ant1\_5310



802.11n(HT40)\_Ant2\_5310



802.11n(HT40)\_Ant1\_5510



802.11n(HT40)\_Ant2\_5510



802.11n(HT40)\_Ant1\_5550



802.11n(HT40)\_Ant2\_5550



802.11n(HT40)\_Ant1\_5670



802.11n(HT40)\_Ant2\_5670



802.11n(HT40)\_Ant1\_5755



802.11n(HT40)\_Ant2\_5755



802.11n(HT40)\_Ant1\_5795



802.11n(HT40)\_Ant2\_5795



802.11ac(VHT20)\_Ant1\_5180



802.11ac(VHT20)\_Ant2\_5180



802.11ac(VHT20)\_Ant1\_5200



802.11ac(VHT20)\_Ant2\_5200



802.11ac(VHT20)\_Ant1\_5240



802.11ac(VHT20)\_Ant2\_5240



802.11ac(VHT20)\_Ant1\_5260



802.11ac(VHT20)\_Ant2\_5260



802.11ac(VHT20)\_Ant1\_5280



802.11ac(VHT20)\_Ant2\_5280



802.11ac(VHT20)\_Ant1\_5320



802.11ac(VHT20)\_Ant2\_5320



802.11ac(VHT20)\_Ant1\_5500



802.11ac(VHT20)\_Ant2\_5500



802.11ac(VHT20)\_Ant1\_5580



802.11ac(VHT20)\_Ant2\_5580



802.11ac(VHT20)\_Ant1\_5700



802.11ac(VHT20)\_Ant2\_5700



802.11ac(VHT20)\_Ant1\_5745



802.11ac(VHT20)\_Ant2\_5745



802.11ac(VHT20)\_Ant1\_5785



802.11ac(VHT20)\_Ant2\_5785



802.11ac(VHT20)\_Ant1\_5825



802.11ac(VHT20)\_Ant2\_5825



802.11ac(VHT40)\_Ant1\_5190



802.11ac(VHT40)\_Ant2\_5190



802.11ac(VHT40)\_Ant1\_5230



802.11ac(VHT40)\_Ant2\_5230



802.11ac(VHT40)\_Ant1\_5270



802.11ac(VHT40)\_Ant2\_5270



802.11ac(VHT40)\_Ant1\_5310



802.11ac(VHT40)\_Ant2\_5310



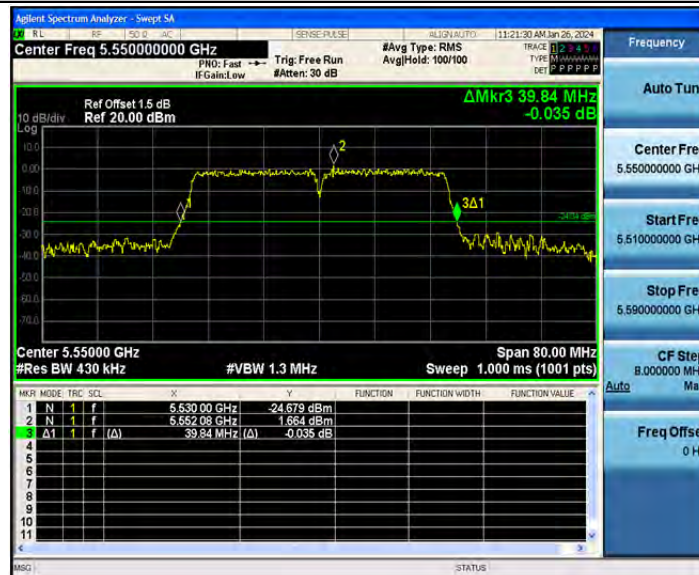
802.11ac(VHT40)\_Ant1\_5510



802.11ac(VHT40)\_Ant2\_5510



802.11ac(VHT40)\_Ant1\_5550



802.11ac(VHT40)\_Ant2\_5550



802.11ac(VHT40)\_Ant1\_5670



802.11ac(VHT40)\_Ant2\_5670



802.11ac(VHT40)\_Ant1\_5755



802.11ac(VHT40)\_Ant2\_5755



802.11ac(VHT40)\_Ant1\_5795



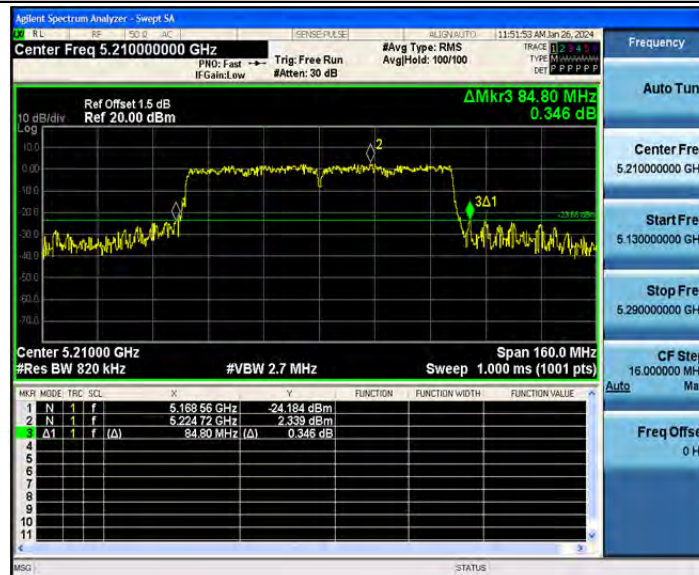
802.11ac(VHT40)\_Ant2\_5795



802.11ac(VHT80)\_Ant1\_5210



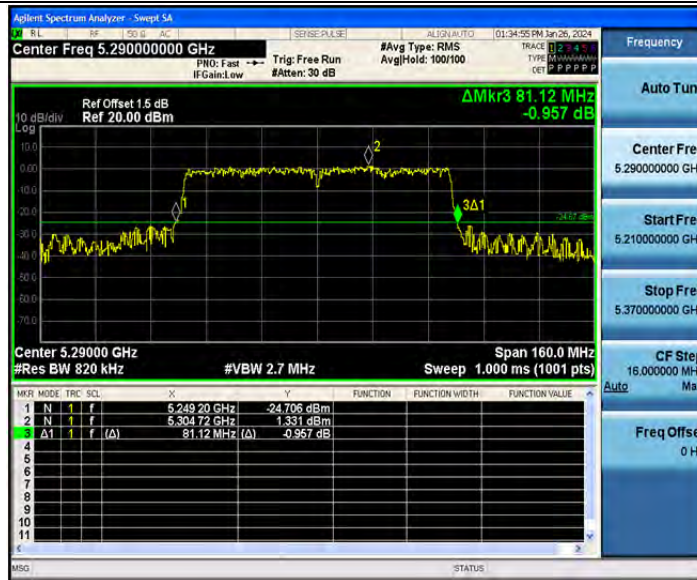
802.11ac(VHT80)\_Ant2\_5210



802.11ac(VHT80)\_Ant1\_5290



802.11ac(VHT80)\_Ant2\_5290



802.11ac(VHT80)\_Ant1\_5530



802.11ac(VHT80)\_Ant2\_5530



802.11ac(VHT80)\_Ant1\_5610



802.11ac(VHT80)\_Ant2\_5610



802.11ac(VHT80)\_Ant1\_5775



802.11ac(VHT80)\_Ant2\_5775



## Appendix A2: Occupied channel bandwidth

### Test Result

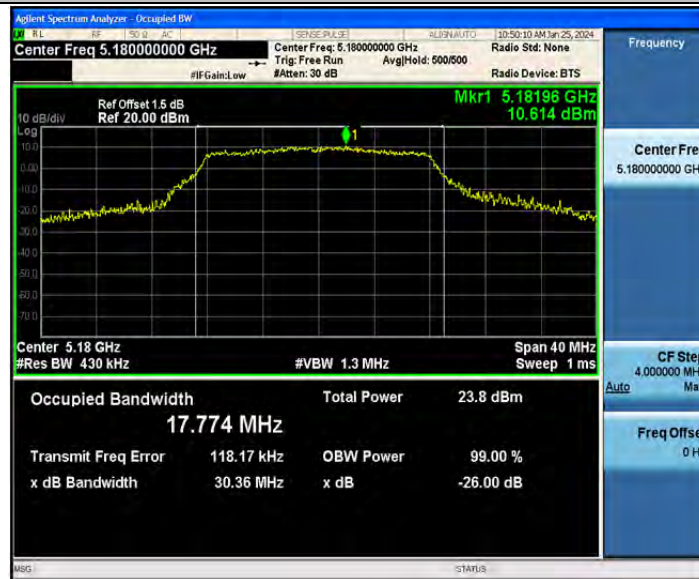
| Test Mode     | Antenna | Freq[MHz] | OCB [MHz] | FL[MHz]   | FH[MHz]   | Verdict |
|---------------|---------|-----------|-----------|-----------|-----------|---------|
| 802.11a       | Ant1    | 5180      | 17.774    | 5171.2312 | 5189.0052 | PASS    |
|               | Ant2    | 5180      | 17.704    | 5171.1056 | 5188.8096 | PASS    |
|               | Ant1    | 5200      | 17.642    | 5191.1491 | 5208.7911 | PASS    |
|               | Ant2    | 5200      | 17.686    | 5191.1463 | 5208.8323 | PASS    |
|               | Ant1    | 5240      | 17.800    | 5231.1832 | 5248.9832 | PASS    |
|               | Ant2    | 5240      | 17.640    | 5231.1680 | 5248.8080 | PASS    |
|               | Ant1    | 5260      | 17.574    | 5251.1670 | 5268.7410 | PASS    |
|               | Ant2    | 5260      | 17.559    | 5251.2287 | 5268.7877 | PASS    |
|               | Ant1    | 5280      | 17.670    | 5271.1784 | 5288.8484 | PASS    |
|               | Ant2    | 5280      | 17.603    | 5271.2063 | 5288.8093 | PASS    |
|               | Ant1    | 5320      | 17.786    | 5311.1426 | 5328.9286 | PASS    |
|               | Ant2    | 5320      | 17.533    | 5311.2235 | 5328.7565 | PASS    |
|               | Ant1    | 5500      | 17.739    | 5491.2006 | 5508.9396 | PASS    |
|               | Ant2    | 5500      | 17.489    | 5491.2766 | 5508.7656 | PASS    |
|               | Ant1    | 5580      | 17.799    | 5571.1577 | 5588.9567 | PASS    |
|               | Ant2    | 5580      | 17.441    | 5571.3339 | 5588.7749 | PASS    |
|               | Ant1    | 5700      | 17.758    | 5691.1433 | 5708.9013 | PASS    |
|               | Ant2    | 5700      | 17.393    | 5691.2960 | 5708.6890 | PASS    |
|               | Ant1    | 5745      | 17.919    | 5736.2075 | 5754.1265 | PASS    |
|               | Ant2    | 5745      | 17.674    | 5736.1408 | 5753.8148 | PASS    |
|               | Ant1    | 5785      | 17.649    | 5776.2844 | 5793.9334 | PASS    |
|               | Ant2    | 5785      | 17.581    | 5776.2324 | 5793.8134 | PASS    |
|               | Ant1    | 5825      | 17.919    | 5816.1236 | 5834.0426 | PASS    |
|               | Ant2    | 5825      | 17.577    | 5816.2677 | 5833.8447 | PASS    |
| 802.11n(HT20) | Ant1    | 5180      | 18.365    | 5170.7828 | 5189.1478 | PASS    |
|               | Ant2    | 5180      | 17.995    | 5171.0175 | 5189.0125 | PASS    |
|               | Ant1    | 5200      | 18.315    | 5190.8492 | 5209.1642 | PASS    |
|               | Ant2    | 5200      | 18.068    | 5190.9296 | 5208.9976 | PASS    |
|               | Ant1    | 5240      | 18.303    | 5230.8277 | 5249.1307 | PASS    |
|               | Ant2    | 5240      | 18.003    | 5230.9951 | 5248.9981 | PASS    |
|               | Ant1    | 5260      | 18.585    | 5250.6294 | 5269.2144 | PASS    |
|               | Ant2    | 5260      | 18.051    | 5250.9489 | 5268.9999 | PASS    |
|               | Ant1    | 5280      | 18.436    | 5270.7161 | 5289.1521 | PASS    |
|               | Ant2    | 5280      | 18.614    | 5270.5791 | 5289.1931 | PASS    |
|               | Ant1    | 5320      | 18.305    | 5310.7917 | 5329.0967 | PASS    |
|               | Ant2    | 5320      | 18.016    | 5310.9520 | 5328.9680 | PASS    |
|               | Ant1    | 5500      | 18.299    | 5490.8733 | 5509.1723 | PASS    |
|               | Ant2    | 5500      | 18.075    | 5490.9808 | 5509.0558 | PASS    |
|               | Ant1    | 5580      | 18.543    | 5570.6695 | 5589.2125 | PASS    |
|               | Ant2    | 5580      | 18.028    | 5570.9838 | 5589.0118 | PASS    |
|               | Ant1    | 5700      | 18.448    | 5690.7347 | 5709.1827 | PASS    |

|                 |      |      |        |           |           |      |
|-----------------|------|------|--------|-----------|-----------|------|
|                 | Ant2 | 5700 | 17.974 | 5690.9966 | 5708.9706 | PASS |
|                 | Ant1 | 5745 | 18.352 | 5735.8071 | 5754.1591 | PASS |
|                 | Ant2 | 5745 | 18.045 | 5735.9719 | 5754.0169 | PASS |
|                 | Ant1 | 5785 | 18.354 | 5775.8591 | 5794.2131 | PASS |
|                 | Ant2 | 5785 | 18.044 | 5775.9803 | 5794.0243 | PASS |
|                 | Ant1 | 5825 | 18.320 | 5815.8661 | 5834.1861 | PASS |
|                 | Ant2 | 5825 | 18.149 | 5815.8989 | 5834.0479 | PASS |
| 802.11n(HT40)   | Ant1 | 5190 | 36.693 | 5171.6720 | 5208.3650 | PASS |
|                 | Ant2 | 5190 | 36.573 | 5171.7426 | 5208.3156 | PASS |
|                 | Ant1 | 5230 | 36.733 | 5211.6682 | 5248.4012 | PASS |
|                 | Ant2 | 5230 | 36.657 | 5211.7193 | 5248.3763 | PASS |
|                 | Ant1 | 5270 | 36.873 | 5251.5684 | 5288.4414 | PASS |
|                 | Ant2 | 5270 | 36.825 | 5251.5636 | 5288.3886 | PASS |
|                 | Ant1 | 5310 | 36.710 | 5291.6441 | 5328.3541 | PASS |
|                 | Ant2 | 5310 | 36.613 | 5291.6730 | 5328.2860 | PASS |
|                 | Ant1 | 5510 | 36.846 | 5491.6183 | 5528.4643 | PASS |
|                 | Ant2 | 5510 | 36.649 | 5491.7103 | 5528.3593 | PASS |
|                 | Ant1 | 5550 | 36.743 | 5531.6073 | 5568.3503 | PASS |
|                 | Ant2 | 5550 | 36.730 | 5531.6575 | 5568.3875 | PASS |
|                 | Ant1 | 5670 | 36.659 | 5651.6749 | 5688.3339 | PASS |
|                 | Ant2 | 5670 | 36.646 | 5651.6977 | 5688.3437 | PASS |
|                 | Ant1 | 5755 | 36.796 | 5736.6282 | 5773.4242 | PASS |
|                 | Ant2 | 5755 | 36.558 | 5736.6694 | 5773.2274 | PASS |
|                 | Ant1 | 5795 | 36.899 | 5776.5818 | 5813.4808 | PASS |
|                 | Ant2 | 5795 | 36.584 | 5776.7500 | 5813.3340 | PASS |
| 802.11ac(VHT20) | Ant1 | 5180 | 18.292 | 5170.8615 | 5189.1535 | PASS |
|                 | Ant2 | 5180 | 17.956 | 5171.0268 | 5188.9828 | PASS |
|                 | Ant1 | 5200 | 18.264 | 5190.8555 | 5209.1195 | PASS |
|                 | Ant2 | 5200 | 18.367 | 5190.6906 | 5209.0576 | PASS |
|                 | Ant1 | 5240 | 18.373 | 5230.7810 | 5249.1540 | PASS |
|                 | Ant2 | 5240 | 18.054 | 5230.9448 | 5248.9988 | PASS |
|                 | Ant1 | 5260 | 18.676 | 5250.5763 | 5269.2523 | PASS |
|                 | Ant2 | 5260 | 17.993 | 5250.9776 | 5268.9706 | PASS |
|                 | Ant1 | 5280 | 18.303 | 5270.8156 | 5289.1186 | PASS |
|                 | Ant2 | 5280 | 18.501 | 5270.6683 | 5289.1693 | PASS |
|                 | Ant1 | 5320 | 18.321 | 5310.7867 | 5329.1077 | PASS |
|                 | Ant2 | 5320 | 18.038 | 5310.9366 | 5328.9746 | PASS |
|                 | Ant1 | 5500 | 18.347 | 5490.8080 | 5509.1550 | PASS |
|                 | Ant2 | 5500 | 18.018 | 5490.9726 | 5508.9906 | PASS |
|                 | Ant1 | 5580 | 18.623 | 5570.6509 | 5589.2739 | PASS |
|                 | Ant2 | 5580 | 18.079 | 5570.9385 | 5589.0175 | PASS |
|                 | Ant1 | 5700 | 18.334 | 5690.8237 | 5709.1577 | PASS |
|                 | Ant2 | 5700 | 17.938 | 5690.9995 | 5708.9375 | PASS |
|                 | Ant1 | 5745 | 18.318 | 5735.8698 | 5754.1878 | PASS |
|                 | Ant2 | 5745 | 18.043 | 5735.9588 | 5754.0018 | PASS |
|                 | Ant1 | 5785 | 18.333 | 5775.8865 | 5794.2195 | PASS |

|                 |      |      |        |           |           |      |
|-----------------|------|------|--------|-----------|-----------|------|
|                 | Ant2 | 5785 | 18.065 | 5775.9494 | 5794.0144 | PASS |
|                 | Ant1 | 5825 | 18.079 | 5815.9304 | 5834.0094 | PASS |
|                 | Ant2 | 5825 | 18.085 | 5815.9347 | 5834.0197 | PASS |
| 802.11ac(VHT40) | Ant1 | 5190 | 36.607 | 5171.7212 | 5208.3282 | PASS |
|                 | Ant2 | 5190 | 36.577 | 5171.6840 | 5208.2610 | PASS |
|                 | Ant1 | 5230 | 36.614 | 5211.7388 | 5248.3528 | PASS |
|                 | Ant2 | 5230 | 36.698 | 5211.6499 | 5248.3479 | PASS |
|                 | Ant1 | 5270 | 36.537 | 5251.7355 | 5288.2725 | PASS |
|                 | Ant2 | 5270 | 36.737 | 5251.5920 | 5288.3290 | PASS |
|                 | Ant1 | 5310 | 36.573 | 5291.6966 | 5328.2696 | PASS |
|                 | Ant2 | 5310 | 36.620 | 5291.6328 | 5328.2528 | PASS |
|                 | Ant1 | 5510 | 36.583 | 5491.7766 | 5528.3596 | PASS |
|                 | Ant2 | 5510 | 36.609 | 5491.7082 | 5528.3172 | PASS |
|                 | Ant1 | 5550 | 36.580 | 5531.7594 | 5568.3394 | PASS |
|                 | Ant2 | 5550 | 36.634 | 5531.6910 | 5568.3250 | PASS |
|                 | Ant1 | 5670 | 36.629 | 5651.6881 | 5688.3171 | PASS |
|                 | Ant2 | 5670 | 36.625 | 5651.6719 | 5688.2969 | PASS |
|                 | Ant1 | 5755 | 36.675 | 5736.7213 | 5773.3963 | PASS |
|                 | Ant2 | 5755 | 36.591 | 5736.6899 | 5773.2809 | PASS |
|                 | Ant1 | 5795 | 36.698 | 5776.7174 | 5813.4154 | PASS |
|                 | Ant2 | 5795 | 36.657 | 5776.7059 | 5813.3629 | PASS |
| 802.11ac(VHT80) | Ant1 | 5210 | 76.115 | 5172.0539 | 5248.1689 | PASS |
|                 | Ant2 | 5210 | 76.228 | 5171.9941 | 5248.2221 | PASS |
|                 | Ant1 | 5290 | 75.967 | 5252.1084 | 5328.0754 | PASS |
|                 | Ant2 | 5290 | 76.219 | 5251.9100 | 5328.1290 | PASS |
|                 | Ant1 | 5530 | 76.099 | 5492.1436 | 5568.2426 | PASS |
|                 | Ant2 | 5530 | 76.056 | 5492.1611 | 5568.2171 | PASS |
|                 | Ant1 | 5610 | 75.920 | 5572.1575 | 5648.0775 | PASS |
|                 | Ant2 | 5610 | 76.038 | 5572.1771 | 5648.2151 | PASS |
|                 | Ant1 | 5775 | 76.060 | 5736.9986 | 5813.0586 | PASS |
|                 | Ant2 | 5775 | 76.041 | 5737.0112 | 5813.0522 | PASS |

## Test Graphs

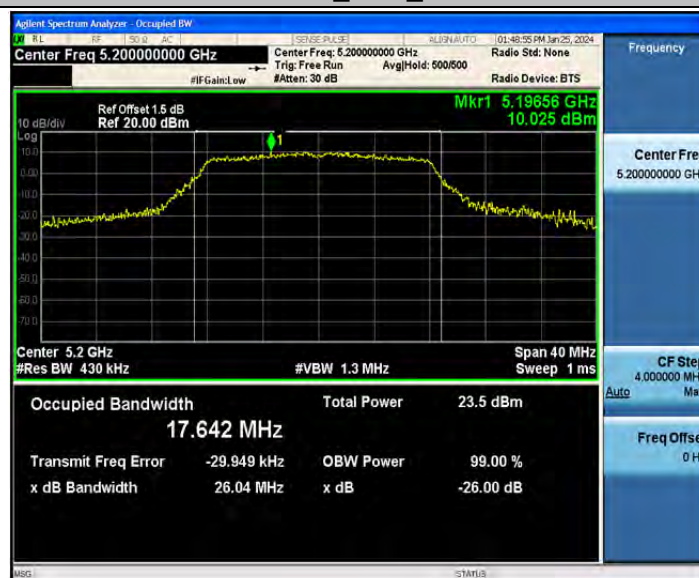
802.11a\_Ant1\_5180



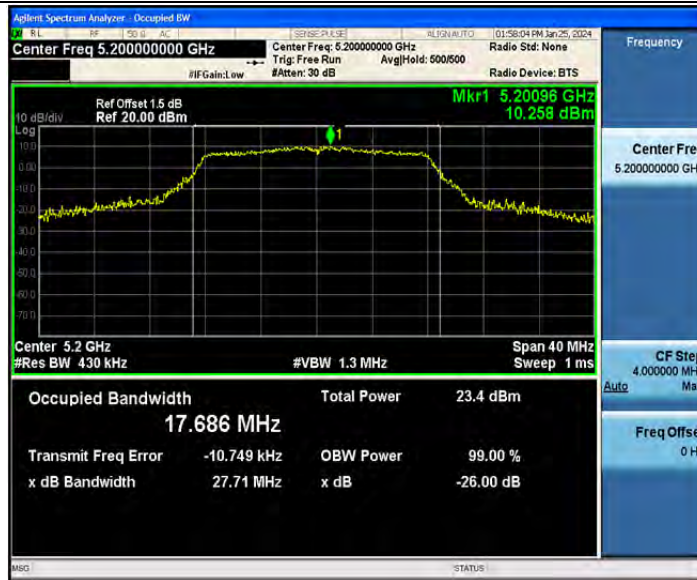
802.11a\_Ant2\_5180



802.11a\_Ant1\_5200



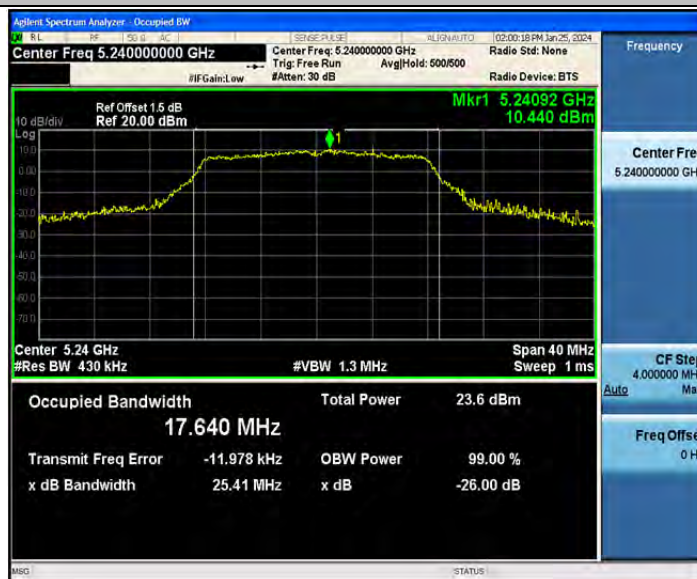
802.11a\_Ant2\_5200



802.11a\_Ant1\_5240



802.11a\_Ant2\_5240



802.11a\_Ant1\_5260



802.11a\_Ant2\_5260



802.11a\_Ant1\_5280



802.11a\_Ant2\_5280



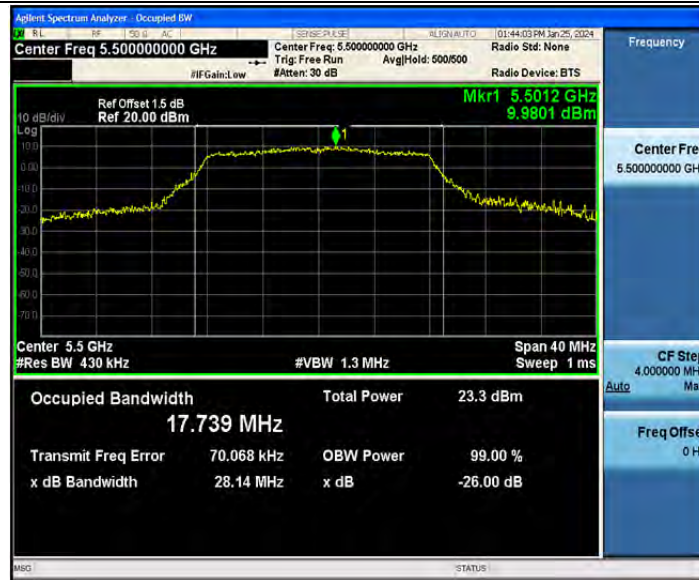
802.11a\_Ant1\_5320



802.11a\_Ant2\_5320



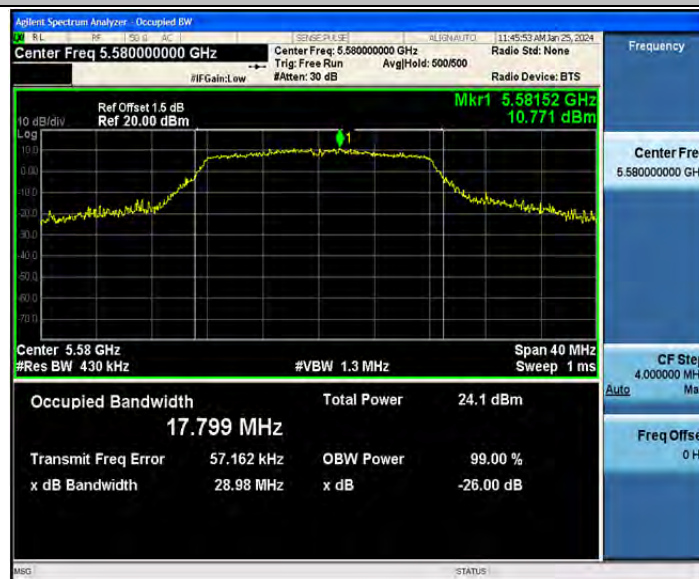
802.11a\_Ant1\_5500



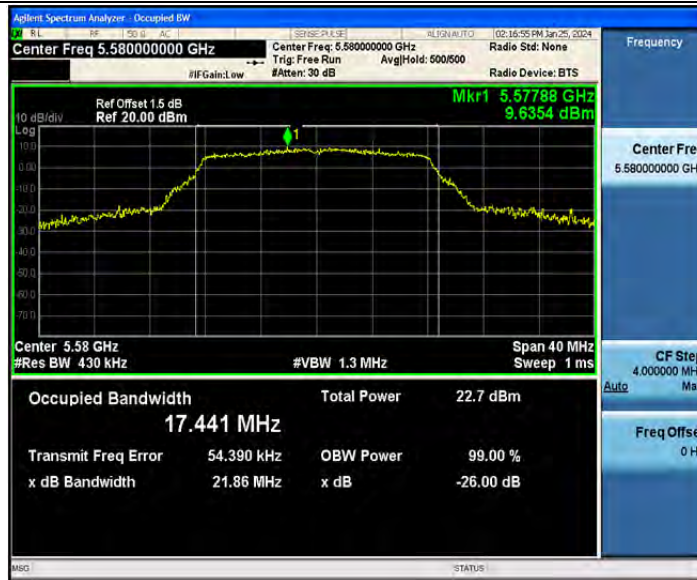
802.11a\_Ant2\_5500



802.11a\_Ant1\_5580



802.11a\_Ant2\_5580



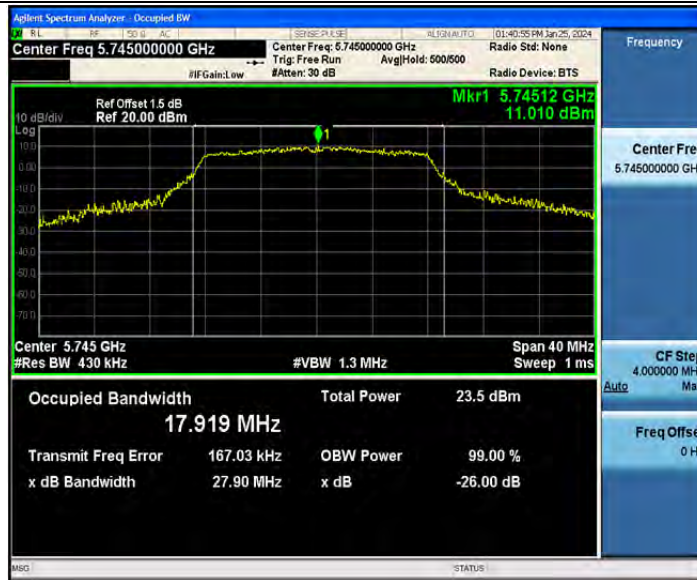
802.11a\_Ant1\_5700



802.11a\_Ant2\_5700



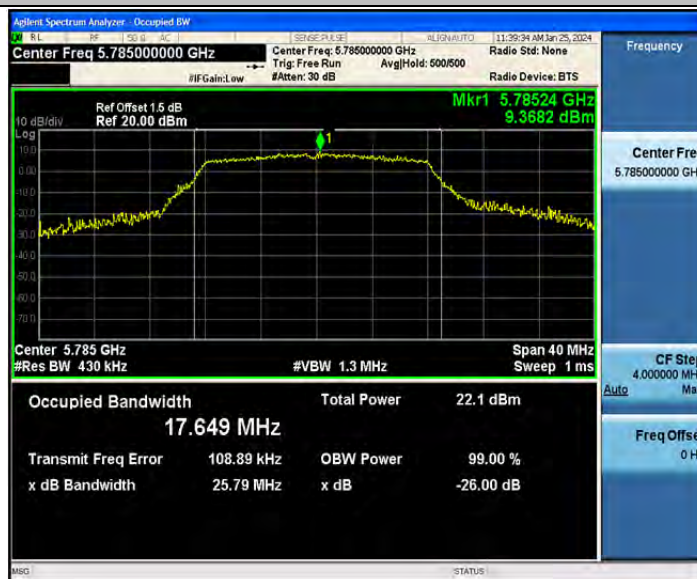
802.11a\_Ant1\_5745



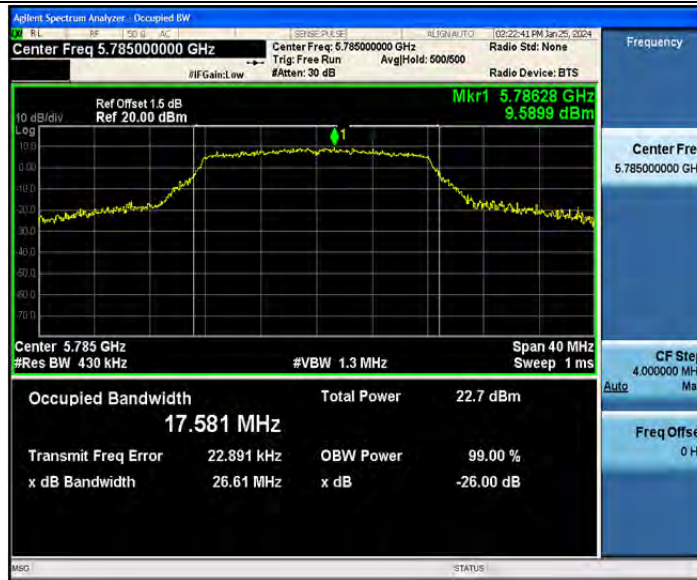
802.11a\_Ant2\_5745



802.11a\_Ant1\_5785



802.11a\_Ant2\_5785



802.11a\_Ant1\_5825



802.11a\_Ant2\_5825



802.11n(HT20)\_Ant1\_5180



802.11n(HT20)\_Ant2\_5180



802.11n(HT20)\_Ant1\_5200



802.11n(HT20)\_Ant2\_5200



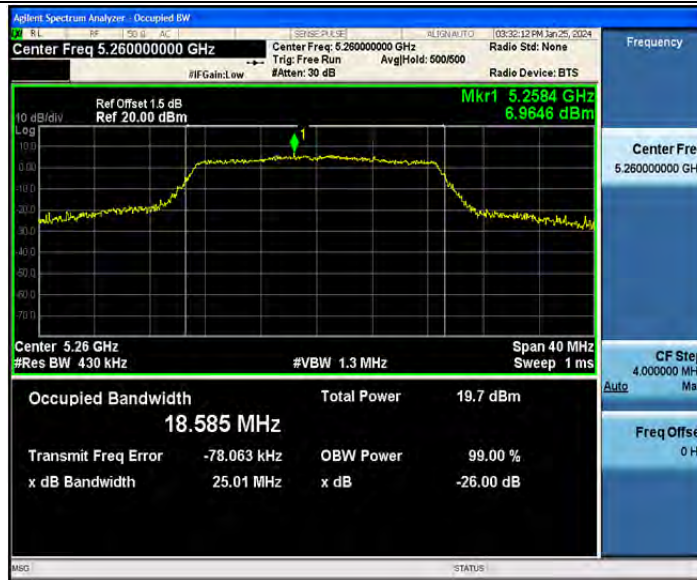
802.11n(HT20)\_Ant1\_5240



802.11n(HT20)\_Ant2\_5240



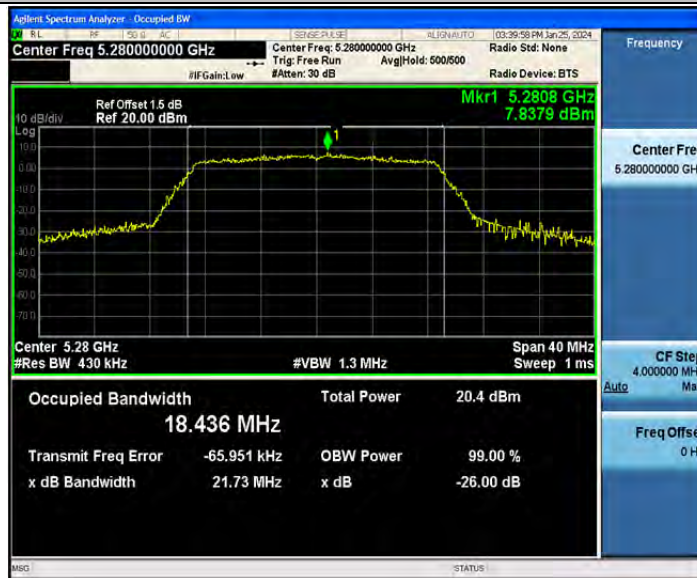
802.11n(HT20)\_Ant1\_5260



802.11n(HT20)\_Ant2\_5260



802.11n(HT20)\_Ant1\_5280



802.11n(HT20)\_Ant2\_5280



802.11n(HT20)\_Ant1\_5320



802.11n(HT20)\_Ant2\_5320



802.11n(HT20)\_Ant1\_5500



802.11n(HT20)\_Ant2\_5500



802.11n(HT20)\_Ant1\_5580



802.11n(HT20)\_Ant2\_5580



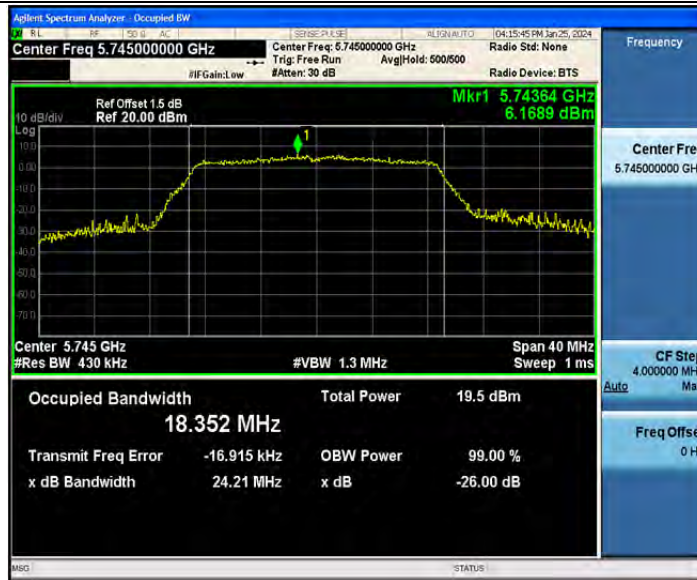
802.11n(HT20)\_Ant1\_5700



802.11n(HT20)\_Ant2\_5700



802.11n(HT20)\_Ant1\_5745



802.11n(HT20)\_Ant2\_5745



802.11n(HT20)\_Ant1\_5785



802.11n(HT20)\_Ant2\_5785