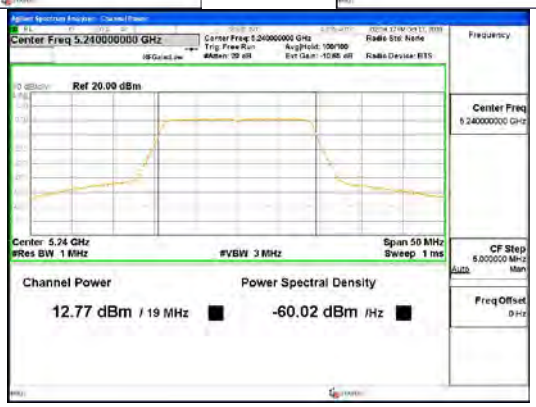
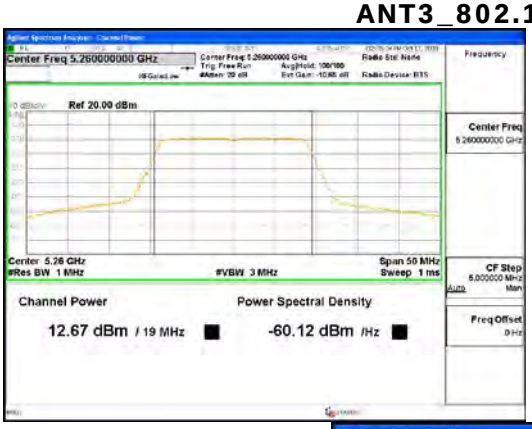
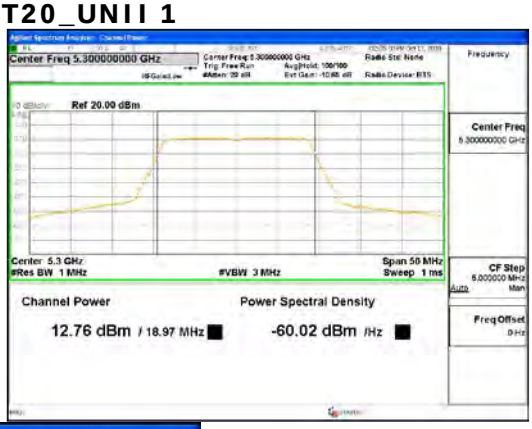







**ANT3_802.11ac_VHT20_UNII 1**



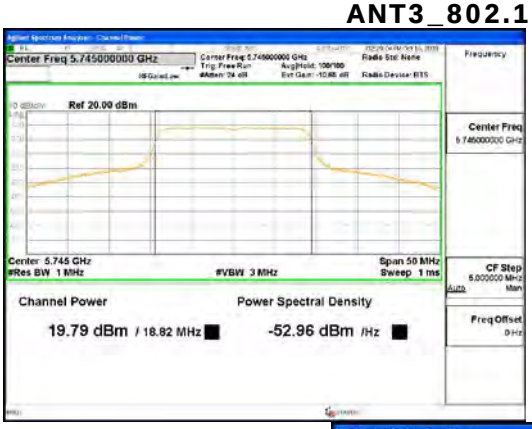



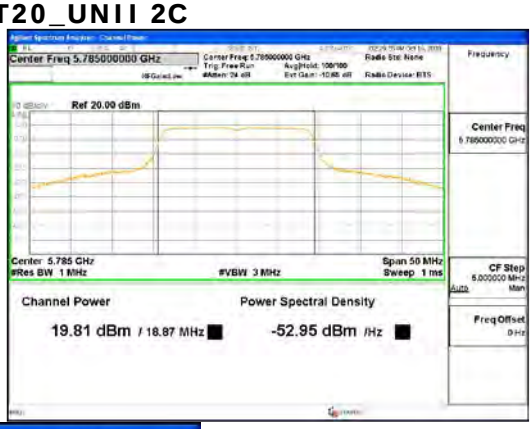


**ANT3_802.11ac_VHT20_UNII 2A**



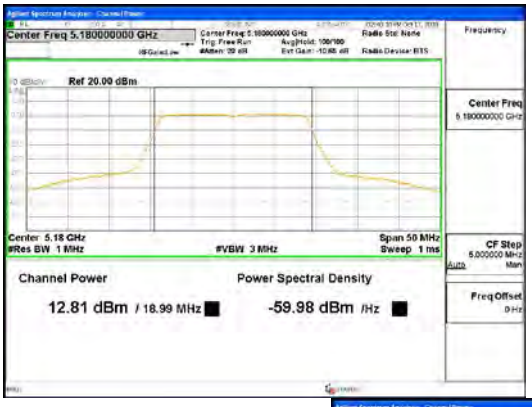

**ANT3_802.11ac_VHT20_UNII 2C**



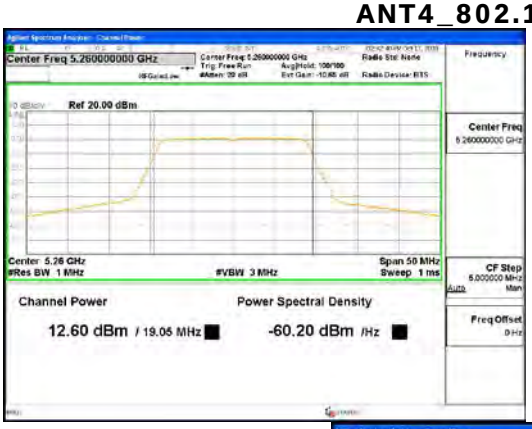


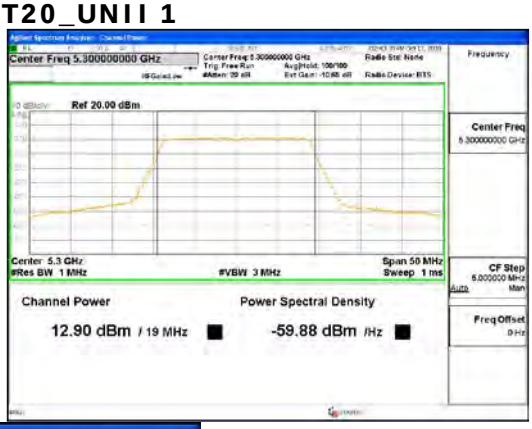
**ANT3_802.11ac_VHT20_UNII 3**






**ANT4_802.11ac_VHT20_UNII 1**



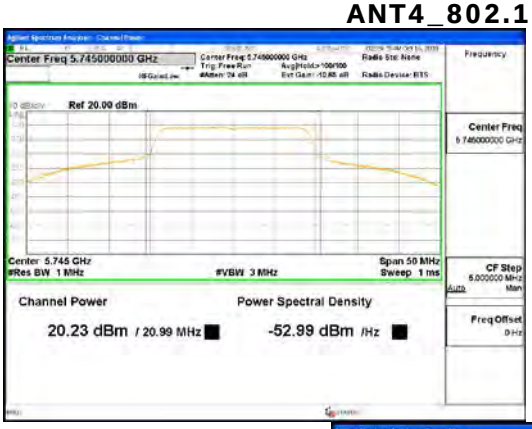



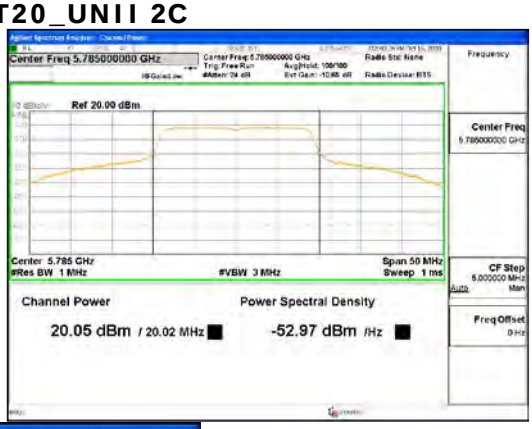


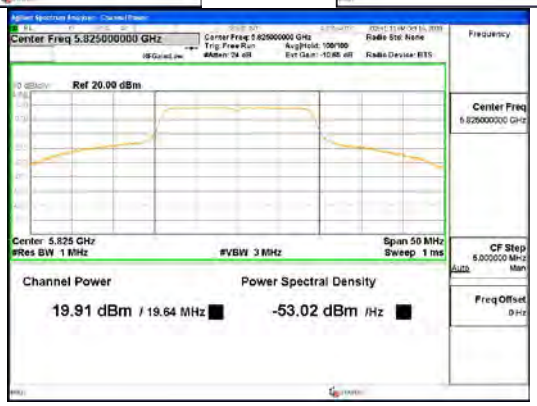
**ANT4_802.11ac_VHT20_UNII 2A**




**ANT4_802.11ac_VHT20_UNII 2C**



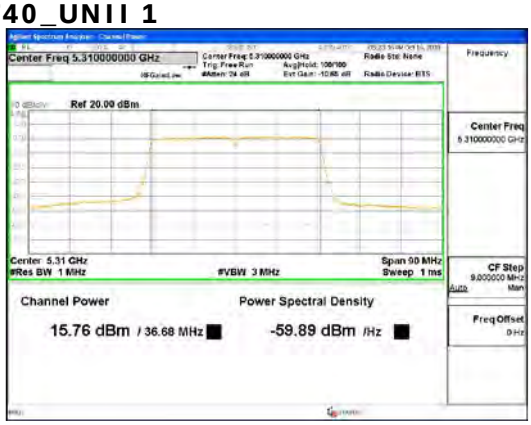



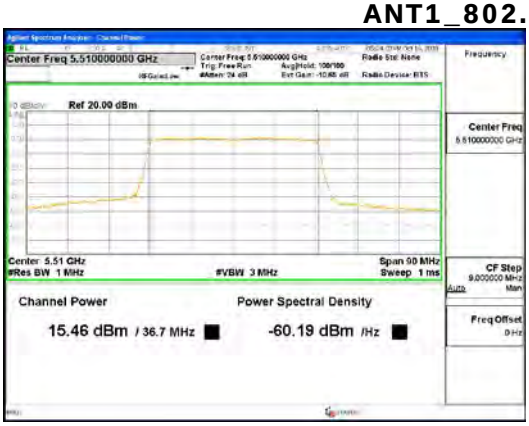

**ANT4_802.11ac_VHT20_UNII 3**

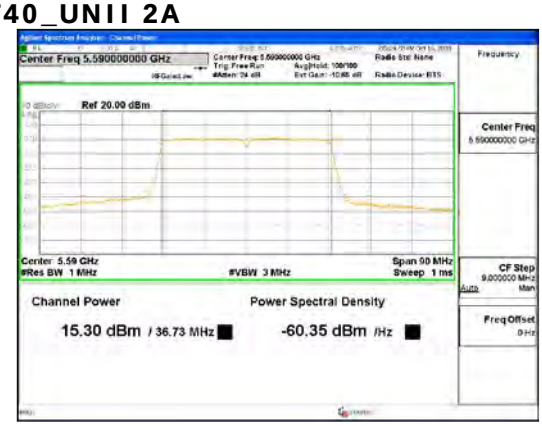


**ANT1_802.11n_HT40_UNII 1**


**ANT1_802.11n_HT40_UNII 2A**





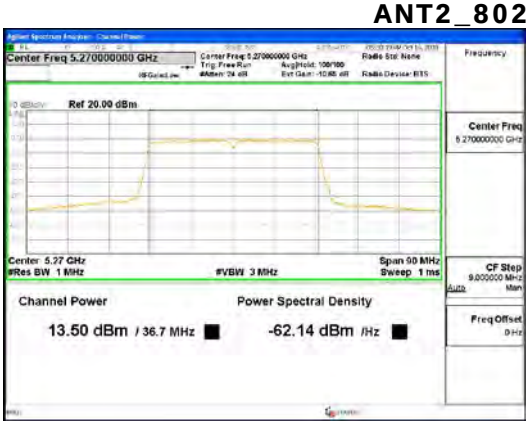
**ANT1_802.11n_HT40_UNII 2C**

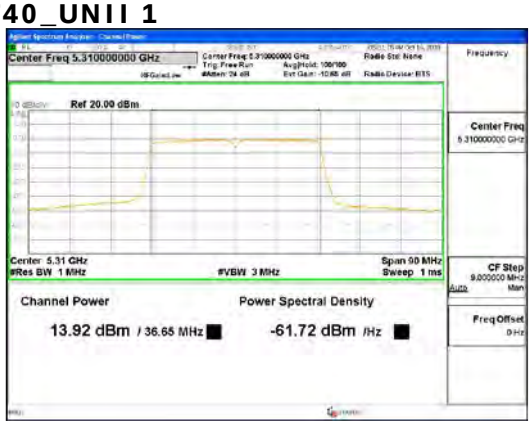


**ANT1_802.11n_HT40_UNII 3**

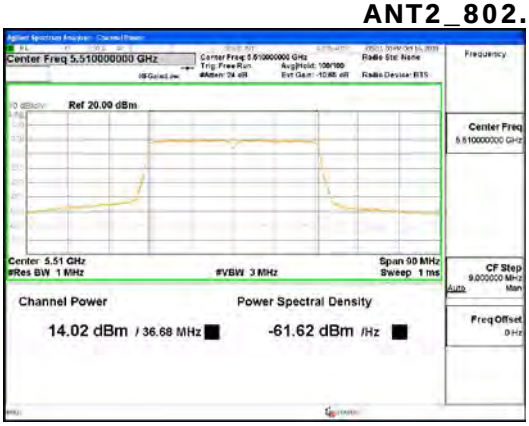


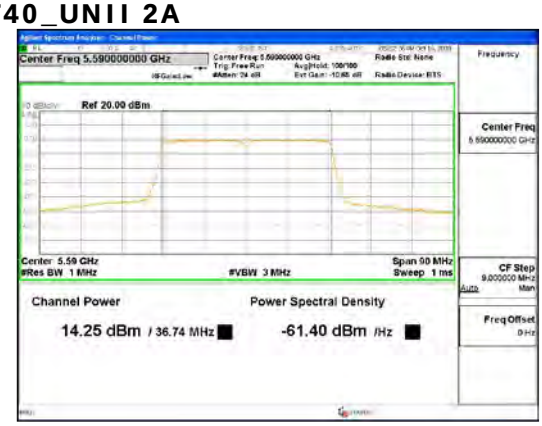
**ANT2_802.11n_HT40_UNII 1**



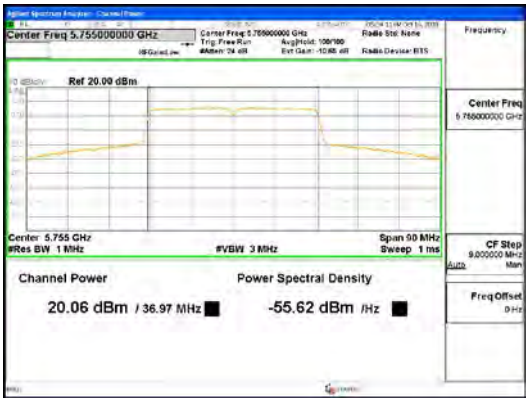

**ANT2_802.11n_HT40_UNII 2A**





**ANT2_802.11n_HT40_UNII 2C**

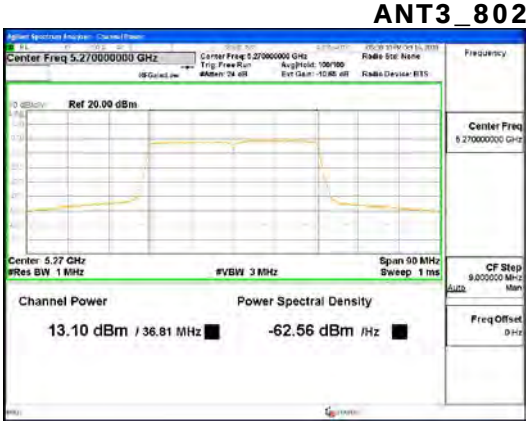


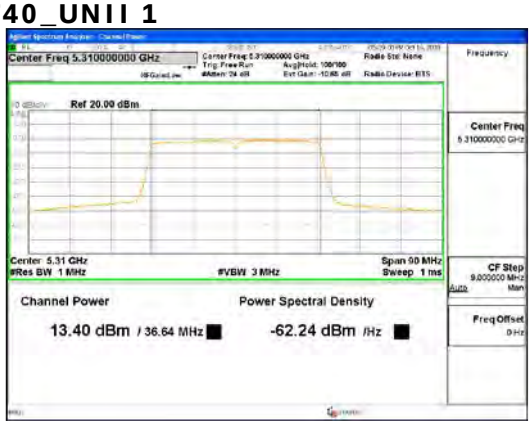


**ANT2_802.11n_HT40_UNII 3**

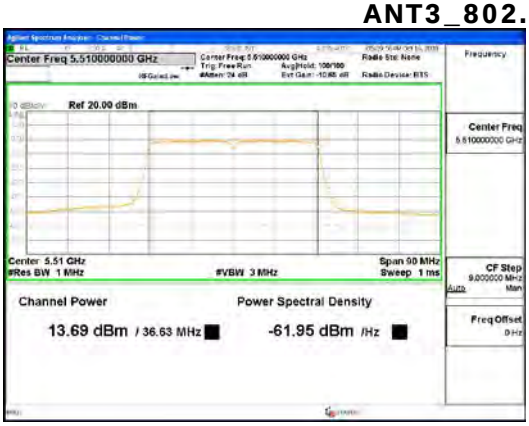


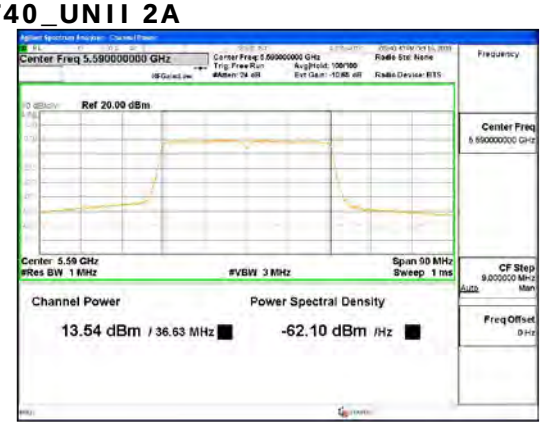
**ANT3_802.11n_HT40_UNII 1**




**ANT3_802.11n_HT40_UNII 2A**





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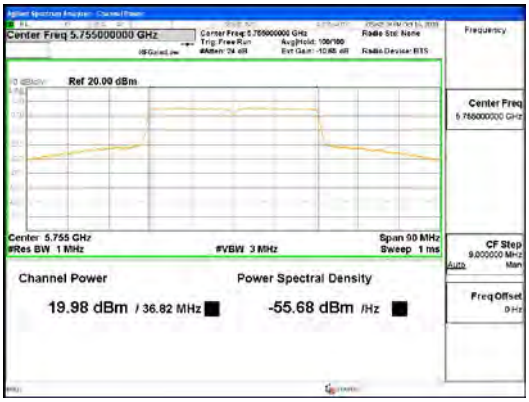


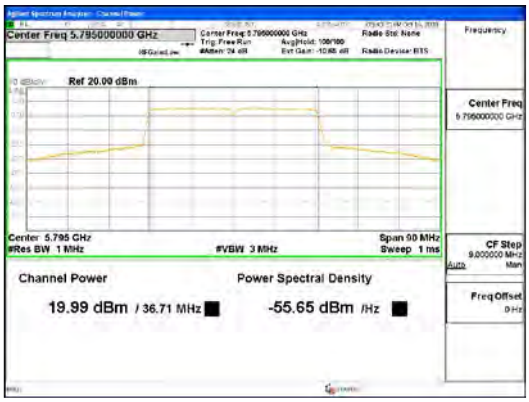


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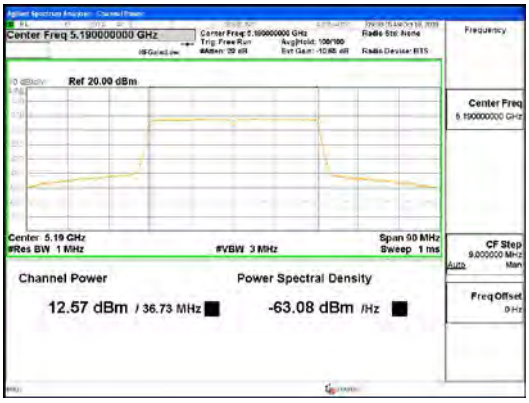
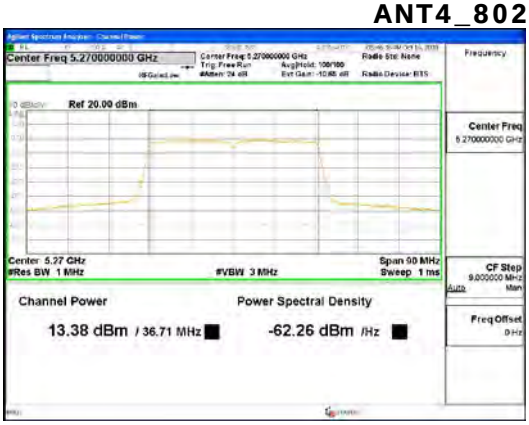
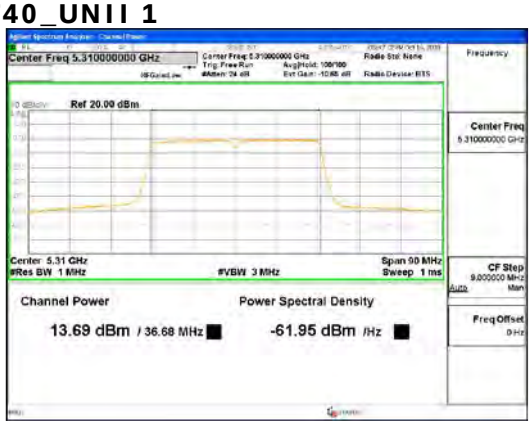


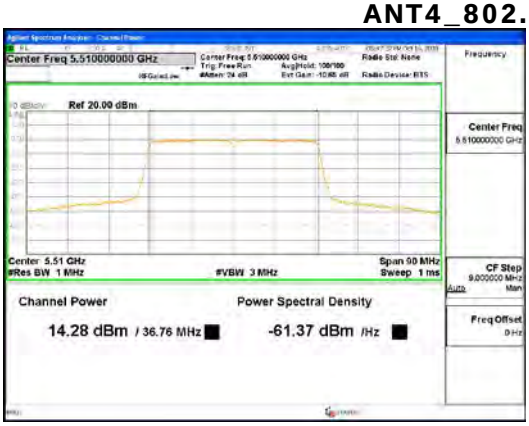


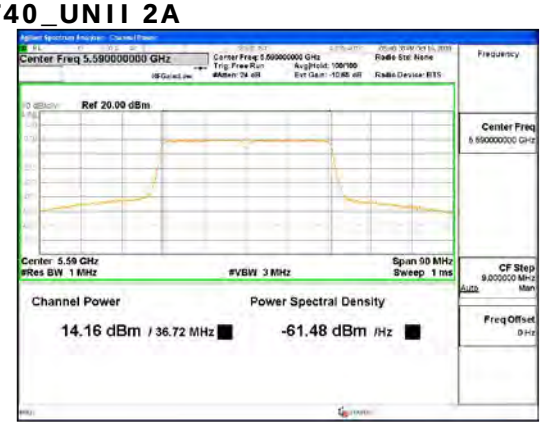
**ANT4_802.11n_HT40_UNII 1**




**ANT4_802.11n_HT40_UNII 2A**





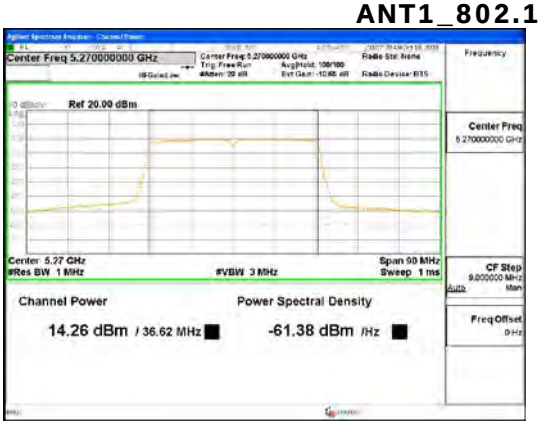
**ANT4_802.11n_HT40_UNII 2C**

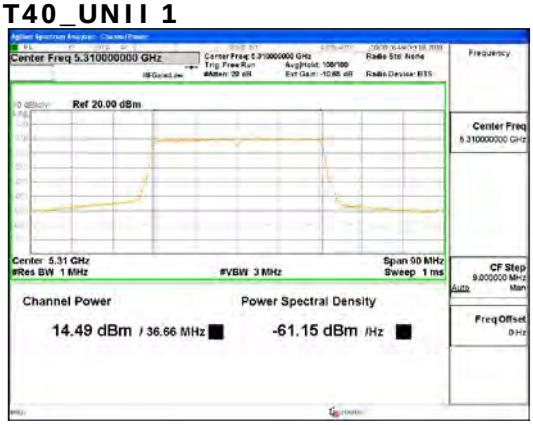


**ANT4_802.11n_HT40_UNII 3**

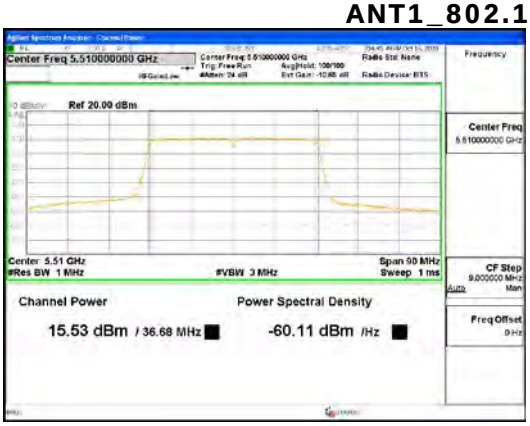


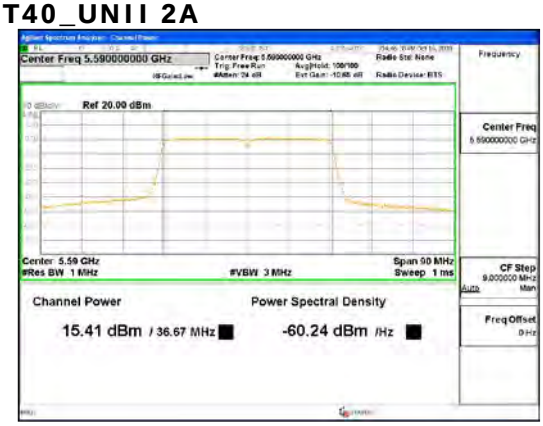
**ANT1_802.11ac_VHT40_UNII 1**




**ANT1_802.11ac_VHT40_UNII 2A**





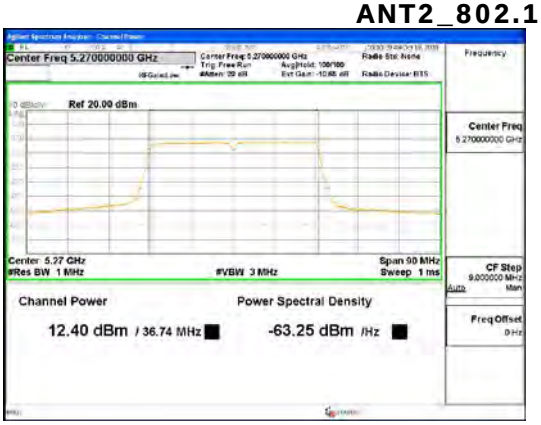
**ANT1_802.11ac_VHT40_UNII 2C**

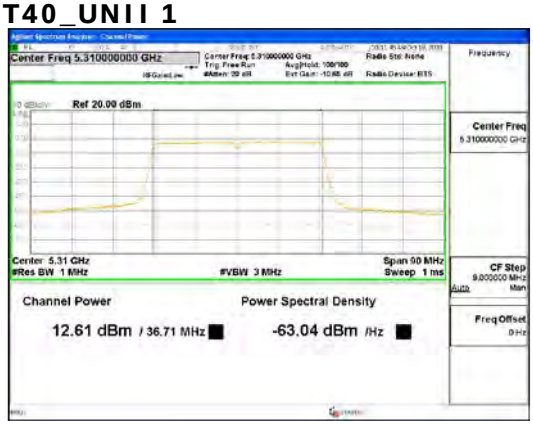


**ANT1_802.11ac_VHT40_UNII 3**

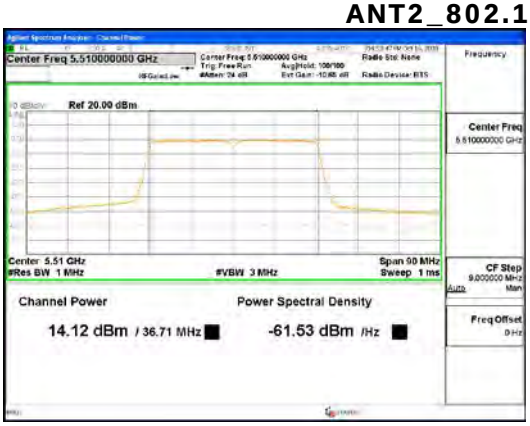


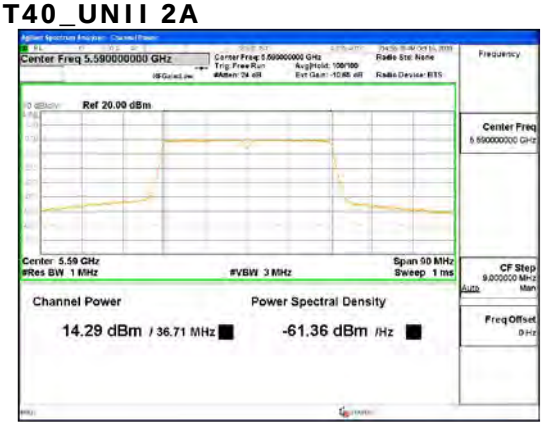
**ANT2_802.11ac_VHT40_UNII 1**



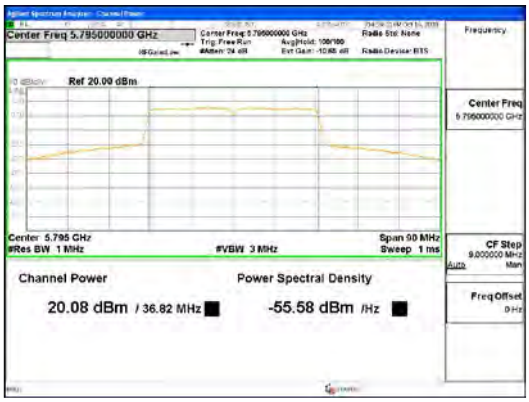

**ANT2_802.11ac_VHT40_UNII 2A**





**ANT2_802.11ac_VHT40_UNII 2C**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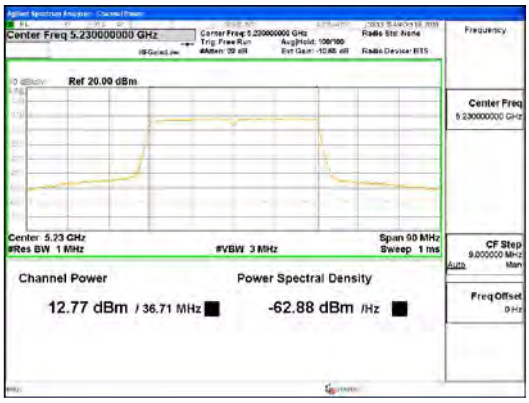
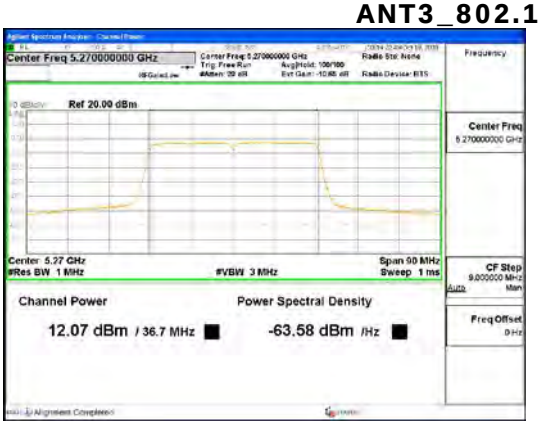
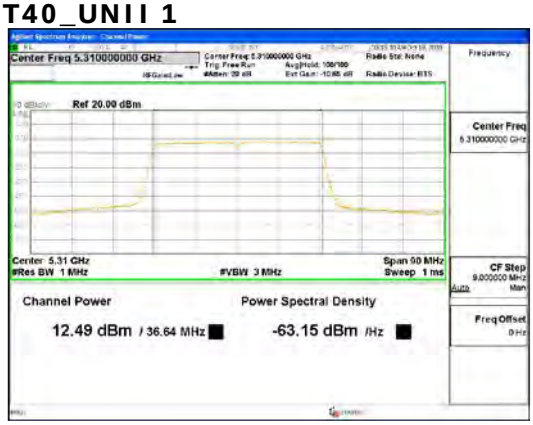
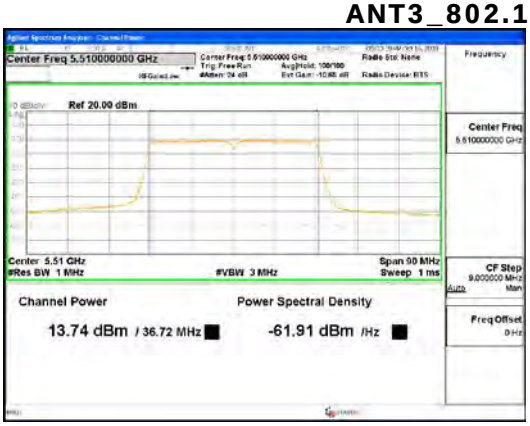


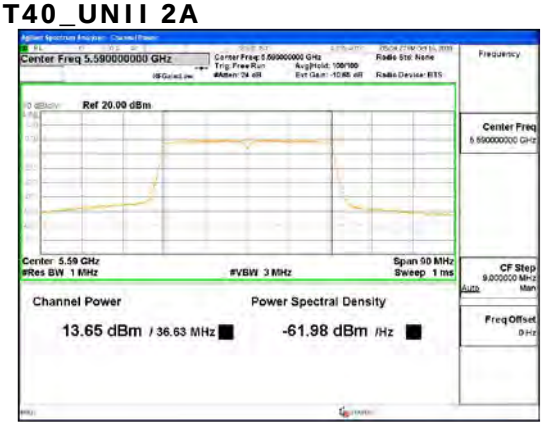

**ANT3_802.11ac_VHT40_UNII 1**



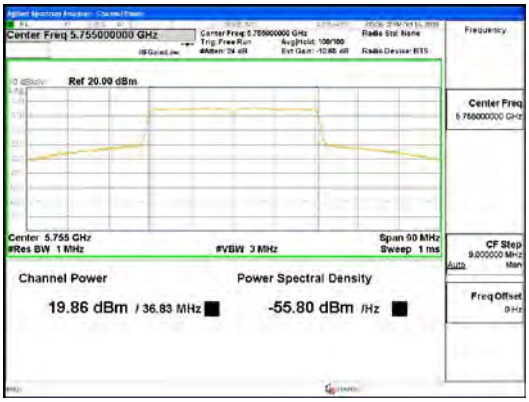

**ANT3_802.11ac_VHT40_UNII 2A**





**ANT3_802.11ac_VHT40_UNII 2C**

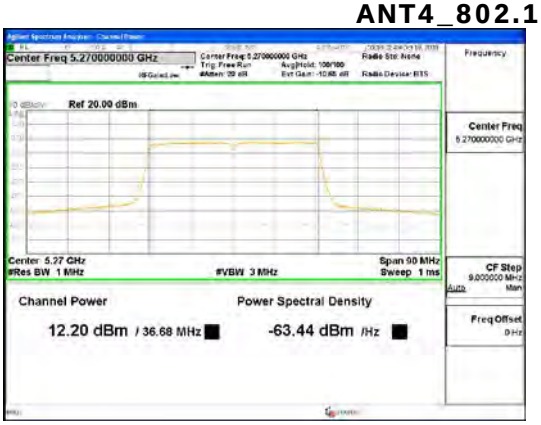


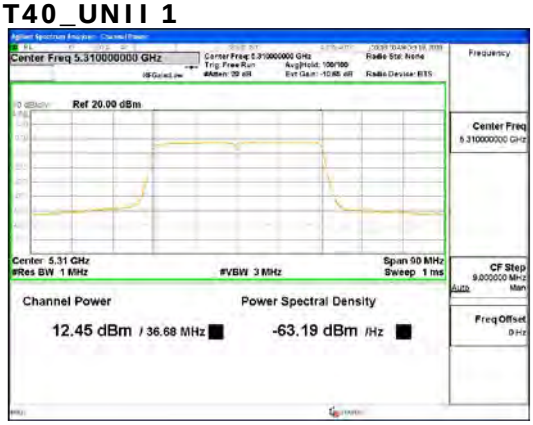


**ANT3_802.11ac_VHT40_UNII 3**

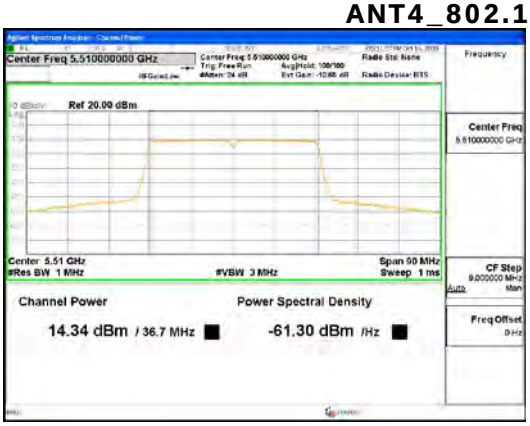


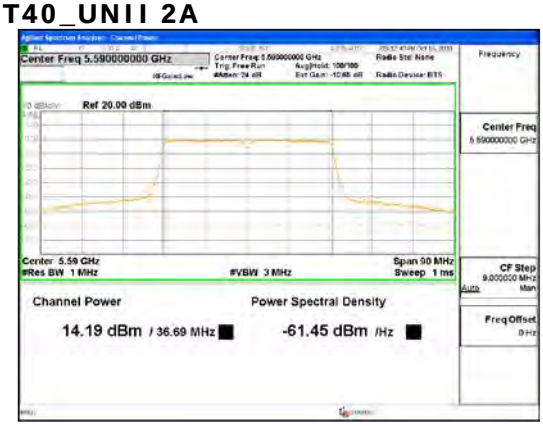
**ANT4_802.11ac_VHT40_UNII 1**



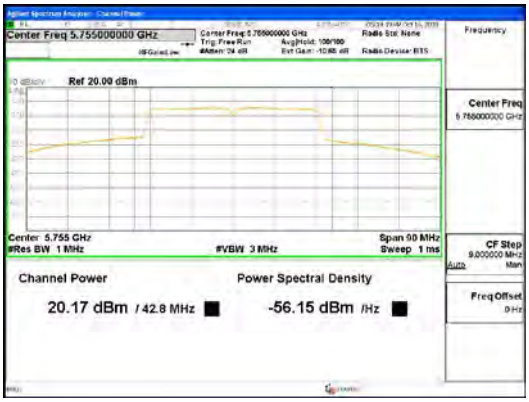

**ANT4_802.11ac_VHT40_UNII 2A**





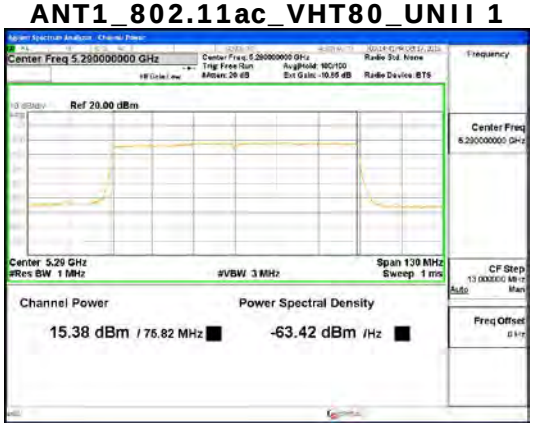
**ANT4_802.11ac_VHT40_UNII 2C**



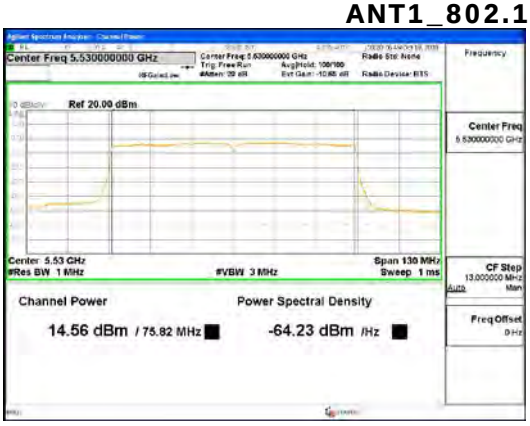


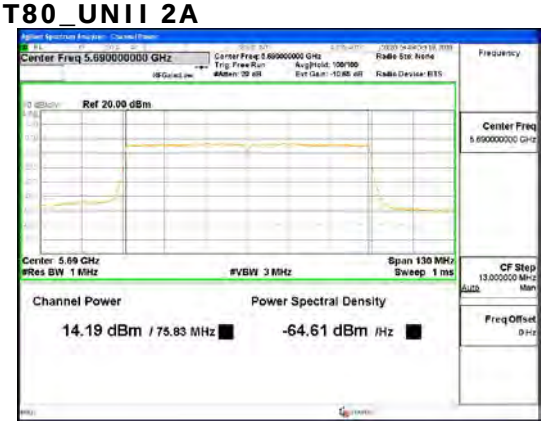
**ANT4_802.11ac_VHT40_UNII 3**


**ANT1_802.11ac_VHT80_UNII 1**




**ANT1_802.11ac_VHT80_UNII 2A**

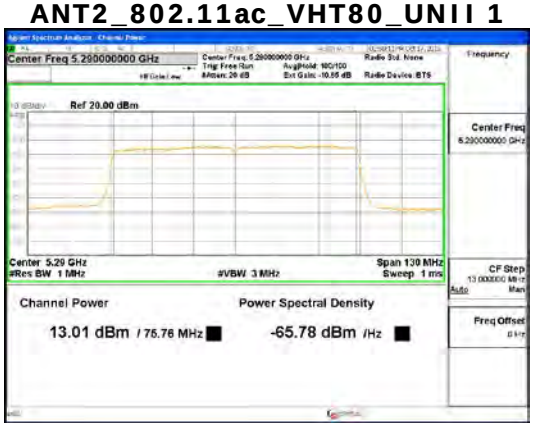


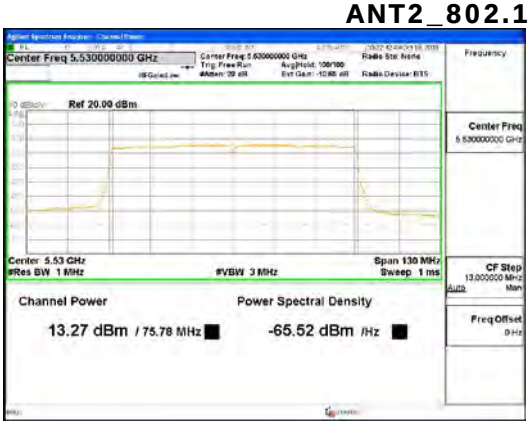

**ANT1_802.11ac_VHT80_UNII 2C**

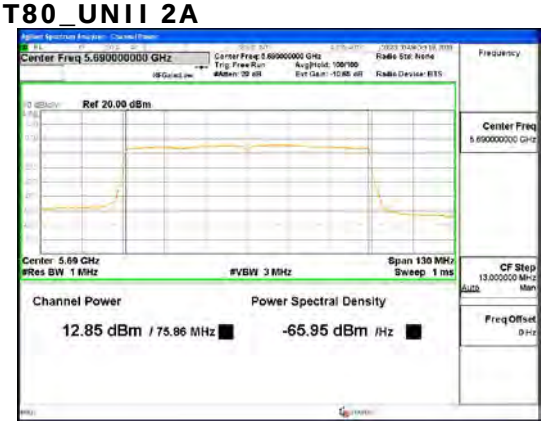

**ANT1_802.11ac_VHT80_UNII 3**


**ANT2_802.11ac_VHT80_UNII 1**




**ANT2_802.11ac_VHT80_UNII 2A**

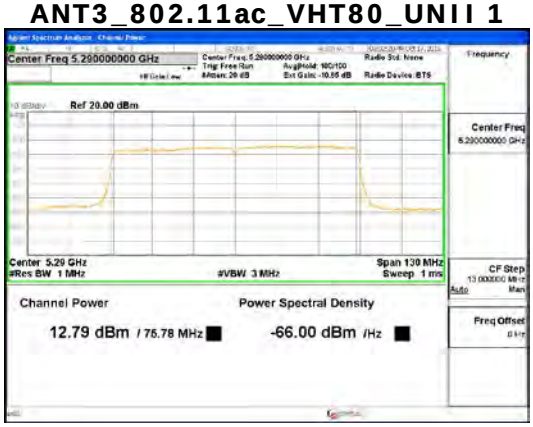


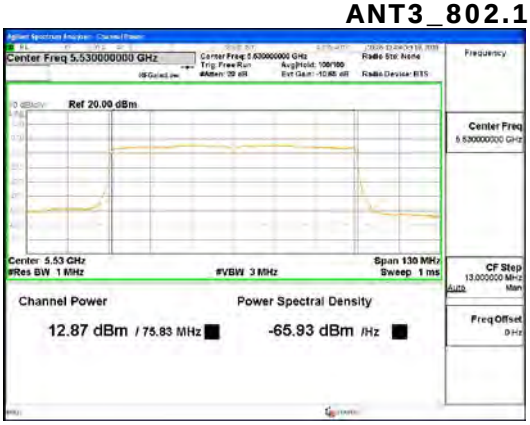

**ANT2_802.11ac_VHT80_UNII 2C**

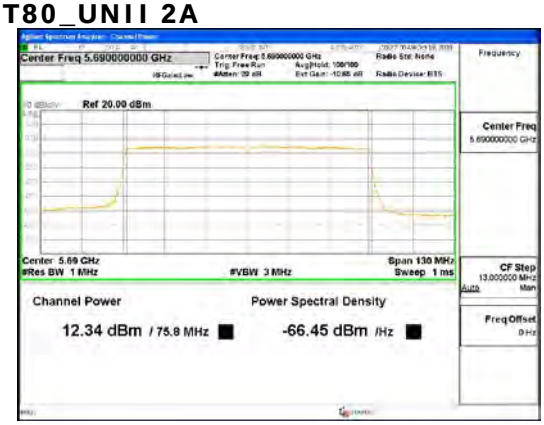

**ANT2_802.11ac_VHT80_UNII 3**


**ANT3_802.11ac_VHT80_UNII 1**




**ANT3_802.11ac_VHT80_UNII 2A**

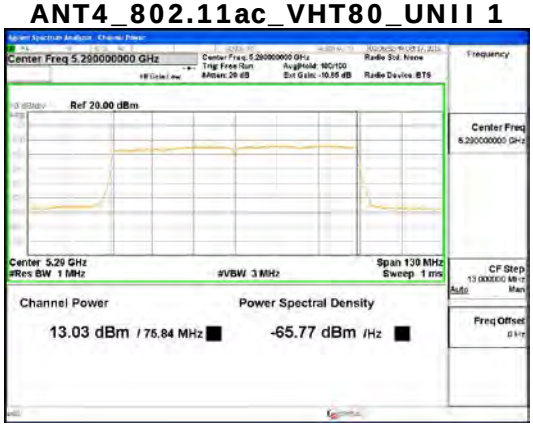


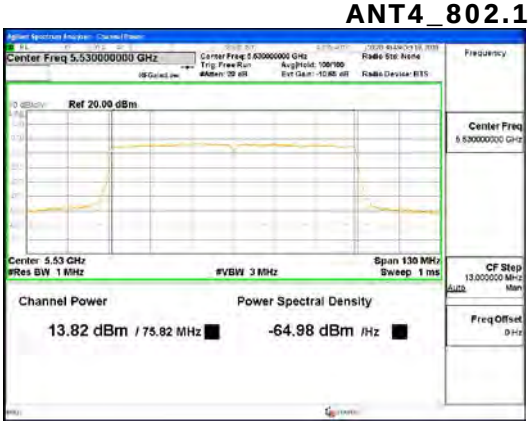

**ANT3_802.11ac_VHT80_UNII 2C**

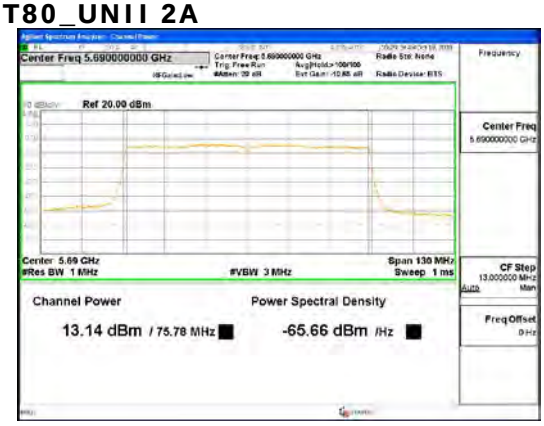

**ANT3_802.11ac_VHT80_UNII 3**


**ANT4_802.11ac_VHT80_UNII 1**




**ANT4_802.11ac_VHT80_UNII 2A**




**ANT4_802.11ac_VHT80_UNII 2C**


**ANT4_802.11ac_VHT80_UNII 3**

## 4.4 Power Spectral Density

### Test Procedures

KDB 789033 – Section F (Method SA-2, Maximum Power Spectral Density)
KDB 662911 D01, D02 (Multiple Transmitter Output)

The peak power density is measured with a spectrum analyzer connected to the antenna terminal while the EUT is operating in transmission mode at the appropriate frequencies.

Test Settings :

Center frequency = the highest, middle and the lowest channels

a) RBW = 1 MHz, 500 KHz (UNII 3)

b) VBW = 3 MHz, 1.5 MHz (UNII 3)

c) Sweep time = auto

d) Detector = power averaging (rms)

e) Trace mode = Average at least 100

f) Duty cycle factor = 10log(1/x)

| Test mode | Duty Cycle Factor (dB) |
|---|---|
| 802.11a | 0.20 |
| 802.11n_HT20 | 0.21 |
| 802.11n_HT40 | 0.43 |
| 802.11ac_VHT20 | 0.21 |
| 802.11ac_VHT40 | 0.42 |
| 802.11ac_VHT80 | 0.84 |

**Limit**

| Operating Mode | ANT Configuration | ANT Gain (dBi) | Mode | Band | Limit (dBm) |
|---|---|---|---|---|---|
| SISO | ANT1, ANT2, ANT3, ANT4 | 2.00 | 802.11a/n/ac | UNII 1 | 11.00 |
| | | | | UNII 2A | 11.00 |
| | | | | UNII 2C | 11.00 |
| | | | | UNII 3 | 30.00 |
| MIMO (2Tx) | ANT1 + ANT2 | 5.01 | 802.11a/n/ac | UNII 1 | 11.00 |
| | | | | UNII 2A | 11.00 |
| | | | | UNII 2C | 11.00 |
| | | | | UNII 3 | 30.00 |
| MIMO (3Tx) | ANT1 + ANT2 + ANT3 | 6.77 | 802.11a/n/ac | UNII 1 | 10.23 |
| | | | | UNII 2A | 10.23 |
| | | | | UNII 2C | 10.23 |
| | | | | UNII 3 | 29.23 |
| MIMO (4Tx) | ANT1 + ANT2 + ANT3 + ATN4 | 8.02 | 802.11a/n/ac | UNII 1 | 8.98 |
| | | | | UNII 2A | 8.98 |
| | | | | UNII 2C | 8.98 |
| | | | | UNII 3 | 27.98 |

**Test Data**

**ANT1**

| Test Mode | Frequency (MHz) | Measured Power Density (dBm) | Duty cycle Factor (dB) | Result Output Power (dBm) | Limit (dBm) | Margin (dB) |
|---|---|---|---|---|---|---|
| 802.11a | 5 180 | 3.65 | 0.20 | 3.85 | 11.00 | 7.15 |
| | 5 200 | 3.46 | 0.20 | 3.66 | 11.00 | 7.34 |
| | 5 240 | 3.90 | 0.20 | 4.10 | 11.00 | 6.90 |
| | 5 260 | 3.63 | 0.20 | 3.83 | 11.00 | 7.17 |
| | 5 300 | 3.89 | 0.20 | 4.09 | 11.00 | 6.91 |
| | 5 320 | 3.83 | 0.20 | 4.03 | 11.00 | 6.97 |
| | 5 500 | 3.41 | 0.20 | 3.61 | 11.00 | 7.39 |
| | 5 600 | 3.22 | 0.20 | 3.42 | 11.00 | 7.58 |
| | 5 720 | 3.13 | 0.20 | 3.33 | 11.00 | 7.67 |
| | 5 745 | 7.03 | 0.20 | 7.23 | 30.00 | 22.77 |
| | 5 785 | 7.14 | 0.20 | 7.34 | 30.00 | 22.66 |
| | 5 825 | 7.08 | 0.20 | 7.28 | 30.00 | 22.72 |
| 802.11n _HT20 | 5 180 | 3.21 | 0.21 | 3.42 | 11.00 | 7.58 |
| | 5 200 | 3.33 | 0.21 | 3.54 | 11.00 | 7.46 |
| | 5 240 | 3.48 | 0.21 | 3.69 | 11.00 | 7.31 |
| | 5 260 | 3.38 | 0.21 | 3.59 | 11.00 | 7.41 |
| | 5 300 | 3.78 | 0.21 | 3.99 | 11.00 | 7.01 |
| | 5 320 | 3.84 | 0.21 | 4.05 | 11.00 | 6.95 |
| | 5 500 | 3.46 | 0.21 | 3.67 | 11.00 | 7.33 |
| | 5 600 | 3.19 | 0.21 | 3.40 | 11.00 | 7.60 |
| | 5 720 | 2.97 | 0.21 | 3.18 | 11.00 | 7.82 |
| | 5 745 | 6.98 | 0.21 | 7.19 | 30.00 | 22.81 |
| | 5 785 | 7.08 | 0.21 | 7.29 | 30.00 | 22.71 |
| | 5 825 | 6.78 | 0.21 | 6.99 | 30.00 | 23.01 |
| 802.11ac _VHT20 | 5 180 | 3.49 | 0.21 | 3.70 | 11.00 | 7.30 |
| | 5 200 | 3.24 | 0.21 | 3.45 | 11.00 | 7.55 |
| | 5 240 | 3.71 | 0.21 | 3.92 | 11.00 | 7.08 |
| | 5 260 | 3.17 | 0.21 | 3.38 | 11.00 | 7.62 |
| | 5 300 | 3.50 | 0.21 | 3.71 | 11.00 | 7.29 |
| | 5 320 | 3.70 | 0.21 | 3.91 | 11.00 | 7.09 |
| | 5 500 | 3.70 | 0.21 | 3.91 | 11.00 | 7.09 |
| | 5 600 | 3.25 | 0.21 | 3.46 | 11.00 | 7.54 |
| | 5 720 | 2.85 | 0.21 | 3.06 | 11.00 | 7.94 |
| | 5 745 | 6.82 | 0.21 | 7.03 | 30.00 | 22.97 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 5 785 | 7.13 | 0.21 | 7.34 | 30.00 | 22.66 |
| | 5 825 | 6.80 | 0.21 | 7.01 | 30.00 | 22.99 |
| 802.11n _HT40 | 5 190 | 0.31 | 0.43 | 0.74 | 11.00 | 10.26 |
| | 5 230 | 0.71 | 0.43 | 1.14 | 11.00 | 9.86 |
| | 5 270 | 1.17 | 0.43 | 1.60 | 11.00 | 9.40 |
| | 5 310 | 1.43 | 0.43 | 1.86 | 11.00 | 9.14 |
| | 5 510 | 1.28 | 0.43 | 1.71 | 11.00 | 9.29 |
| | 5 590 | 0.82 | 0.43 | 1.25 | 11.00 | 9.75 |
| | 5 710 | 0.51 | 0.43 | 0.94 | 11.00 | 10.06 |
| | 5 755 | 4.30 | 0.43 | 4.73 | 30.00 | 25.27 |
| | 5 795 | 4.29 | 0.43 | 4.72 | 30.00 | 25.28 |
| 802.11ac _VHT40 | 5 190 | 0.38 | 0.42 | 0.80 | 11.00 | 10.20 |
| | 5 230 | 0.51 | 0.42 | 0.93 | 11.00 | 10.07 |
| | 5 270 | -0.04 | 0.42 | 0.38 | 11.00 | 10.62 |
| | 5 310 | 0.15 | 0.42 | 0.57 | 11.00 | 10.43 |
| | 5 510 | 1.17 | 0.42 | 1.59 | 11.00 | 9.41 |
| | 5 590 | 1.08 | 0.42 | 1.50 | 11.00 | 9.50 |
| | 5 710 | 0.49 | 0.42 | 0.91 | 11.00 | 10.09 |
| | 5 755 | 4.69 | 0.42 | 5.11 | 30.00 | 24.89 |
| | 5 795 | 4.44 | 0.42 | 4.86 | 30.00 | 25.14 |
| 802.11ac _VHT80 | 5 210 | -1.40 | 0.84 | -0.56 | 11.00 | 11.56 |
| | 5 290 | -1.62 | 0.84 | -0.78 | 11.00 | 11.78 |
| | 5 530 | -2.70 | 0.84 | -1.86 | 11.00 | 12.86 |
| | 5 690 | -3.09 | 0.84 | -2.25 | 11.00 | 13.25 |
| | 5 775 | -3.09 | 0.84 | -2.25 | 30.00 | 32.25 |
| Measurement uncertainty | | ± 1.5 dB | | | | |

**ANT2**

| Test Mode | Frequency (MHz) | Measured Power Density (dBm) | Duty cycle Factor (dB) | Result Output Power (dBm) | Limit (dBm) | Margin (dB) |
|---|---|---|---|---|---|---|
| 802.11a | 5 180 | 1.47 | 0.20 | 1.67 | 11.00 | 9.33 |
| | 5 200 | 1.59 | 0.20 | 1.79 | 11.00 | 9.21 |
| | 5 240 | 1.73 | 0.20 | 1.93 | 11.00 | 9.07 |
| | 5 260 | 1.26 | 0.20 | 1.46 | 11.00 | 9.54 |
| | 5 300 | 1.68 | 0.20 | 1.88 | 11.00 | 9.12 |
| | 5 320 | 1.89 | 0.20 | 2.09 | 11.00 | 8.91 |
| | 5 500 | 1.63 | 0.20 | 1.83 | 11.00 | 9.17 |
| | 5 600 | 1.42 | 0.20 | 1.62 | 11.00 | 9.38 |
| | 5 720 | 1.71 | 0.20 | 1.91 | 11.00 | 9.09 |
| | 5 745 | 6.01 | 0.20 | 6.21 | 30.00 | 23.79 |
| | 5 785 | 6.20 | 0.20 | 6.40 | 30.00 | 23.60 |
| | 5 825 | 6.12 | 0.20 | 6.32 | 30.00 | 23.68 |
| 802.11n _HT20 | 5 180 | 1.36 | 0.21 | 1.57 | 11.00 | 9.43 |
| | 5 200 | 1.02 | 0.21 | 1.23 | 11.00 | 9.77 |
| | 5 240 | 1.22 | 0.21 | 1.43 | 11.00 | 9.57 |
| | 5 260 | 1.38 | 0.21 | 1.59 | 11.00 | 9.41 |
| | 5 300 | 1.51 | 0.21 | 1.72 | 11.00 | 9.28 |
| | 5 320 | 1.67 | 0.21 | 1.88 | 11.00 | 9.12 |
| | 5 500 | 1.83 | 0.21 | 2.04 | 11.00 | 8.96 |
| | 5 600 | 1.48 | 0.21 | 1.69 | 11.00 | 9.31 |
| | 5 720 | 1.81 | 0.21 | 2.02 | 11.00 | 8.98 |
| | 5 745 | 5.61 | 0.21 | 5.82 | 30.00 | 24.18 |
| | 5 785 | 5.83 | 0.21 | 6.04 | 30.00 | 23.96 |
| | 5 825 | 5.69 | 0.21 | 5.90 | 30.00 | 24.10 |
| 802.11ac _VHT20 | 5 180 | 1.39 | 0.21 | 1.60 | 11.00 | 9.40 |
| | 5 200 | 1.25 | 0.21 | 1.46 | 11.00 | 9.54 |
| | 5 240 | 1.41 | 0.21 | 1.62 | 11.00 | 9.38 |
| | 5 260 | 1.08 | 0.21 | 1.29 | 11.00 | 9.71 |
| | 5 300 | 1.46 | 0.21 | 1.67 | 11.00 | 9.33 |
| | 5 320 | 1.50 | 0.21 | 1.71 | 11.00 | 9.29 |
| | 5 500 | 1.85 | 0.21 | 2.06 | 11.00 | 8.94 |
| | 5 600 | 1.58 | 0.21 | 1.79 | 11.00 | 9.21 |
| | 5 720 | 1.72 | 0.21 | 1.93 | 11.00 | 9.07 |
| | 5 745 | 5.59 | 0.21 | 5.80 | 30.00 | 24.20 |
| | 5 785 | 5.82 | 0.21 | 6.03 | 30.00 | 23.97 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 5 825 | 5.74 | 0.21 | 5.95 | 30.00 | 24.05 |
| 802.11n _HT40 | 5 190 | -1.27 | 0.43 | -0.84 | 11.00 | 11.84 |
| | 5 230 | -1.29 | 0.43 | -0.86 | 11.00 | 11.86 |
| | 5 270 | -0.77 | 0.43 | -0.34 | 11.00 | 11.34 |
| | 5 310 | -0.48 | 0.43 | -0.05 | 11.00 | 11.05 |
| | 5 510 | -0.38 | 0.43 | 0.05 | 11.00 | 10.95 |
| | 5 590 | -0.17 | 0.43 | 0.26 | 11.00 | 10.74 |
| | 5 710 | -0.59 | 0.43 | -0.16 | 11.00 | 11.16 |
| | 5 755 | 2.65 | 0.43 | 3.08 | 30.00 | 26.92 |
| | 5 795 | 3.03 | 0.43 | 3.46 | 30.00 | 26.54 |
| 802.11ac _VHT40 | 5 190 | -1.27 | 0.42 | -0.85 | 11.00 | 11.85 |
| | 5 230 | -1.31 | 0.42 | -0.89 | 11.00 | 11.89 |
| | 5 270 | -2.04 | 0.42 | -1.62 | 11.00 | 12.62 |
| | 5 310 | -1.56 | 0.42 | -1.14 | 11.00 | 12.14 |
| | 5 510 | -0.30 | 0.42 | 0.12 | 11.00 | 10.88 |
| | 5 590 | -0.16 | 0.42 | 0.26 | 11.00 | 10.74 |
| | 5 710 | -0.42 | 0.42 | 0.00 | 11.00 | 11.00 |
| | 5 755 | 2.94 | 0.42 | 3.36 | 30.00 | 26.64 |
| | 5 795 | 2.82 | 0.42 | 3.24 | 30.00 | 26.76 |
| 802.11ac _VHT80 | 5 210 | -3.78 | 0.84 | -2.94 | 11.00 | 13.94 |
| | 5 290 | -3.61 | 0.84 | -2.77 | 11.00 | 13.77 |
| | 5 530 | -4.23 | 0.84 | -3.39 | 11.00 | 14.39 |
| | 5 690 | -4.22 | 0.84 | -3.38 | 11.00 | 14.38 |
| | 5 775 | -4.20 | 0.84 | -3.36 | 30.00 | 33.36 |
| Measurement uncertainty | | ± 1.5 dB | | | | |

**ANT3**

| Test Mode | Frequency (MHz) | Measured Power Density (dBm) | Duty cycle Factor (dB) | Result Output Power (dBm) | Limit (dBm) | Margin (dB) |
|---|---|---|---|---|---|---|
| 802.11a | 5 180 | 1.59 | 0.20 | 1.79 | 11.00 | 9.21 |
| | 5 200 | 1.11 | 0.20 | 1.31 | 11.00 | 9.69 |
| | 5 240 | 1.72 | 0.20 | 1.92 | 11.00 | 9.08 |
| | 5 260 | 1.43 | 0.20 | 1.63 | 11.00 | 9.37 |
| | 5 300 | 1.68 | 0.20 | 1.88 | 11.00 | 9.12 |
| | 5 320 | 1.79 | 0.20 | 1.99 | 11.00 | 9.01 |
| | 5 500 | 1.69 | 0.20 | 1.89 | 11.00 | 9.11 |
| | 5 600 | 1.28 | 0.20 | 1.48 | 11.00 | 9.52 |
| | 5 720 | 1.15 | 0.20 | 1.35 | 11.00 | 9.65 |
| | 5 745 | 6.09 | 0.20 | 6.29 | 30.00 | 23.71 |
| | 5 785 | 6.02 | 0.20 | 6.22 | 30.00 | 23.78 |
| | 5 825 | 5.77 | 0.20 | 5.97 | 30.00 | 24.03 |
| 802.11n _HT20 | 5 180 | 1.15 | 0.21 | 1.36 | 11.00 | 9.64 |
| | 5 200 | 1.00 | 0.21 | 1.21 | 11.00 | 9.79 |
| | 5 240 | 1.30 | 0.21 | 1.51 | 11.00 | 9.49 |
| | 5 260 | 0.85 | 0.21 | 1.06 | 11.00 | 9.94 |
| | 5 300 | 1.44 | 0.21 | 1.65 | 11.00 | 9.35 |
| | 5 320 | 1.64 | 0.21 | 1.85 | 11.00 | 9.15 |
| | 5 500 | 1.74 | 0.21 | 1.95 | 11.00 | 9.05 |
| | 5 600 | 1.17 | 0.21 | 1.38 | 11.00 | 9.62 |
| | 5 720 | 1.20 | 0.21 | 1.41 | 11.00 | 9.59 |
| | 5 745 | 5.65 | 0.21 | 5.86 | 30.00 | 24.14 |
| | 5 785 | 5.70 | 0.21 | 5.91 | 30.00 | 24.09 |
| | 5 825 | 5.69 | 0.21 | 5.90 | 30.00 | 24.10 |
| 802.11ac _VHT20 | 5 180 | 1.29 | 0.21 | 1.50 | 11.00 | 9.50 |
| | 5 200 | 0.94 | 0.21 | 1.15 | 11.00 | 9.85 |
| | 5 240 | 1.33 | 0.21 | 1.54 | 11.00 | 9.46 |
| | 5 260 | 1.28 | 0.21 | 1.49 | 11.00 | 9.51 |
| | 5 300 | 1.28 | 0.21 | 1.49 | 11.00 | 9.51 |
| | 5 320 | 1.66 | 0.21 | 1.87 | 11.00 | 9.13 |
| | 5 500 | 1.68 | 0.21 | 1.89 | 11.00 | 9.11 |
| | 5 600 | 1.34 | 0.21 | 1.55 | 11.00 | 9.45 |
| | 5 720 | 1.24 | 0.21 | 1.45 | 11.00 | 9.55 |
| | 5 745 | 5.55 | 0.21 | 5.76 | 30.00 | 24.24 |
| | 5 785 | 5.63 | 0.21 | 5.84 | 30.00 | 24.16 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 5 825 | 5.50 | 0.21 | 5.71 | 30.00 | 24.29 |
| 802.11n _HT40 | 5 190 | -1.61 | 0.43 | -1.18 | 11.00 | 12.18 |
| | 5 230 | -1.80 | 0.43 | -1.37 | 11.00 | 12.37 |
| | 5 270 | -1.11 | 0.43 | -0.68 | 11.00 | 11.68 |
| | 5 310 | -0.88 | 0.43 | -0.45 | 11.00 | 11.45 |
| | 5 510 | -0.76 | 0.43 | -0.33 | 11.00 | 11.33 |
| | 5 590 | -0.90 | 0.43 | -0.47 | 11.00 | 11.47 |
| | 5 710 | -1.06 | 0.43 | -0.63 | 11.00 | 11.63 |
| | 5 755 | 2.92 | 0.43 | 3.35 | 30.00 | 26.65 |
| | 5 795 | 2.75 | 0.43 | 3.18 | 30.00 | 26.82 |
| 802.11ac _VHT40 | 5 190 | -1.56 | 0.42 | -1.14 | 11.00 | 12.14 |
| | 5 230 | -1.46 | 0.42 | -1.04 | 11.00 | 12.04 |
| | 5 270 | -2.20 | 0.42 | -1.78 | 11.00 | 12.78 |
| | 5 310 | -1.66 | 0.42 | -1.24 | 11.00 | 12.24 |
| | 5 510 | -0.70 | 0.42 | -0.28 | 11.00 | 11.28 |
| | 5 590 | -0.88 | 0.42 | -0.46 | 11.00 | 11.46 |
| | 5 710 | -1.17 | 0.42 | -0.75 | 11.00 | 11.75 |
| | 5 755 | 2.66 | 0.42 | 3.08 | 30.00 | 26.92 |
| | 5 795 | 3.27 | 0.42 | 3.69 | 30.00 | 26.31 |
| 802.11ac _VHT80 | 5 210 | -3.94 | 0.84 | -3.10 | 11.00 | 14.10 |
| | 5 290 | -4.12 | 0.84 | -3.28 | 11.00 | 14.28 |
| | 5 530 | -4.39 | 0.84 | -3.55 | 11.00 | 14.55 |
| | 5 690 | -4.82 | 0.84 | -3.98 | 11.00 | 14.98 |
| | 5 775 | -4.75 | 0.84 | -3.91 | 30.00 | 33.91 |
| Measurement uncertainty | | ± 1.5 dB | | | | |

**ANT4**

| Test Mode | Frequency (MHz) | Measured Power Density (dBm) | Duty cycle Factor (dB) | Result Output Power (dBm) | Limit (dBm) | Margin (dB) |
|---|---|---|---|---|---|---|
| 802.11a | 5 180 | 1.65 | 0.20 | 1.85 | 11.00 | 9.15 |
| | 5 200 | 1.62 | 0.20 | 1.82 | 11.00 | 9.18 |
| | 5 240 | 1.81 | 0.20 | 2.01 | 11.00 | 8.99 |
| | 5 260 | 1.39 | 0.20 | 1.59 | 11.00 | 9.41 |
| | 5 300 | 1.81 | 0.20 | 2.01 | 11.00 | 8.99 |
| | 5 320 | 1.78 | 0.20 | 1.98 | 11.00 | 9.02 |
| | 5 500 | 1.98 | 0.20 | 2.18 | 11.00 | 8.82 |
| | 5 600 | 2.09 | 0.20 | 2.29 | 11.00 | 8.71 |
| | 5 720 | 1.58 | 0.20 | 1.78 | 11.00 | 9.22 |
| | 5 745 | 6.12 | 0.20 | 6.32 | 30.00 | 23.68 |
| | 5 785 | 6.45 | 0.20 | 6.65 | 30.00 | 23.35 |
| | 5 825 | 6.19 | 0.20 | 6.39 | 30.00 | 23.61 |
| 802.11n _HT20 | 5 180 | 1.05 | 0.21 | 1.26 | 11.00 | 9.74 |
| | 5 200 | 1.10 | 0.21 | 1.31 | 11.00 | 9.69 |
| | 5 240 | 1.44 | 0.21 | 1.65 | 11.00 | 9.35 |
| | 5 260 | 1.11 | 0.21 | 1.32 | 11.00 | 9.68 |
| | 5 300 | 1.73 | 0.21 | 1.94 | 11.00 | 9.06 |
| | 5 320 | 1.58 | 0.21 | 1.79 | 11.00 | 9.21 |
| | 5 500 | 2.28 | 0.21 | 2.49 | 11.00 | 8.51 |
| | 5 600 | 1.82 | 0.21 | 2.03 | 11.00 | 8.97 |
| | 5 720 | 1.90 | 0.21 | 2.11 | 11.00 | 8.89 |
| | 5 745 | 5.90 | 0.21 | 6.11 | 30.00 | 23.89 |
| | 5 785 | 5.93 | 0.21 | 6.14 | 30.00 | 23.86 |
| | 5 825 | 5.81 | 0.21 | 6.02 | 30.00 | 23.98 |
| 802.11ac _VHT20 | 5 180 | 1.51 | 0.21 | 1.72 | 11.00 | 9.28 |
| | 5 200 | 1.15 | 0.21 | 1.36 | 11.00 | 9.64 |
| | 5 240 | 1.65 | 0.21 | 1.86 | 11.00 | 9.14 |
| | 5 260 | 1.32 | 0.21 | 1.53 | 11.00 | 9.47 |
| | 5 300 | 1.52 | 0.21 | 1.73 | 11.00 | 9.27 |
| | 5 320 | 1.76 | 0.21 | 1.97 | 11.00 | 9.03 |
| | 5 500 | 2.13 | 0.21 | 2.34 | 11.00 | 8.66 |
| | 5 600 | 2.55 | 0.21 | 2.76 | 11.00 | 8.24 |
| | 5 720 | 2.10 | 0.21 | 2.31 | 11.00 | 8.69 |
| | 5 745 | 5.89 | 0.21 | 6.10 | 30.00 | 23.90 |
| | 5 785 | 5.84 | 0.21 | 6.05 | 30.00 | 23.95 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 5 825 | 5.57 | 0.21 | 5.78 | 30.00 | 24.22 |
| 802.11n _HT40 | 5 190 | -1.68 | 0.43 | -1.25 | 11.00 | 12.25 |
| | 5 230 | -1.98 | 0.43 | -1.55 | 11.00 | 12.55 |
| | 5 270 | -0.83 | 0.43 | -0.40 | 11.00 | 11.40 |
| | 5 310 | -0.49 | 0.43 | -0.06 | 11.00 | 11.06 |
| | 5 510 | -0.07 | 0.43 | 0.36 | 11.00 | 10.64 |
| | 5 590 | -0.31 | 0.43 | 0.12 | 11.00 | 10.88 |
| | 5 710 | -0.39 | 0.43 | 0.04 | 11.00 | 10.96 |
| | 5 755 | 3.08 | 0.43 | 3.51 | 30.00 | 26.49 |
| | 5 795 | 3.05 | 0.43 | 3.48 | 30.00 | 26.52 |
| 802.11ac _VHT40 | 5 190 | -1.51 | 0.42 | -1.09 | 11.00 | 12.09 |
| | 5 230 | -1.22 | 0.42 | -0.80 | 11.00 | 11.80 |
| | 5 270 | -2.16 | 0.42 | -1.74 | 11.00 | 12.74 |
| | 5 310 | -1.52 | 0.42 | -1.10 | 11.00 | 12.10 |
| | 5 510 | 0.38 | 0.42 | 0.80 | 11.00 | 10.20 |
| | 5 590 | 0.00 | 0.42 | 0.42 | 11.00 | 10.58 |
| | 5 710 | -0.46 | 0.42 | -0.04 | 11.00 | 11.04 |
| | 5 755 | 2.99 | 0.42 | 3.41 | 30.00 | 26.59 |
| | 5 795 | 2.87 | 0.42 | 3.29 | 30.00 | 26.71 |
| 802.11ac _VHT80 | 5 210 | -3.98 | 0.84 | -3.14 | 11.00 | 14.14 |
| | 5 290 | -4.20 | 0.84 | -3.36 | 11.00 | 14.36 |
| | 5 530 | -3.62 | 0.84 | -2.78 | 11.00 | 13.78 |
| | 5 690 | -4.16 | 0.84 | -3.32 | 11.00 | 14.32 |
| | 5 775 | -4.02 | 0.84 | -3.18 | 30.00 | 33.18 |
| Measurement uncertainty | | ± 1.5 dB | | | | |

**ANT1 + ANT2**

| Test Mode | Frequency (MHz) | Measured Power Density (dBm) | Duty cycle Factor (dB) | Result Output Power (dBm) | Limit (dBm) | Margin (dB) |
|---|---|---|---|---|---|---|
| 802.11a | 5 180 | 5.71 | 0.20 | 5.91 | 11.00 | 5.09 |
| | 5 200 | 5.64 | 0.20 | 5.84 | 11.00 | 5.16 |
| | 5 240 | 5.96 | 0.20 | 6.16 | 11.00 | 4.84 |
| | 5 260 | 5.62 | 0.20 | 5.82 | 11.00 | 5.18 |
| | 5 300 | 5.93 | 0.20 | 6.13 | 11.00 | 4.87 |
| | 5 320 | 5.98 | 0.20 | 6.18 | 11.00 | 4.82 |
| | 5 500 | 5.62 | 0.20 | 5.82 | 11.00 | 5.18 |
| | 5 600 | 5.42 | 0.20 | 5.62 | 11.00 | 5.38 |
| | 5 720 | 5.49 | 0.20 | 5.69 | 11.00 | 5.31 |
| | 5 745 | 9.56 | 0.20 | 9.76 | 30.00 | 20.24 |
| | 5 785 | 9.71 | 0.20 | 9.91 | 30.00 | 20.09 |
| | 5 825 | 9.64 | 0.20 | 9.84 | 30.00 | 20.16 |
| 802.11n _HT20 | 5 180 | 5.39 | 0.21 | 5.60 | 11.00 | 5.40 |
| | 5 200 | 5.34 | 0.21 | 5.55 | 11.00 | 5.45 |
| | 5 240 | 5.51 | 0.21 | 5.72 | 11.00 | 5.28 |
| | 5 260 | 5.50 | 0.21 | 5.71 | 11.00 | 5.29 |
| | 5 300 | 5.80 | 0.21 | 6.01 | 11.00 | 4.99 |
| | 5 320 | 5.90 | 0.21 | 6.11 | 11.00 | 4.89 |
| | 5 500 | 5.73 | 0.21 | 5.94 | 11.00 | 5.06 |
| | 5 600 | 5.43 | 0.21 | 5.64 | 11.00 | 5.36 |
| | 5 720 | 5.44 | 0.21 | 5.65 | 11.00 | 5.35 |
| | 5 745 | 9.36 | 0.21 | 9.57 | 30.00 | 20.43 |
| | 5 785 | 9.51 | 0.21 | 9.72 | 30.00 | 20.28 |
| | 5 825 | 9.28 | 0.21 | 9.49 | 30.00 | 20.51 |
| 802.11ac _VHT20 | 5 180 | 5.58 | 0.21 | 5.79 | 11.00 | 5.21 |
| | 5 200 | 5.37 | 0.21 | 5.58 | 11.00 | 5.42 |
| | 5 240 | 5.72 | 0.21 | 5.93 | 11.00 | 5.07 |
| | 5 260 | 5.26 | 0.21 | 5.47 | 11.00 | 5.53 |
| | 5 300 | 5.61 | 0.21 | 5.82 | 11.00 | 5.18 |
| | 5 320 | 5.75 | 0.21 | 5.96 | 11.00 | 5.04 |
| | 5 500 | 5.88 | 0.21 | 6.09 | 11.00 | 4.91 |
| | 5 600 | 5.51 | 0.21 | 5.72 | 11.00 | 5.28 |
| | 5 720 | 5.33 | 0.21 | 5.54 | 11.00 | 5.46 |
| | 5 745 | 9.26 | 0.21 | 9.47 | 30.00 | 20.53 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 5 785 | 9.53 | 0.21 | 9.74 | 30.00 | 20.26 |
| | 5 825 | 9.31 | 0.21 | 9.52 | 30.00 | 20.48 |
| 802.11n _HT40 | 5 190 | 2.60 | 0.43 | 3.03 | 11.00 | 7.97 |
| | 5 230 | 2.83 | 0.43 | 3.26 | 11.00 | 7.74 |
| | 5 270 | 3.32 | 0.43 | 3.75 | 11.00 | 7.25 |
| | 5 310 | 3.59 | 0.43 | 4.02 | 11.00 | 6.98 |
| | 5 510 | 3.54 | 0.43 | 3.97 | 11.00 | 7.03 |
| | 5 590 | 3.36 | 0.43 | 3.79 | 11.00 | 7.21 |
| | 5 710 | 3.01 | 0.43 | 3.44 | 11.00 | 7.56 |
| | 5 755 | 6.56 | 0.43 | 6.99 | 30.00 | 23.01 |
| | 5 795 | 6.72 | 0.43 | 7.15 | 30.00 | 22.85 |
| 802.11ac _VHT40 | 5 190 | 2.64 | 0.42 | 3.06 | 11.00 | 7.94 |
| | 5 230 | 2.70 | 0.42 | 3.12 | 11.00 | 7.88 |
| | 5 270 | 2.08 | 0.42 | 2.50 | 11.00 | 8.50 |
| | 5 310 | 2.39 | 0.42 | 2.81 | 11.00 | 8.19 |
| | 5 510 | 3.51 | 0.42 | 3.93 | 11.00 | 7.07 |
| | 5 590 | 3.51 | 0.42 | 3.93 | 11.00 | 7.07 |
| | 5 710 | 3.07 | 0.42 | 3.49 | 11.00 | 7.51 |
| | 5 755 | 6.91 | 0.42 | 7.33 | 30.00 | 22.67 |
| | 5 795 | 6.72 | 0.42 | 7.14 | 30.00 | 22.86 |
| 802.11ac _VHT80 | 5 210 | 0.58 | 0.84 | 1.42 | 11.00 | 9.58 |
| | 5 290 | 0.51 | 0.84 | 1.35 | 11.00 | 9.65 |
| | 5 530 | -0.39 | 0.84 | 0.45 | 11.00 | 10.55 |
| | 5 690 | -0.61 | 0.84 | 0.23 | 11.00 | 10.77 |
| | 5 775 | -0.60 | 0.84 | 0.24 | 30.00 | 29.76 |
| Measurement uncertainty | | ± 1.5 dB | | | | |

**ANT1 + ANT2 + ANT3**

| Test Mode | Frequency (MHz) | Measured Power Density (dBm) | Duty cycle Factor (dB) | Result Output Power (dBm) | Limit (dBm) | Margin (dB) |
|---|---|---|---|---|---|---|
| 802.11a | 5 180 | 7.13 | 0.20 | 7.33 | 11.00 | 3.67 |
| | 5 200 | 6.95 | 0.20 | 7.15 | 11.00 | 3.85 |
| | 5 240 | 7.35 | 0.20 | 7.55 | 11.00 | 3.45 |
| | 5 260 | 7.02 | 0.20 | 7.22 | 11.00 | 3.78 |
| | 5 300 | 7.32 | 0.20 | 7.52 | 11.00 | 3.48 |
| | 5 320 | 7.38 | 0.20 | 7.58 | 11.00 | 3.42 |
| | 5 500 | 7.10 | 0.20 | 7.30 | 11.00 | 3.70 |
| | 5 600 | 6.84 | 0.20 | 7.04 | 11.00 | 3.96 |
| | 5 720 | 6.85 | 0.20 | 7.05 | 11.00 | 3.95 |
| | 5 745 | 11.17 | 0.20 | 11.37 | 30.00 | 18.63 |
| | 5 785 | 11.25 | 0.20 | 11.45 | 30.00 | 18.55 |
| | 5 825 | 11.13 | 0.20 | 11.33 | 30.00 | 18.67 |
| 802.11n _HT20 | 5 180 | 6.78 | 0.21 | 6.99 | 11.00 | 4.01 |
| | 5 200 | 6.70 | 0.21 | 6.91 | 11.00 | 4.09 |
| | 5 240 | 6.90 | 0.21 | 7.11 | 11.00 | 3.89 |
| | 5 260 | 6.78 | 0.21 | 6.99 | 11.00 | 4.01 |
| | 5 300 | 7.16 | 0.21 | 7.37 | 11.00 | 3.63 |
| | 5 320 | 7.28 | 0.21 | 7.49 | 11.00 | 3.51 |
| | 5 500 | 7.19 | 0.21 | 7.40 | 11.00 | 3.60 |
| | 5 600 | 6.81 | 0.21 | 7.02 | 11.00 | 3.98 |
| | 5 720 | 6.83 | 0.21 | 7.04 | 11.00 | 3.96 |
| | 5 745 | 10.90 | 0.21 | 11.11 | 30.00 | 18.89 |
| | 5 785 | 11.02 | 0.21 | 11.23 | 30.00 | 18.77 |
| | 5 825 | 10.86 | 0.21 | 11.07 | 30.00 | 18.93 |
| 802.11ac _VHT20 | 5 180 | 6.95 | 0.21 | 7.16 | 11.00 | 3.84 |
| | 5 200 | 6.71 | 0.21 | 6.92 | 11.00 | 4.08 |
| | 5 240 | 7.07 | 0.21 | 7.28 | 11.00 | 3.72 |
| | 5 260 | 6.72 | 0.21 | 6.93 | 11.00 | 4.07 |
| | 5 300 | 6.97 | 0.21 | 7.18 | 11.00 | 3.82 |
| | 5 320 | 7.18 | 0.21 | 7.39 | 11.00 | 3.61 |
| | 5 500 | 7.28 | 0.21 | 7.49 | 11.00 | 3.51 |
| | 5 600 | 6.91 | 0.21 | 7.12 | 11.00 | 3.88 |
| | 5 720 | 6.76 | 0.21 | 6.97 | 11.00 | 4.03 |
| | 5 745 | 10.80 | 0.21 | 11.01 | 30.00 | 18.99 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 5 785 | 11.02 | 0.21 | 11.23 | 30.00 | 18.77 |
| | 5 825 | 10.82 | 0.21 | 11.03 | 30.00 | 18.97 |
| 802.11n _HT40 | 5 190 | 4.00 | 0.43 | 4.43 | 11.00 | 6.57 |
| | 5 230 | 4.12 | 0.43 | 4.55 | 11.00 | 6.45 |
| | 5 270 | 4.66 | 0.43 | 5.09 | 11.00 | 5.91 |
| | 5 310 | 4.92 | 0.43 | 5.35 | 11.00 | 5.65 |
| | 5 510 | 4.91 | 0.43 | 5.34 | 11.00 | 5.66 |
| | 5 590 | 4.75 | 0.43 | 5.18 | 11.00 | 5.82 |
| | 5 710 | 4.44 | 0.43 | 4.87 | 11.00 | 6.13 |
| | 5 755 | 8.12 | 0.43 | 8.55 | 30.00 | 21.45 |
| | 5 795 | 8.18 | 0.43 | 8.61 | 30.00 | 21.39 |
| 802.11ac _VHT40 | 5 190 | 4.04 | 0.42 | 4.46 | 11.00 | 6.54 |
| | 5 230 | 4.11 | 0.42 | 4.53 | 11.00 | 6.47 |
| | 5 270 | 3.46 | 0.42 | 3.88 | 11.00 | 7.12 |
| | 5 310 | 3.83 | 0.42 | 4.25 | 11.00 | 6.75 |
| | 5 510 | 4.90 | 0.42 | 5.32 | 11.00 | 5.68 |
| | 5 590 | 4.86 | 0.42 | 5.28 | 11.00 | 5.72 |
| | 5 710 | 4.46 | 0.42 | 4.88 | 11.00 | 6.12 |
| | 5 755 | 8.30 | 0.42 | 8.72 | 30.00 | 21.28 |
| | 5 795 | 8.34 | 0.42 | 8.76 | 30.00 | 21.24 |
| 802.11ac _VHT80 | 5 210 | 1.89 | 0.84 | 2.73 | 11.00 | 8.27 |
| | 5 290 | 1.79 | 0.84 | 2.63 | 11.00 | 8.37 |
| | 5 530 | 1.07 | 0.84 | 1.91 | 11.00 | 9.09 |
| | 5 690 | 0.79 | 0.84 | 1.63 | 11.00 | 9.37 |
| | 5 775 | 0.81 | 0.84 | 1.65 | 30.00 | 28.35 |
| Measurement uncertainty | | ± 1.5 dB | | | | |

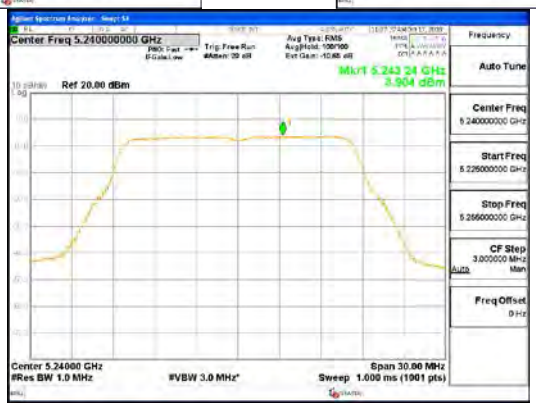
**ANT1 + ANT2 + ANT3 + ANT4**

| Test Mode | Frequency (MHz) | Measured Power Density (dBm) | Duty cycle Factor (dB) | Result Output Power (dBm) | Limit (dBm) | Margin (dB) |
|---|---|---|---|---|---|---|
| 802.11a | 5 180 | 8.21 | 0.20 | 8.41 | 11.00 | 2.59 |
| | 5 200 | 8.06 | 0.20 | 8.26 | 11.00 | 2.74 |
| | 5 240 | 8.42 | 0.20 | 8.62 | 11.00 | 2.38 |
| | 5 260 | 8.07 | 0.20 | 8.27 | 11.00 | 2.73 |
| | 5 300 | 8.40 | 0.20 | 8.60 | 11.00 | 2.40 |
| | 5 320 | 8.44 | 0.20 | 8.64 | 11.00 | 2.36 |
| | 5 500 | 8.26 | 0.20 | 8.46 | 11.00 | 2.54 |
| | 5 600 | 8.09 | 0.20 | 8.29 | 11.00 | 2.71 |
| | 5 720 | 7.98 | 0.20 | 8.18 | 11.00 | 2.82 |
| | 5 745 | 12.35 | 0.20 | 12.55 | 30.00 | 17.45 |
| | 5 785 | 12.49 | 0.20 | 12.69 | 30.00 | 17.31 |
| | 5 825 | 12.34 | 0.20 | 12.54 | 30.00 | 17.46 |
| 802.11n _HT20 | 5 180 | 7.81 | 0.21 | 8.02 | 11.00 | 2.98 |
| | 5 200 | 7.76 | 0.21 | 7.97 | 11.00 | 3.03 |
| | 5 240 | 7.99 | 0.21 | 8.20 | 11.00 | 2.80 |
| | 5 260 | 7.82 | 0.21 | 8.03 | 11.00 | 2.97 |
| | 5 300 | 8.25 | 0.21 | 8.46 | 11.00 | 2.54 |
| | 5 320 | 8.32 | 0.21 | 8.53 | 11.00 | 2.47 |
| | 5 500 | 8.40 | 0.21 | 8.61 | 11.00 | 2.39 |
| | 5 600 | 8.01 | 0.21 | 8.22 | 11.00 | 2.78 |
| | 5 720 | 8.04 | 0.21 | 8.25 | 11.00 | 2.75 |
| | 5 745 | 12.09 | 0.21 | 12.30 | 30.00 | 17.70 |
| | 5 785 | 12.19 | 0.21 | 12.40 | 30.00 | 17.60 |
| | 5 825 | 12.04 | 0.21 | 12.25 | 30.00 | 17.75 |
| 802.11ac _VHT20 | 5 180 | 8.04 | 0.21 | 8.25 | 11.00 | 2.75 |
| | 5 200 | 7.77 | 0.21 | 7.98 | 11.00 | 3.02 |
| | 5 240 | 8.16 | 0.21 | 8.37 | 11.00 | 2.63 |
| | 5 260 | 7.82 | 0.21 | 8.03 | 11.00 | 2.97 |
| | 5 300 | 8.06 | 0.21 | 8.27 | 11.00 | 2.73 |
| | 5 320 | 8.27 | 0.21 | 8.48 | 11.00 | 2.52 |
| | 5 500 | 8.44 | 0.21 | 8.65 | 11.00 | 2.35 |
| | 5 600 | 8.27 | 0.21 | 8.48 | 11.00 | 2.52 |
| | 5 720 | 8.04 | 0.21 | 8.25 | 11.00 | 2.75 |
| | 5 745 | 12.01 | 0.21 | 12.22 | 30.00 | 17.78 |

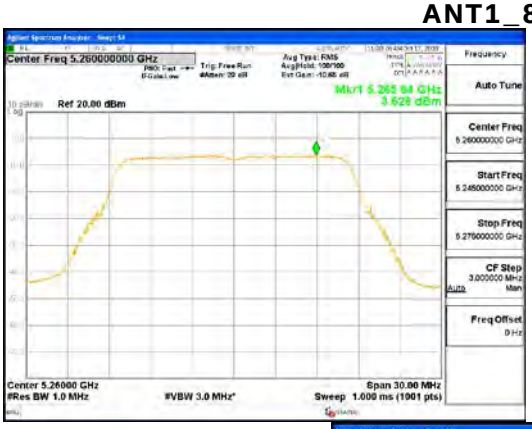
| | | | | | | |
|---|---|---|---|---|---|---|
| | 5 785 | 12.17 | 0.21 | 12.38 | 30.00 | 17.62 |
| | 5 825 | 11.96 | 0.21 | 12.17 | 30.00 | 17.83 |
| 802.11n _HT40 | 5 190 | 5.04 | 0.43 | 5.47 | 11.00 | 5.53 |
| | 5 230 | 5.07 | 0.43 | 5.50 | 11.00 | 5.50 |
| | 5 270 | 5.74 | 0.43 | 6.17 | 11.00 | 4.83 |
| | 5 310 | 6.02 | 0.43 | 6.45 | 11.00 | 4.55 |
| | 5 510 | 6.11 | 0.43 | 6.54 | 11.00 | 4.46 |
| | 5 590 | 5.93 | 0.43 | 6.36 | 11.00 | 4.64 |
| | 5 710 | 5.68 | 0.43 | 6.11 | 11.00 | 4.89 |
| | 5 755 | 9.31 | 0.43 | 9.74 | 30.00 | 20.26 |
| | 5 795 | 9.34 | 0.43 | 9.77 | 30.00 | 20.23 |
| 802.11ac _VHT40 | 5 190 | 5.11 | 0.42 | 5.53 | 11.00 | 5.47 |
| | 5 230 | 5.23 | 0.42 | 5.65 | 11.00 | 5.35 |
| | 5 270 | 4.51 | 0.42 | 4.93 | 11.00 | 6.07 |
| | 5 310 | 4.94 | 0.42 | 5.36 | 11.00 | 5.64 |
| | 5 510 | 6.22 | 0.42 | 6.64 | 11.00 | 4.36 |
| | 5 590 | 6.09 | 0.42 | 6.51 | 11.00 | 4.49 |
| | 5 710 | 5.67 | 0.42 | 6.09 | 11.00 | 4.91 |
| | 5 755 | 9.42 | 0.42 | 9.84 | 30.00 | 20.16 |
| | 5 795 | 9.42 | 0.42 | 9.84 | 30.00 | 20.16 |
| 802.11ac _VHT80 | 5 210 | 2.89 | 0.84 | 3.73 | 11.00 | 7.27 |
| | 5 290 | 2.77 | 0.84 | 3.61 | 11.00 | 7.39 |
| | 5 530 | 2.34 | 0.84 | 3.18 | 11.00 | 7.82 |
| | 5 690 | 1.99 | 0.84 | 2.83 | 11.00 | 8.17 |
| | 5 775 | 2.05 | 0.84 | 2.89 | 30.00 | 27.11 |
| Measurement uncertainty | | ± 1.5 dB | | | | |

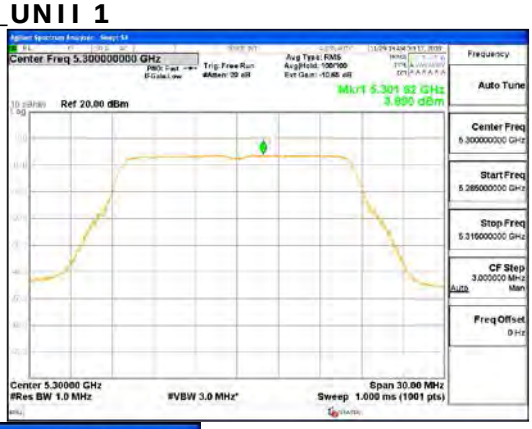
See next pages for actual measured spectrum plots.

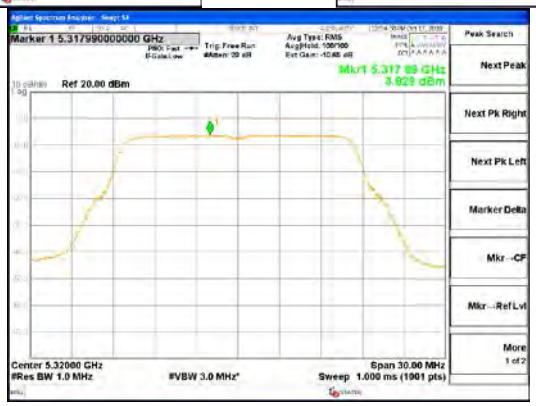





**ANT1_802.11a_UNII 1**

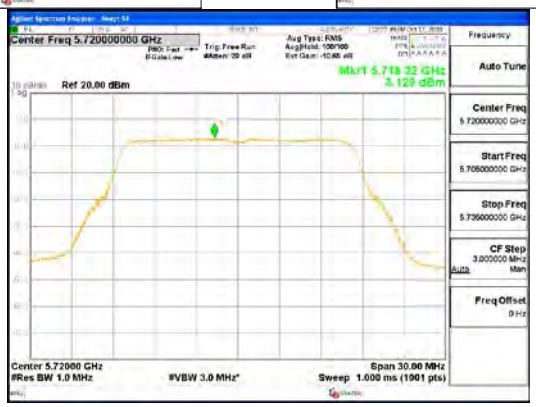


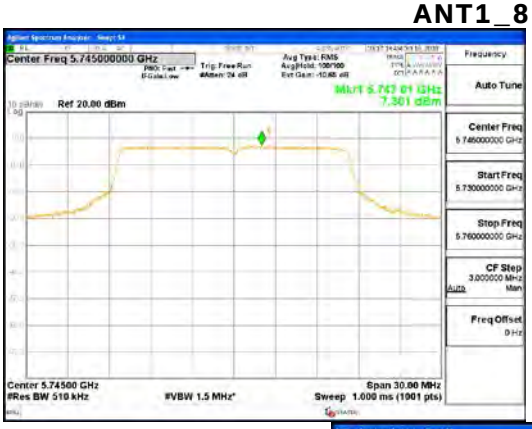




**ANT1_802.11a_UNII 2A**





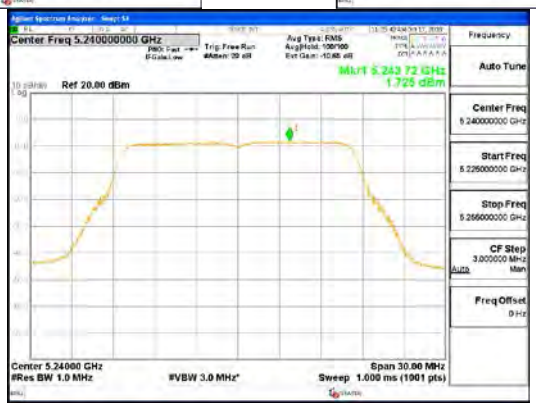

**ANT1_802.11a_UNII 2C**



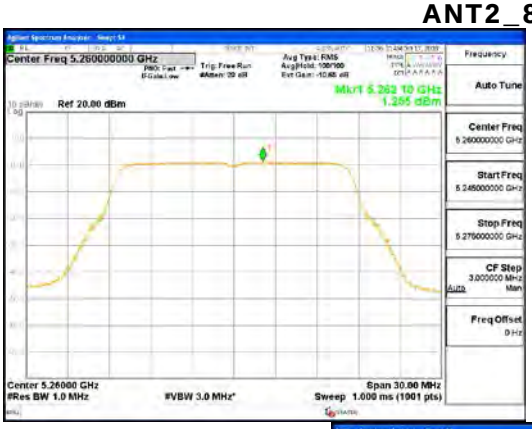


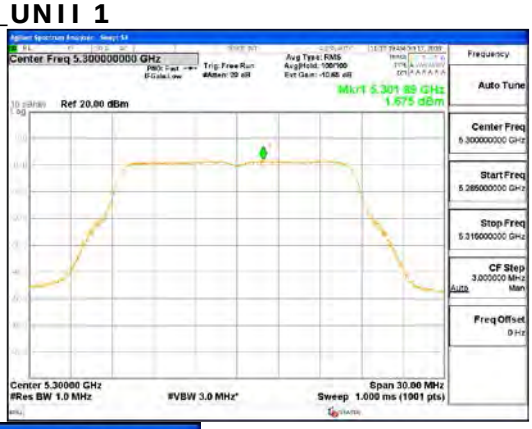

**ANT1_802.11a_UNII 3**

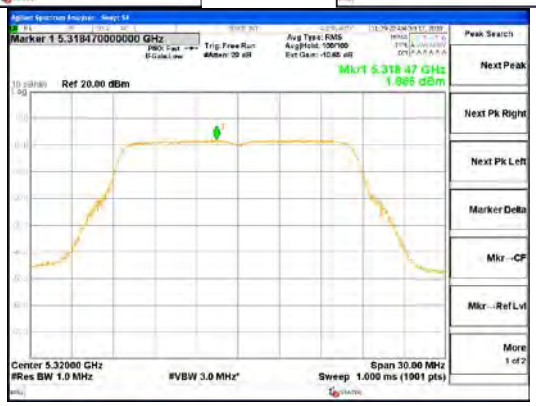




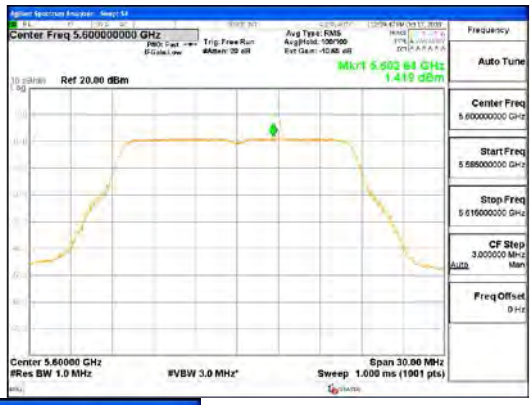

**ANT2_802.11a_UNII 1**

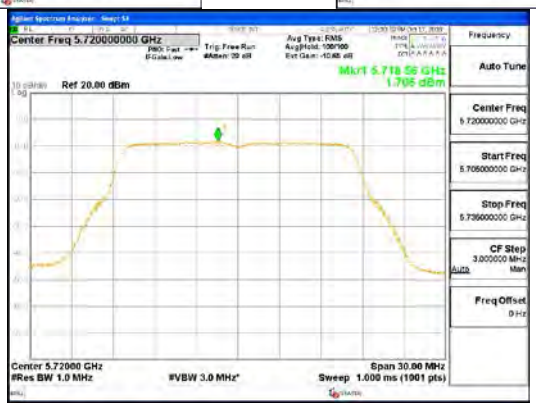


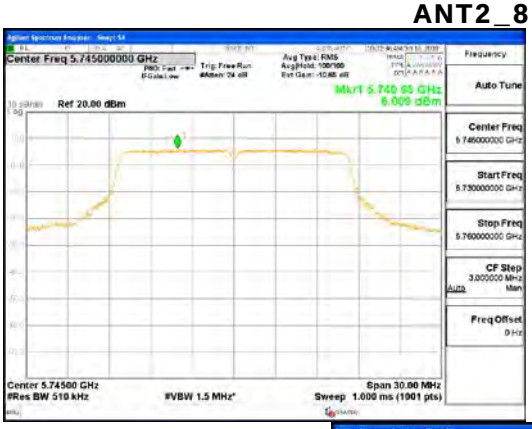




**ANT2_802.11a_UNII 2A**


**ANT2_802.11a_UNII 2C**

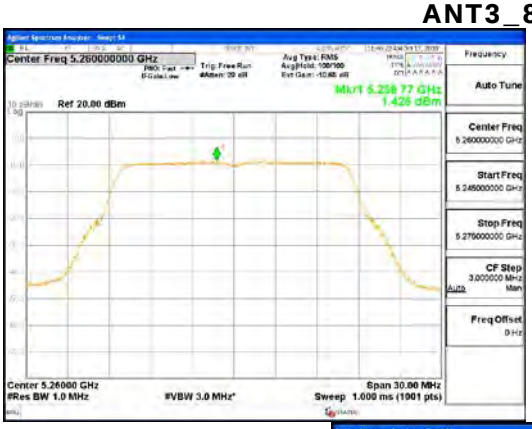


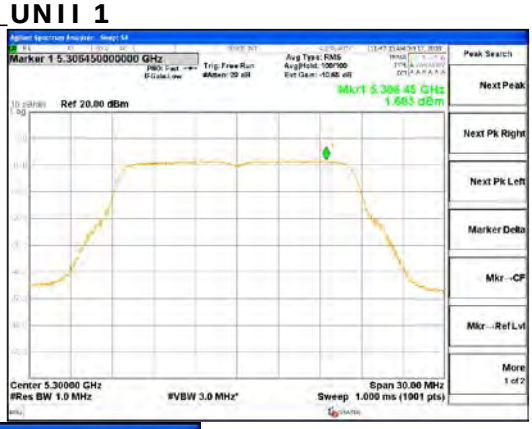



**ANT2_802.11a_UNII 3**



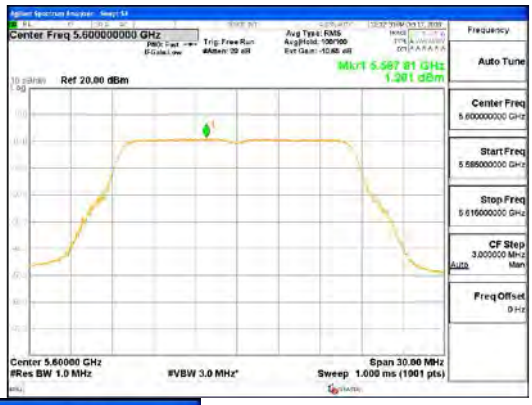

**ANT3_802.11a_UNII 1**

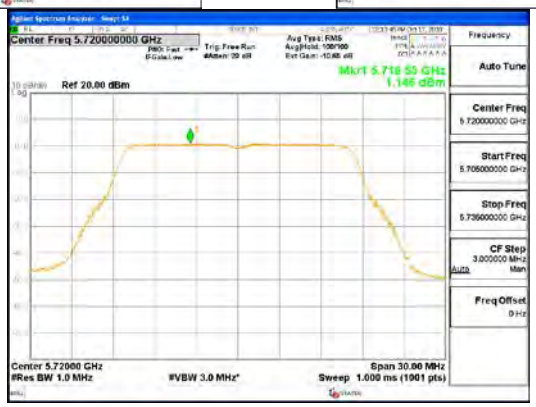


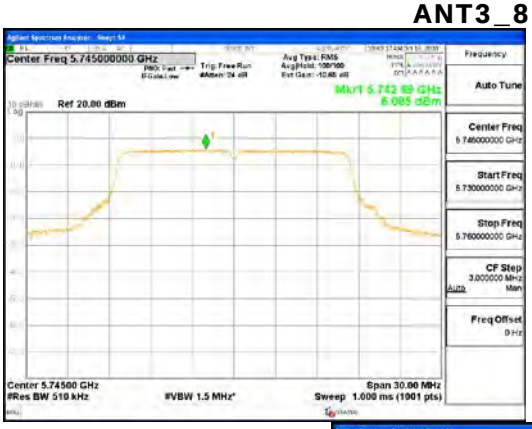


**ANT3_802.11a_UNII 2A**

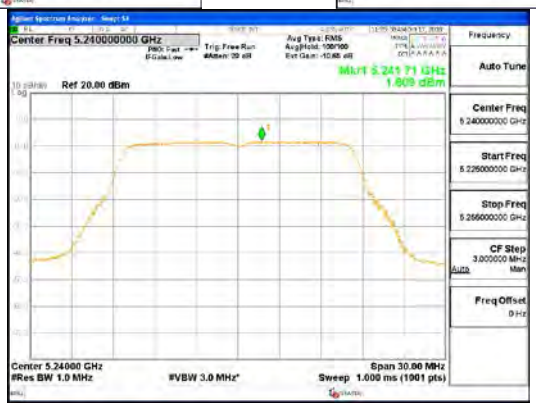

**ANT3_802.11a_UNII 2C**



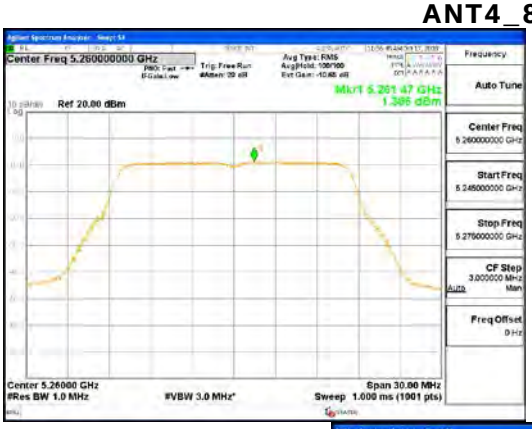


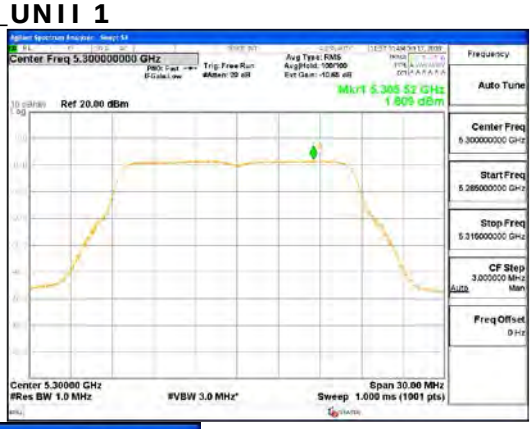

**ANT3_802.11a_UNII 3**

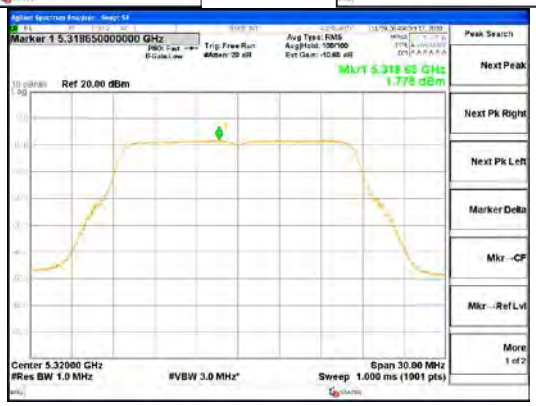





**ANT4_802.11a_UNII 1**

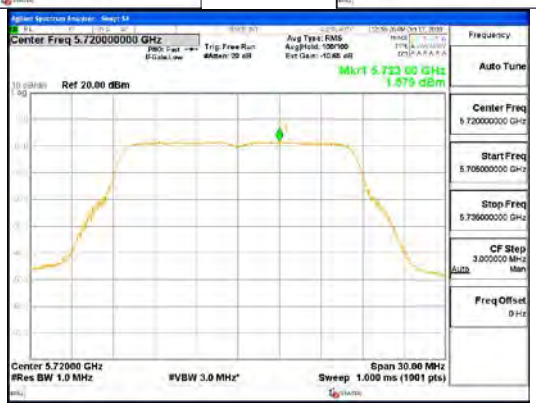


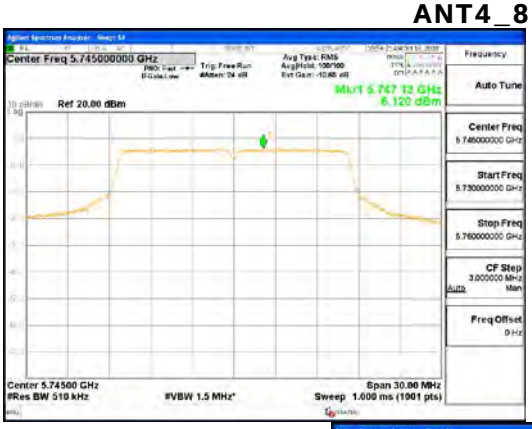




**ANT4_802.11a_UNII 2A**





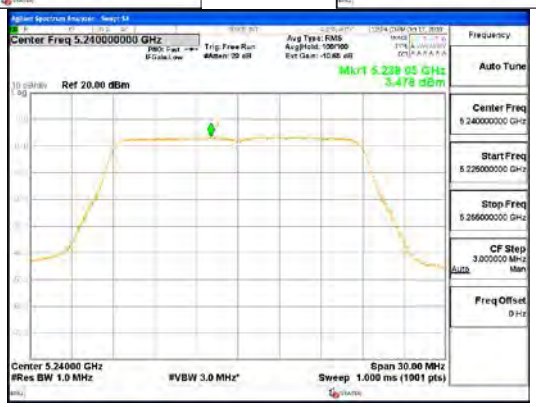

**ANT4_802.11a_UNII 2C**



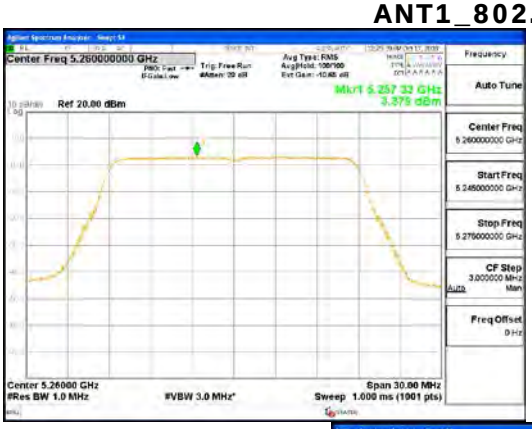


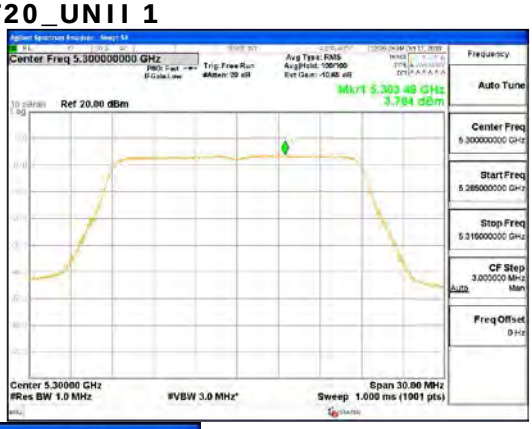

**ANT4_802.11a_UNII 3**






**ANT1_802.11n_HT20_UNII 1**



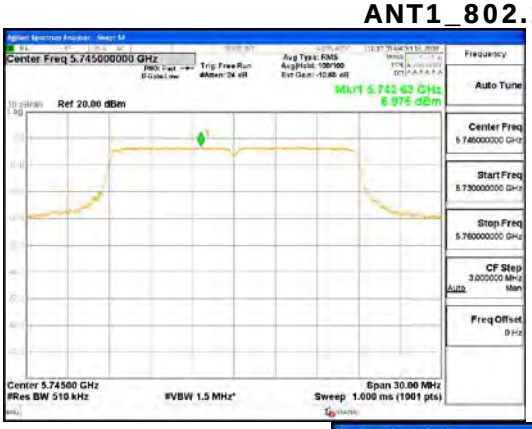



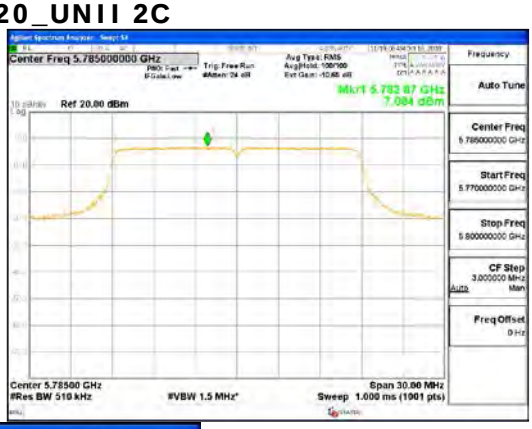


**ANT1_802.11n_HT20_UNII 2A**




**ANT1_802.11n_HT20_UNII 2C**

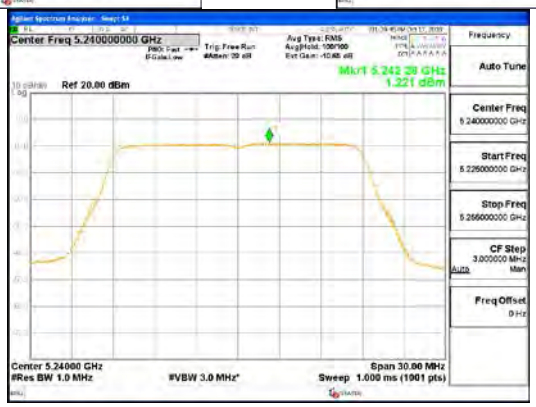


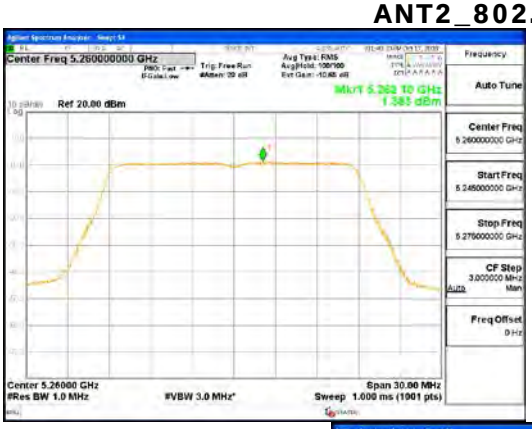


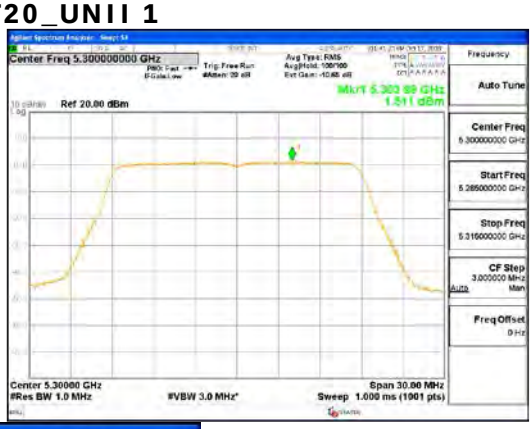
**ANT1_802.11n_HT20_UNII 3**





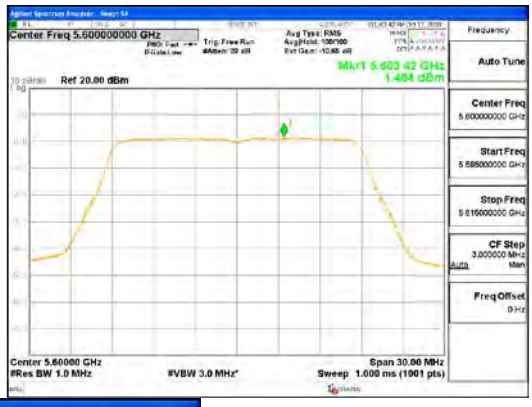

**ANT2_802.11n_HT20_UNII 1**



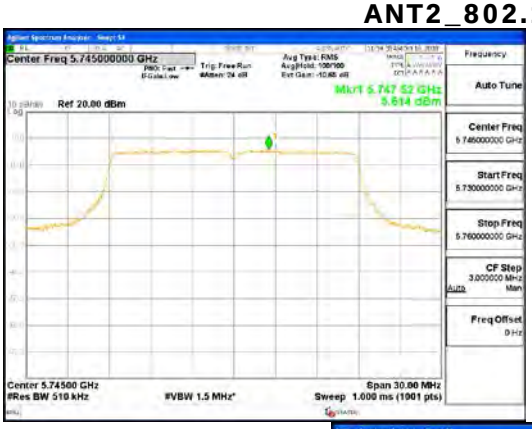


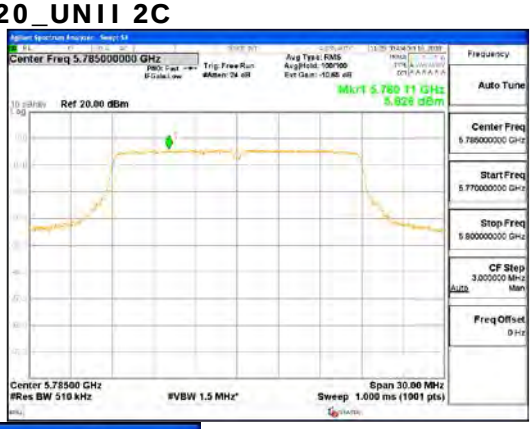
**ANT2_802.11n_HT20_UNII 2A**



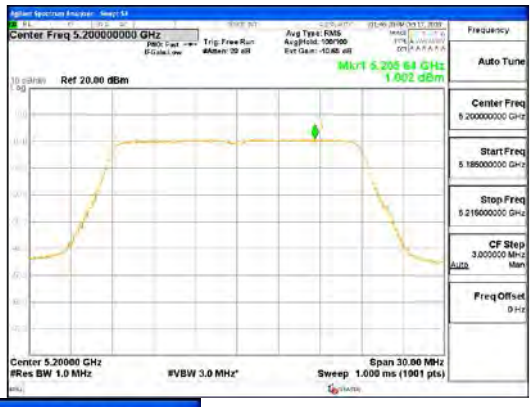
**ANT2_802.11n_HT20_UNII 2C**

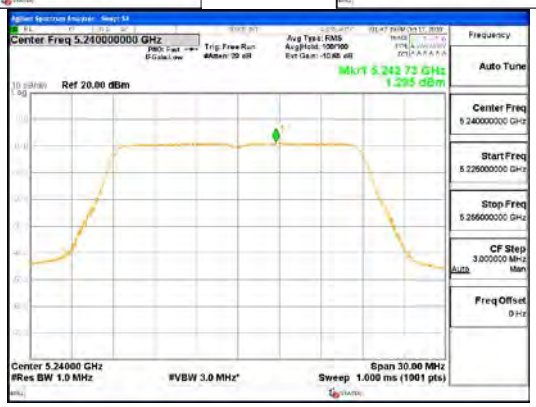


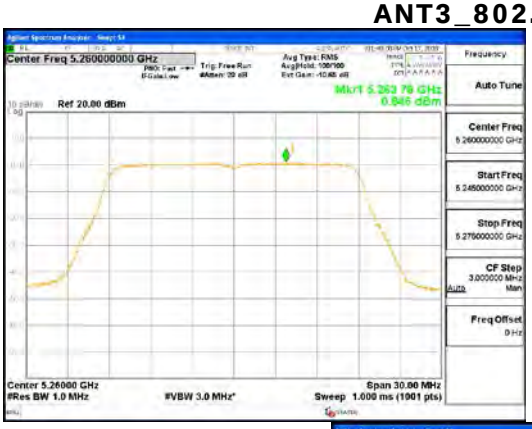


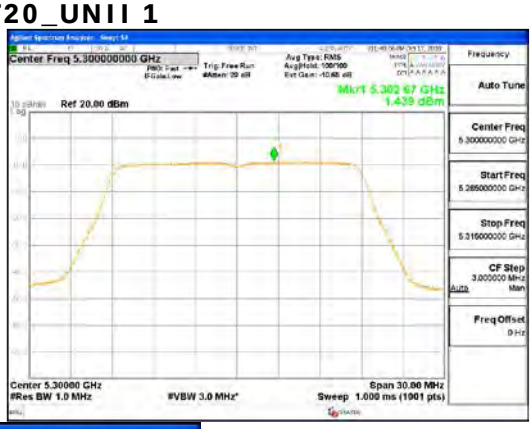
**ANT2_802.11n_HT20_UNII 3**

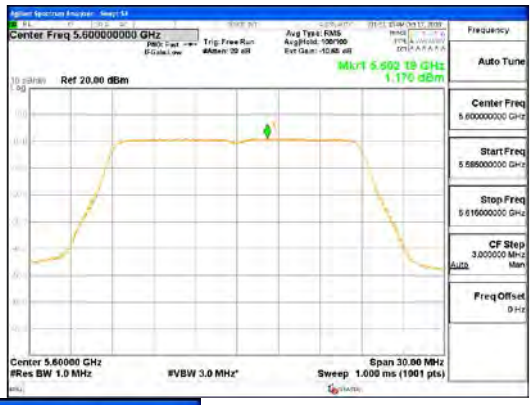

**ANT3_802.11n_HT20_UNII 1**



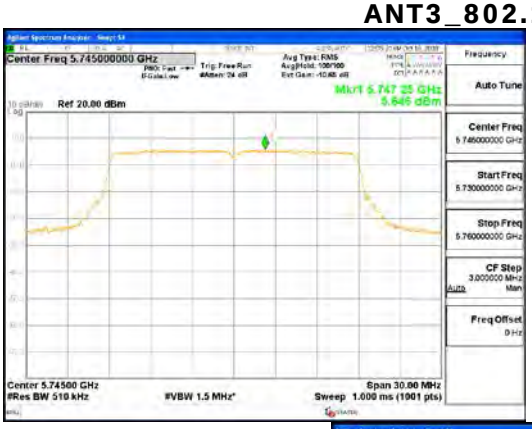


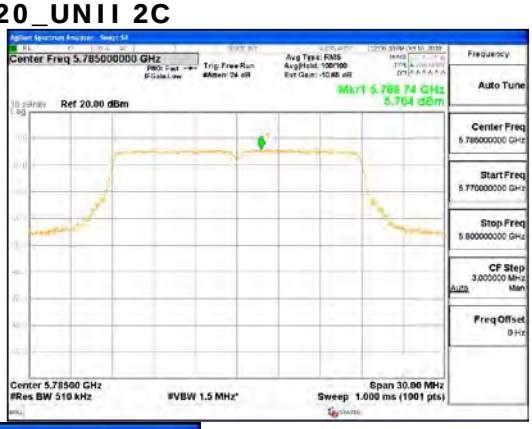
**ANT3_802.11n_HT20_UNII 2A**



**ANT3_802.11n_HT20_UNII 2C**



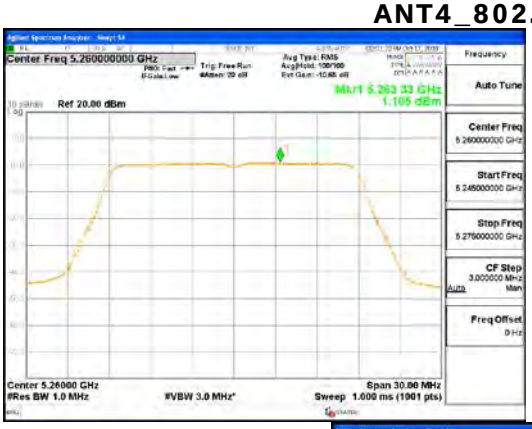



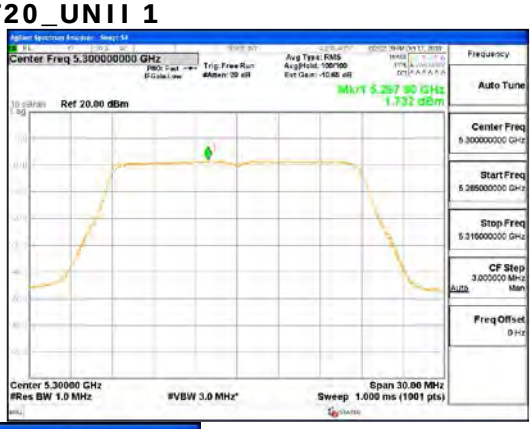


**ANT3_802.11n_HT20_UNII 3**



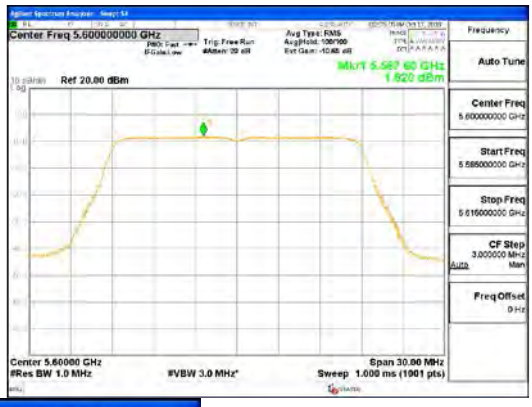

**ANT4_802.11n_HT20_UNII 1**

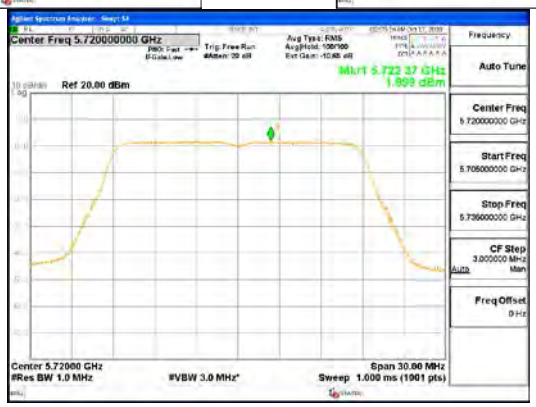


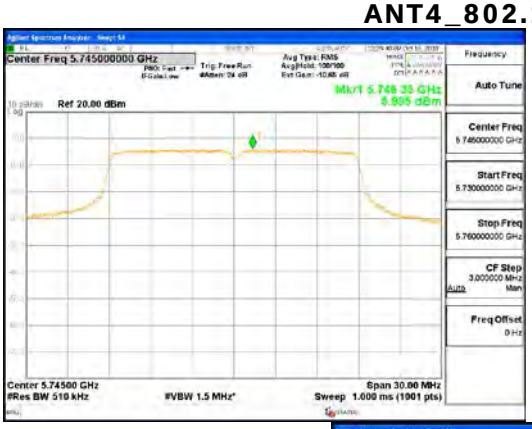


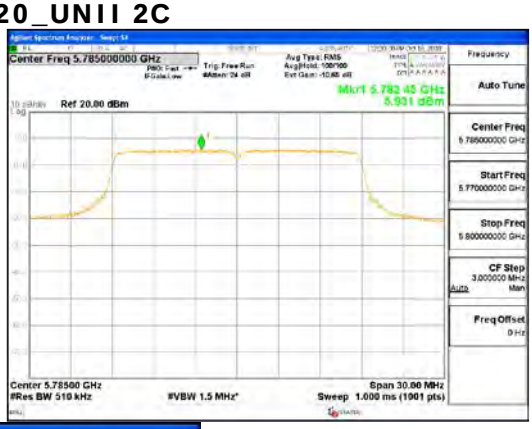
**ANT4_802.11n_HT20_UNII 2A**


**ANT4_802.11n_HT20_UNII 2C**

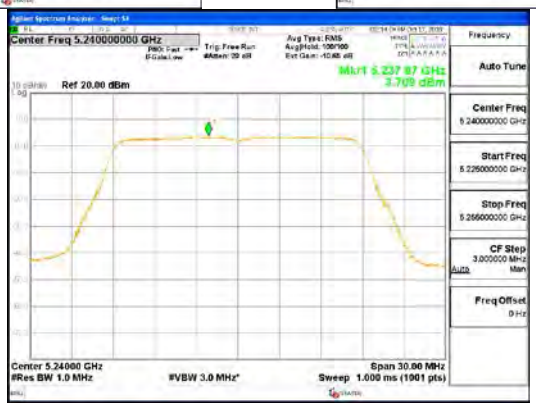


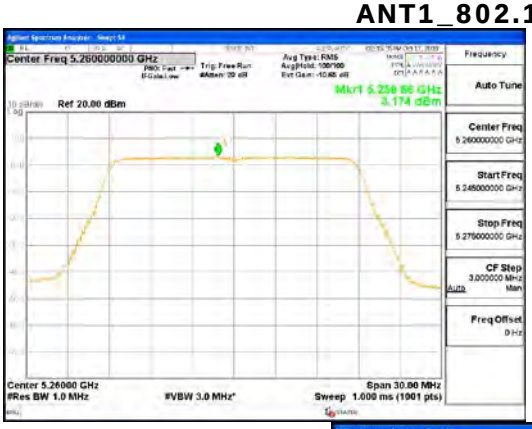


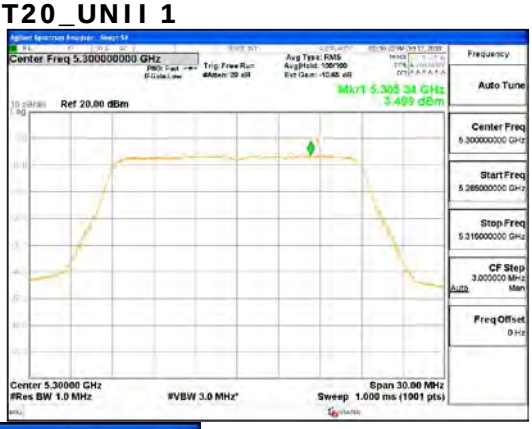
**ANT4_802.11n_HT20_UNII 3**






**ANT1_802.11ac_VHT20_UNII 1**

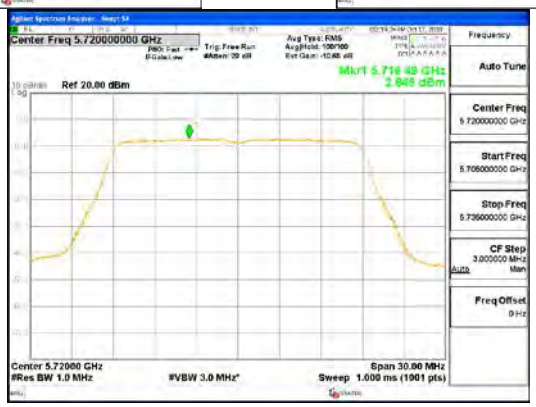


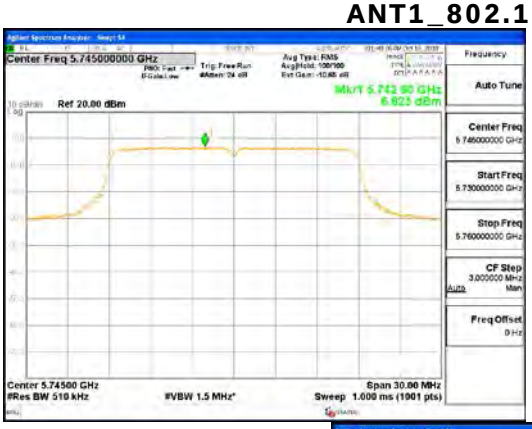


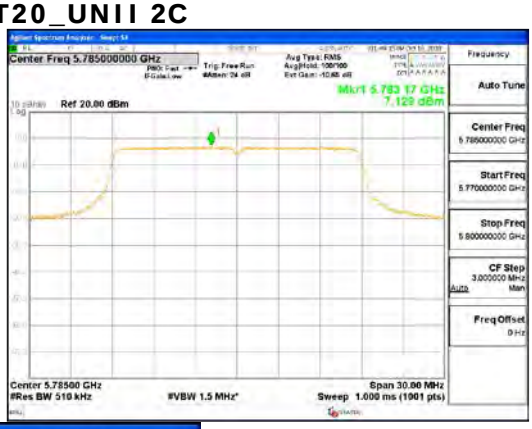
**ANT1_802.11ac_VHT20_UNII 2A**





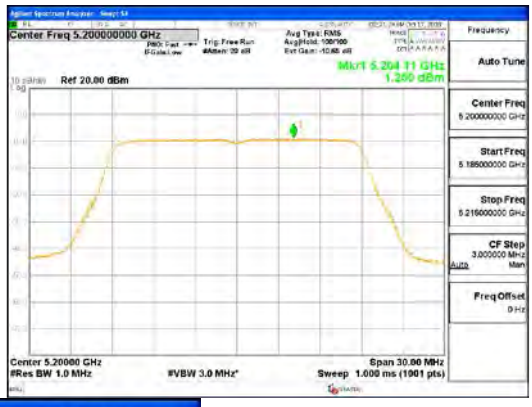

**ANT1_802.11ac_VHT20_UNII 2C**

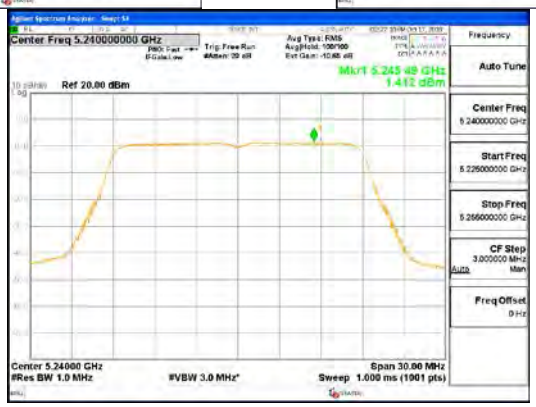


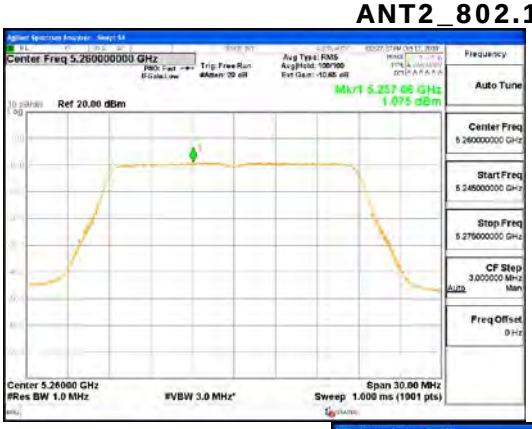


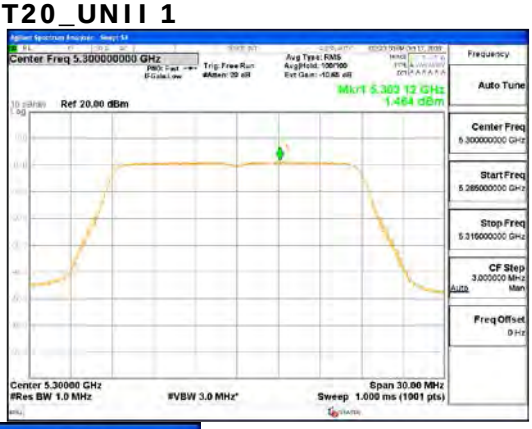
**ANT1_802.11ac_VHT20_UNII 3**

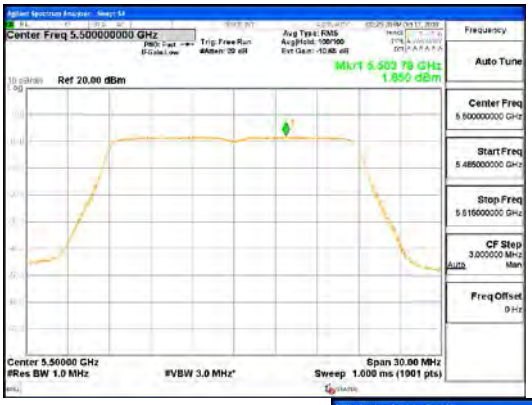

**ANT2_802.11ac_VHT20_UNII 1**

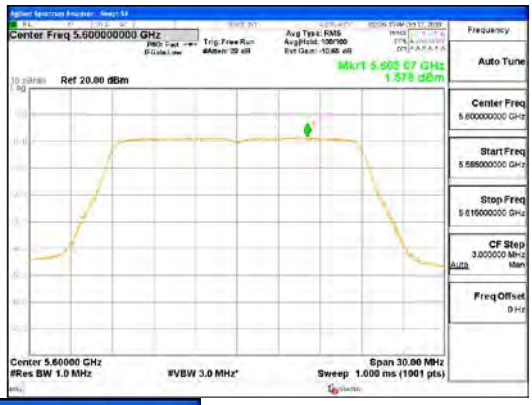




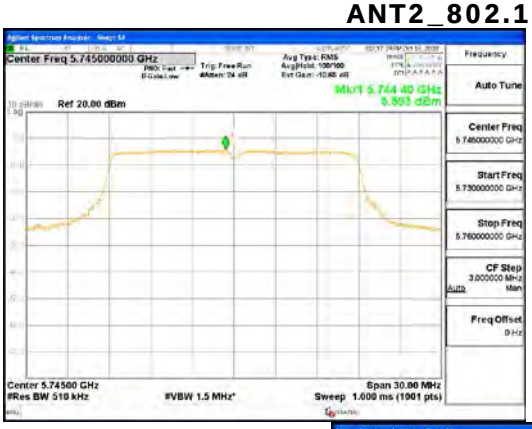
**ANT2_802.11ac_VHT20_UNII 2A**

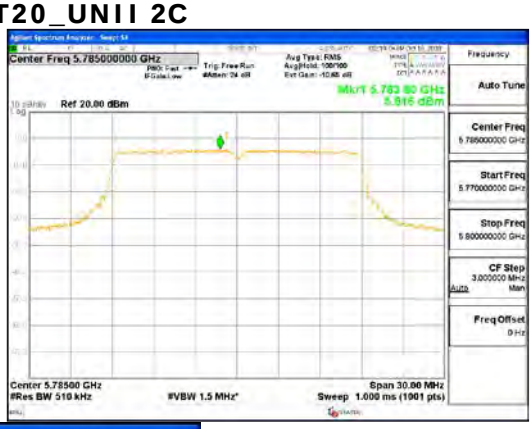




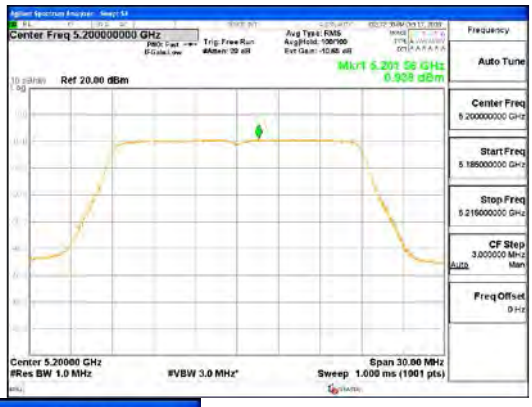
**ANT2_802.11ac_VHT20_UNII 2C**

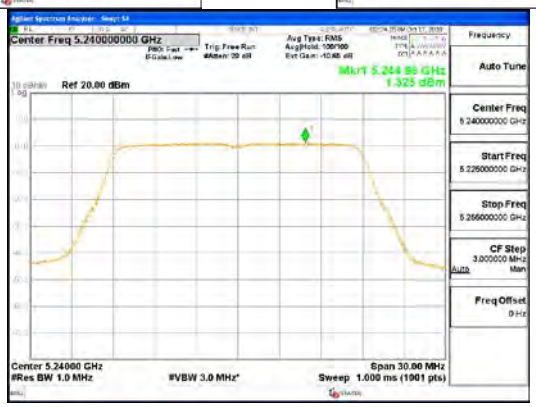


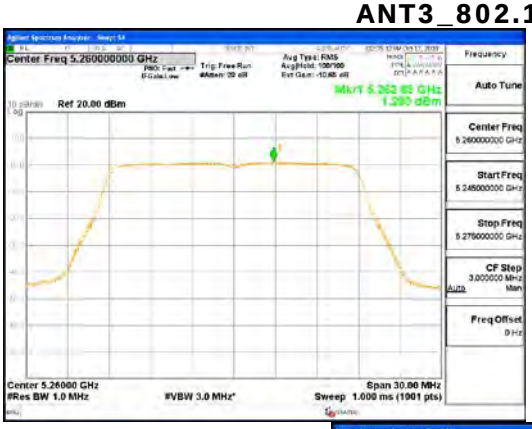


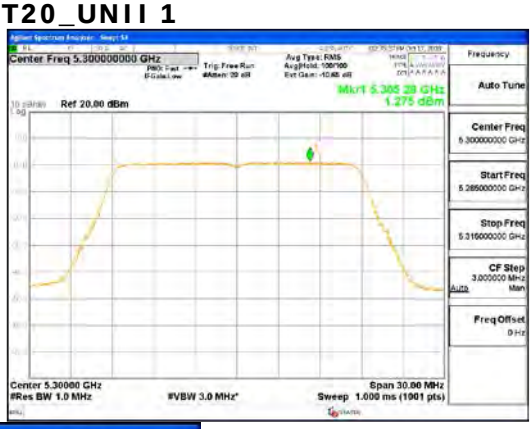
**ANT2_802.11ac_VHT20_UNII 3**

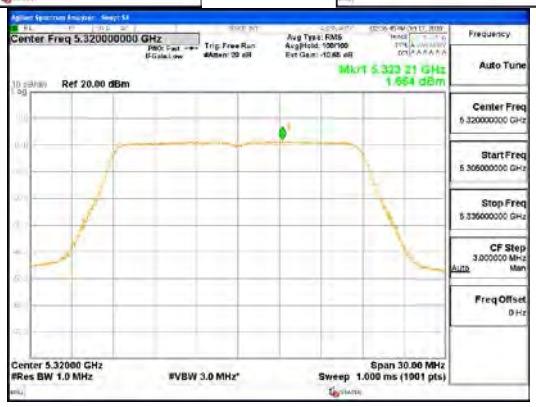



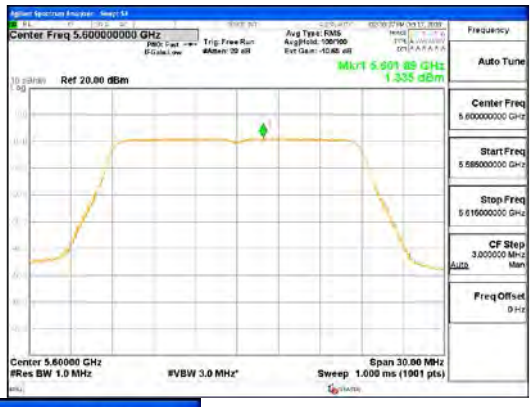

**ANT3_802.11ac_VHT20_UNII 1**

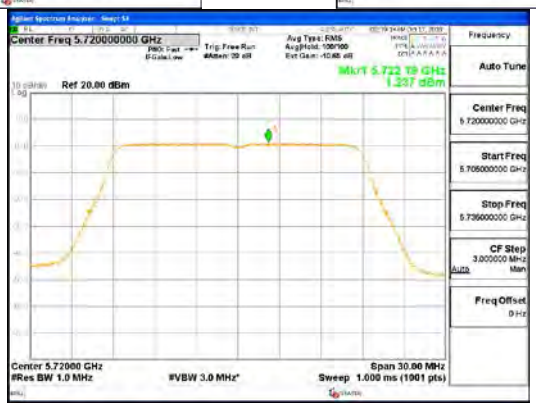


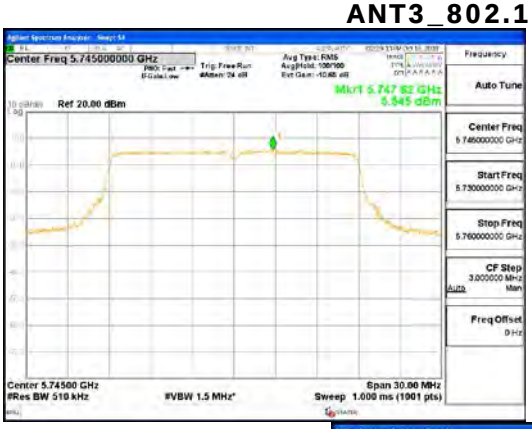



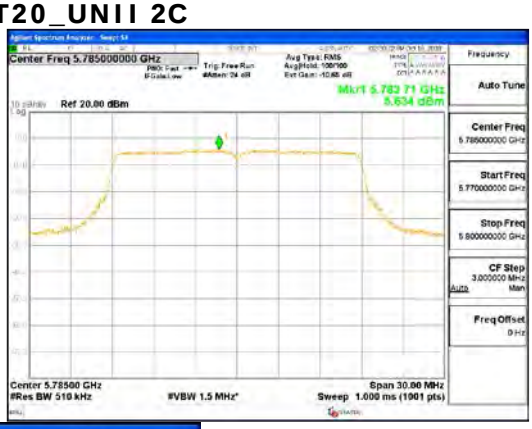

**ANT3_802.11ac_VHT20_UNII 2A**

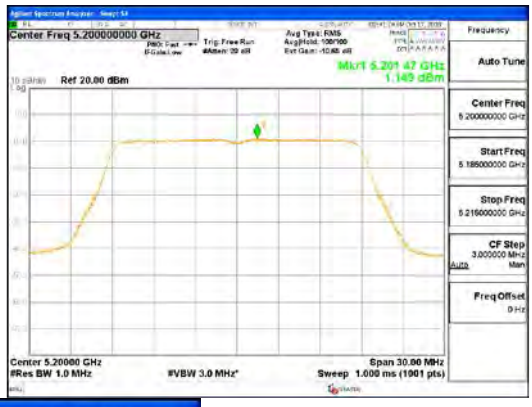

**ANT3_802.11ac_VHT20_UNII 2C**

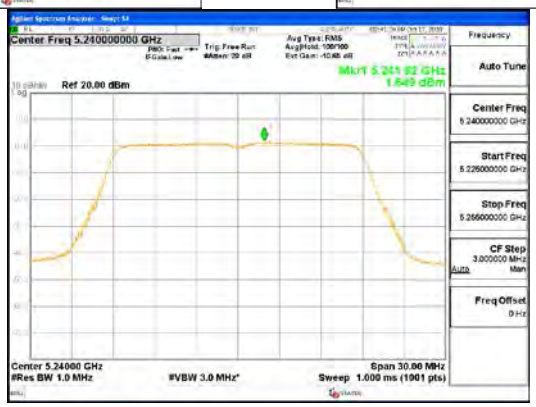


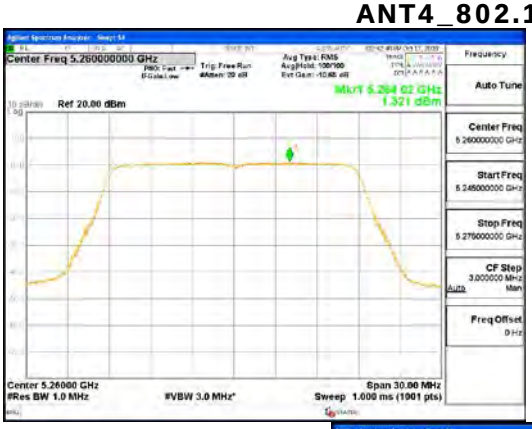


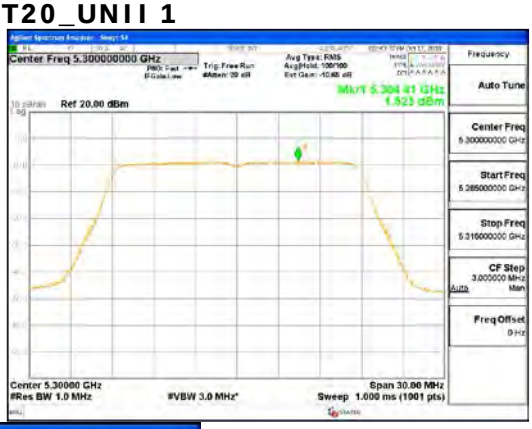
**ANT3_802.11ac_VHT20_UNII 3**


**ANT4_802.11ac_VHT20_UNII 1**

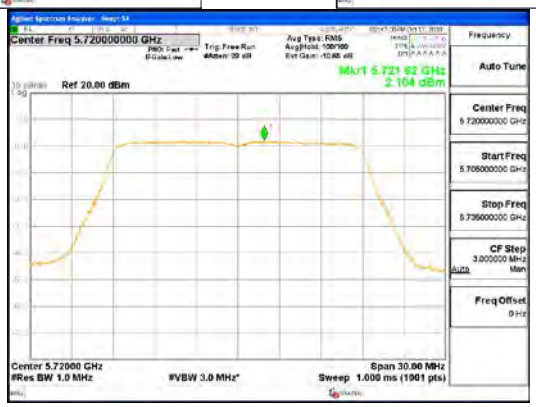


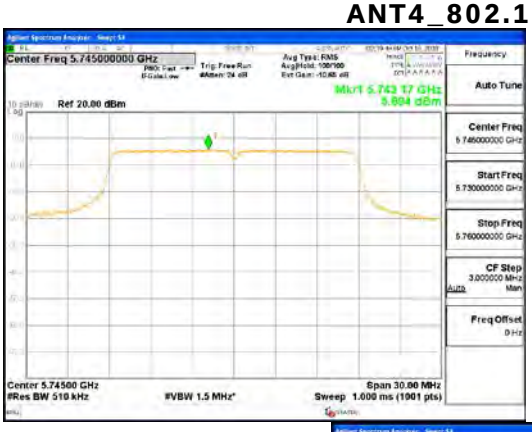


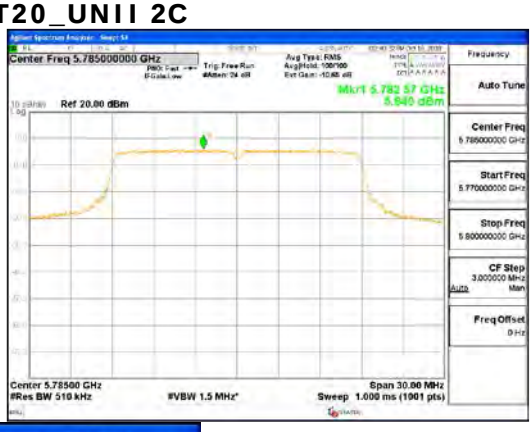
**ANT4_802.11ac_VHT20_UNII 2A**





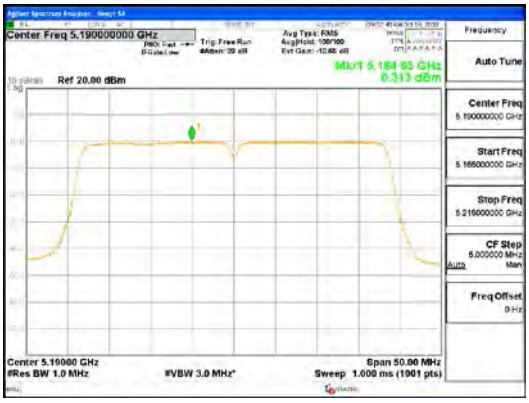

**ANT4_802.11ac_VHT20_UNII 2C**



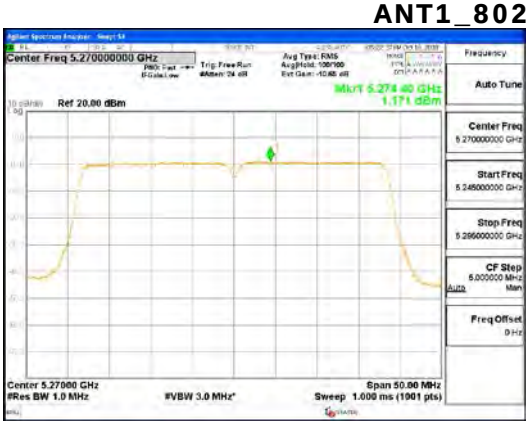


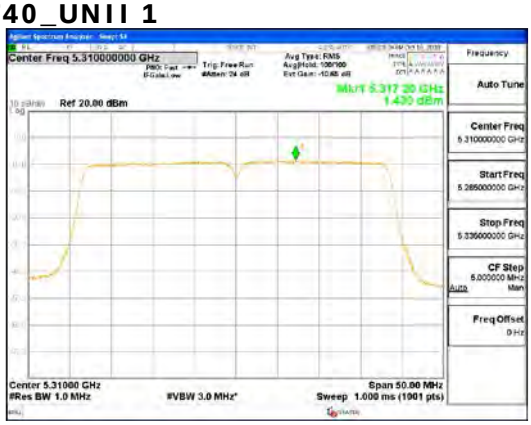
**ANT4_802.11ac_VHT20_UNII 3**



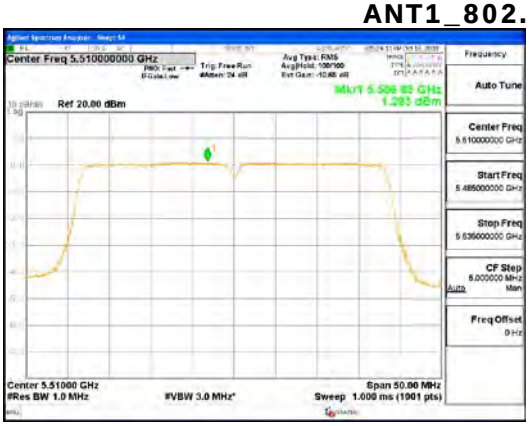


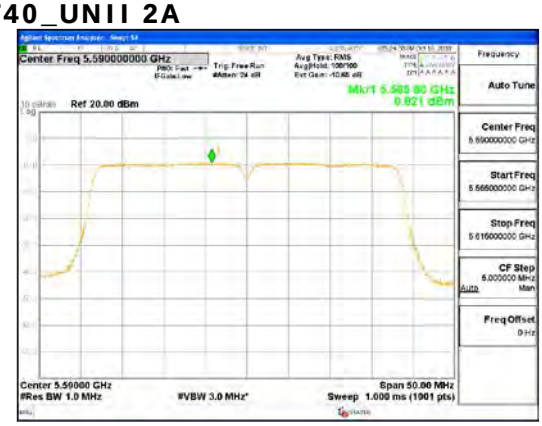
**ANT1_802.11n_HT40_UNII 1**

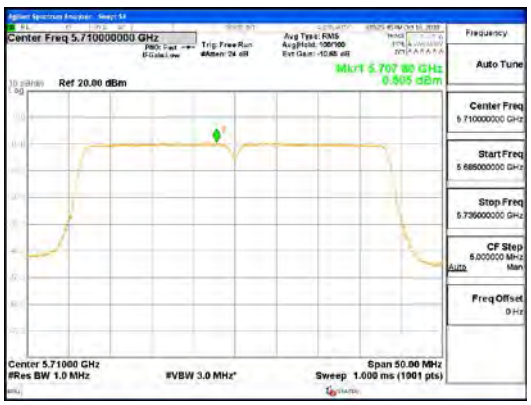



**ANT1_802.11n_HT40_UNII 2A**



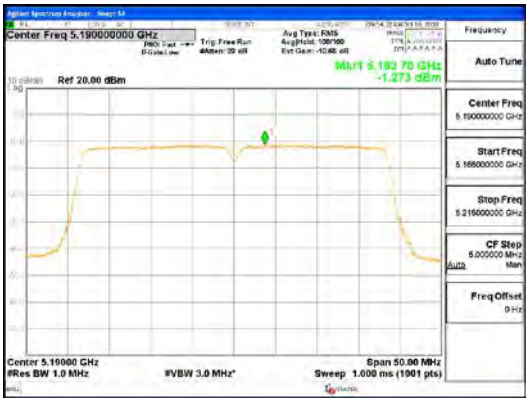



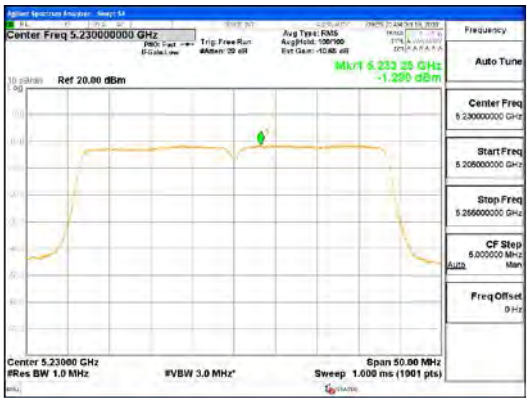




**ANT1_802.11n_HT40_UNII 2C**

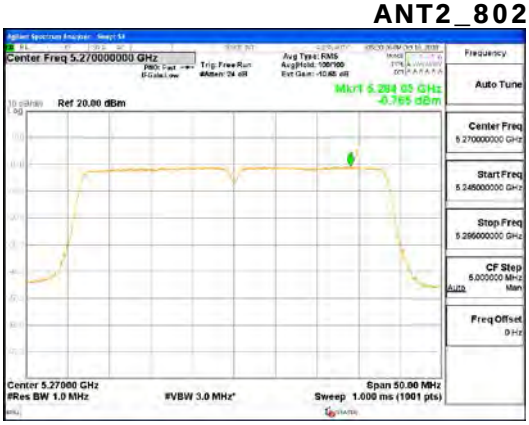


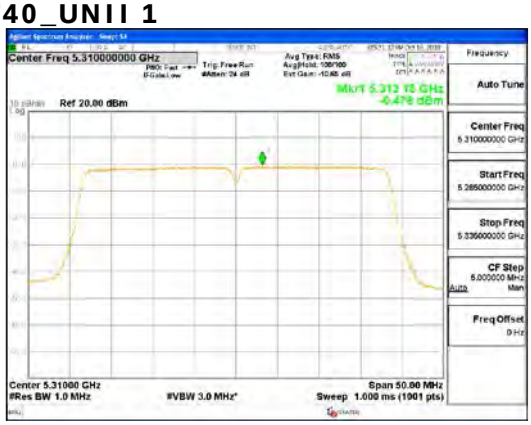
**ANT1_802.11n_HT40_UNII 3**



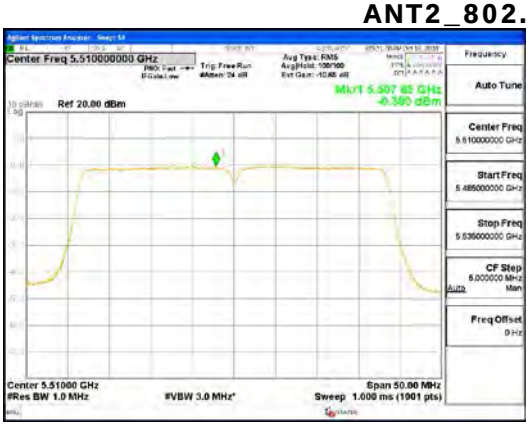



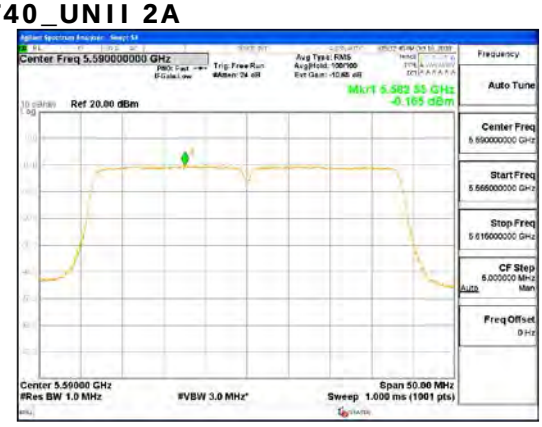

**ANT2_802.11n_HT40_UNII 1**

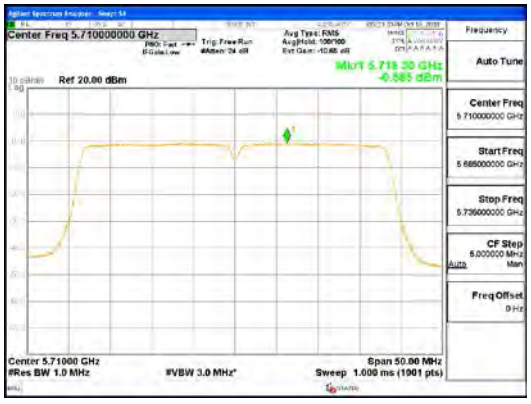



**ANT2_802.11n_HT40_UNII 2A**



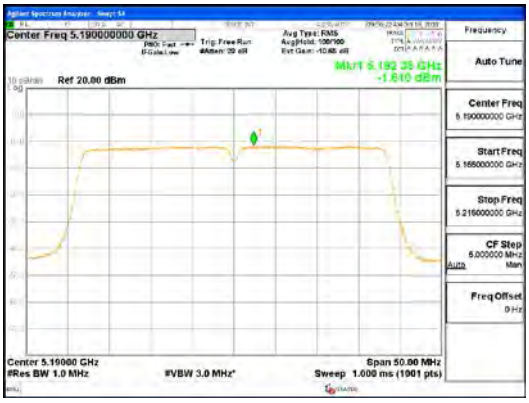




**ANT2_802.11n_HT40_UNII 2C**

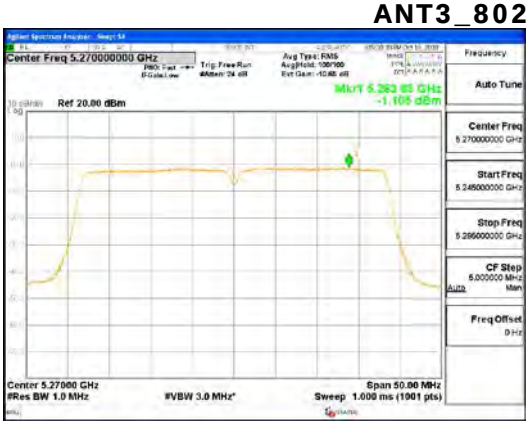


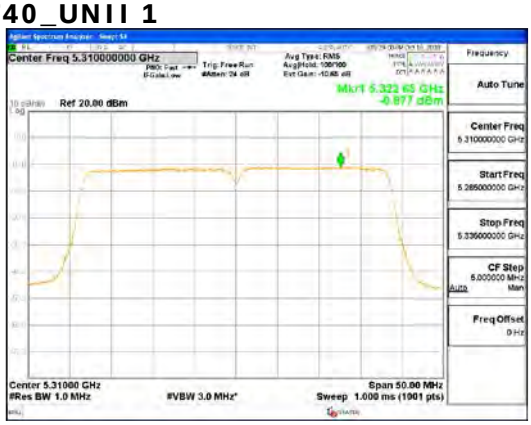
**ANT2_802.11n_HT40_UNII 3**



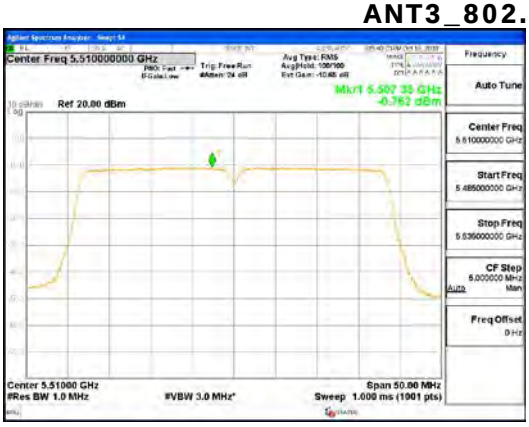


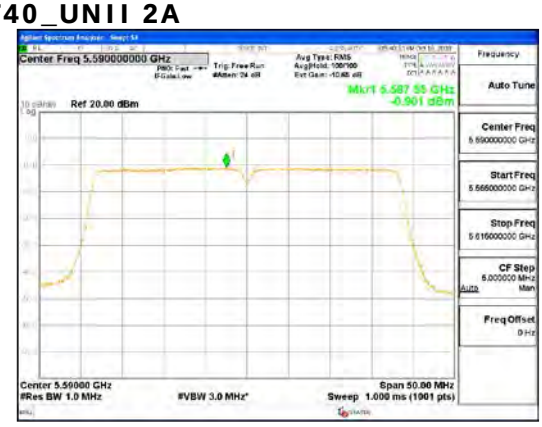
**ANT3_802.11n_HT40_UNII 1**

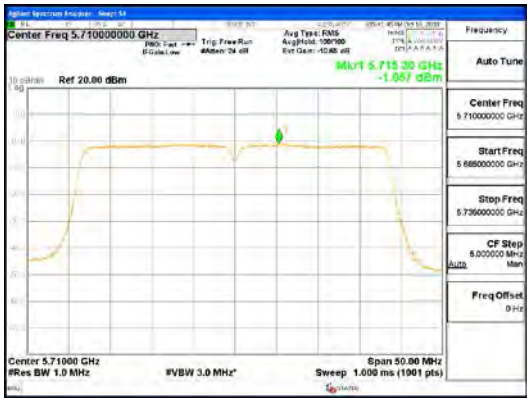



**ANT3_802.11n_HT40_UNII 2A**



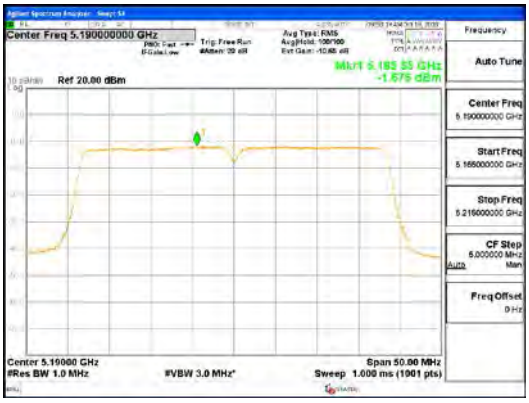



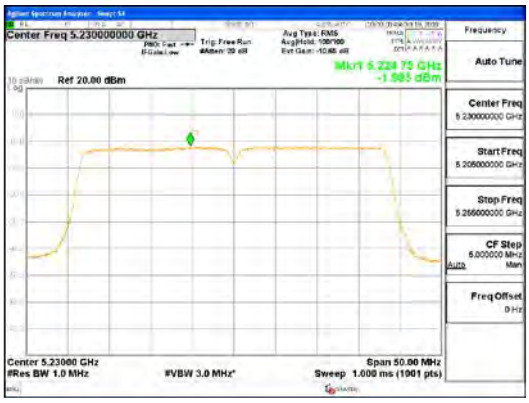




**ANT3_802.11n_HT40_UNII 2C**

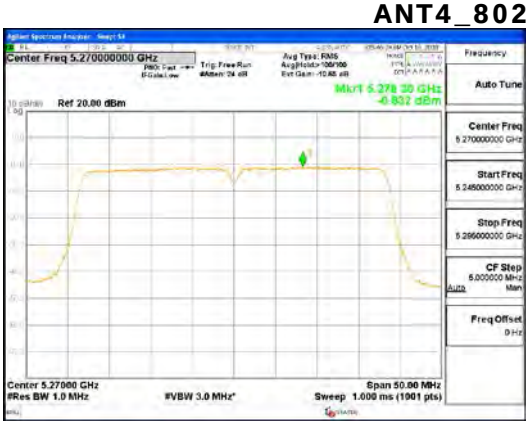


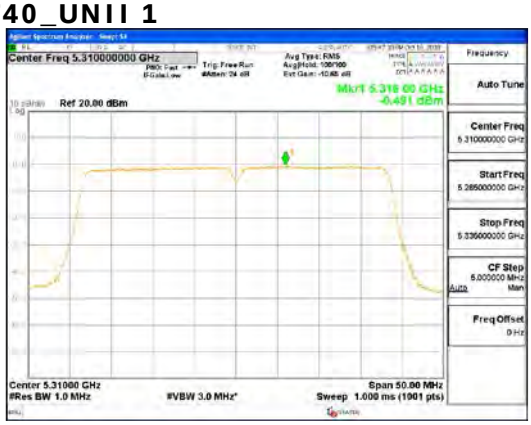
**ANT3_802.11n_HT40_UNII 3**



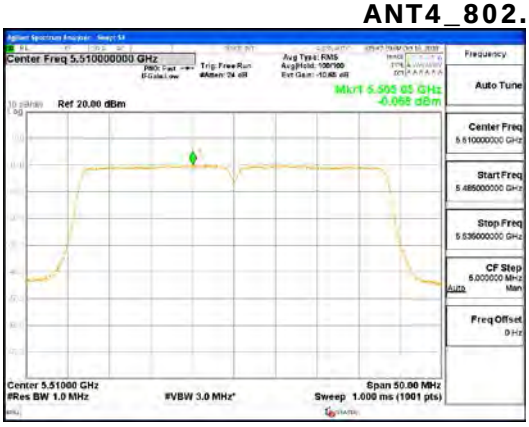



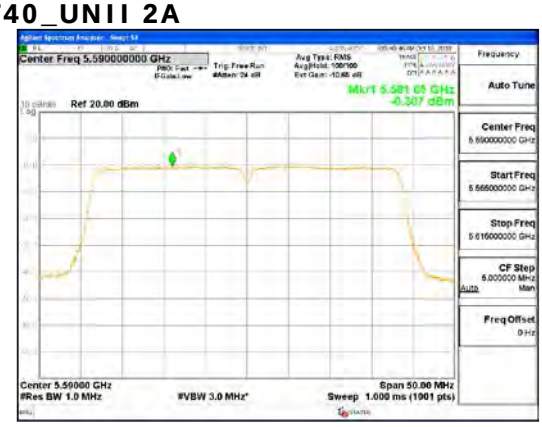

**ANT4_802.11n_HT40_UNII 1**

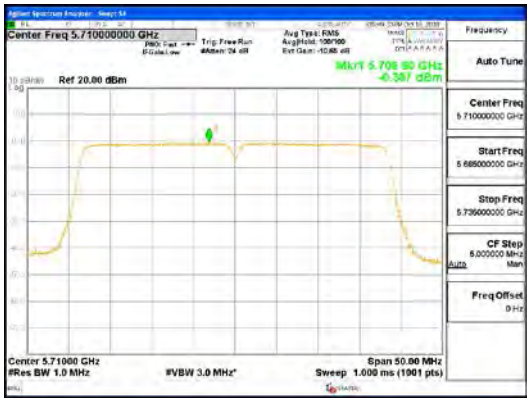



**ANT4_802.11n_HT40_UNII 2A**



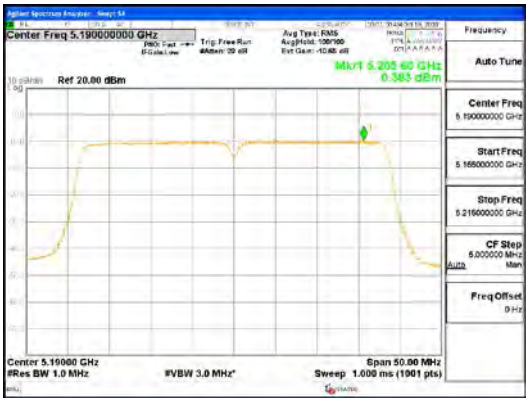




**ANT4_802.11n_HT40_UNII 2C**

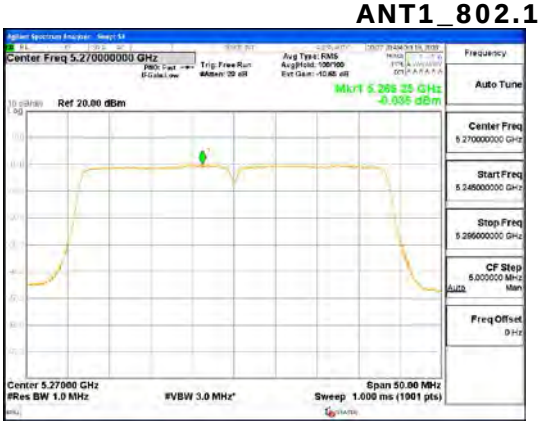


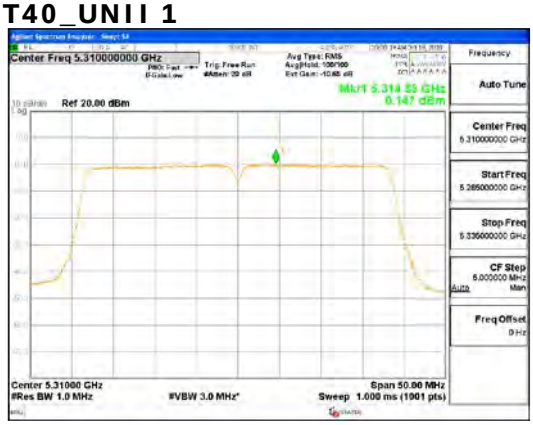
**ANT4_802.11n_HT40_UNII 3**



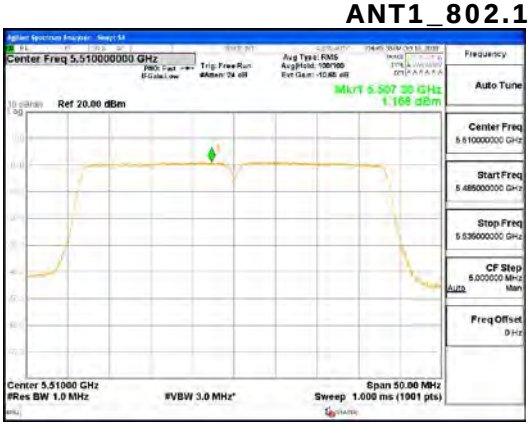


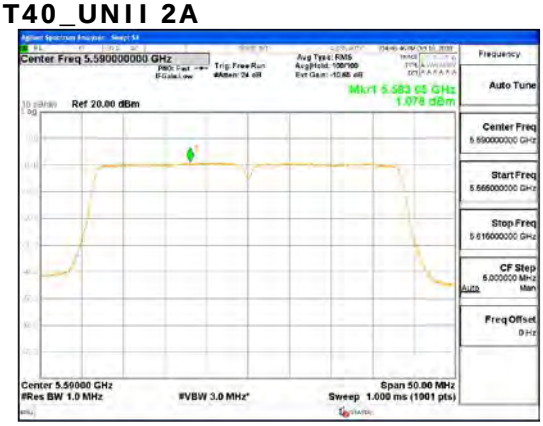
**ANT1_802.11ac_VHT40_UNII 1**

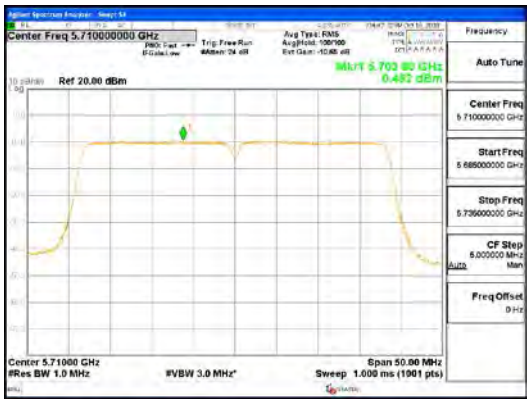



**ANT1_802.11ac_VHT40_UNII 2A**



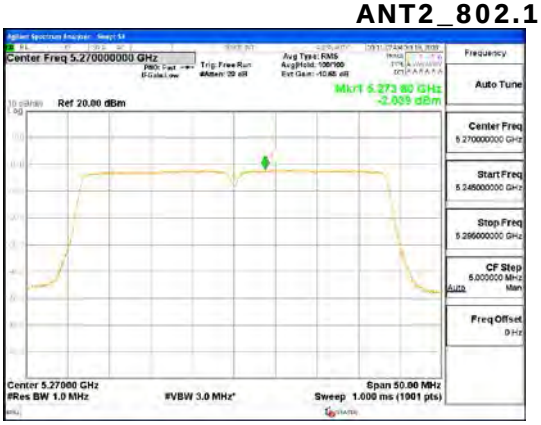

**ANT1_802.11ac_VHT40_UNII 2C**

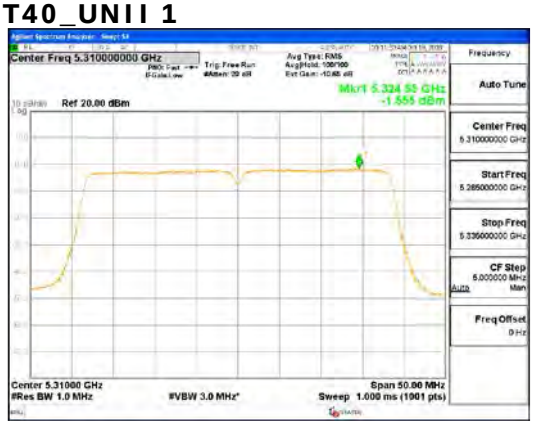


**ANT1_802.11ac_VHT40_UNII 3**

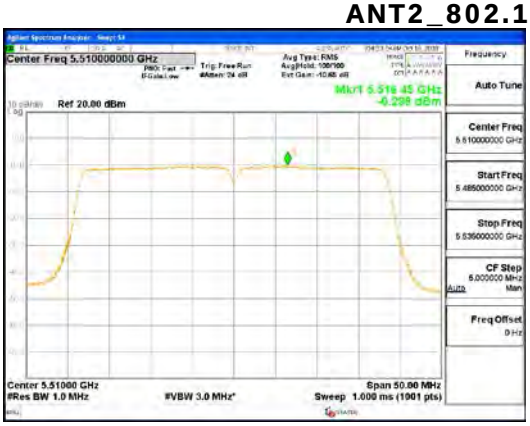


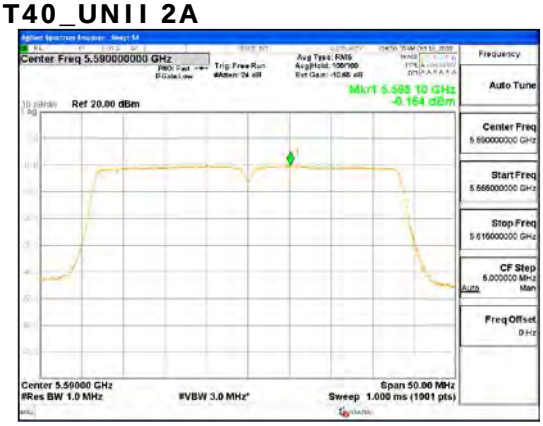
**ANT2_802.11ac_VHT40_UNII 1**

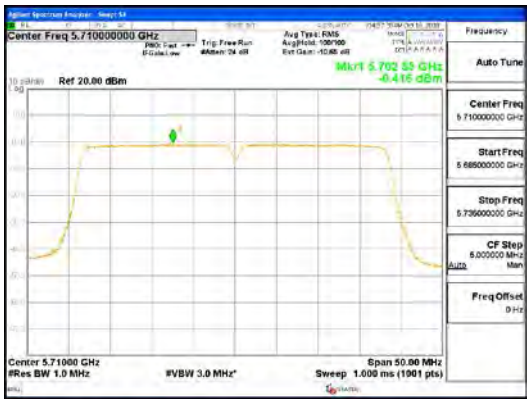



**ANT2_802.11ac_VHT40_UNII 2A**



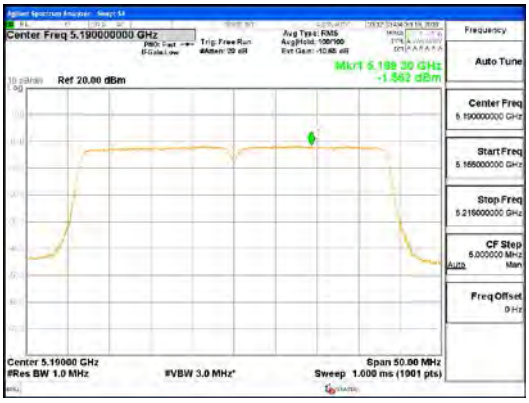




**ANT2_802.11ac_VHT40_UNII 2C**

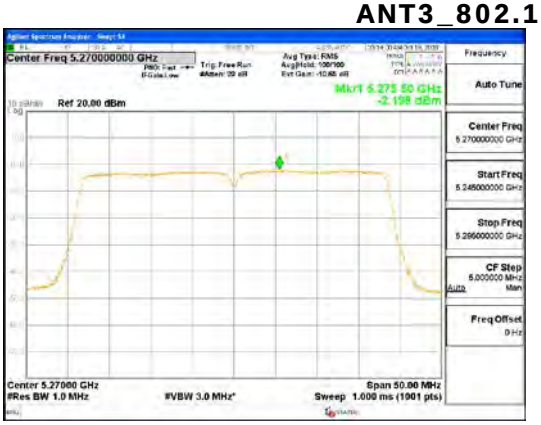


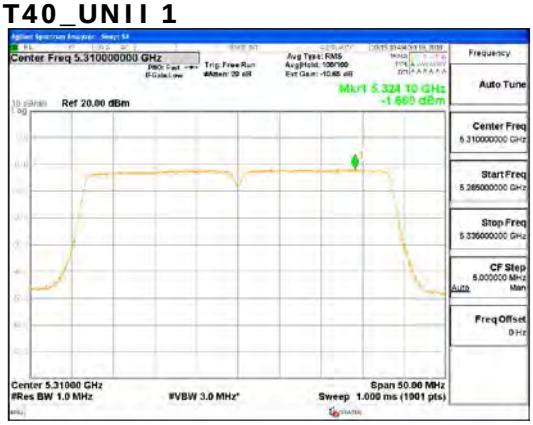
**ANT2_802.11ac_VHT40_UNII 3**



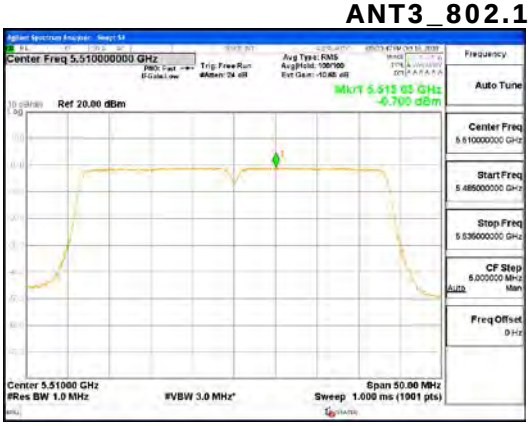


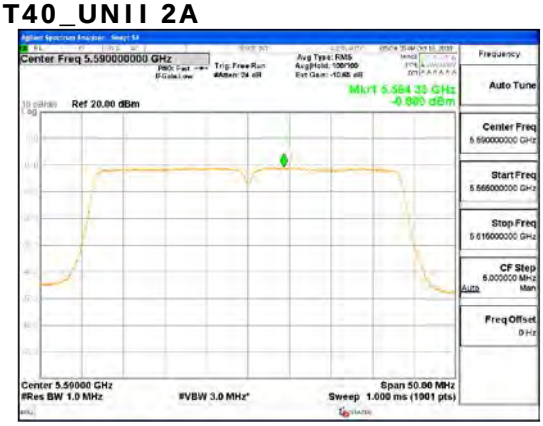
**ANT3_802.11ac_VHT40_UNII 1**

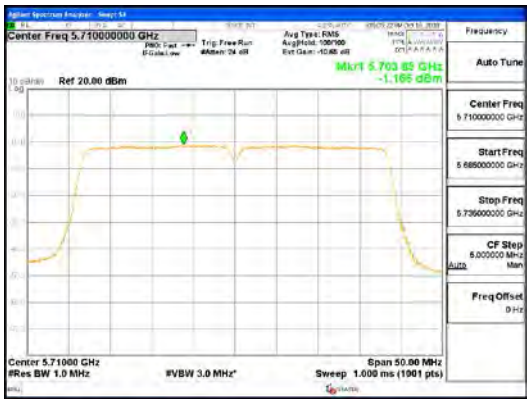



**ANT3_802.11ac_VHT40_UNII 2A**



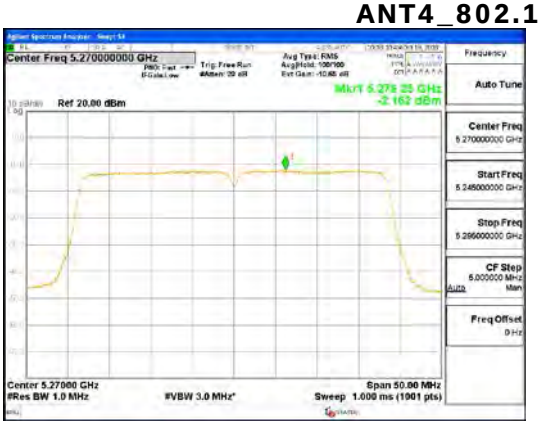

**ANT3_802.11ac_VHT40_UNII 2C**

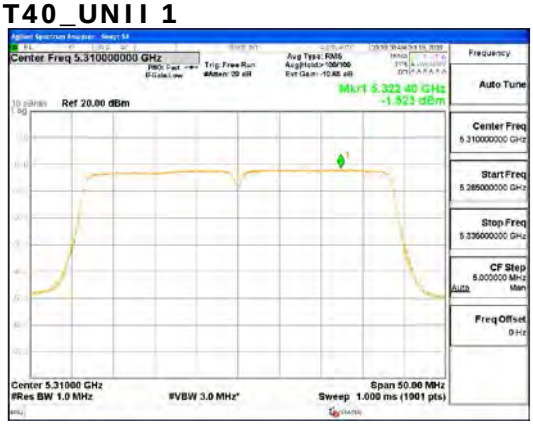


**ANT3_802.11ac_VHT40_UNII 3**

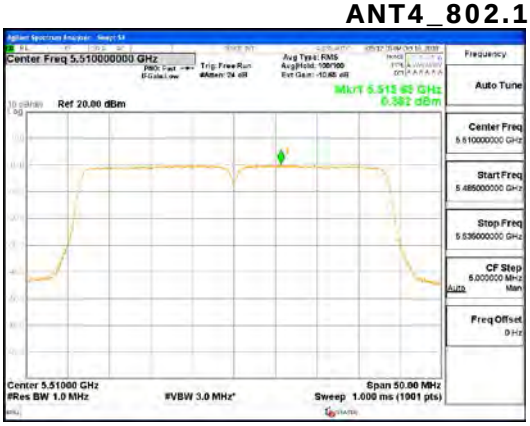


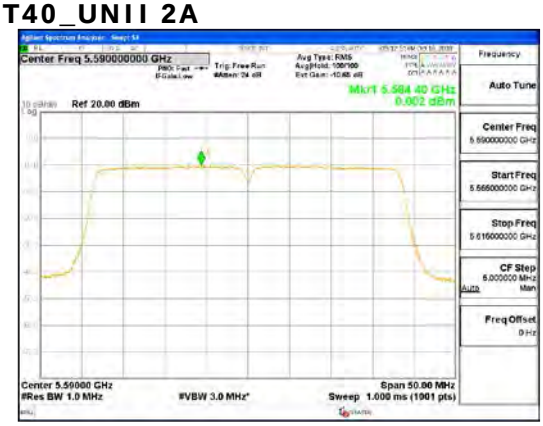
**ANT4_802.11ac_VHT40_UNII 1**

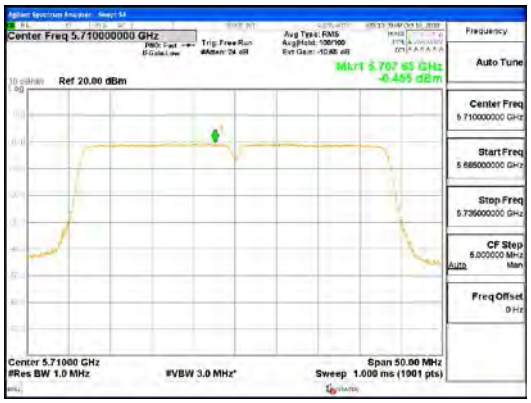



**ANT4_802.11ac_VHT40_UNII 2A**



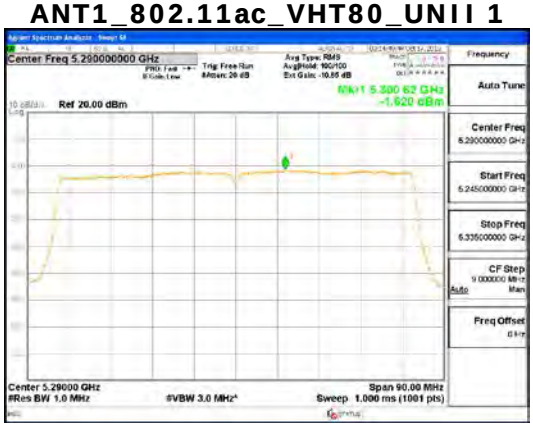




**ANT4_802.11ac_VHT40_UNII 2C**

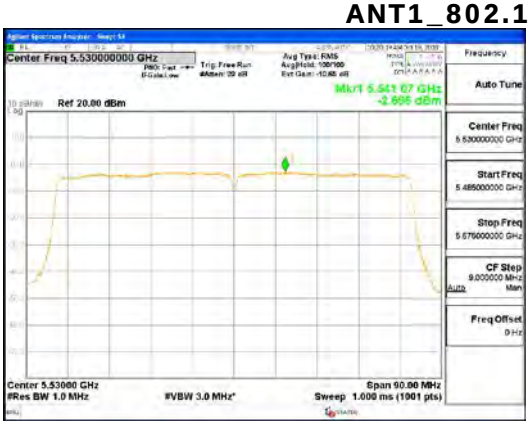


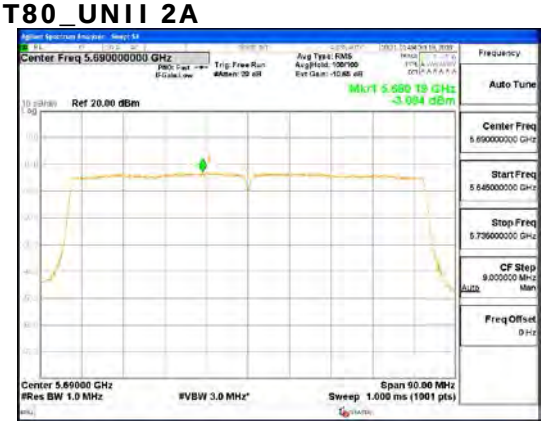
**ANT4_802.11ac_VHT40_UNII 3**


**ANT1_802.11ac_VHT80_UNII 1**

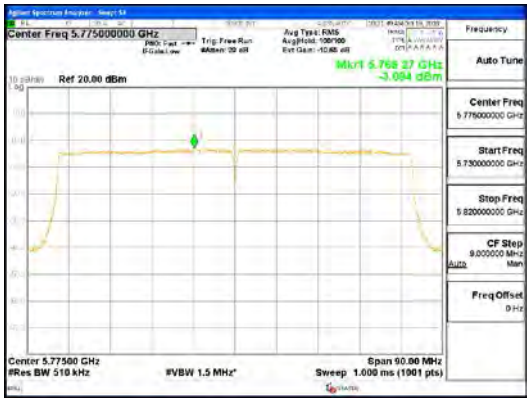



**ANT1_802.11ac_VHT80_UNII 2A**



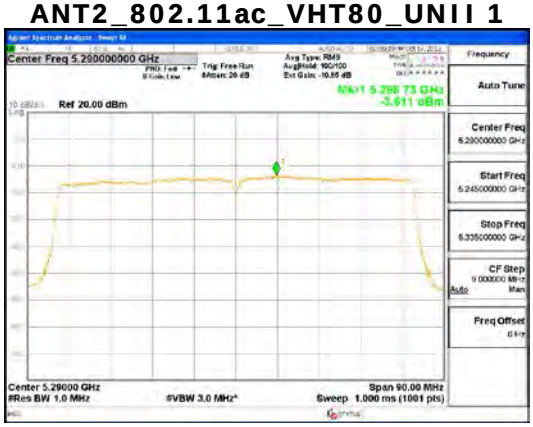




**ANT1_802.11ac_VHT80_UNII 2C**

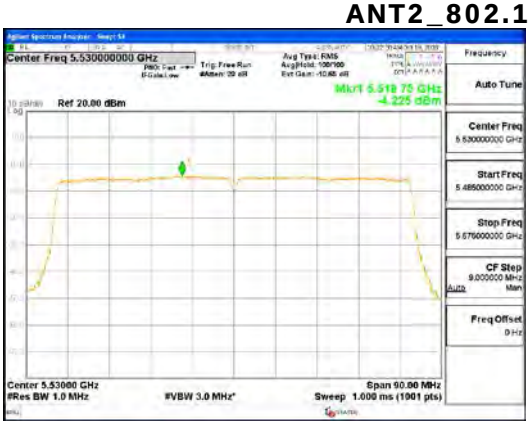


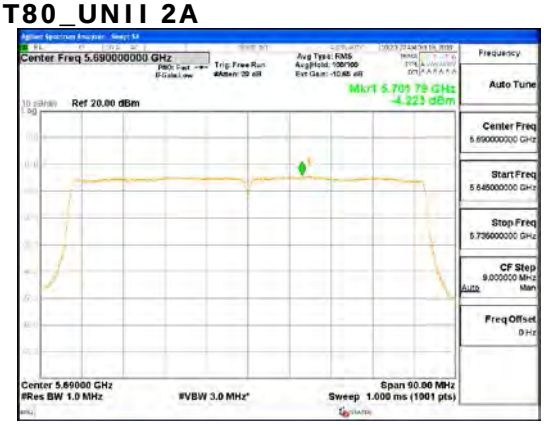

**ANT1_802.11ac_VHT80_UNII 3**


**ANT2_802.11ac_VHT80_UNII 1**

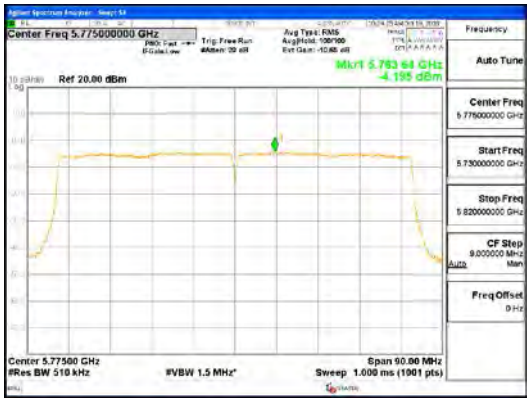



**ANT2_802.11ac_VHT80_UNII 2A**

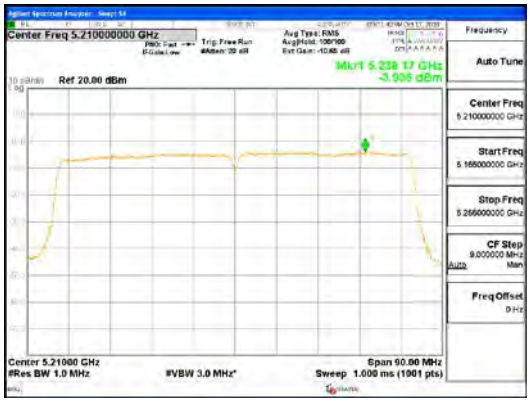


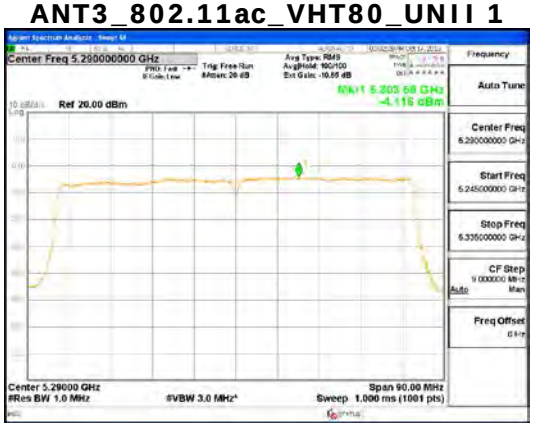

**ANT2_802.11ac_VHT80_UNII 2C**



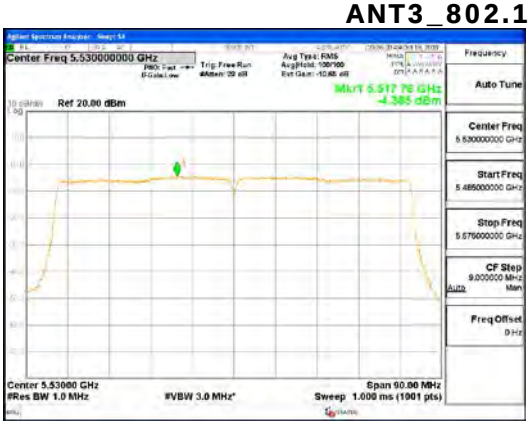

**ANT2_802.11ac_VHT80_UNII 3**

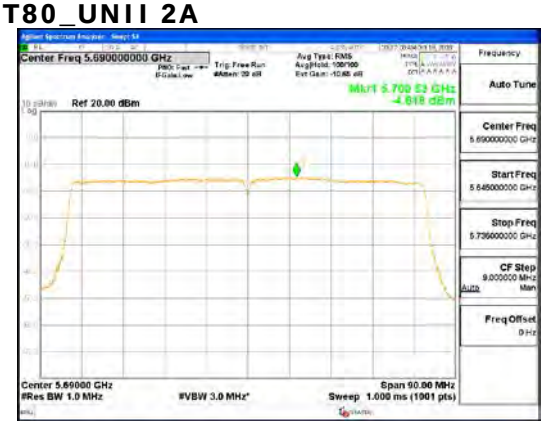



**ANT3_802.11ac_VHT80_UNII 1**

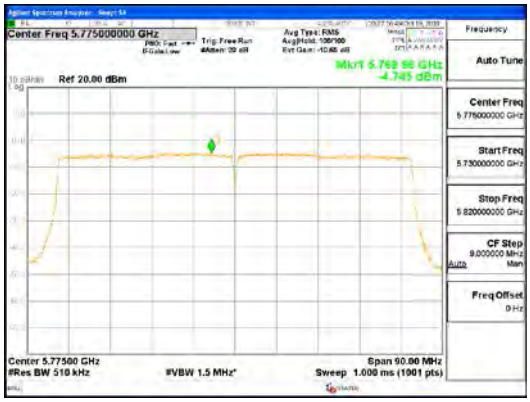



**ANT3_802.11ac_VHT80_UNII 2A**



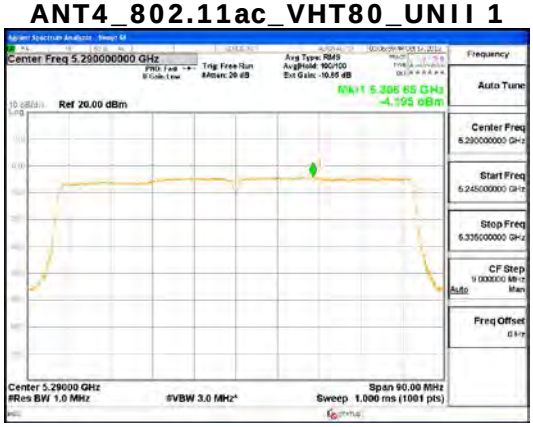




**ANT3_802.11ac_VHT80_UNII 2C**

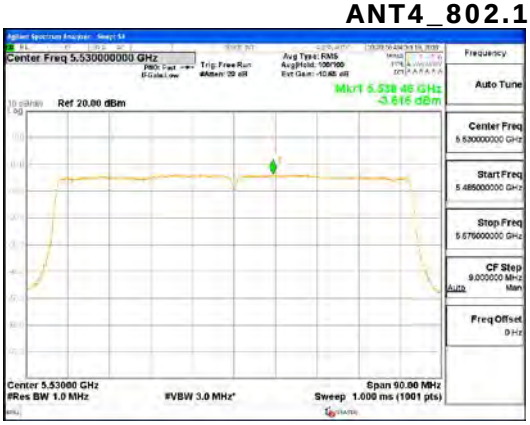


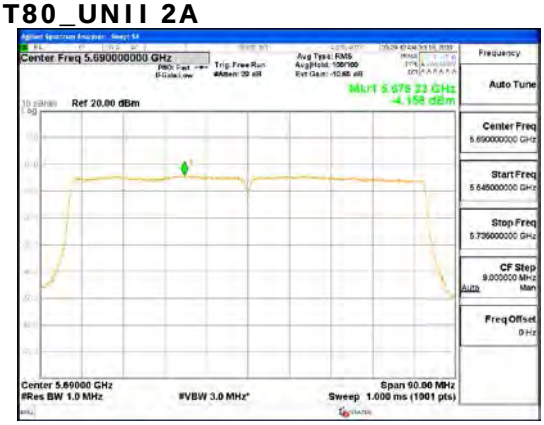

**ANT3_802.11ac_VHT80_UNII 3**


**ANT4_802.11ac_VHT80_UNII 1**




**ANT4_802.11ac_VHT80_UNII 2A**




**ANT4_802.11ac_VHT80_UNII 2C**


**ANT4_802.11ac_VHT80_UNII 3**

## 4.5 Frequency Stability

**Test Procedures**

KDB 789033 – Section A.3

The EUT was placed inside of an environmental chamber as the temperature in the chamber was varied between 0 ℃ and +40 ℃(Declaration by the Manufacturer). The temperature was incremented by 10 ℃ intervals and the unit was allowed to stabilize at each temperature before each measurement. The center frequency of the transmitting channel was evaluated at each temperature and the frequency deviation from the channel's center frequency was recorded.

Data for the worst case channel is shown below.

| Temperature (℃) | 0 | 10 | 20 | 30 | 40 |
|---|---|---|---|---|---|
| Frequency | Measured Frequency Error (kHz) | | | | |
| 5 180 MHz | 102.39 | 91.45 | 65.02 | 51.17 | 33.13 |
| 5 200 MHz | 101.55 | 94.42 | 67.69 | 48.72 | 34.85 |
| 5 240 MHz | 99.915 | 87.71 | 70.27 | 56.61 | 36.53 |
| 5 260 MHz | 110.29 | 89.95 | 60.58 | 44.84 | 32.82 |
| 5 300 MHz | 93.68 | 84.69 | 57.03 | 48.65 | 32.31 |
| 5 320 MHz | 104.02 | 84.24 | 66.04 | 47.17 | 30.15 |
| 5 500 MHz | 98.80 | 89.84 | 61.69 | 47.89 | 33.62 |
| 5 600 MHz | 98.69 | 89.59 | 59.99 | 44.09 | 27.99 |
| 5 720 MHz | 100.30 | 82.33 | 57.96 | 38.97 | 31.57 |
| 5 745 MHz | 50.05 | 32.74 | 1.14 | -11.45 | -34.60 |
| 5 785 MHz | 84.22 | 4.21 | 37.83 | 3.73 | 16.97 |
| 5 825 MHz | 92.01 | 77.08 | 8.49 | 16.21 | -14.94 |

Note :

Based on the results of the frequency stability test shown above the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature range as tested.

## 4.6 Unwanted Emissions

**Test Location**

☒ 10 m SAC (test distance : ☐ 10 m, ☒ 3 m)
☒ 3 m SAC (test distance : 3 m)

**Test Procedures**

KDB 789033 - Section G

1) In the frequency range of 9 kHz to 30 MHz, magnetic field is measured with Loop Antenna. The Test Antenna is positioned with its plane vertical at 1m distance from the EUT. The center of the Loop Test Antenna is 1m above the ground. During the measurement the Loop Test Antenna rotates about its vertical axis for maximum response at each azimuth about the EUT.
2) In the frequency rage above 30 MHz, Bi-Log Test Antenna(30 MHz to 1 GHz) and Horn Test Antenna(above 1 GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is carried from 1m to 4m above the ground to determine the maximum value of the field strength. The emissions levels at both horizontal and vertical polarizations should be tested.

Test Settings:

Frequency Range = 9 kHz ~ 1 GHz

a) RBW = 100 kHz for f < 1 GHz, 9 kHz for f < 30 MHz

b) VBW ≥ RBW

c) Detector = CISPR Quasi-peak

d) Sweep time = auto couple

- Peak

Frequency Range = 1 GHz ~ 40 GHz

a) RBW = 1 MHz

b) VBW ≥ 3 x RBW

c) Detector = Peak

d) Sweep time = auto

e) Trace mode = max hold

- Average (duty cycle ≥ 98%)

Frequency Range = 1 GHz ~ 40 GHz

a) RBW = 1 MHz

b) VBW ≥ 3 x RBW

c) Detector = RMS

d) Sweep time = auto

e) Averaging type = power (i.e., RMS)

f) Trace mode = average (at least 100 traces)

- Average (duty cycle < 98%)

Frequency Range = 1 GHz ~ 40 GHz

a) RBW = 1 MHz

b) VBW ≥ 3 x RBW

c) Detector = RMS

d) Sweep time = auto

e) Averaging type = power (i.e., RMS)

f) Trace mode = average (at least 100 traces)

If power averaging (RMS) mode, then the applicable correction factor is 10 log(1/x), where x is the duty cycle.

| Test mode | Duty Cycle Factor (dB) |
|---|---|
| 802.11a | 0.20 |
| 802.11n_HT20 | 0.21 |
| 802.11n_HT40 | 0.43 |
| 802.11ac_VHT20 | 0.21 |
| 802.11ac_VHT40 | 0.42 |
| 802.11ac_VHT80 | 0.84 |

**Limit**

- **15.209(a)**

| Frequency(MHz) | Field Strength uV/m@3m | Field Strength dBuV/m@3m | Deasurement Distance (meters) |
|---|---|---|---|
| 0.009-0.490 | 2400/F(kHz) | - | 300 |
| 0.490-1.705 | 24000/F(kHz) | - | 30 |
| 1.705-30 | 30 | - | 30 |
| 30-88 | 100** | 40 | 3 |
| 88-216 | 150** | 43.5 | 3 |
| 216-960 | 200** | 46 | 3 |
| Above 960 | 500 | 54 | 3 |

** Except as provided in 15.209(g).fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72MHz, 76-88MHz, 174-216MHz, 470-806MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g.15.231 and 15.241.

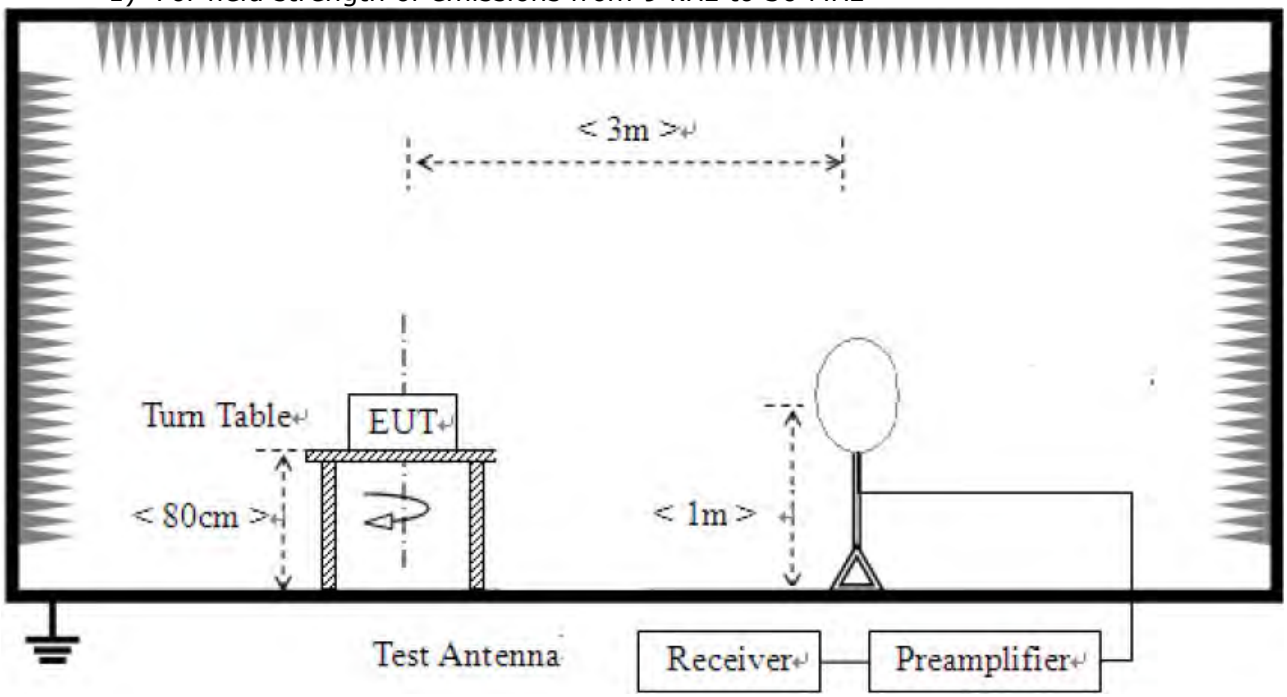
- **15.407, KDB 789033**

E.I.R.P -27 dBm/MHz

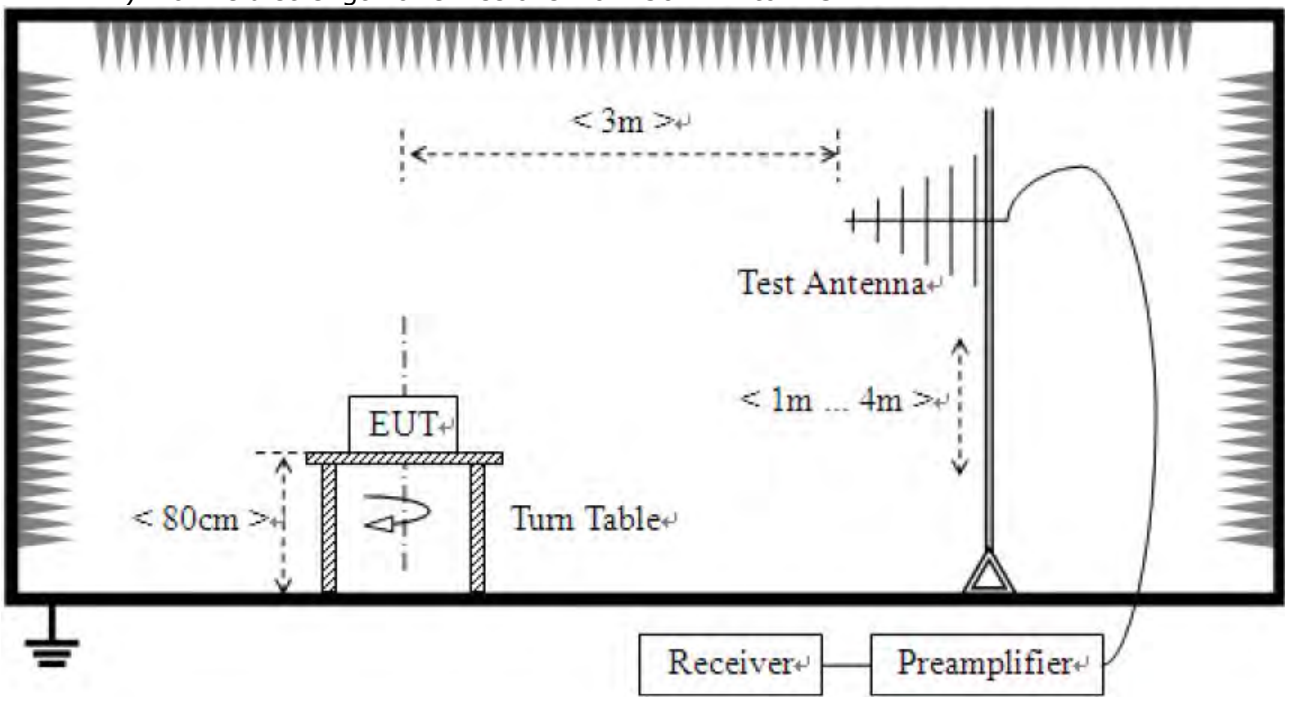
E[dBuV/m] = EIRP[dBm] + 95.2, for d = 3m

**Test Setup:**

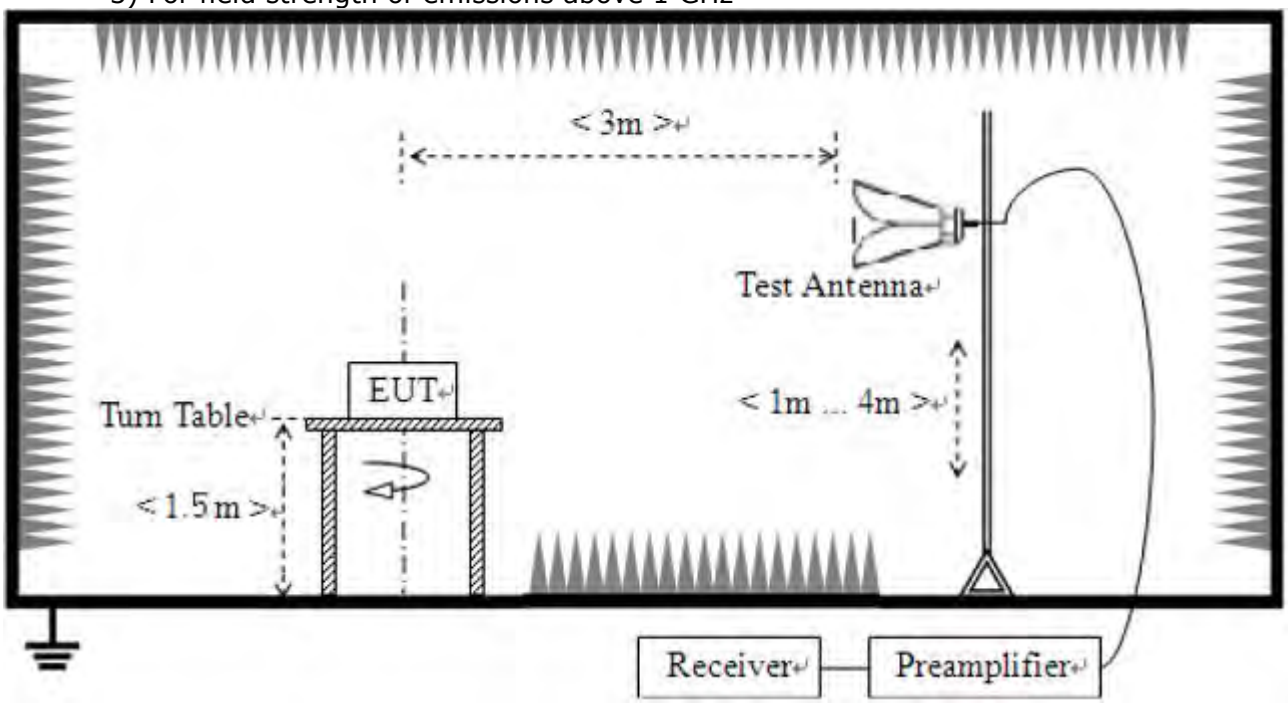
1) For field strength of emissions from 9 kHz to 30 MHz




2) For field strength of emissions from 30 MHz to 1 GHz



3) For field strength of emissions above 1 GHz




**Test Mode**

We have done all test mode.
The worst case antenna configuration and Test mode are determined to be as follows.

802.11a : ANT1 + ANT2 + ANT3 + ANT4 (MIMO)
802.11n : ANT1 + ANT2 + ANT3 + ANT4 (MIMO)
802.11ac : ANT1 + ANT2 + ANT3 + ANT4 (MIMO)

So the results are only attached worst cases.

**CTK Co., Ltd.**
**(Ho-dong), 113, Yejik-ro, Cheoin-gu, Yongin-si, Gyeonggi-do, Korea**
**Tel: +82-31-339-9970**
**Fax: +82-31-624-9501**

## Test Results

### 1) 9 kHz to 30 MHz

**Test mode : Transmitter, 802.11a, 802.11n, 802.11ac (Worst case)**

The requirements are:
☒ Complies

| Frequency (MHz) | Measured Data (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|
| - | - | - | See note |

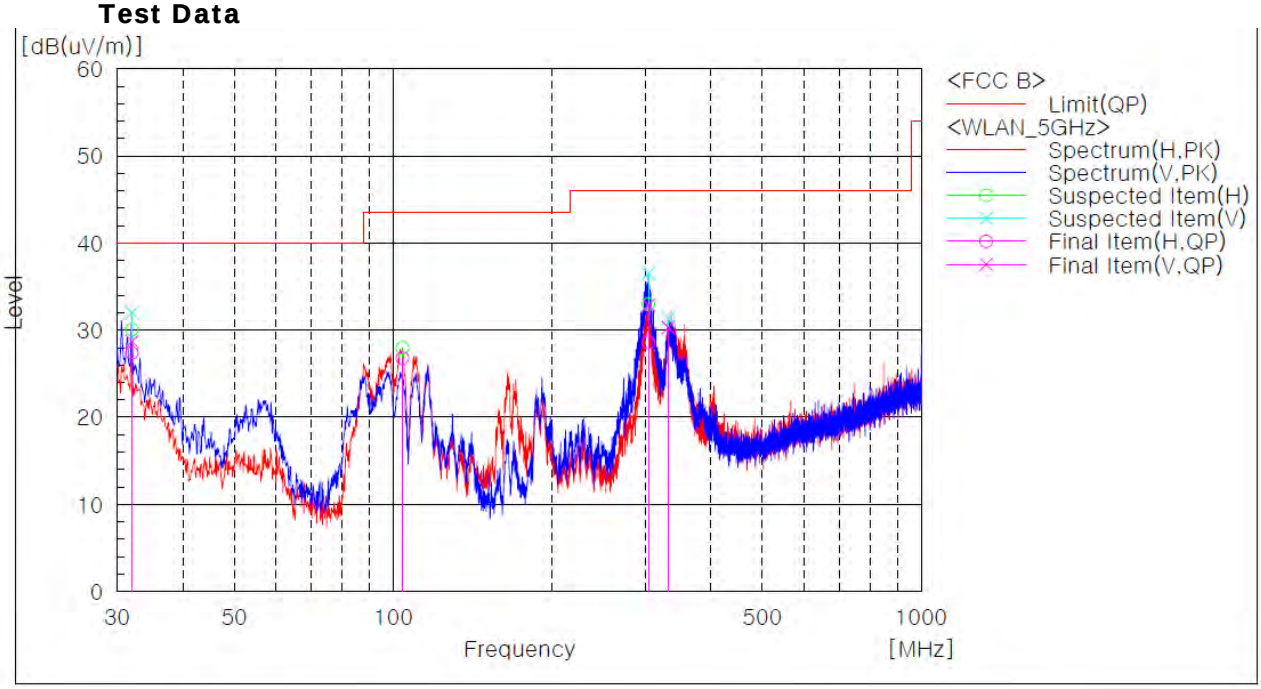
**Note :**
The amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.
Distance extrapolation factor = 40 log (specific distance / test distance) (dB)

## 2) 30 MHz to 1 GHz

**Test mode : Transmitter, 802.11a(Worst Case)**

The requirements are:
☒ Complies

**Test Data**




Final Result

| No. | Frequency [MHz] | (P) | Reading QP [dB(uV)] | c.f [dB(1/m)] | Result QP [dB(uV/m)] | Limit QP [dB(uV/m)] | Margin QP [dB] | Height [cm] | Angle [deg] | Remark |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 31.960 | V | 43.8 | -15.1 | 28.7 | 40.0 | 11.3 | 99.8 | 87.4 | |
| 2 | 31.960 | H | 42.5 | -15.1 | 27.4 | 40.0 | 12.6 | 99.8 | 63.6 | |
| 3 | 104.030 | H | 41.0 | -14.2 | 26.8 | 43.5 | 16.7 | 99.8 | 247.7 | |
| 4 | 304.129 | V | 44.8 | -11.9 | 32.9 | 46.0 | 13.1 | 99.8 | 226.0 | |
| 5 | 304.238 | H | 40.5 | -11.9 | 28.6 | 46.0 | 17.4 | 99.8 | 88.1 | |
| 6 | 331.781 | V | 41.8 | -11.5 | 30.3 | 46.0 | 15.7 | 99.8 | 226.0 | |

**Remark** :
1. The EUT was tested in three orientations in order to determine that "Y axis" was the worst case.
2. Result = Reading + c.f(Correction factor)
3. Correction factor = Antenna factor + Cable loss + 6 dB attenuator - Amp Gain

### 3) above 1 GHz

**Test mode : Transmitter, 802.11a**

The requirements are:
☒ Complies

**Test Data**

Ch.36(5 180 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 5 132.36 | H | 54.00 | 74.00 | 45.30 | 56.60 | 8.70 | 17.40 |
| 5 142.98 | V | 54.00 | 74.00 | 47.10 | 57.20 | 6.90 | 16.80 |

Ch.40(5 200 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| The emissions above 1 GHz were 20 dB lower than the limit. | | | | | | | |

Ch.48(5 240 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| The emissions above 1 GHz were 20 dB lower than the limit. | | | | | | | |

Ch.52(5 260 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| The emissions above 1 GHz were 20 dB lower than the limit. | | | | | | | |

Ch.60(5 300 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| The emissions above 1 GHz were 20 dB lower than the limit. | | | | | | | |

Ch.64(5 320 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 5 360.74 | H | 54.00 | 74.00 | 47.10 | 57.50 | 6.90 | 16.50 |
| 5 355.61 | V | 54.00 | 74.00 | 48.00 | 59.50 | 6.00 | 14.50 |

Ch.100(5 500 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 5 439.64 | H | 54.00 | 74.00 | 46.70 | 57.50 | 7.30 | 16.50 |
| 5 425.03 | V | 54.00 | 74.00 | 48.40 | 58.50 | 5.60 | 15.50 |

Ch.120(5 600 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| The emissions above 1 GHz were 20 dB lower than the limit. | | | | | | | |

Ch.144(5 720 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| The emissions above 1 GHz were 20 dB lower than the limit. | | | | | | | |

Ch.149(5 745 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 5 558.95 | H | - | 68.20 | - | 58.20 | - | 10.00 |
| 5 642.92 | V | - | 68.20 | - | 63.00 | - | 5.20 |

Ch.157(5 785 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| The emissions above 1 GHz were 20 dB lower than the limit. | | | | | | | |

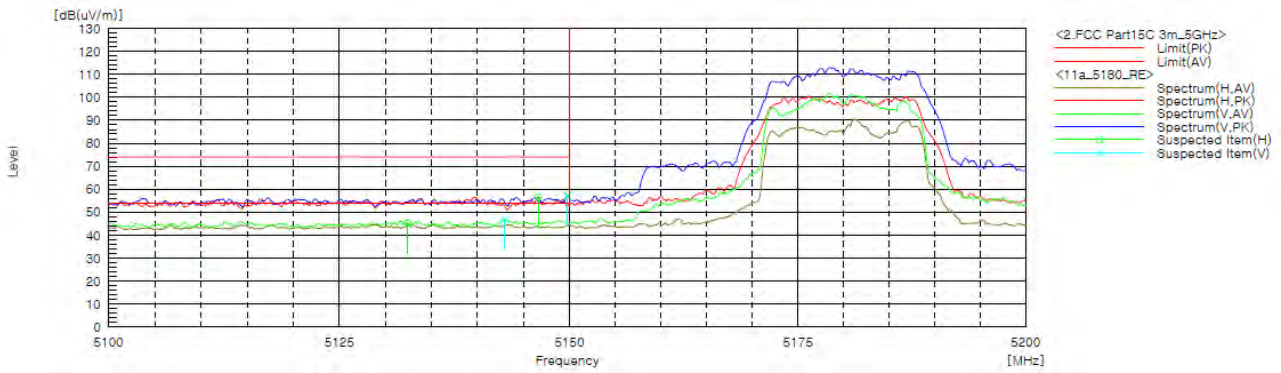
Ch.165(5 825 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 5 938.20 | H | - | 68.20 | - | 60.40 | - | 7.80 |
| 5 933.27 | V | - | 68.20 | - | 62.30 | - | 5.90 |

**Remarks**

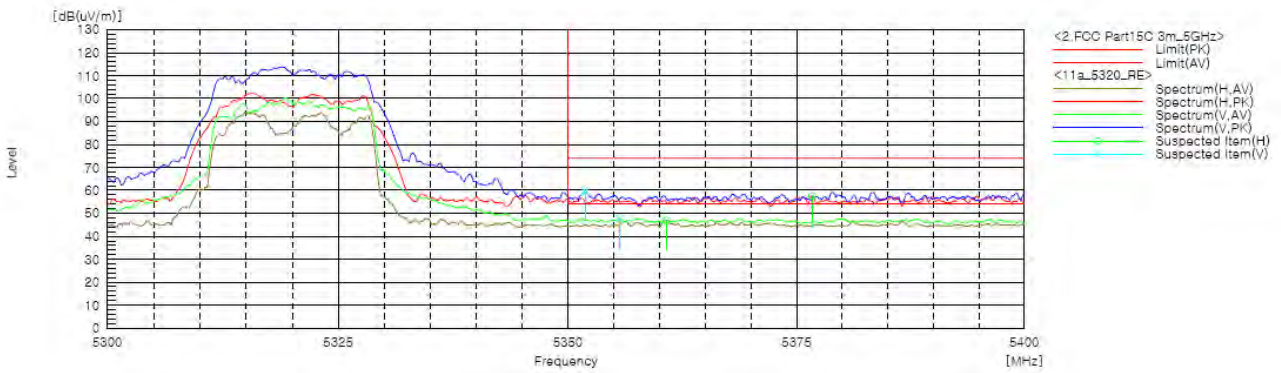
1. The EUT was tested in three orientations in order to determine that "Y axis" was the worst case.

| | |
|---|---|
| Worst Case Mode : | 802.11a |
| Worst Case Transfer Rate : | 6 Mbps |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 180 MHz |
| Channel : | 36 |



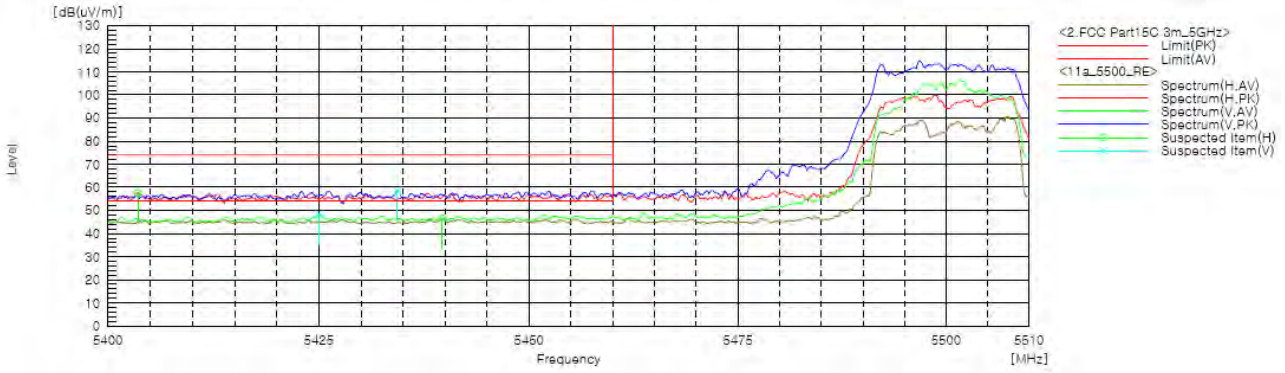

Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11a |
| Worst Case Transfer Rate : | 6 Mbps |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 320 MHz |
| Channel : | 64 |



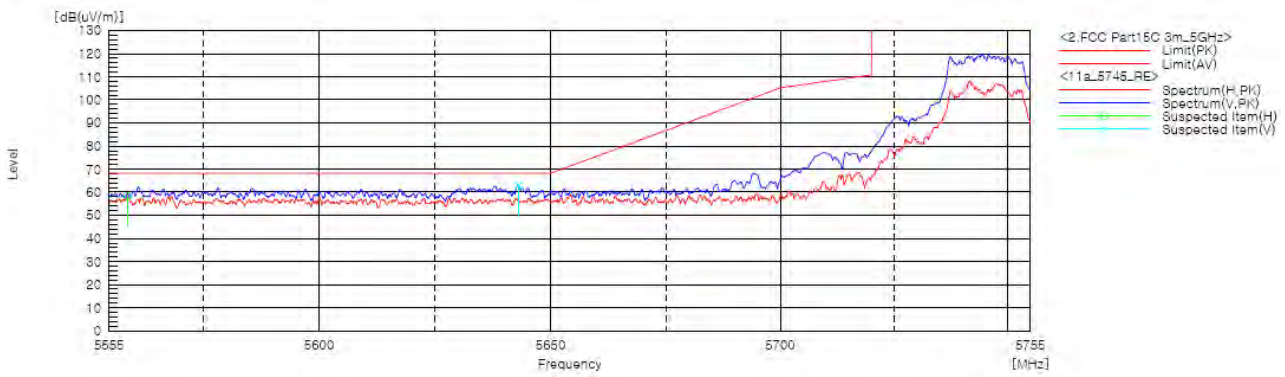

Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11a |
| Worst Case Transfer Rate : | 6 Mbps |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 500 MHz |
| Channel : | 100 |



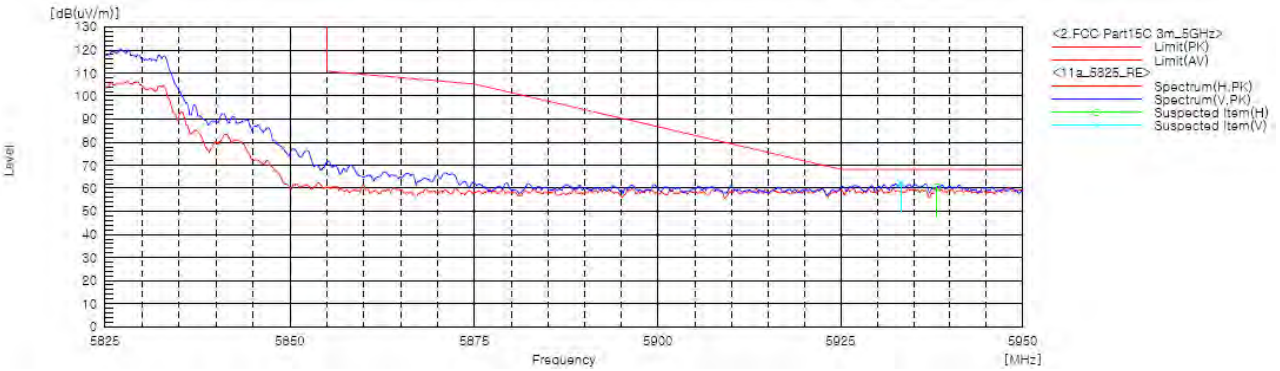

Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11a |
| Worst Case Transfer Rate : | 6 Mbps |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 745 MHz |
| Channel : | 149 |




Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11a |
| Worst Case Transfer Rate : | 6 Mbps |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 825 MHz |
| Channel : | 165 |




Radiated Restricted Upper Band Edge Plot

**Test mode : Transmitter, 802.11n_HT20**

The requirements are:
☒ Complies

**Test Data**

Ch.36(5 180 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 3 453.35 | H | 54.00 | 74.00 | 34.91 | 41.30 | 19.09 | 32.70 |
| 3 453.35 | V | 54.00 | 74.00 | 39.51 | 43.20 | 14.49 | 30.80 |
| 5 140.73 | H | 54.00 | 74.00 | 44.91 | 56.10 | 9.09 | 17.90 |
| 5 146.49 | V | 54.00 | 74.00 | 46.61 | 57.60 | 7.39 | 16.40 |

Ch.40(5 200 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 3 466.69 | H | 54.00 | 74.00 | 34.41 | 41.80 | 19.59 | 32.20 |
| 3 466.72 | V | 54.00 | 74.00 | 39.01 | 43.00 | 14.99 | 31.00 |

Ch.48(5 240 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 3 493.38 | H | 54.00 | 74.00 | 32.41 | 41.30 | 21.59 | 32.70 |
| 3 493.36 | V | 54.00 | 74.00 | 38.71 | 43.20 | 15.29 | 30.80 |

Ch.52(5 260 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 3 506.71 | H | 54.00 | 74.00 | 40.40 | 32.21 | 40.40 | 21.79 |
| 3 506.72 | V | 54.00 | 74.00 | 43.70 | 39.11 | 43.70 | 14.89 |

Ch.60(5 300 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 3 533.40 | H | 54.00 | 74.00 | 32.31 | 40.40 | 21.69 | 33.60 |
| 3 533.39 | V | 54.00 | 74.00 | 38.31 | 43.70 | 15.69 | 30.30 |

Ch.64(5 320 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 3 546.71 | H | 54.00 | 74.00 | 31.81 | 40.50 | 22.19 | 33.50 |
| 3 546.71 | V | 54.00 | 74.00 | 37.61 | 42.30 | 16.39 | 31.70 |
| 5 394.70 | H | 54.00 | 74.00 | 47.21 | 57.10 | 6.79 | 16.90 |
| 5 380.75 | V | 54.00 | 74.00 | 48.71 | 59.60 | 5.29 | 14.40 |

Ch.100(5 500 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 5 441.70 | H | 54.00 | 74.00 | 47.01 | 58.00 | 6.99 | 16.00 |
| 5 441.96 | V | 54.00 | 74.00 | 48.31 | 59.30 | 5.69 | 14.70 |

Ch.120(5 600 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| The emissions above 1 GHz were 20 dB lower than the limit. | | | | | | | |

Ch.144(5 720 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| The emissions above 1 GHz were 20 dB lower than the limit. | | | | | | | |

Ch.149(5 745 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 5 622.34 | H | - | 68.20 | - | 58.60 | - | 9.60 |
| 5 629.05 | V | - | 68.20 | - | 61.70 | - | 6.50 |

Ch.157(5 785 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| The emissions above 1 GHz were 20 dB lower than the limit. | | | | | | | |

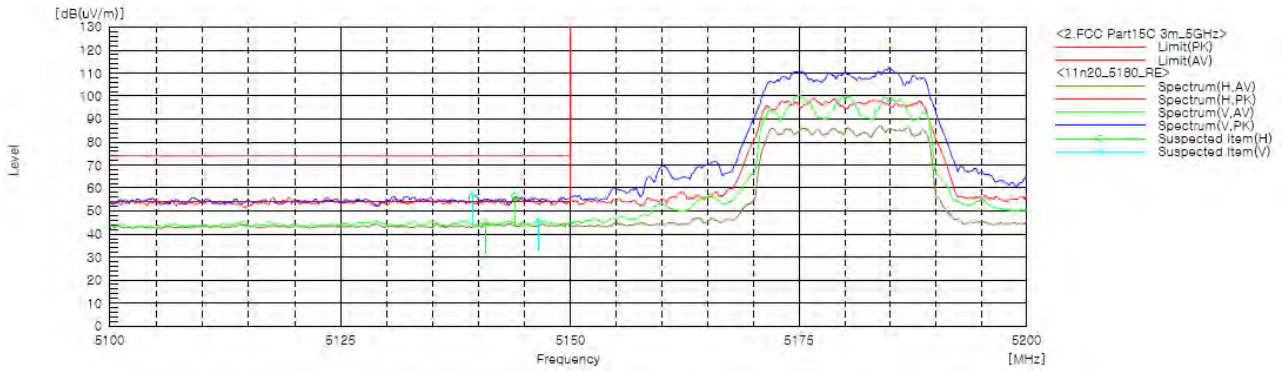
Ch.165(5 825 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 5 932.80 | H | - | 68.20 | - | 60.20 | - | 8.00 |
| 5 928.76 | V | - | 68.20 | - | 63.20 | - | 5.00 |

**Remarks**

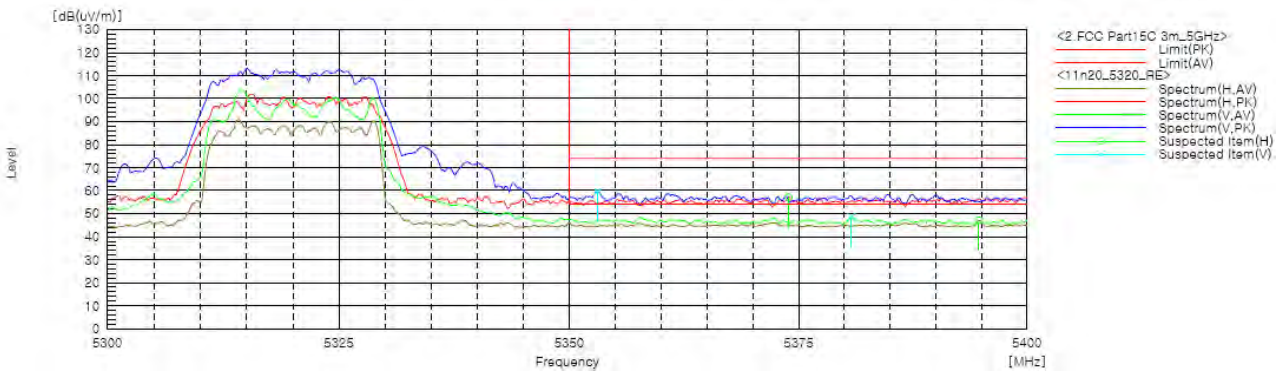
1. The EUT was tested in three orientations in order to determine that "Y axis" was the worst case.

| | |
|---|---|
| Worst Case Mode : | 802.11n_HT20 |
| Worst Case Transfer Rate : | MCS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 180 MHz |
| Channel : | 36 |



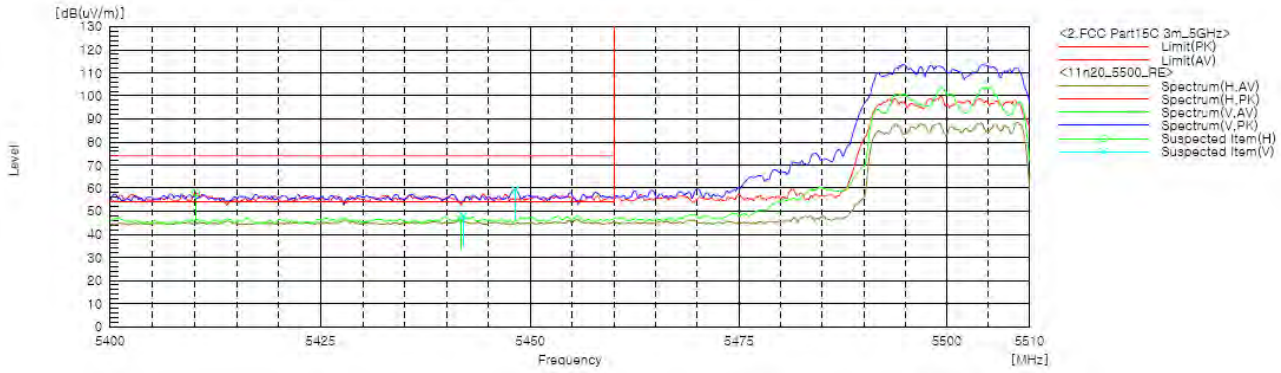

Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11n_HT20 |
| Worst Case Transfer Rate : | MCS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 320 MHz |
| Channel : | 64 |



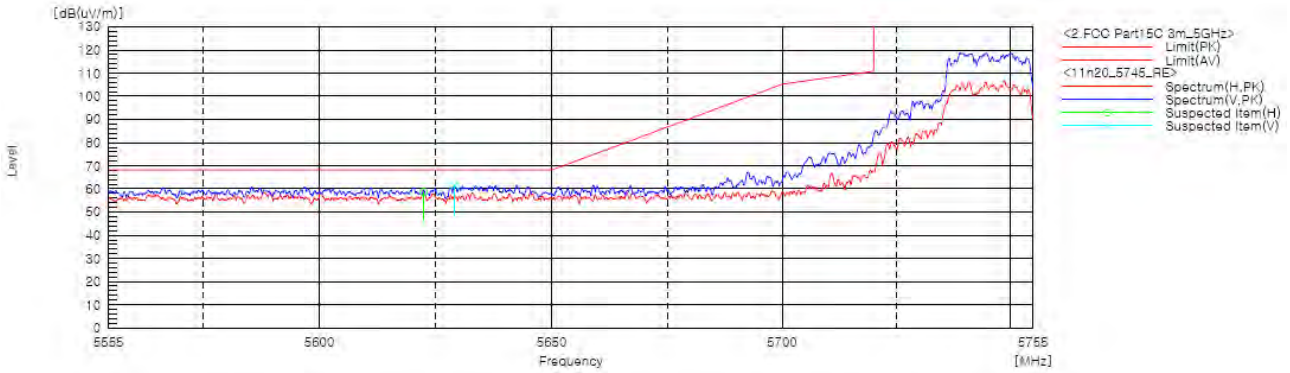

Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11n_HT20 |
| Worst Case Transfer Rate : | MCS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 500 MHz |
| Channel : | 100 |



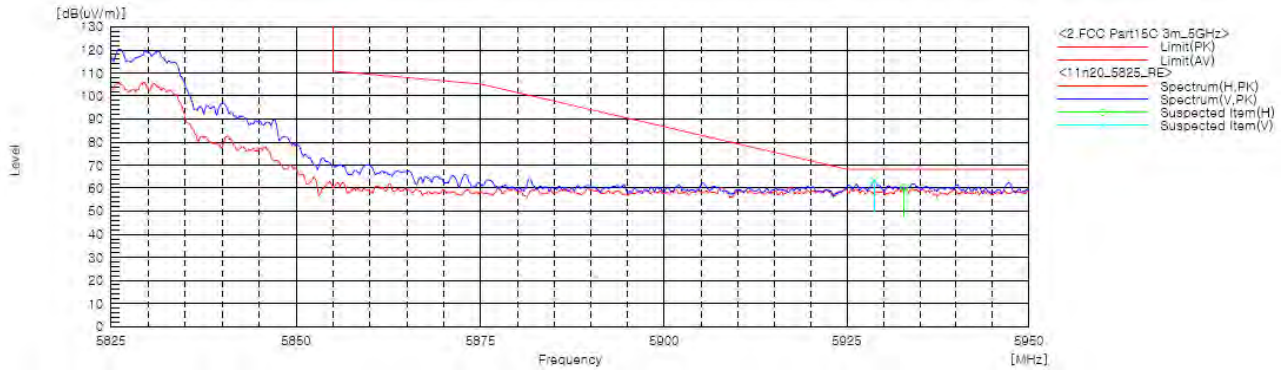

Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11n_HT20 |
| Worst Case Transfer Rate : | MCS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 745 MHz |
| Channel : | 149 |




Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11n_HT20 |
| Worst Case Transfer Rate : | MCS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 825 MHz |
| Channel : | 165 |




Radiated Restricted Upper Band Edge Plot

**Test mode : Transmitter, 802.11ac_VHT20**

The requirements are:
☒ Complies

**Test Data**

Ch.36(5 180 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 3 453.68 | H | 54.00 | 74.00 | 33.81 | 41.00 | 20.19 | 33.00 |
| 3 453.68 | V | 54.00 | 74.00 | 38.91 | 42.70 | 15.09 | 31.30 |
| 5 143.75 | H | 54.00 | 74.00 | 45.21 | 56.00 | 8.79 | 18.00 |
| 5 149.82 | V | 54.00 | 74.00 | 46.01 | 57.00 | 7.99 | 17.00 |

Ch.40(5 200 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 3 467.03 | H | 54.00 | 74.00 | 32.71 | 42.20 | 21.29 | 31.80 |
| 3 467.03 | V | 54.00 | 74.00 | 48.31 | 43.20 | 5.69 | 30.80 |

Ch.48(5 240 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 3 493.74 | H | 54.00 | 74.00 | 33.11 | 40.90 | 20.89 | 33.10 |
| 3 493.74 | V | 54.00 | 74.00 | 39.11 | 42.90 | 14.89 | 31.10 |

Ch.52(5 260 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 3 507.10 | H | 54.00 | 74.00 | 33.71 | 41.10 | 20.29 | 32.90 |
| 3 507.10 | V | 54.00 | 74.00 | 39.31 | 43.80 | 14.69 | 30.20 |

Ch.60(5 300 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 3 533.81 | H | 54.00 | 74.00 | 31.61 | 40.20 | 22.39 | 33.80 |
| 3 531.90 | V | 54.00 | 74.00 | 38.91 | 43.60 | 15.09 | 30.40 |

Ch.64(5 320 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 3 570.06 | H | 54.00 | 74.00 | 32.31 | 42.30 | 21.69 | 31.70 |
| 3 547.17 | V | 54.00 | 74.00 | 37.41 | 43.60 | 16.59 | 30.40 |
| 5 372.21 | H | 54.00 | 74.00 | 46.81 | 57.40 | 7.19 | 16.60 |
| 5 362.06 | V | 54.00 | 74.00 | 48.31 | 59.10 | 5.69 | 14.90 |

Ch.100(5 500 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 5 428.12 | H | 54.00 | 74.00 | 46.91 | 57.60 | 7.09 | 16.40 |
| 5 439.22 | V | 54.00 | 74.00 | 48.41 | 58.50 | 5.59 | 15.50 |

Ch.120(5 600 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| The emissions above 1 GHz were 20 dB lower than the limit. | | | | | | | |

Ch.144(5 720 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| The emissions above 1 GHz were 20 dB lower than the limit. | | | | | | | |

Ch.149(5 745 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 5 585.37 | H | - | 68.20 | - | 58.90 | - | 9.30 |
| 5 636.01 | V | - | 68.20 | - | 64.50 | - | 3.70 |

Ch.157(5 785 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| The emissions above 1 GHz were 20 dB lower than the limit. | | | | | | | |

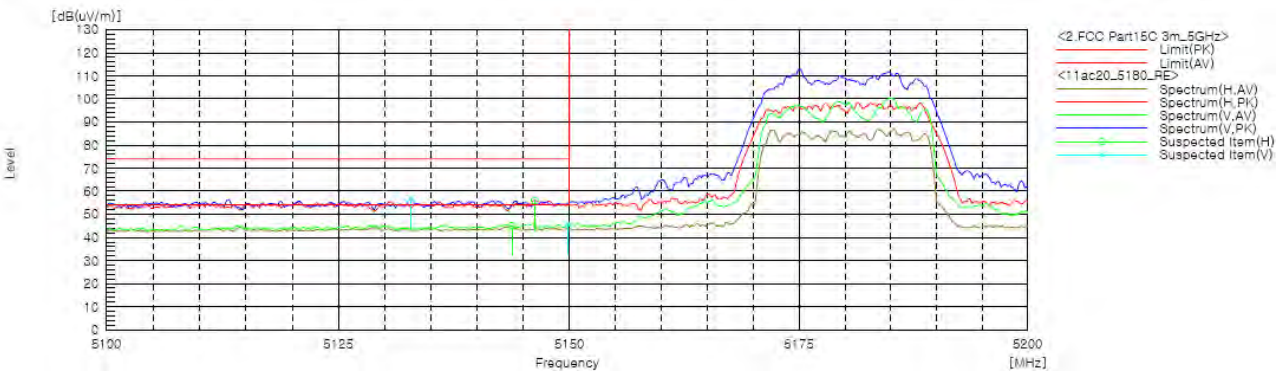
Ch.165(5 825 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 5 944.35 | H | - | 68.20 | - | 60.90 | - | 7.30 |
| 5 938.92 | V | - | 68.20 | - | 64.10 | - | 4.10 |

**Remarks**

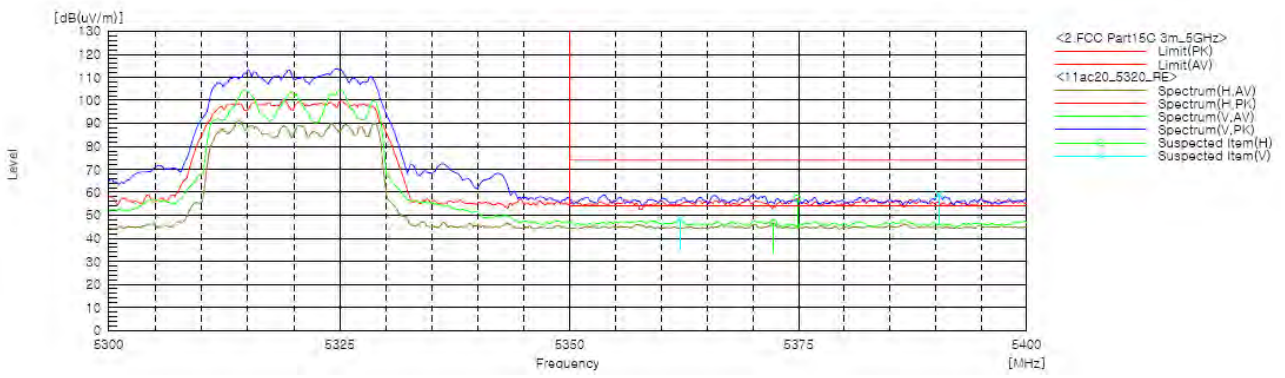
1. The EUT was tested in three orientations in order to determine that "Y axis" was the worst case.

| | |
|---|---|
| Worst Case Mode : | 802.11ac_VHT20 |
| Worst Case Transfer Rate : | MNSS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 180 MHz |
| Channel : | 36 |



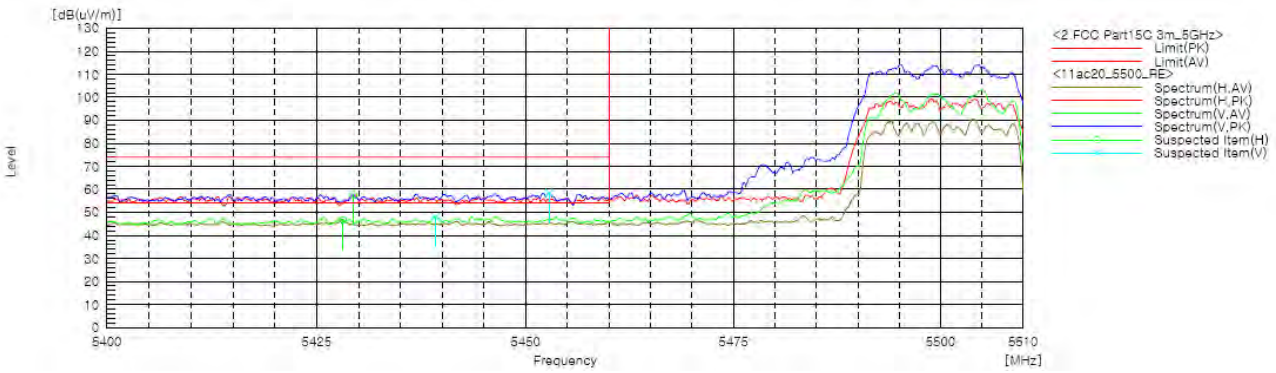

Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11ac_VHT20 |
| Worst Case Transfer Rate : | MNSS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 320 MHz |
| Channel : | 64 |



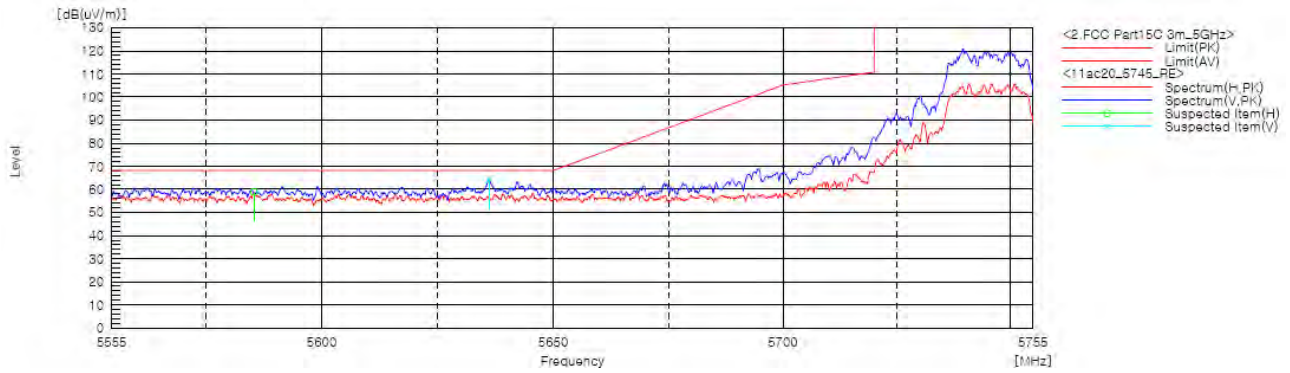

Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11ac_VHT20 |
| Worst Case Transfer Rate : | MNSS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 500 MHz |
| Channel : | 100 |



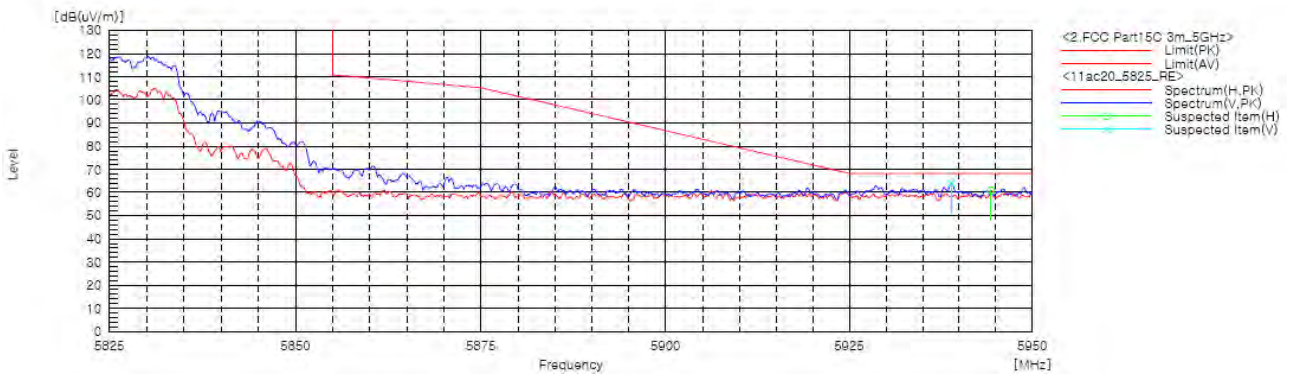

Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11ac_VHT20 |
| Worst Case Transfer Rate : | MNSS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 745 MHz |
| Channel : | 149 |




Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11ac_VHT20 |
| Worst Case Transfer Rate : | MNSS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 825 MHz |
| Channel : | 165 |




Radiated Restricted Upper Band Edge Plot

**Test mode : Transmitter, 802.11n_HT40**

The requirements are:
☒ Complies

**Test Data**

Ch.38(5 190 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 3 460.06 | H | 54.00 | 74.00 | 34.93 | 40.80 | 19.07 | 33.20 |
| 3 460.04 | V | 54.00 | 74.00 | 37.73 | 42.60 | 16.27 | 31.40 |
| 5 148.99 | H | 54.00 | 74.00 | 39.13 | 51.60 | 14.87 | 22.40 |
| 5 149.98 | V | 54.00 | 74.00 | 50.23 | 62.70 | 3.77 | 11.30 |

Ch.46(5 230 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 3 486.63 | H | 54.00 | 74.00 | 32.93 | 40.60 | 21.07 | 33.40 |
| 3 486.74 | V | 54.00 | 74.00 | 37.23 | 42.80 | 16.77 | 31.20 |

Ch.54(5 270 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 3 513.32 | H | 54.00 | 74.00 | 32.23 | 41.20 | 21.77 | 32.80 |
| 3 513.41 | V | 54.00 | 74.00 | 37.63 | 42.50 | 16.37 | 31.50 |

Ch.62(5 310 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 3 540.03 | H | 54.00 | 74.00 | 32.43 | 41.60 | 21.57 | 32.40 |
| 3 540.08 | V | 54.00 | 74.00 | 38.33 | 43.40 | 15.67 | 30.60 |
| 5 357.68 | H | 54.00 | 74.00 | 40.33 | 52.00 | 13.67 | 22.00 |
| 5 350.00 | V | 54.00 | 74.00 | 51.23 | 67.80 | 2.77 | 6.20 |

Ch.102(5 510 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 5 454.01 | H | 54.00 | 74.00 | 39.03 | 50.10 | 14.97 | 23.90 |
| 5 459.66 | V | 54.00 | 74.00 | 48.63 | 61.50 | 5.37 | 12.50 |

Ch.118(5 590 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| The emissions above 1 GHz were 20 dB lower than the limit. | | | | | | | |

Ch.142(5 710 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| The emissions above 1 GHz were 20 dB lower than the limit. | | | | | | | |

Ch.151(5 755 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 5 595.54 | H | - | 68.20 | - | 58.80 | - | 9.40 |
| 5 636.57 | V | - | 68.20 | - | 61.80 | - | 6.40 |

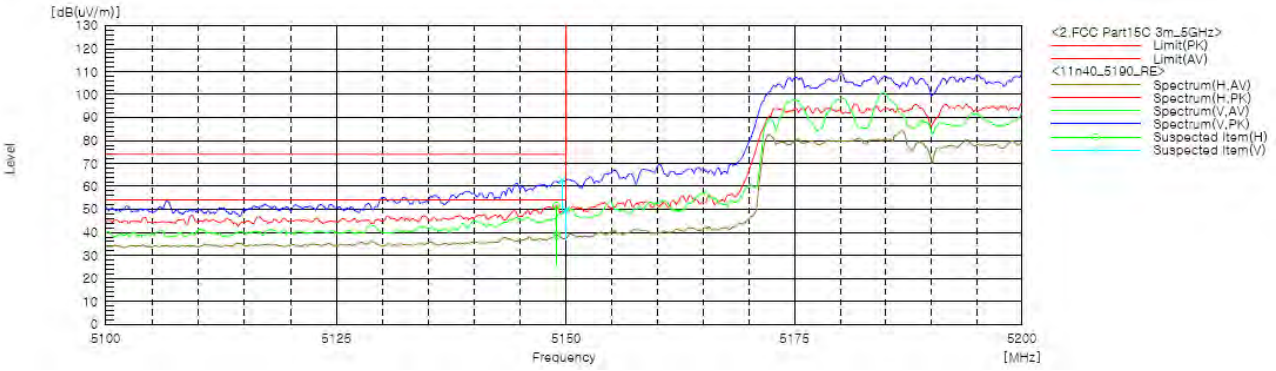
Ch.159(5 795 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 5 935.34 | H | - | 68.20 | - | 61.20 | - | 7.00 |
| 5 931.17 | V | - | 68.20 | - | 62.20 | - | 6.00 |

**Remarks**

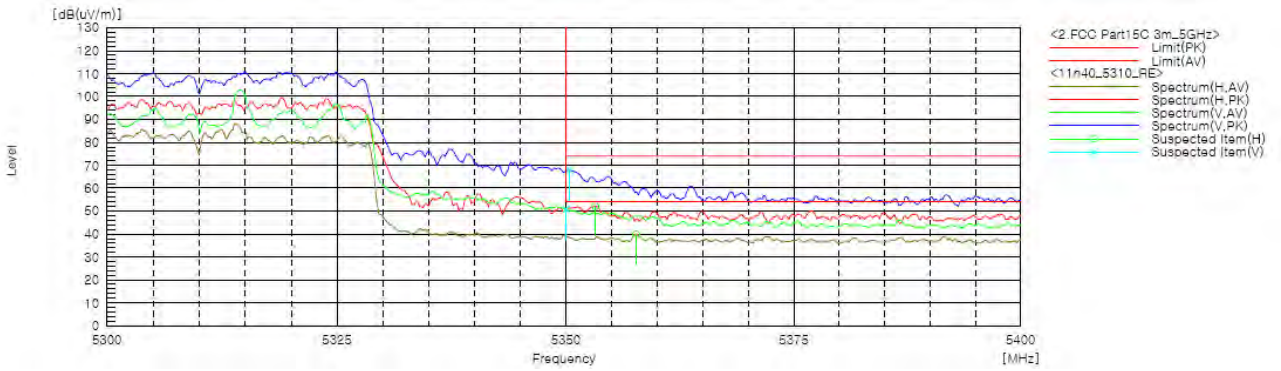
1. The EUT was tested in three orientations in order to determine that "Y axis" was the worst case.

| | |
|---|---|
| Worst Case Mode : | 802.11n_HT40 |
| Worst Case Transfer Rate : | MCS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 190 MHz |
| Channel : | 38 |



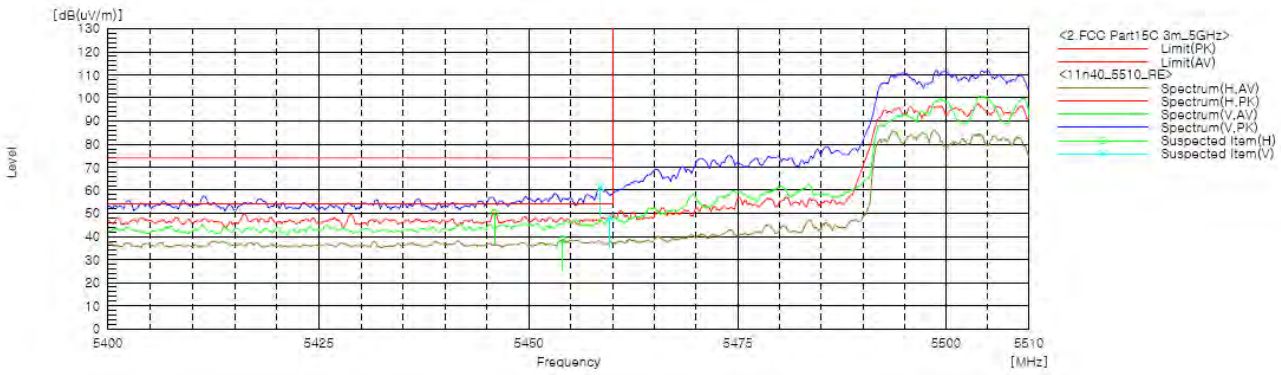

Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11n_HT40 |
| Worst Case Transfer Rate : | MCS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 310 MHz |
| Channel : | 62 |



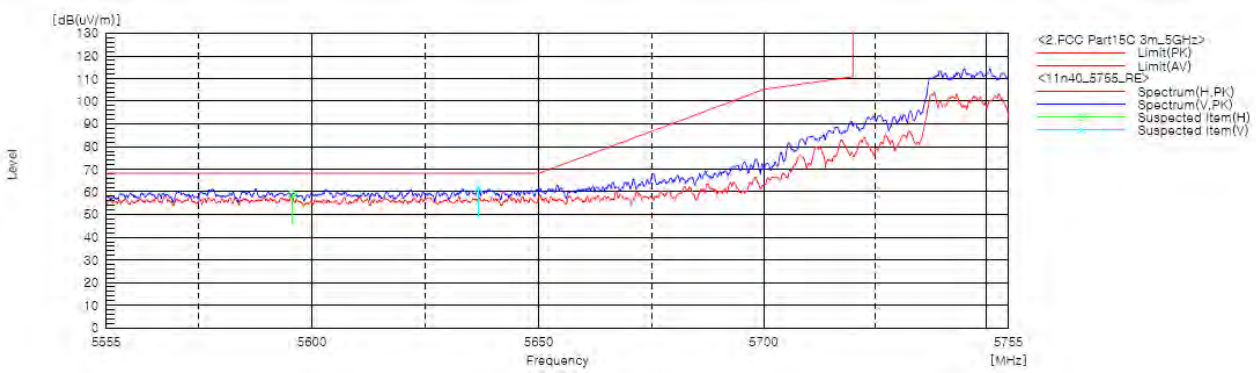

Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11n_HT40 |
| Worst Case Transfer Rate : | MCS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 510 MHz |
| Channel : | 102 |



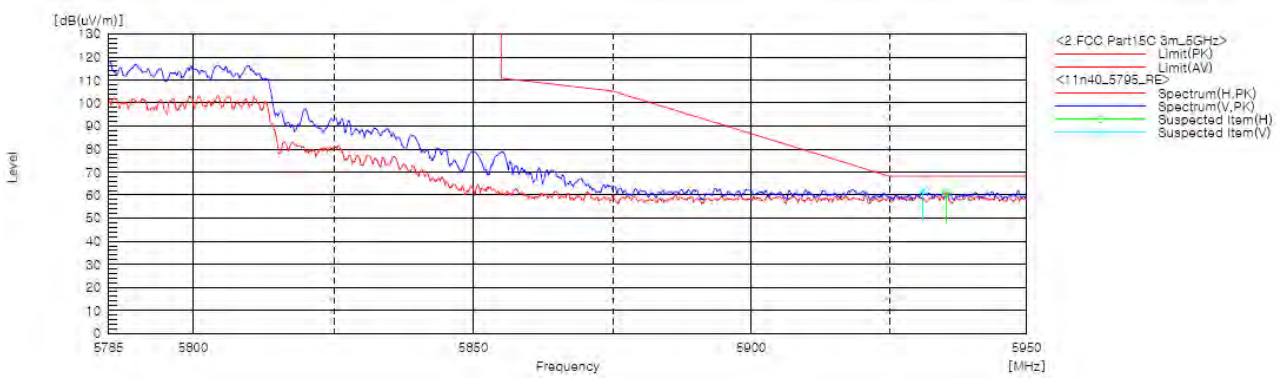

Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11n_HT40 |
| Worst Case Transfer Rate : | MCS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 755 MHz |
| Channel : | 151 |




Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11n_HT40 |
| Worst Case Transfer Rate : | MCS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 795 MHz |
| Channel : | 159 |




Radiated Restricted Upper Band Edge Plot

**Test mode : Transmitter, 802.11ac_VHT40**

The requirements are:
☒ Complies

**Test Data**

Ch.38(5 190 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 3 460.06 | H | 54.00 | 74.00 | 36.02 | 37.90 | 17.98 | 36.10 |
| 3 460.07 | V | 54.00 | 74.00 | 38.72 | 42.20 | 15.28 | 31.80 |
| 5 149.16 | H | 54.00 | 74.00 | 38.52 | 51.10 | 15.48 | 22.90 |
| 5 149.52 | V | 54.00 | 74.00 | 51.52 | 63.90 | 2.48 | 10.10 |

Ch.46(5 230 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 3 486.11 | H | 54.00 | 74.00 | 34.22 | 41.20 | 19.78 | 32.80 |
| 3 486.11 | V | 54.00 | 74.00 | 39.22 | 43.50 | 14.78 | 30.50 |

Ch.54(5 270 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 3 512.82 | H | 54.00 | 74.00 | 34.42 | 42.30 | 19.58 | 31.70 |
| 3 512.82 | V | 54.00 | 74.00 | 38.52 | 42.40 | 15.48 | 31.60 |

Ch.62(5 310 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 3 539.53 | H | 54.00 | 74.00 | 34.02 | 42.20 | 19.98 | 31.80 |
| 3 539.53 | V | 54.00 | 74.00 | 38.02 | 41.40 | 15.98 | 32.60 |
| 5 354.27 | H | 54.00 | 74.00 | 39.32 | 50.10 | 14.68 | 23.90 |
| 5 350.00 | V | 54.00 | 74.00 | 50.62 | 65.40 | 3.38 | 8.60 |

Ch.102(5 510 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 4 591.72 | V | 54.00 | 74.00 | 37.92 | 44.40 | 16.08 | 29.60 |
| 5 455.59 | H | 54.00 | 74.00 | 38.92 | 50.30 | 15.08 | 23.70 |
| 5 459.52 | V | 54.00 | 74.00 | 48.32 | 61.40 | 5.68 | 12.60 |

Ch.118(5 590 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| The emissions above 1 GHz were 20 dB lower than the limit. | | | | | | | |

Ch.142(5 710 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| The emissions above 1 GHz were 20 dB lower than the limit. | | | | | | | |

Ch.151(5 755 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 5 594.48 | H | - | 68.20 | - | 59.20 | - | 9.00 |
| 5 640.41 | V | - | 68.20 | - | 64.70 | - | 3.50 |

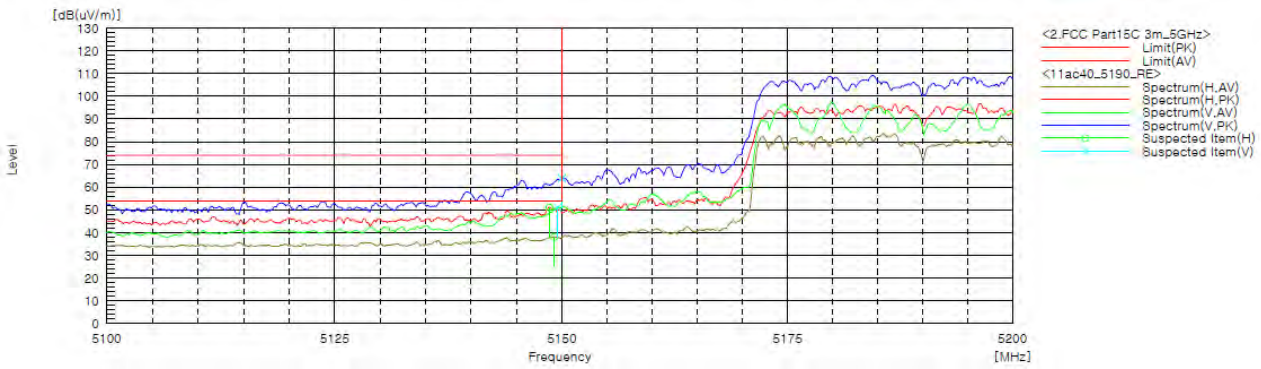
Ch.159(5 795 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 5 940.11 | H | - | 68.20 | - | 59.80 | - | 8.40 |
| 5 944.21 | V | - | 68.20 | - | 61.90 | - | 6.30 |

**Remarks**

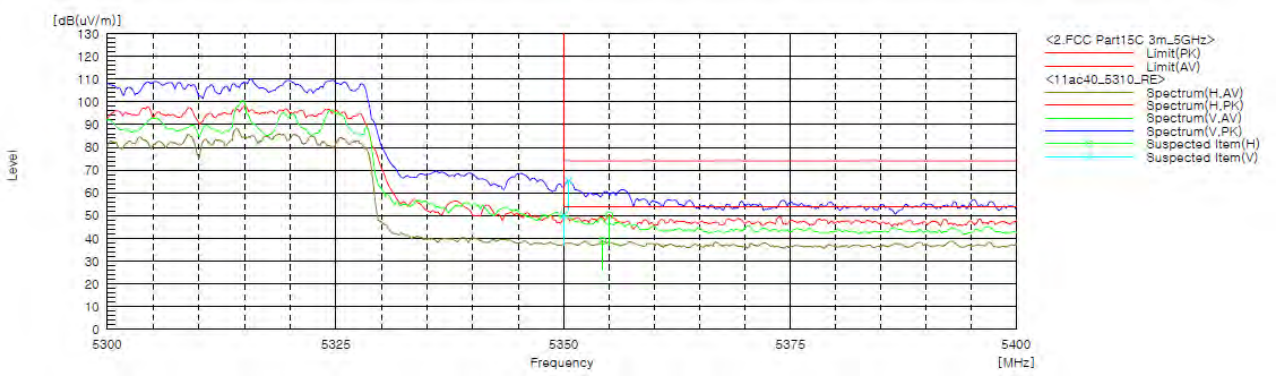
1. The EUT was tested in three orientations in order to determine that "Y axis" was the worst case.

| | |
|---|---|
| Worst Case Mode : | 802.11ac_VHT40 |
| Worst Case Transfer Rate : | MNSS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 190 MHz |
| Channel : | 38 |



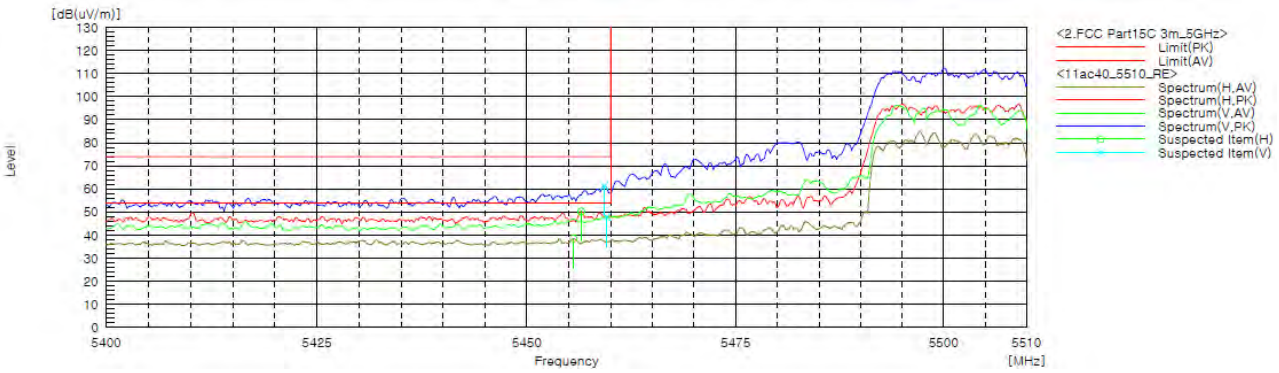

Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11ac_VHT40 |
| Worst Case Transfer Rate : | MNSS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 310 MHz |
| Channel : | 62 |



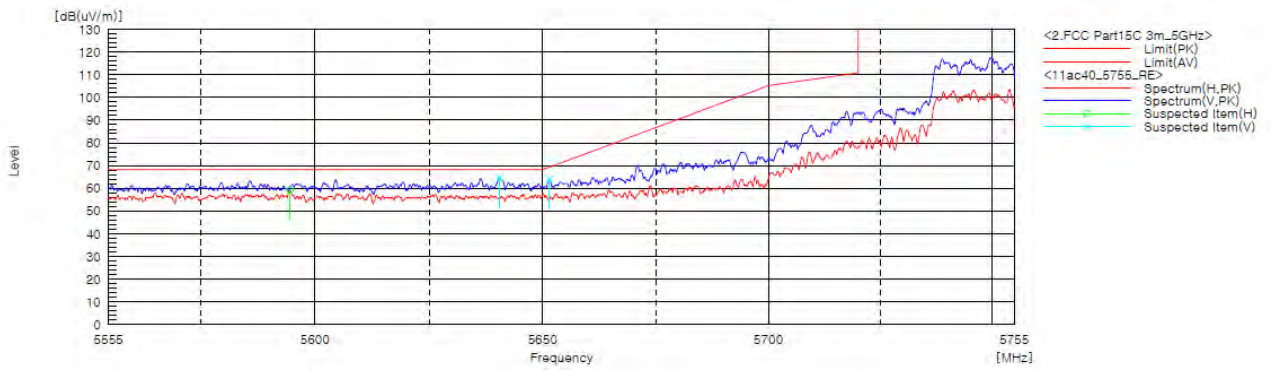

Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11ac_VHT40 |
| Worst Case Transfer Rate : | MNSS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 510 MHz |
| Channel : | 102 |



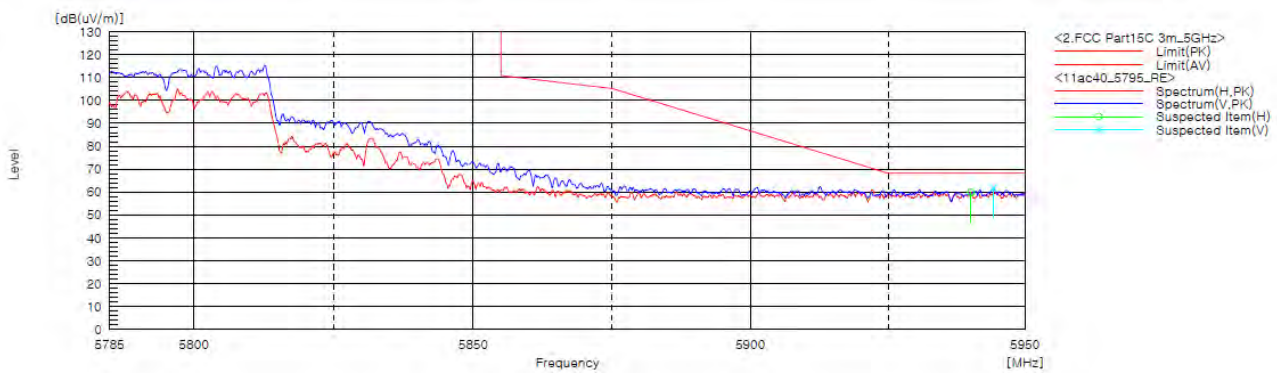

Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11ac_VHT40 |
| Worst Case Transfer Rate : | MNSS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 755 MHz |
| Channel : | 151 |




Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11ac_VHT40 |
| Worst Case Transfer Rate : | MNSS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 795 MHz |
| Channel : | 159 |




Radiated Restricted Upper Band Edge Plot

**Test mode : Transmitter, 802.11ac_VHT80**

The requirements are:
☒ Complies

**Test Data**

Ch.42(5 210 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 3 473.43 | H | 54.00 | 74.00 | 35.34 | 41.40 | 18.66 | 32.60 |
| 3 473.38 | V | 54.00 | 74.00 | 39.14 | 44.40 | 14.86 | 29.60 |
| 5 143.39 | H | 54.00 | 74.00 | 41.34 | 56.70 | 12.66 | 17.30 |
| 5 149.13 | V | 54.00 | 74.00 | 50.04 | 69.00 | 3.96 | 5.00 |

Ch.58(5 290 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 3 526.68 | H | 54.00 | 74.00 | 33.64 | 40.80 | 20.36 | 33.20 |
| 3 526.71 | V | 54.00 | 74.00 | 39.84 | 44.20 | 14.16 | 29.80 |
| 5 356.10 | H | 54.00 | 74.00 | 40.84 | 52.20 | 13.16 | 21.80 |
| 5 357.78 | V | 54.00 | 74.00 | 50.14 | 72.70 | 3.86 | 1.30 |

Ch.106(5 530 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 5 458.98 | H | 54.00 | 74.00 | 41.14 | 55.00 | 12.86 | 19.00 |
| 5 459.21 | V | 54.00 | 74.00 | 51.94 | 70.60 | 2.06 | 3.40 |

Ch.138(5 690 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| The emissions above 1 GHz were 20 dB lower than the limit. | | | | | | | |

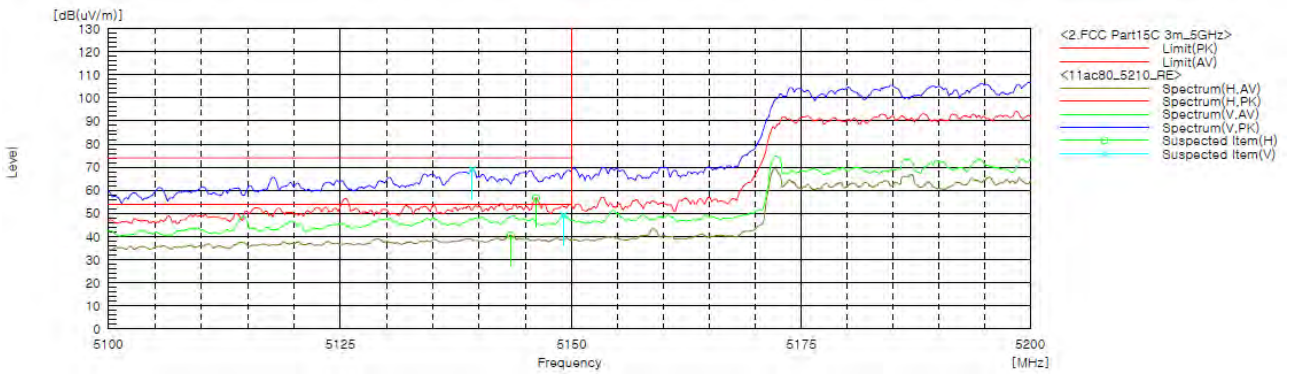
Ch.155(5 775 MHz)

| Frequency [MHz] | (P) | Limit AV [dBuV/m] | Limit PK [dBuV/m] | Result AV [dBuV/m] | Result PK [dBuV/m] | Margin AV [dB] | Margin PK [dB] |
|---|---|---|---|---|---|---|---|
| 5 611.21 | H | - | 68.20 | - | 60.30 | - | 7.90 |
| 5 645.19 | V | - | 68.20 | - | 64.40 | - | 3.80 |
| 5 948.41 | H | - | 68.20 | - | 54.80 | - | 13.40 |
| 5 932.02 | V | - | 68.20 | - | 59.70 | - | 8.50 |

**Remarks**

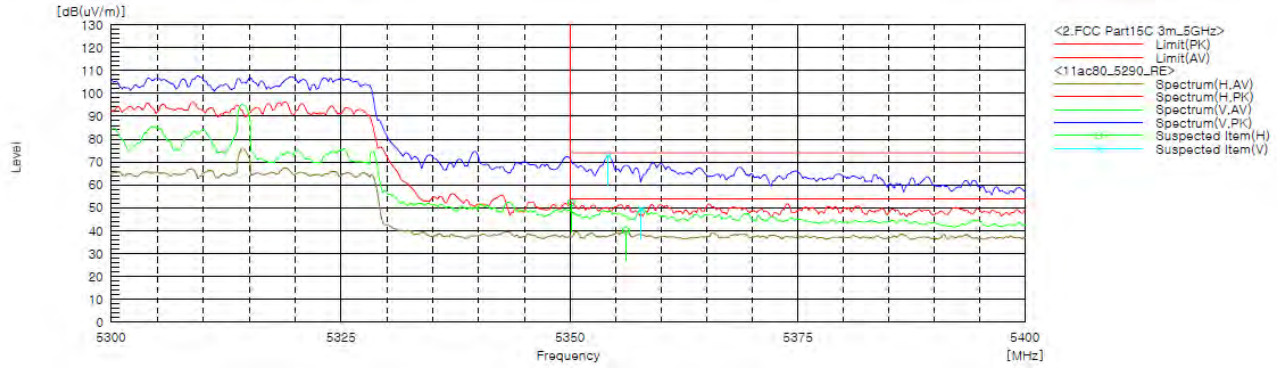
1. The EUT was tested in three orientations in order to determine that "Y axis" was the worst case.

| | |
|---|---|
| Worst Case Mode : | 802.11ac_VHT80 |
| Worst Case Transfer Rate : | MNSS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 210 MHz |
| Channel : | 42 |



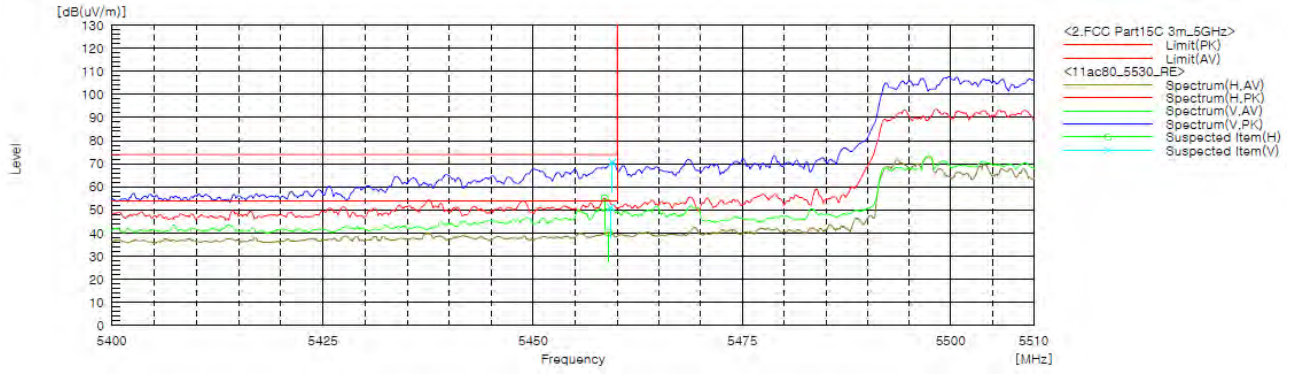

Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11ac_VHT80 |
| Worst Case Transfer Rate : | MNSS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 290 MHz |
| Channel : | 58 |



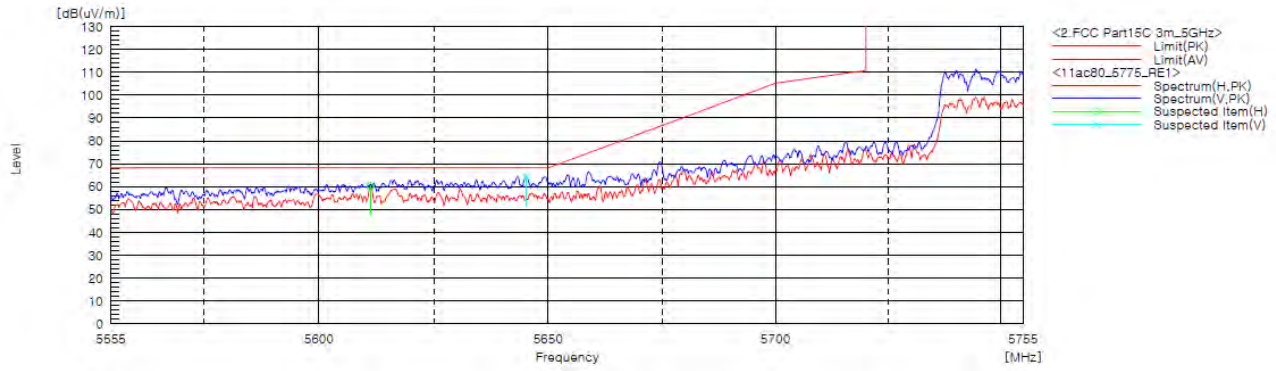

Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11ac_VHT80 |
| Worst Case Transfer Rate : | MNSS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 530 MHz |
| Channel : | 106 |



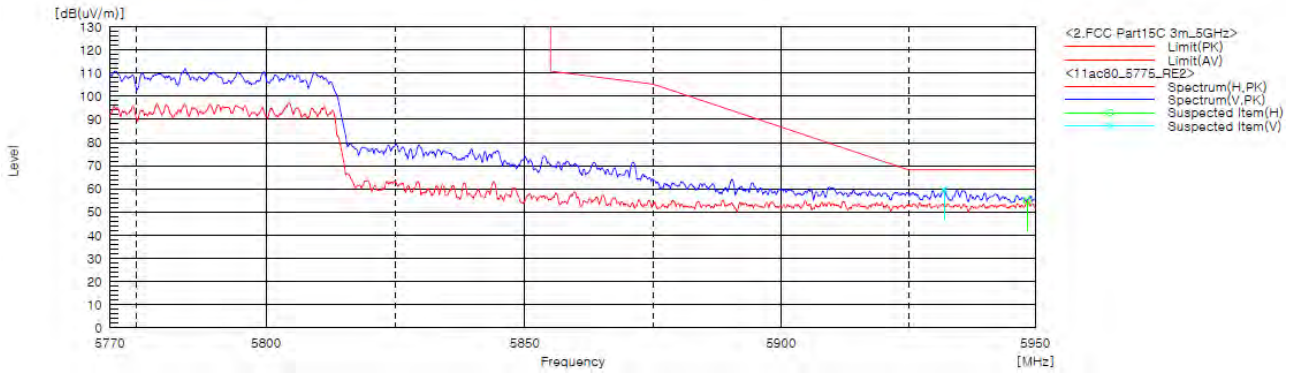

Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11ac_VHT80 |
| Worst Case Transfer Rate : | MNSS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 775 MHz |
| Channel : | 155 |




Radiated Restricted Lower Band Edge Plot

| | |
|---|---|
| Worst Case Mode : | 802.11ac_VHT80 |
| Worst Case Transfer Rate : | MNSS 0 |
| Distance of Measurements : | 3 Meters |
| Operating Frequency : | 5 775 MHz |
| Channel : | 155 |




Radiated Restricted Upper Band Edge Plot

## 4.7 AC Conducted Emissions

**Test Location**
Shielded Room

**Frequency Range of Measurement**
150 kHz to 30 MHz

**Instrument Settings**
IF Band Width: 9 kHz

**Test Procedures**

The EUT was placed on a non-metallic table 0.8m above the metallic, grounded floor and 0.4m from the reference ground plane wall. The distance to other metallic surfaces was at least 0.8m.
Amplitude measurements were performed with a quasi-peak detector and an average detector.

**Limit**

- **15.207(a)**

| Frequency (MHz) | Conducted Limit (dBuV) | |
|---|---|---|
| | Quasi-peak | Average |
| 0.15 ~ 0.5 | 66 to 56* | 56 to 46* |
| 0.5 ~ 5 | 56 | 46 |
| 5 ~ 30 | 60 | 50 |

* Decreases with the logarithm of the frequency.

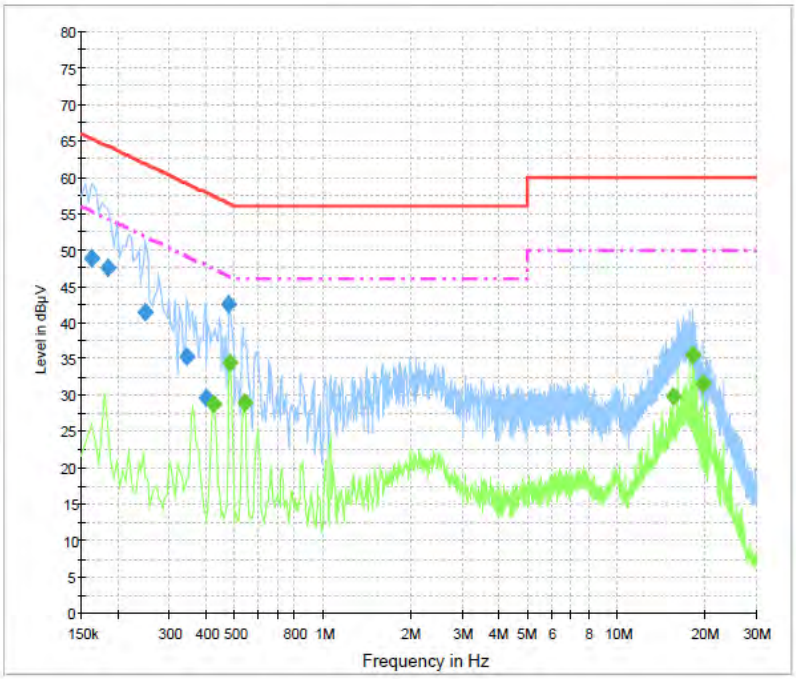
**Test Results**
The requirements are:

☒ Complies

**Test Data**

[LINE]

Class B_L1




## Final Result 1

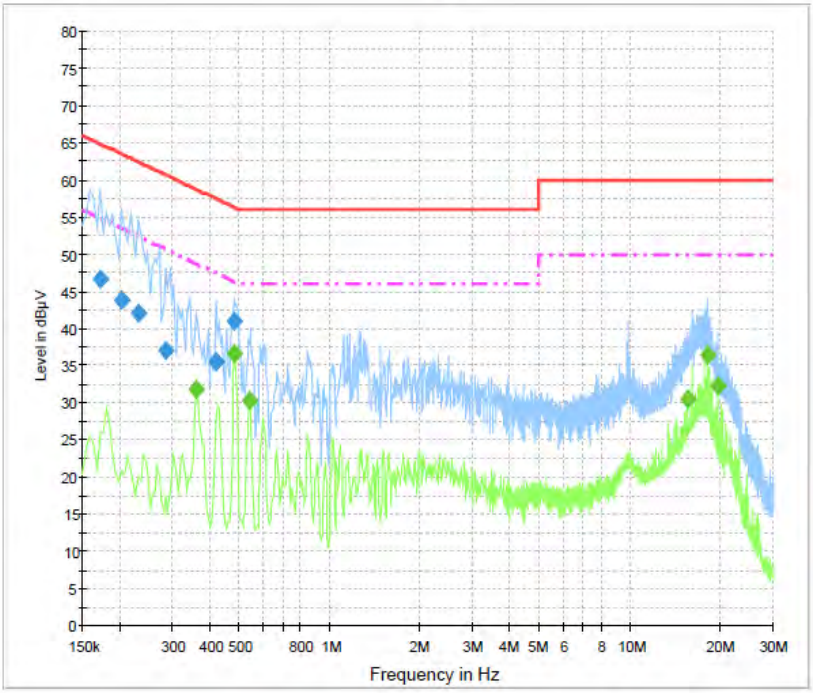
| Frequency (MHz) | QuasiPeak (dBµV) | Meas. Time (ms) | Bandwidth (kHz) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|---|---|---|---|---|---|---|---|---|
| 0.163500 | 48.9 | 1000.0 | 9.000 | On | L1 | 9.8 | 16.4 | 65.3 |
| 0.186000 | 47.6 | 1000.0 | 9.000 | On | L1 | 9.9 | 16.6 | 64.2 |
| 0.249000 | 41.5 | 1000.0 | 9.000 | On | L1 | 9.7 | 20.3 | 61.8 |
| 0.343500 | 35.3 | 1000.0 | 9.000 | On | L1 | 9.9 | 23.8 | 59.1 |
| 0.397500 | 29.7 | 1000.0 | 9.000 | On | L1 | 9.9 | 28.2 | 57.9 |
| 0.478500 | 42.5 | 1000.0 | 9.000 | On | L1 | 9.9 | 13.9 | 56.4 |

## Final Result 2

| Frequency (MHz) | CAverage (dBµV) | Meas. Time (ms) | Bandwidth (kHz) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|---|---|---|---|---|---|---|---|---|
| 0.424500 | 28.8 | 1000.0 | 9.000 | On | L1 | 9.9 | 18.6 | 47.4 |
| 0.483000 | 34.5 | 1000.0 | 9.000 | On | L1 | 9.9 | 11.8 | 46.3 |
| 0.541500 | 29.0 | 1000.0 | 9.000 | On | L1 | 9.9 | 17.0 | 46.0 |
| 15.616500 | 29.8 | 1000.0 | 9.000 | On | L1 | 10.0 | 20.2 | 50.0 |
| 18.244500 | 35.4 | 1000.0 | 9.000 | On | L1 | 10.0 | 14.6 | 50.0 |
| 19.707000 | 31.6 | 1000.0 | 9.000 | On | L1 | 10.0 | 18.4 | 50.0 |

[NEUTRAL]

Class B_N




## Final Result 1

| Frequency (MHz) | QuasiPeak (dBµV) | Meas. Time (ms) | Bandwidth (kHz) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|---|---|---|---|---|---|---|---|---|
| 0.172500 | 46.7 | 1000.0 | 9.000 | On | N | 9.8 | 18.1 | 64.8 |
| 0.204000 | 43.7 | 1000.0 | 9.000 | On | N | 9.9 | 19.7 | 63.4 |
| 0.231000 | 42.0 | 1000.0 | 9.000 | On | N | 9.7 | 20.4 | 62.4 |
| 0.285000 | 37.1 | 1000.0 | 9.000 | On | N | 9.7 | 23.6 | 60.7 |
| 0.420000 | 35.4 | 1000.0 | 9.000 | On | N | 9.9 | 22.0 | 57.4 |
| 0.483000 | 40.9 | 1000.0 | 9.000 | On | N | 9.9 | 15.4 | 56.3 |

## Final Result 2

| Frequency (MHz) | CAverage (dBµV) | Meas. Time (ms) | Bandwidth (kHz) | Filter | Line | Corr. (dB) | Margin (dB) | Limit (dBµV) |
|---|---|---|---|---|---|---|---|---|
| 0.361500 | 31.9 | 1000.0 | 9.000 | On | N | 9.9 | 16.8 | 48.7 |
| 0.483000 | 36.6 | 1000.0 | 9.000 | On | N | 9.9 | 9.6 | 46.3 |
| 0.541500 | 30.2 | 1000.0 | 9.000 | On | N | 9.9 | 15.8 | 46.0 |
| 15.616500 | 30.5 | 1000.0 | 9.000 | On | N | 10.0 | 19.5 | 50.0 |
| 18.244500 | 36.4 | 1000.0 | 9.000 | On | N | 10.0 | 13.6 | 50.0 |
| 19.707000 | 32.3 | 1000.0 | 9.000 | On | N | 10.0 | 17.7 | 50.0 |

# APPENDIX A – Test Equipment Used For Tests

| | Name of Equipment | Manufacturer | Model No. | Serial No. | Cal Date | Due Date |
|---|---|---|---|---|---|---|
| 1 | Signal Analyzer | Agilent | N9020A | MY48011598 | 2018-10-25 | 2019-10-25 |
| 2 | Signal Generator | Rohde & Schwarz | SMB100A | 175528 | 2018-10-24 | 2019-10-24 |
| 3 | EMI Test Receiver | Rohde & Schwarz | ESCI3 | 100032 | 2018-01-31 | 2019-01-31 |
| 4 | Bilog Antenna | Schaffner | CBL6111C | 2551 | 2018-05-10 | 2020-05-10 |
| 5 | Active Loop Antenna | SCHWARZBECK | FMZB 1513 | 1513-125 | 2018-05-02 | 2020-05-02 |
| 6 | 6dB Attenuator | R&S | DNF | 272.4110.50-2 | 2018-10-25 | 2019-10-25 |
| 7 | AMPLIFIER | SONOMA | 310 | 291721 | 2018-02-02 | 2019-02-02 |
| 8 | EMI Test Receiver | Rohde & Schwarz | ESU40 | 100336 | 2018-02-01 | 2019-02-01 |
| 9 | Preamplifier | Agilent | 8449B | 3008A02011 | 2017-11-30 | 2018-11-30 |
| 10 | Horn Antenna | ETS-Lindgren | 3116 | 00062504 | 2017-12-04 | 2019-12-04 |
| 11 | Horn Antenna | ETS-Lindgren | 3117 | 00154525 | 2017-09-14 | 2019-09-14 |
| 12 | LISN | Rohde & Schwarz | ENV216 | 101760 | 2018-01-31 | 2019-01-31 |
| 13 | Singnal Canditioning Unit | R&S | SCU-40 | 10023 | 2018-10-24 | 2019-10-24 |
| 14 | Band Reject Filter | Micro Tronics | BRM50716 | G184 | 2018-01-26 | 2019-01-26 |
| 15 | Temp&Humi Chamber | ESPEC CORP. | SH-242 | 93008423 | 2018-09-18 | 2019-09-18 |