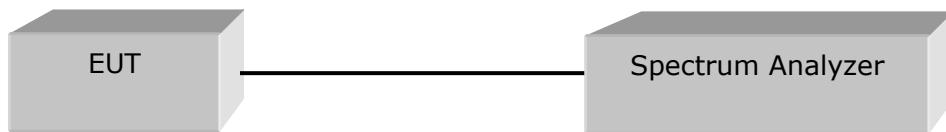


4.3 OUTPUT POWER

Test Procedures

Maximum Conducted Output Power(KDB 789033, Method SA-2)
Multiple Transmitter Output (KDB 662911 D01, D02)

The transmitter output is connected to a spectrum analyzer and the analyzer's internal channel power integration function is used to integrate the power over a bandwidth greater than or equal to the 99% bandwidth.



Test Settings :

Center frequency = the highest, middle and the lowest channels

- | | |
|--------------------------------------|-------------------------------------|
| a) RBW = 1 MHz | b) VBW \geq 3 x RBW |
| c) Sweep time = auto | d) Detector = power averaging (rms) |
| e) Trace mode = Average at least 100 | |
| f) Duty cycle factor = $10\log(1/x)$ | |

| | | |
|----------|----------------|---------|
| CDD Mode | 802.11a | 0.19 dB |
| | 802.11n_HT20 | 0.21 dB |
| | 802.11n_HT40 | 0.41 dB |
| | 802.11ac_VHT20 | 0.21 dB |
| | 802.11ac_VHT40 | 0.41 dB |
| | 802.11ac_VHT80 | 0.86 dB |
| SDM Mode | 802.11n_HT20 | 0.74 dB |
| | 802.11n_HT40 | 1.30 dB |
| | 802.11ac_VHT20 | 0.73 dB |
| | 802.11ac_VHT40 | 1.29 dB |
| | 802.11ac_VHT80 | 2.06 dB |



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Limit

| Operating Mode | Band | Mode | ANT Configuration | ANT Gain (dBi) | Limit (dBm) | |
|----------------|------------------|--------------|---------------------------|----------------|-------------|--|
| SISO | UNII 1 | 802.11a/n/ac | ANT0 | 2.00 | 30.00 | |
| | | | ANT1 | | | |
| | | | ANT2 | | | |
| | | | ANT3 | | | |
| | UNII 3 | | ANT0 | | | |
| | | | ANT1 | | | |
| | | | ANT2 | | | |
| | | | ANT3 | | | |
| MIMO (2Tx) | UNII 1 UNII 3 | 802.11a/n/ac | ANT0 + ANT1 | 5.01 | 30.00 | |
| MIMO (3Tx) | UNII 1 UNII 3 | 802.11a/n/ac | ANT0 + ANT1 + ANT2 | 6.77 | 29.23 | |
| MIMO (4Tx) | UNII 1 UNII 3 | 802.11a/n/ac | ANT0 + ANT1 + ANT2 + ANT3 | 8.02 | 27.98 | |

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Test Data**CDD Mode_ANTO**

| Test Mode | Frequency (MHz) | Measured Output Power (dBm) | Duty cycle Factor (dB) | Result Output Power (dBm) | Limit (dBm) | Margin (dB) |
|-------------------------|-----------------|-----------------------------|------------------------|---------------------------|-------------|-------------|
| 802.11a | 5 180 | 16.59 | 0.19 | 16.78 | 30.00 | 13.22 |
| | 5 200 | 17.04 | 0.19 | 17.23 | 30.00 | 12.77 |
| | 5 240 | 17.00 | 0.19 | 17.19 | 30.00 | 12.81 |
| | 5 745 | 14.00 | 0.19 | 14.19 | 30.00 | 15.81 |
| | 5 785 | 14.01 | 0.19 | 14.20 | 30.00 | 15.80 |
| | 5 825 | 13.81 | 0.19 | 14.00 | 30.00 | 16.00 |
| 802.11n _HT20 | 5 180 | 16.04 | 0.21 | 16.25 | 30.00 | 13.75 |
| | 5 200 | 16.33 | 0.21 | 16.54 | 30.00 | 13.46 |
| | 5 240 | 16.44 | 0.21 | 16.65 | 30.00 | 13.35 |
| | 5 745 | 15.25 | 0.21 | 15.46 | 30.00 | 14.54 |
| | 5 785 | 14.90 | 0.21 | 15.11 | 30.00 | 14.89 |
| | 5 825 | 14.97 | 0.21 | 15.18 | 30.00 | 14.82 |
| 802.11ac _VHT20 | 5 180 | 17.11 | 0.21 | 17.32 | 30.00 | 12.68 |
| | 5 200 | 16.96 | 0.21 | 17.17 | 30.00 | 12.83 |
| | 5 240 | 17.02 | 0.21 | 17.23 | 30.00 | 12.77 |
| | 5 745 | 15.24 | 0.21 | 15.45 | 30.00 | 14.55 |
| | 5 785 | 15.33 | 0.21 | 15.54 | 30.00 | 14.46 |
| | 5 825 | 15.06 | 0.21 | 15.27 | 30.00 | 14.73 |
| 802.11n _HT40 | 5 190 | 12.87 | 0.41 | 13.28 | 30.00 | 16.72 |
| | 5 230 | 12.94 | 0.41 | 13.35 | 30.00 | 16.65 |
| | 5 755 | 15.11 | 0.41 | 15.52 | 30.00 | 14.48 |
| | 5 795 | 15.14 | 0.41 | 15.55 | 30.00 | 14.45 |
| 802.11ac _VHT40 | 5 190 | 12.73 | 0.41 | 13.14 | 30.00 | 16.86 |
| | 5 230 | 12.63 | 0.41 | 13.04 | 30.00 | 16.96 |
| | 5 755 | 15.26 | 0.41 | 15.67 | 30.00 | 14.33 |
| | 5 795 | 14.92 | 0.41 | 15.33 | 30.00 | 14.67 |
| 802.11ac _VHT80 | 5 210 | 9.97 | 0.86 | 10.83 | 30.00 | 19.17 |
| | 5 775 | 14.50 | 0.86 | 15.36 | 30.00 | 14.64 |
| Measurement uncertainty | | ± 1.5 dB | | | | |

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CDD Mode_ANT1

| Test Mode | Frequency (MHz) | Measured Output Power (dBm) | Duty cycle Factor (dB) | Result Output Power (dBm) | Limit (dBm) | Margin (dB) |
|-------------------------|-----------------|-----------------------------|------------------------|---------------------------|-------------|-------------|
| 802.11a | 5 180 | 16.28 | 0.19 | 16.47 | 30.00 | 13.53 |
| | 5 200 | 16.47 | 0.19 | 16.66 | 30.00 | 13.34 |
| | 5 240 | 16.38 | 0.19 | 16.57 | 30.00 | 13.43 |
| | 5 745 | 13.60 | 0.19 | 13.79 | 30.00 | 16.21 |
| | 5 785 | 13.47 | 0.19 | 13.66 | 30.00 | 16.34 |
| | 5 825 | 13.22 | 0.19 | 13.41 | 30.00 | 16.59 |
| 802.11n _HT20 | 5 180 | 15.74 | 0.21 | 15.95 | 30.00 | 14.05 |
| | 5 200 | 15.64 | 0.21 | 15.85 | 30.00 | 14.15 |
| | 5 240 | 15.74 | 0.21 | 15.95 | 30.00 | 14.05 |
| | 5 745 | 15.01 | 0.21 | 15.22 | 30.00 | 14.78 |
| | 5 785 | 14.69 | 0.21 | 14.90 | 30.00 | 15.10 |
| | 5 825 | 14.29 | 0.21 | 14.50 | 30.00 | 15.50 |
| 802.11ac _VHT20 | 5 180 | 16.56 | 0.21 | 16.77 | 30.00 | 13.23 |
| | 5 200 | 16.33 | 0.21 | 16.54 | 30.00 | 13.46 |
| | 5 240 | 16.45 | 0.21 | 16.66 | 30.00 | 13.34 |
| | 5 745 | 15.01 | 0.21 | 15.22 | 30.00 | 14.78 |
| | 5 785 | 15.26 | 0.21 | 15.47 | 30.00 | 14.53 |
| | 5 825 | 14.22 | 0.21 | 14.43 | 30.00 | 15.57 |
| 802.11n _HT40 | 5 190 | 11.95 | 0.41 | 12.36 | 30.00 | 17.64 |
| | 5 230 | 12.02 | 0.41 | 12.43 | 30.00 | 17.57 |
| | 5 755 | 15.22 | 0.41 | 15.63 | 30.00 | 14.37 |
| | 5 795 | 14.62 | 0.41 | 15.03 | 30.00 | 14.97 |
| 802.11ac _VHT40 | 5 190 | 12.25 | 0.41 | 12.66 | 30.00 | 17.34 |
| | 5 230 | 12.04 | 0.41 | 12.45 | 30.00 | 17.55 |
| | 5 755 | 14.78 | 0.41 | 15.19 | 30.00 | 14.81 |
| | 5 795 | 14.82 | 0.41 | 15.23 | 30.00 | 14.77 |
| 802.11ac _VHT80 | 5 210 | 9.64 | 0.86 | 10.50 | 30.00 | 19.50 |
| | 5 775 | 14.54 | 0.86 | 15.40 | 30.00 | 14.60 |
| Measurement uncertainty | | ± 1.5 dB | | | | |

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CDD Mode_ANT2

| Test Mode | Frequency (MHz) | Measured Output Power (dBm) | Duty cycle Factor (dB) | Result Output Power (dBm) | Limit (dBm) | Margin (dB) |
|-------------------------|-----------------|-----------------------------|------------------------|---------------------------|-------------|-------------|
| 802.11a | 5 180 | 16.87 | 0.19 | 17.06 | 30.00 | 12.94 |
| | 5 200 | 17.20 | 0.19 | 17.39 | 30.00 | 12.61 |
| | 5 240 | 16.85 | 0.19 | 17.04 | 30.00 | 12.96 |
| | 5 745 | 13.75 | 0.19 | 13.94 | 30.00 | 16.06 |
| | 5 785 | 13.73 | 0.19 | 13.92 | 30.00 | 16.08 |
| | 5 825 | 13.39 | 0.19 | 13.58 | 30.00 | 16.42 |
| 802.11n _HT20 | 5 180 | 16.17 | 0.21 | 16.38 | 30.00 | 13.62 |
| | 5 200 | 16.15 | 0.21 | 16.36 | 30.00 | 13.64 |
| | 5 240 | 16.24 | 0.21 | 16.45 | 30.00 | 13.55 |
| | 5 745 | 14.74 | 0.21 | 14.95 | 30.00 | 15.05 |
| | 5 785 | 14.84 | 0.21 | 15.05 | 30.00 | 14.95 |
| | 5 825 | 14.48 | 0.21 | 14.69 | 30.00 | 15.31 |
| 802.11ac _VHT20 | 5 180 | 16.83 | 0.21 | 17.04 | 30.00 | 12.96 |
| | 5 200 | 17.05 | 0.21 | 17.26 | 30.00 | 12.74 |
| | 5 240 | 17.03 | 0.21 | 17.24 | 30.00 | 12.76 |
| | 5 745 | 14.99 | 0.21 | 15.20 | 30.00 | 14.80 |
| | 5 785 | 15.03 | 0.21 | 15.24 | 30.00 | 14.76 |
| | 5 825 | 14.51 | 0.21 | 14.72 | 30.00 | 15.28 |
| 802.11n _HT40 | 5 190 | 11.72 | 0.41 | 12.13 | 30.00 | 17.87 |
| | 5 230 | 12.10 | 0.41 | 12.51 | 30.00 | 17.49 |
| | 5 755 | 14.71 | 0.41 | 15.12 | 30.00 | 14.88 |
| | 5 795 | 15.18 | 0.41 | 15.59 | 30.00 | 14.41 |
| 802.11ac _VHT40 | 5 190 | 12.27 | 0.41 | 12.68 | 30.00 | 17.32 |
| | 5 230 | 12.32 | 0.41 | 12.73 | 30.00 | 17.27 |
| | 5 755 | 15.11 | 0.41 | 15.52 | 30.00 | 14.48 |
| | 5 795 | 15.01 | 0.41 | 15.42 | 30.00 | 14.58 |
| 802.11ac _VHT80 | 5 210 | 9.31 | 0.86 | 10.17 | 30.00 | 19.83 |
| | 5 775 | 14.02 | 0.86 | 14.88 | 30.00 | 15.12 |
| Measurement uncertainty | | ± 1.5 dB | | | | |

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CDD Mode_ANT3

| Test Mode | Frequency (MHz) | Measured Output Power (dBm) | Duty cycle Factor (dB) | Result Output Power (dBm) | Limit (dBm) | Margin (dB) |
|-------------------------|-----------------|-----------------------------|------------------------|---------------------------|-------------|-------------|
| 802.11a | 5 180 | 16.06 | 0.19 | 16.25 | 30.00 | 13.75 |
| | 5 200 | 15.92 | 0.19 | 16.11 | 30.00 | 13.89 |
| | 5 240 | 16.06 | 0.19 | 16.25 | 30.00 | 13.75 |
| | 5 745 | 13.50 | 0.19 | 13.69 | 30.00 | 16.31 |
| | 5 785 | 13.42 | 0.19 | 13.61 | 30.00 | 16.39 |
| | 5 825 | 12.80 | 0.19 | 12.99 | 30.00 | 17.01 |
| 802.11n _HT20 | 5 180 | 15.35 | 0.21 | 15.56 | 30.00 | 14.44 |
| | 5 200 | 15.37 | 0.21 | 15.58 | 30.00 | 14.42 |
| | 5 240 | 15.48 | 0.21 | 15.69 | 30.00 | 14.31 |
| | 5 745 | 14.71 | 0.21 | 14.92 | 30.00 | 15.08 |
| | 5 785 | 14.27 | 0.21 | 14.48 | 30.00 | 15.52 |
| | 5 825 | 13.80 | 0.21 | 14.01 | 30.00 | 15.99 |
| 802.11ac _VHT20 | 5 180 | 15.82 | 0.21 | 16.03 | 30.00 | 13.97 |
| | 5 200 | 16.04 | 0.21 | 16.25 | 30.00 | 13.75 |
| | 5 240 | 16.06 | 0.21 | 16.27 | 30.00 | 13.73 |
| | 5 745 | 14.59 | 0.21 | 14.80 | 30.00 | 15.20 |
| | 5 785 | 14.45 | 0.21 | 14.66 | 30.00 | 15.34 |
| | 5 825 | 14.04 | 0.21 | 14.25 | 30.00 | 15.75 |
| 802.11n _HT40 | 5 190 | 11.52 | 0.41 | 11.93 | 30.00 | 18.07 |
| | 5 230 | 11.95 | 0.41 | 12.36 | 30.00 | 17.64 |
| | 5 755 | 14.73 | 0.41 | 15.14 | 30.00 | 14.86 |
| | 5 795 | 14.43 | 0.41 | 14.84 | 30.00 | 15.16 |
| 802.11ac _VHT40 | 5 190 | 11.64 | 0.41 | 12.05 | 30.00 | 17.95 |
| | 5 230 | 11.76 | 0.41 | 12.17 | 30.00 | 17.83 |
| | 5 755 | 14.55 | 0.41 | 14.96 | 30.00 | 15.04 |
| | 5 795 | 14.47 | 0.41 | 14.88 | 30.00 | 15.12 |
| 802.11ac _VHT80 | 5 210 | 8.58 | 0.86 | 9.44 | 30.00 | 20.56 |
| | 5 775 | 13.82 | 0.86 | 14.68 | 30.00 | 15.32 |
| Measurement uncertainty | | ± 1.5 dB | | | | |

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CDD Mode_ANTO + ANT1

| Test Mode | Frequency (MHz) | Measured Output Power (dBm) | Duty cycle Factor (dB) | Result Output Power (dBm) | Limit (dBm) | Margin (dB) |
|-------------------------|-----------------|-----------------------------|------------------------|---------------------------|-------------|-------------|
| 802.11a | 5 180 | 19.45 | 0.19 | 19.64 | 30.00 | 10.36 |
| | 5 200 | 19.77 | 0.19 | 19.96 | 30.00 | 10.04 |
| | 5 240 | 19.71 | 0.19 | 19.90 | 30.00 | 10.10 |
| | 5 745 | 16.81 | 0.19 | 17.00 | 30.00 | 13.00 |
| | 5 785 | 16.76 | 0.19 | 16.95 | 30.00 | 13.05 |
| | 5 825 | 16.54 | 0.19 | 16.73 | 30.00 | 13.27 |
| 802.11n _HT20 | 5 180 | 18.90 | 0.21 | 19.11 | 30.00 | 10.89 |
| | 5 200 | 19.01 | 0.21 | 19.22 | 30.00 | 10.78 |
| | 5 240 | 19.11 | 0.21 | 19.32 | 30.00 | 10.68 |
| | 5 745 | 18.14 | 0.21 | 18.35 | 30.00 | 11.65 |
| | 5 785 | 17.81 | 0.21 | 18.02 | 30.00 | 11.98 |
| | 5 825 | 17.65 | 0.21 | 17.86 | 30.00 | 12.14 |
| 802.11ac _VHT20 | 5 180 | 19.85 | 0.21 | 20.06 | 30.00 | 9.94 |
| | 5 200 | 19.67 | 0.21 | 19.88 | 30.00 | 10.12 |
| | 5 240 | 19.75 | 0.21 | 19.96 | 30.00 | 10.04 |
| | 5 745 | 18.14 | 0.21 | 18.35 | 30.00 | 11.65 |
| | 5 785 | 18.31 | 0.21 | 18.52 | 30.00 | 11.48 |
| | 5 825 | 17.67 | 0.21 | 17.88 | 30.00 | 12.12 |
| 802.11n _HT40 | 5 190 | 15.44 | 0.41 | 15.85 | 30.00 | 14.15 |
| | 5 230 | 15.51 | 0.41 | 15.92 | 30.00 | 14.08 |
| | 5 755 | 18.18 | 0.41 | 18.59 | 30.00 | 11.41 |
| | 5 795 | 17.90 | 0.41 | 18.31 | 30.00 | 11.69 |
| 802.11ac _VHT40 | 5 190 | 15.51 | 0.41 | 15.92 | 30.00 | 14.08 |
| | 5 230 | 15.36 | 0.41 | 15.77 | 30.00 | 14.23 |
| | 5 755 | 18.04 | 0.41 | 18.45 | 30.00 | 11.55 |
| | 5 795 | 17.88 | 0.41 | 18.29 | 30.00 | 11.71 |
| 802.11ac _VHT80 | 5 210 | 12.82 | 0.86 | 13.68 | 30.00 | 16.32 |
| | 5 775 | 17.53 | 0.86 | 18.39 | 30.00 | 11.61 |
| Measurement uncertainty | | ± 1.5 dB | | | | |

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CDD Mode_ANTO + ANT1 + ANT2

| Test Mode | Frequency (MHz) | Measured Output Power (dBm) | Duty cycle Factor (dB) | Result Output Power (dBm) | Limit (dBm) | Margin (dB) |
|-------------------------|-----------------|-----------------------------|------------------------|---------------------------|-------------|-------------|
| 802.11a | 5 180 | 21.36 | 0.19 | 21.55 | 29.23 | 7.68 |
| | 5 200 | 21.69 | 0.19 | 21.88 | 29.23 | 7.35 |
| | 5 240 | 21.52 | 0.19 | 21.71 | 29.23 | 7.52 |
| | 5 745 | 18.56 | 0.19 | 18.75 | 29.23 | 10.48 |
| | 5 785 | 18.51 | 0.19 | 18.70 | 29.23 | 10.53 |
| | 5 825 | 18.25 | 0.19 | 18.44 | 29.23 | 10.79 |
| 802.11n _HT20 | 5 180 | 20.76 | 0.21 | 20.97 | 29.23 | 8.26 |
| | 5 200 | 20.82 | 0.21 | 21.03 | 29.23 | 8.20 |
| | 5 240 | 20.92 | 0.21 | 21.13 | 29.23 | 8.10 |
| | 5 745 | 19.78 | 0.21 | 19.99 | 29.23 | 9.24 |
| | 5 785 | 19.58 | 0.21 | 19.79 | 29.23 | 9.44 |
| | 5 825 | 19.36 | 0.21 | 19.57 | 29.23 | 9.66 |
| 802.11ac _VHT20 | 5 180 | 21.61 | 0.21 | 21.82 | 29.23 | 7.41 |
| | 5 200 | 21.56 | 0.21 | 21.77 | 29.23 | 7.46 |
| | 5 240 | 21.61 | 0.21 | 21.82 | 29.23 | 7.41 |
| | 5 745 | 19.85 | 0.21 | 20.06 | 29.23 | 9.17 |
| | 5 785 | 19.98 | 0.21 | 20.19 | 29.23 | 9.04 |
| | 5 825 | 19.38 | 0.21 | 19.59 | 29.23 | 9.64 |
| 802.11n _HT40 | 5 190 | 16.98 | 0.41 | 17.39 | 29.23 | 11.84 |
| | 5 230 | 17.14 | 0.41 | 17.55 | 29.23 | 11.68 |
| | 5 755 | 19.79 | 0.41 | 20.20 | 29.23 | 9.03 |
| | 5 795 | 19.76 | 0.41 | 20.17 | 29.23 | 9.06 |
| 802.11ac _VHT40 | 5 190 | 17.19 | 0.41 | 17.60 | 29.23 | 11.63 |
| | 5 230 | 17.11 | 0.41 | 17.52 | 29.23 | 11.71 |
| | 5 755 | 19.83 | 0.41 | 20.24 | 29.23 | 8.99 |
| | 5 795 | 19.69 | 0.41 | 20.10 | 29.23 | 9.13 |
| 802.11ac _VHT80 | 5 210 | 14.42 | 0.86 | 15.28 | 29.23 | 13.95 |
| | 5 775 | 19.13 | 0.86 | 19.99 | 29.23 | 9.24 |
| Measurement uncertainty | | ± 1.5 dB | | | | |

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CDD Mode_ANTO + ANT1 + ANT2 + ANT3

| Test Mode | Frequency (MHz) | Measured Output Power (dBm) | Duty cycle Factor (dB) | Result Output Power (dBm) | Limit (dBm) | Margin (dB) |
|-------------------------|-----------------|-----------------------------|------------------------|---------------------------|-------------|-------------|
| 802.11a | 5 180 | 22.48 | 0.19 | 22.67 | 27.98 | 5.31 |
| | 5 200 | 22.71 | 0.19 | 22.90 | 27.98 | 5.08 |
| | 5 240 | 22.61 | 0.19 | 22.80 | 27.98 | 5.18 |
| | 5 745 | 19.74 | 0.19 | 19.93 | 27.98 | 8.05 |
| | 5 785 | 19.68 | 0.19 | 19.87 | 27.98 | 8.11 |
| | 5 825 | 19.34 | 0.19 | 19.53 | 27.98 | 8.45 |
| 802.11n _HT20 | 5 180 | 21.86 | 0.21 | 22.07 | 27.98 | 5.91 |
| | 5 200 | 21.91 | 0.21 | 22.12 | 27.98 | 5.86 |
| | 5 240 | 22.01 | 0.21 | 22.22 | 27.98 | 5.76 |
| | 5 745 | 20.95 | 0.21 | 21.16 | 27.98 | 6.82 |
| | 5 785 | 20.70 | 0.21 | 20.91 | 27.98 | 7.07 |
| | 5 825 | 20.43 | 0.21 | 20.64 | 27.98 | 7.34 |
| 802.11ac _VHT20 | 5 180 | 22.63 | 0.21 | 22.84 | 27.98 | 5.14 |
| | 5 200 | 22.64 | 0.21 | 22.85 | 27.98 | 5.13 |
| | 5 240 | 22.68 | 0.21 | 22.89 | 27.98 | 5.09 |
| | 5 745 | 20.98 | 0.21 | 21.19 | 27.98 | 6.79 |
| | 5 785 | 21.05 | 0.21 | 21.26 | 27.98 | 6.72 |
| | 5 825 | 20.50 | 0.21 | 20.71 | 27.98 | 7.27 |
| 802.11n _HT40 | 5 190 | 18.07 | 0.41 | 18.48 | 27.98 | 9.50 |
| | 5 230 | 18.29 | 0.41 | 18.70 | 27.98 | 9.28 |
| | 5 755 | 20.97 | 0.41 | 21.38 | 27.98 | 6.60 |
| | 5 795 | 20.88 | 0.41 | 21.29 | 27.98 | 6.69 |
| 802.11ac _VHT40 | 5 190 | 18.26 | 0.41 | 18.67 | 27.98 | 9.31 |
| | 5 230 | 18.22 | 0.41 | 18.63 | 27.98 | 9.35 |
| | 5 755 | 20.95 | 0.41 | 21.36 | 27.98 | 6.62 |
| | 5 795 | 20.83 | 0.41 | 21.24 | 27.98 | 6.74 |
| 802.11ac _VHT80 | 5 210 | 15.43 | 0.86 | 16.29 | 27.98 | 11.69 |
| | 5 775 | 20.25 | 0.86 | 21.11 | 27.98 | 6.87 |
| Measurement uncertainty | | ± 1.5 dB | | | | |

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|---|---|--|

SDM Mode_ANTO

| Test Mode | Frequency (MHz) | Measured Output Power (dBm) | Duty cycle Factor (dB) | Result Output Power (dBm) | Limit (dBm) | Margin (dB) |
|-------------------------|-----------------|-----------------------------|------------------------|---------------------------|-------------|-------------|
| 802.11n _HT20 | 5 180 | 15.39 | 0.74 | 16.13 | 30.00 | 13.87 |
| | 5 200 | 15.60 | 0.74 | 16.34 | 30.00 | 13.66 |
| | 5 240 | 15.72 | 0.74 | 16.46 | 30.00 | 13.54 |
| | 5 745 | 14.39 | 0.74 | 15.13 | 30.00 | 14.87 |
| | 5 785 | 14.39 | 0.74 | 15.13 | 30.00 | 14.87 |
| | 5 825 | 13.75 | 0.74 | 14.49 | 30.00 | 15.51 |
| 802.11ac _VHT20 | 5 180 | 15.88 | 0.73 | 16.61 | 30.00 | 13.39 |
| | 5 200 | 16.30 | 0.73 | 17.03 | 30.00 | 12.97 |
| | 5 240 | 16.30 | 0.73 | 17.03 | 30.00 | 12.97 |
| | 5 745 | 14.56 | 0.73 | 15.29 | 30.00 | 14.71 |
| | 5 785 | 14.35 | 0.73 | 15.08 | 30.00 | 14.92 |
| | 5 825 | 14.02 | 0.73 | 14.75 | 30.00 | 15.25 |
| 802.11n _HT40 | 5 190 | 11.34 | 1.30 | 12.64 | 30.00 | 17.36 |
| | 5 230 | 11.67 | 1.30 | 12.97 | 30.00 | 17.03 |
| | 5 755 | 14.61 | 1.30 | 15.91 | 30.00 | 14.09 |
| | 5 795 | 14.57 | 1.30 | 15.87 | 30.00 | 14.13 |
| 802.11ac _VHT40 | 5 190 | 11.45 | 1.29 | 12.74 | 30.00 | 17.26 |
| | 5 230 | 11.94 | 1.29 | 13.23 | 30.00 | 16.77 |
| | 5 755 | 14.45 | 1.29 | 15.74 | 30.00 | 14.26 |
| | 5 795 | 14.57 | 1.29 | 15.86 | 30.00 | 14.14 |
| 802.11ac _VHT80 | 5 210 | 8.56 | 2.06 | 10.62 | 30.00 | 19.38 |
| | 5 775 | 13.38 | 2.06 | 15.44 | 30.00 | 14.56 |
| Measurement uncertainty | | ± 1.5 dB | | | | |

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|---|---|--|--|

SDM Mode_ANT1

| Test Mode | Frequency (MHz) | Measured Output Power (dBm) | Duty cycle Factor (dB) | Result Output Power (dBm) | Limit (dBm) | Margin (dB) |
|-------------------------|-----------------|-----------------------------|------------------------|---------------------------|-------------|-------------|
| 802.11n _HT20 | 5 180 | 15.18 | 0.74 | 15.92 | 30.00 | 14.08 |
| | 5 200 | 14.84 | 0.74 | 15.58 | 30.00 | 14.42 |
| | 5 240 | 15.14 | 0.74 | 15.88 | 30.00 | 14.12 |
| | 5 745 | 14.23 | 0.74 | 14.97 | 30.00 | 15.03 |
| | 5 785 | 14.43 | 0.74 | 15.17 | 30.00 | 14.83 |
| | 5 825 | 13.69 | 0.74 | 14.43 | 30.00 | 15.57 |
| 802.11ac _VHT20 | 5 180 | 15.77 | 0.73 | 16.50 | 30.00 | 13.50 |
| | 5 200 | 15.53 | 0.73 | 16.26 | 30.00 | 13.74 |
| | 5 240 | 15.81 | 0.73 | 16.54 | 30.00 | 13.46 |
| | 5 745 | 14.32 | 0.73 | 15.05 | 30.00 | 14.95 |
| | 5 785 | 14.36 | 0.73 | 15.09 | 30.00 | 14.91 |
| | 5 825 | 13.86 | 0.73 | 14.59 | 30.00 | 15.41 |
| 802.11n _HT40 | 5 190 | 11.28 | 1.30 | 12.58 | 30.00 | 17.42 |
| | 5 230 | 11.20 | 1.30 | 12.50 | 30.00 | 17.50 |
| | 5 755 | 14.15 | 1.30 | 15.45 | 30.00 | 14.55 |
| | 5 795 | 13.98 | 1.30 | 15.28 | 30.00 | 14.72 |
| 802.11ac _VHT40 | 5 190 | 11.13 | 1.29 | 12.42 | 30.00 | 17.58 |
| | 5 230 | 11.13 | 1.29 | 12.42 | 30.00 | 17.58 |
| | 5 755 | 14.28 | 1.29 | 15.57 | 30.00 | 14.43 |
| | 5 795 | 13.99 | 1.29 | 15.28 | 30.00 | 14.72 |
| 802.11ac _VHT80 | 5 210 | 8.05 | 2.06 | 10.11 | 30.00 | 19.89 |
| | 5 775 | 13.03 | 2.06 | 15.09 | 30.00 | 14.91 |
| Measurement uncertainty | | ± 1.5 dB | | | | |

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|---|---|--|--|

SDM Mode_ANT2

| Test Mode | Frequency (MHz) | Measured Output Power (dBm) | Duty cycle Factor (dB) | Result Output Power (dBm) | Limit (dBm) | Margin (dB) |
|-------------------------|-----------------|-----------------------------|------------------------|---------------------------|-------------|-------------|
| 802.11n _HT20 | 5 180 | 15.33 | 0.74 | 16.07 | 30.00 | 13.93 |
| | 5 200 | 15.28 | 0.74 | 16.02 | 30.00 | 13.98 |
| | 5 240 | 15.51 | 0.74 | 16.25 | 30.00 | 13.75 |
| | 5 745 | 14.46 | 0.74 | 15.20 | 30.00 | 14.80 |
| | 5 785 | 14.23 | 0.74 | 14.97 | 30.00 | 15.03 |
| | 5 825 | 14.21 | 0.74 | 14.95 | 30.00 | 15.05 |
| 802.11ac _VHT20 | 5 180 | 15.76 | 0.73 | 16.49 | 30.00 | 13.51 |
| | 5 200 | 16.06 | 0.73 | 16.79 | 30.00 | 13.21 |
| | 5 240 | 16.15 | 0.73 | 16.88 | 30.00 | 13.12 |
| | 5 745 | 14.52 | 0.73 | 15.25 | 30.00 | 14.75 |
| | 5 785 | 14.49 | 0.73 | 15.22 | 30.00 | 14.78 |
| | 5 825 | 14.39 | 0.73 | 15.12 | 30.00 | 14.88 |
| 802.11n _HT40 | 5 190 | 11.47 | 1.30 | 12.77 | 30.00 | 17.23 |
| | 5 230 | 11.58 | 1.30 | 12.88 | 30.00 | 17.12 |
| | 5 755 | 13.61 | 1.30 | 14.91 | 30.00 | 15.09 |
| | 5 795 | 13.83 | 1.30 | 15.13 | 30.00 | 14.87 |
| 802.11ac _VHT40 | 5 190 | 11.40 | 1.29 | 12.69 | 30.00 | 17.31 |
| | 5 230 | 11.53 | 1.29 | 12.82 | 30.00 | 17.18 |
| | 5 755 | 13.79 | 1.29 | 15.08 | 30.00 | 14.92 |
| | 5 795 | 13.78 | 1.29 | 15.07 | 30.00 | 14.93 |
| 802.11ac _VHT80 | 5 210 | 8.29 | 2.06 | 10.35 | 30.00 | 19.65 |
| | 5 775 | 12.64 | 2.06 | 14.70 | 30.00 | 15.30 |
| Measurement uncertainty | | ± 1.5 dB | | | | |

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SDM Mode_ANT3

| Test Mode | Frequency (MHz) | Measured Output Power (dBm) | Duty cycle Factor (dB) | Result Output Power (dBm) | Limit (dBm) | Margin (dB) |
|-------------------------|-----------------|-----------------------------|------------------------|---------------------------|-------------|-------------|
| 802.11n _HT20 | 5 180 | 14.85 | 0.74 | 15.59 | 30.00 | 14.41 |
| | 5 200 | 14.95 | 0.74 | 15.69 | 30.00 | 14.31 |
| | 5 240 | 14.75 | 0.74 | 15.49 | 30.00 | 14.51 |
| | 5 745 | 13.93 | 0.74 | 14.67 | 30.00 | 15.33 |
| | 5 785 | 13.76 | 0.74 | 14.50 | 30.00 | 15.50 |
| | 5 825 | 13.45 | 0.74 | 14.19 | 30.00 | 15.81 |
| 802.11ac _VHT20 | 5 180 | 15.25 | 0.73 | 15.98 | 30.00 | 14.02 |
| | 5 200 | 15.29 | 0.73 | 16.02 | 30.00 | 13.98 |
| | 5 240 | 15.25 | 0.73 | 15.98 | 30.00 | 14.02 |
| | 5 745 | 13.91 | 0.73 | 14.64 | 30.00 | 15.36 |
| | 5 785 | 13.91 | 0.73 | 14.64 | 30.00 | 15.36 |
| | 5 825 | 13.75 | 0.73 | 14.48 | 30.00 | 15.52 |
| 802.11n _HT40 | 5 190 | 10.82 | 1.30 | 12.12 | 30.00 | 17.88 |
| | 5 230 | 11.10 | 1.30 | 12.40 | 30.00 | 17.60 |
| | 5 755 | 13.97 | 1.30 | 15.27 | 30.00 | 14.73 |
| | 5 795 | 13.55 | 1.30 | 14.85 | 30.00 | 15.15 |
| 802.11ac _VHT40 | 5 190 | 10.74 | 1.29 | 12.03 | 30.00 | 17.97 |
| | 5 230 | 11.21 | 1.29 | 12.50 | 30.00 | 17.50 |
| | 5 755 | 13.91 | 1.29 | 15.20 | 30.00 | 14.80 |
| | 5 795 | 13.72 | 1.29 | 15.01 | 30.00 | 14.99 |
| 802.11ac _VHT80 | 5 210 | 7.36 | 2.06 | 9.42 | 30.00 | 20.58 |
| | 5 775 | 12.57 | 2.06 | 14.63 | 30.00 | 15.37 |
| Measurement uncertainty | | ± 1.5 dB | | | | |

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|---|---|--|

SDM Mode_ANTO + ANT1

| Test Mode | Frequency (MHz) | Measured Output Power (dBm) | Duty cycle Factor (dB) | Result Output Power (dBm) | Limit (dBm) | Margin (dB) |
|-------------------------|-----------------|-----------------------------|------------------------|---------------------------|-------------|-------------|
| 802.11n _HT20 | 5 180 | 18.30 | 0.74 | 19.04 | 30.00 | 10.96 |
| | 5 200 | 18.25 | 0.74 | 18.99 | 30.00 | 11.01 |
| | 5 240 | 18.45 | 0.74 | 19.19 | 30.00 | 10.81 |
| | 5 745 | 17.32 | 0.74 | 18.06 | 30.00 | 11.94 |
| | 5 785 | 17.42 | 0.74 | 18.16 | 30.00 | 11.84 |
| | 5 825 | 16.73 | 0.74 | 17.47 | 30.00 | 12.53 |
| 802.11ac _VHT20 | 5 180 | 18.84 | 0.73 | 19.57 | 30.00 | 10.43 |
| | 5 200 | 18.94 | 0.73 | 19.67 | 30.00 | 10.33 |
| | 5 240 | 19.07 | 0.73 | 19.80 | 30.00 | 10.20 |
| | 5 745 | 17.45 | 0.73 | 18.18 | 30.00 | 11.82 |
| | 5 785 | 17.37 | 0.73 | 18.10 | 30.00 | 11.90 |
| | 5 825 | 16.95 | 0.73 | 17.68 | 30.00 | 12.32 |
| 802.11n _HT40 | 5 190 | 14.32 | 1.30 | 15.62 | 30.00 | 14.38 |
| | 5 230 | 14.45 | 1.30 | 15.75 | 30.00 | 14.25 |
| | 5 755 | 17.40 | 1.30 | 18.70 | 30.00 | 11.30 |
| | 5 795 | 17.30 | 1.30 | 18.60 | 30.00 | 11.40 |
| 802.11ac _VHT40 | 5 190 | 14.30 | 1.29 | 15.59 | 30.00 | 14.41 |
| | 5 230 | 14.56 | 1.29 | 15.85 | 30.00 | 14.15 |
| | 5 755 | 17.38 | 1.29 | 18.67 | 30.00 | 11.33 |
| | 5 795 | 17.30 | 1.29 | 18.59 | 30.00 | 11.41 |
| 802.11ac _VHT80 | 5 210 | 11.32 | 2.06 | 13.38 | 30.00 | 16.62 |
| | 5 775 | 16.22 | 2.06 | 18.28 | 30.00 | 11.72 |
| Measurement uncertainty | | ± 1.5 dB | | | | |

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SDM Mode_ANTO + ANT1 + ANT2

| Test Mode | Frequency (MHz) | Measured Output Power (dBm) | Duty cycle Factor (dB) | Result Output Power (dBm) | Limit (dBm) | Margin (dB) |
|-------------------------|-----------------|-----------------------------|------------------------|---------------------------|-------------|-------------|
| 802.11n _HT20 | 5 180 | 20.07 | 0.74 | 20.81 | 29.23 | 8.42 |
| | 5 200 | 20.02 | 0.74 | 20.76 | 29.23 | 8.47 |
| | 5 240 | 20.23 | 0.74 | 20.97 | 29.23 | 8.26 |
| | 5 745 | 19.13 | 0.74 | 19.87 | 29.23 | 9.36 |
| | 5 785 | 19.12 | 0.74 | 19.86 | 29.23 | 9.37 |
| | 5 825 | 18.66 | 0.74 | 19.40 | 29.23 | 9.83 |
| 802.11ac _VHT20 | 5 180 | 20.57 | 0.73 | 21.30 | 29.23 | 7.93 |
| | 5 200 | 20.75 | 0.73 | 21.48 | 29.23 | 7.75 |
| | 5 240 | 20.86 | 0.73 | 21.59 | 29.23 | 7.64 |
| | 5 745 | 19.24 | 0.73 | 19.97 | 29.23 | 9.26 |
| | 5 785 | 19.17 | 0.73 | 19.90 | 29.23 | 9.33 |
| | 5 825 | 18.87 | 0.73 | 19.60 | 29.23 | 9.63 |
| 802.11n _HT40 | 5 190 | 16.14 | 1.30 | 17.44 | 29.23 | 11.79 |
| | 5 230 | 16.26 | 1.30 | 17.56 | 29.23 | 11.67 |
| | 5 755 | 18.91 | 1.30 | 20.21 | 29.23 | 9.02 |
| | 5 795 | 18.91 | 1.30 | 20.21 | 29.23 | 9.02 |
| 802.11ac _VHT40 | 5 190 | 16.10 | 1.29 | 17.39 | 29.23 | 11.84 |
| | 5 230 | 16.32 | 1.29 | 17.61 | 29.23 | 11.62 |
| | 5 755 | 18.95 | 1.29 | 20.24 | 29.23 | 8.99 |
| | 5 795 | 18.90 | 1.29 | 20.19 | 29.23 | 9.04 |
| 802.11ac _VHT80 | 5 210 | 13.08 | 2.06 | 15.14 | 29.23 | 14.09 |
| | 5 775 | 17.80 | 2.06 | 19.86 | 29.23 | 9.37 |
| Measurement uncertainty | | ± 1.5 dB | | | | |

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SDM Mode_ANTO + ANT1 + ANT2 + ANT3

| Test Mode | Frequency (MHz) | Measured Output Power (dBm) | Duty cycle Factor (dB) | Result Output Power (dBm) | Limit (dBm) | Margin (dB) |
|-------------------------|-----------------|-----------------------------|------------------------|---------------------------|-------------|-------------|
| 802.11n _HT20 | 5 180 | 21.21 | 0.74 | 21.95 | 27.98 | 6.03 |
| | 5 200 | 21.20 | 0.74 | 21.94 | 27.98 | 6.04 |
| | 5 240 | 21.32 | 0.74 | 22.06 | 27.98 | 5.92 |
| | 5 745 | 20.28 | 0.74 | 21.02 | 27.98 | 6.96 |
| | 5 785 | 20.23 | 0.74 | 20.97 | 27.98 | 7.01 |
| | 5 825 | 19.80 | 0.74 | 20.54 | 27.98 | 7.44 |
| 802.11ac _VHT20 | 5 180 | 21.69 | 0.73 | 22.42 | 27.98 | 5.56 |
| | 5 200 | 21.83 | 0.73 | 22.56 | 27.98 | 5.42 |
| | 5 240 | 21.92 | 0.73 | 22.65 | 27.98 | 5.33 |
| | 5 745 | 20.36 | 0.73 | 21.09 | 27.98 | 6.89 |
| | 5 785 | 20.30 | 0.73 | 21.03 | 27.98 | 6.95 |
| | 5 825 | 20.03 | 0.73 | 20.76 | 27.98 | 7.22 |
| 802.11n _HT40 | 5 190 | 17.25 | 1.30 | 18.55 | 27.98 | 9.43 |
| | 5 230 | 17.41 | 1.30 | 18.71 | 27.98 | 9.27 |
| | 5 755 | 20.12 | 1.30 | 21.42 | 27.98 | 6.56 |
| | 5 795 | 20.02 | 1.30 | 21.32 | 27.98 | 6.66 |
| 802.11ac _VHT40 | 5 190 | 17.21 | 1.29 | 18.50 | 27.98 | 9.48 |
| | 5 230 | 17.48 | 1.29 | 18.77 | 27.98 | 9.21 |
| | 5 755 | 20.14 | 1.29 | 21.43 | 27.98 | 6.55 |
| | 5 795 | 20.05 | 1.29 | 21.34 | 27.98 | 6.64 |
| 802.11ac _VHT80 | 5 210 | 14.11 | 2.06 | 16.17 | 27.98 | 11.81 |
| | 5 775 | 18.94 | 2.06 | 21.00 | 27.98 | 6.98 |
| Measurement uncertainty | | ± 1.5 dB | | | | |

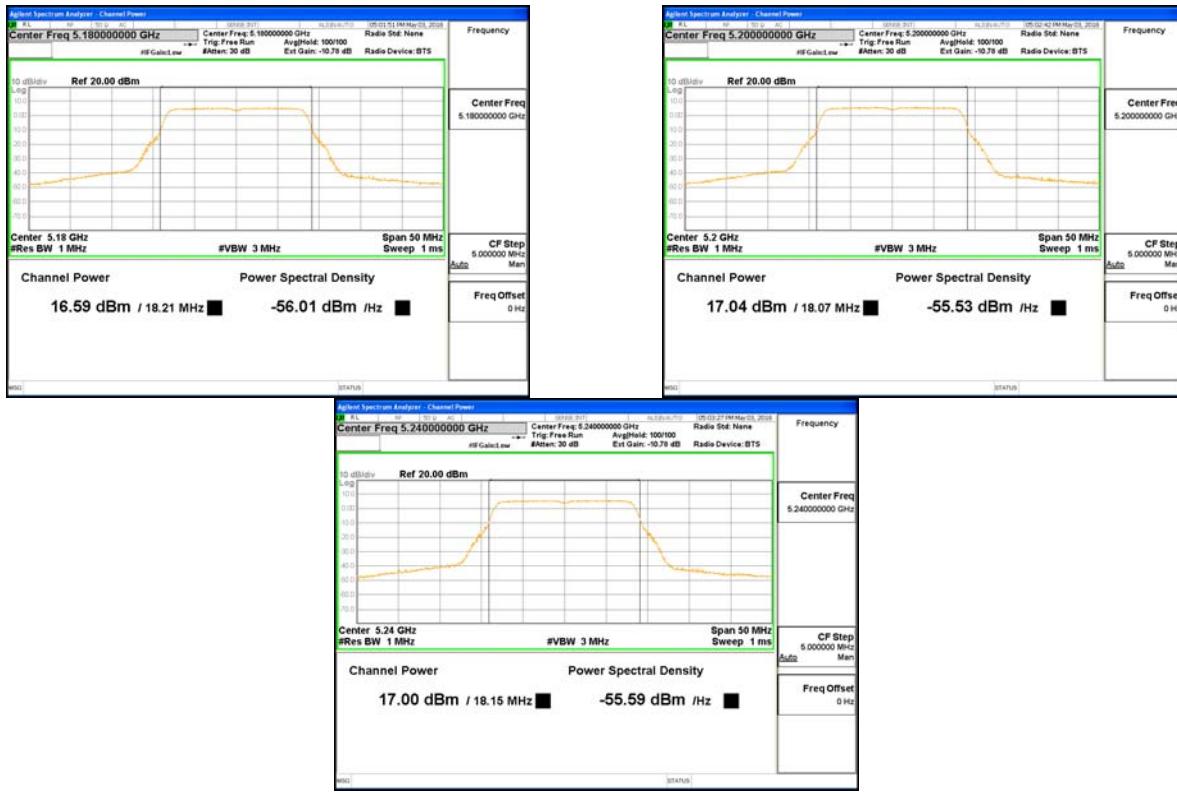
See next pages for actual measured spectrum plots.



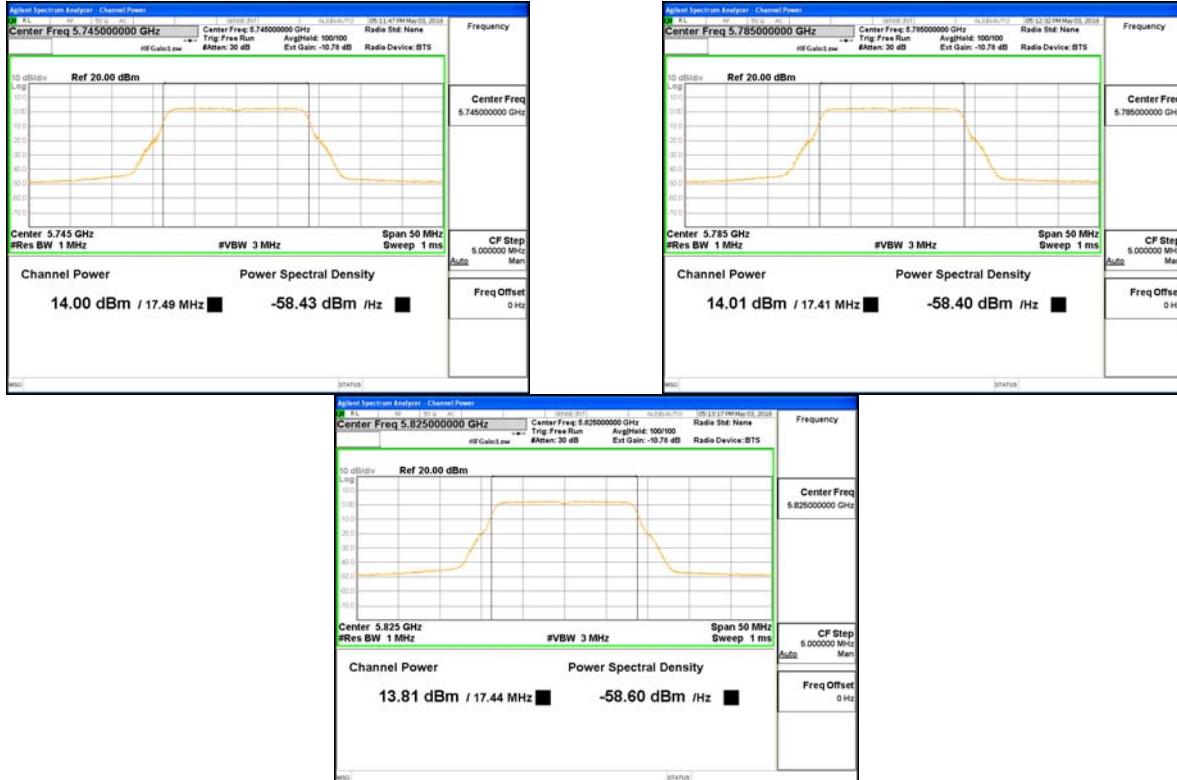
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CDD Mode_ANTO_802.11a_UNII-1



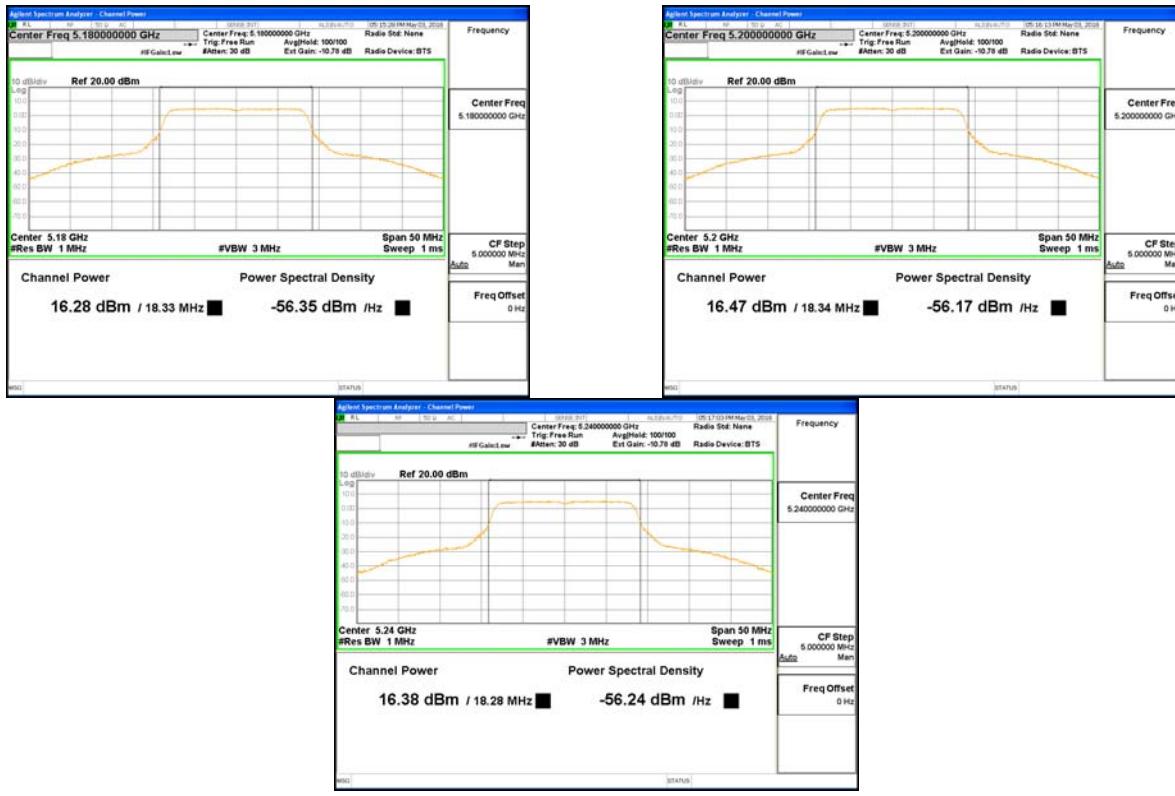
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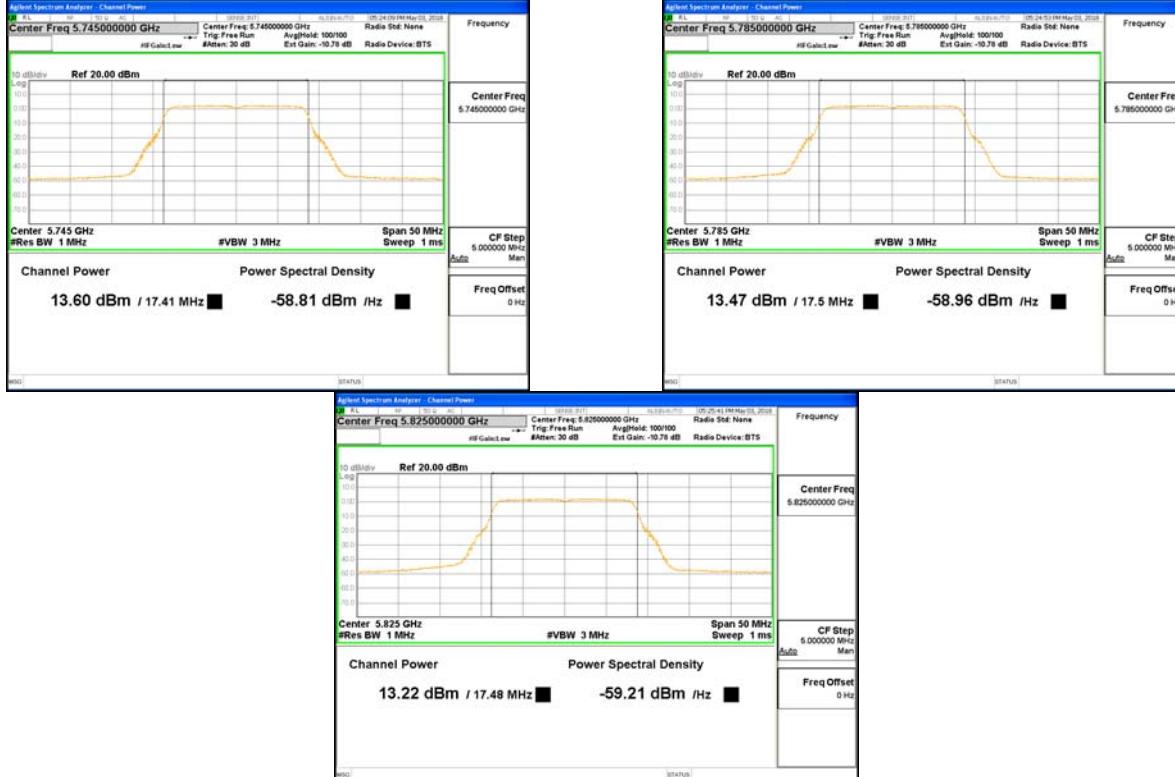
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CDD Mode_ANT1_802.11a_UNII-1



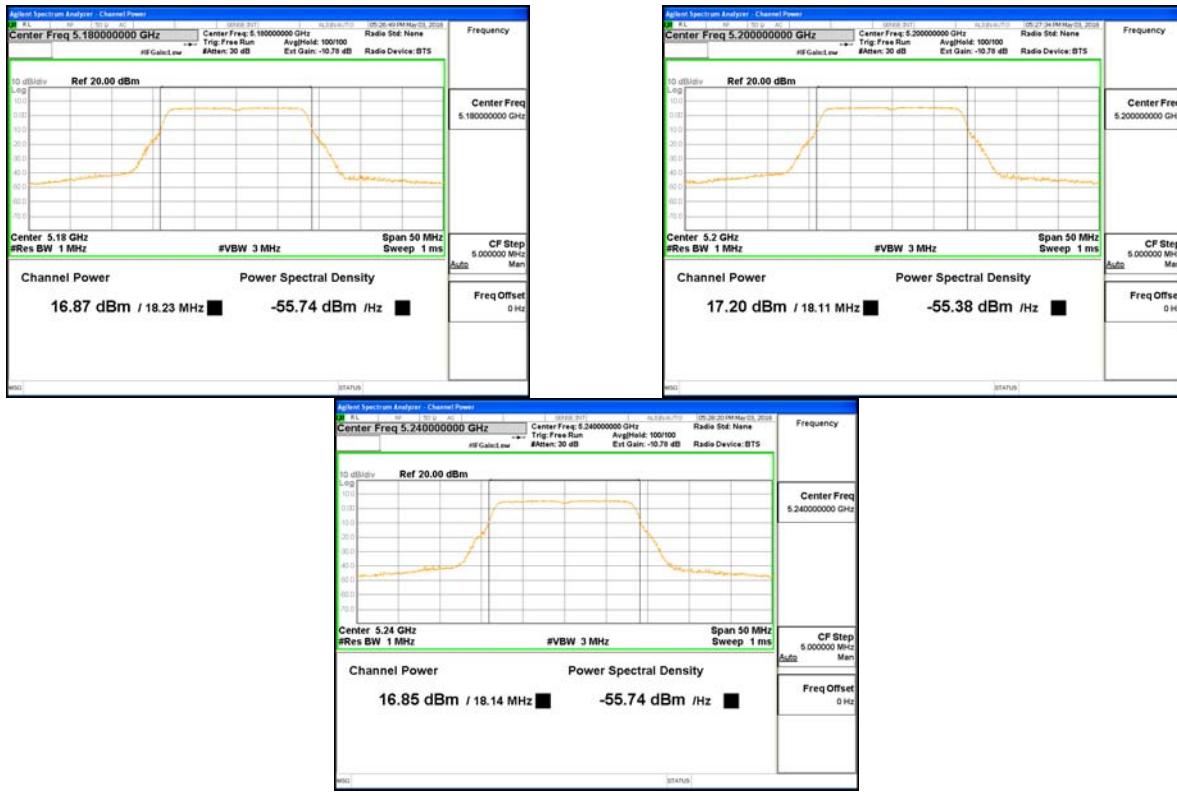
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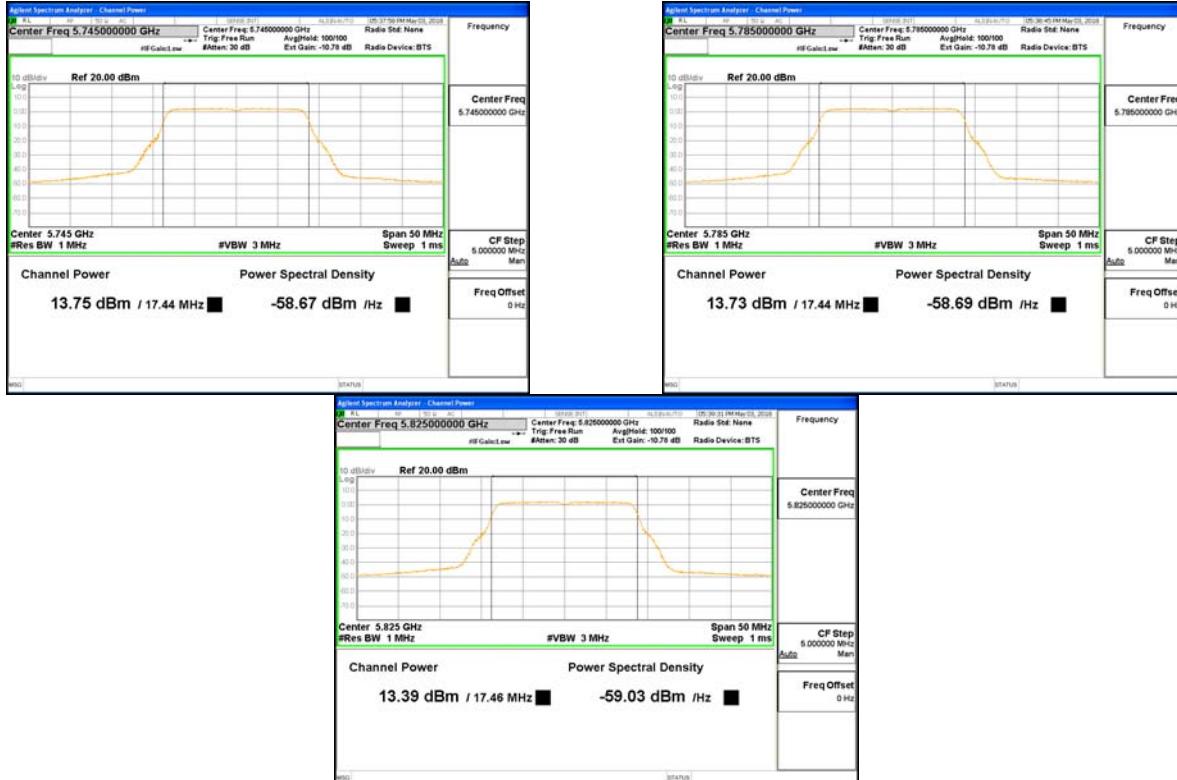
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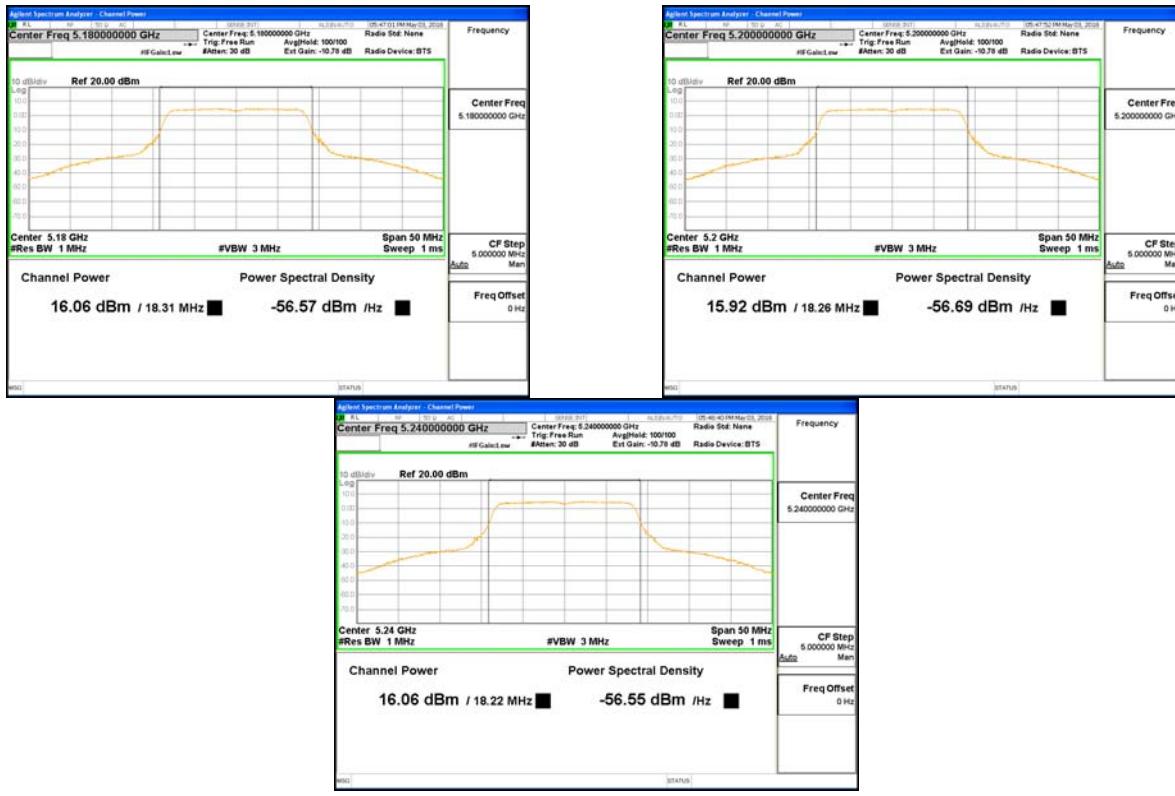
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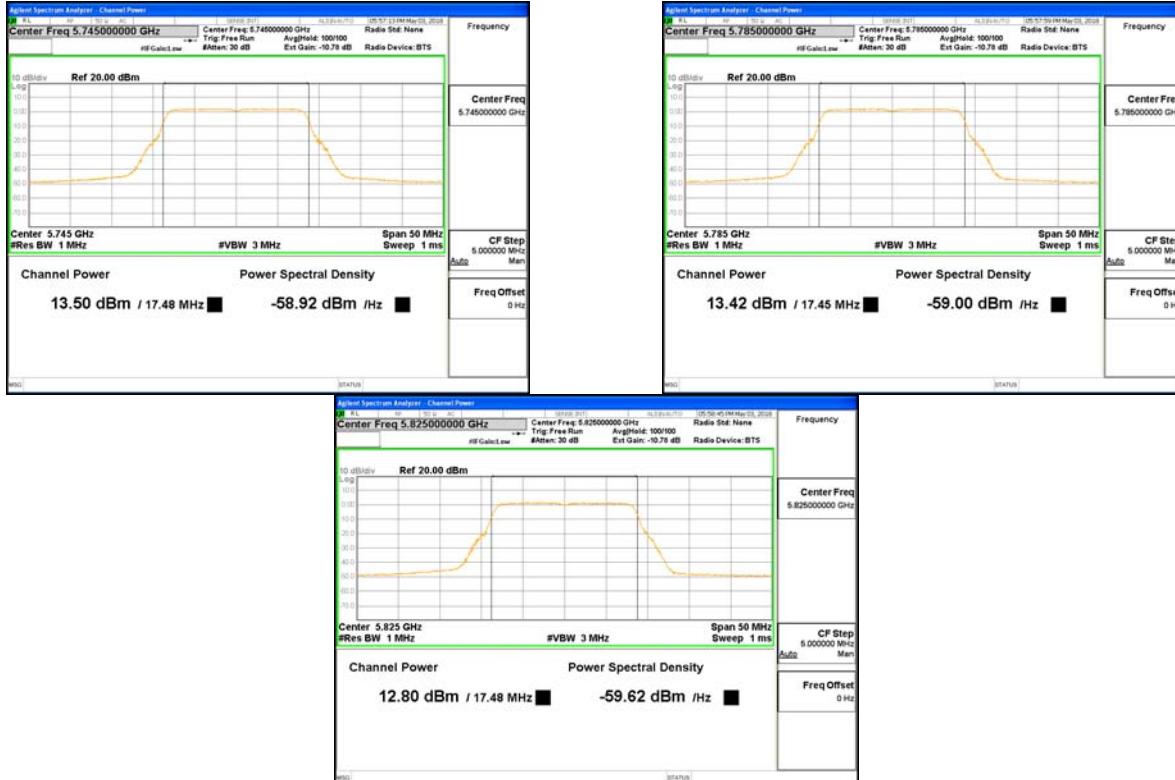
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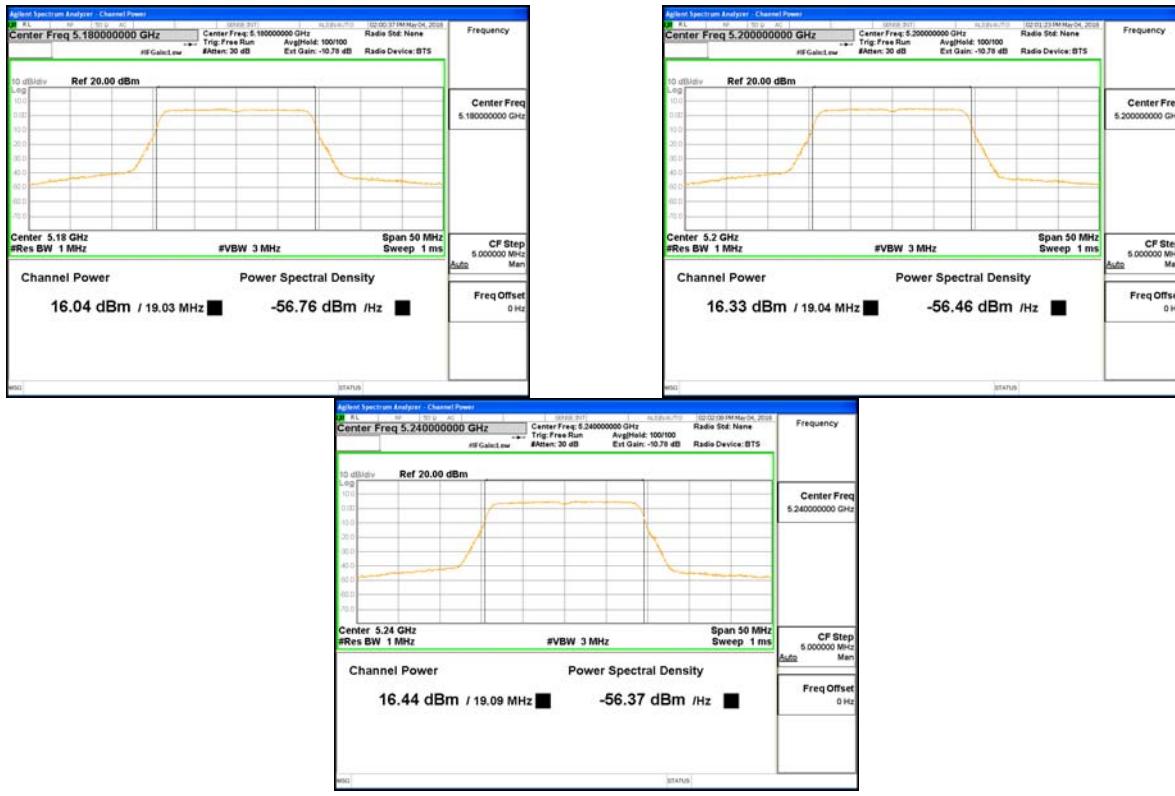
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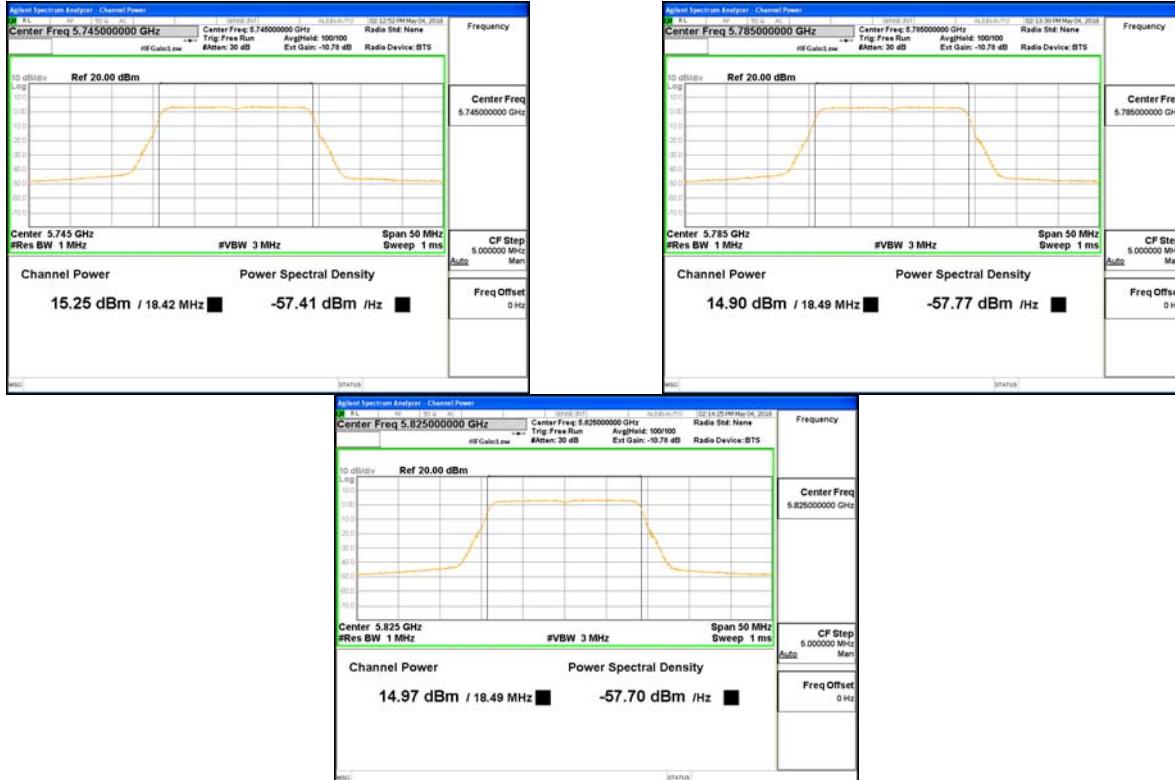
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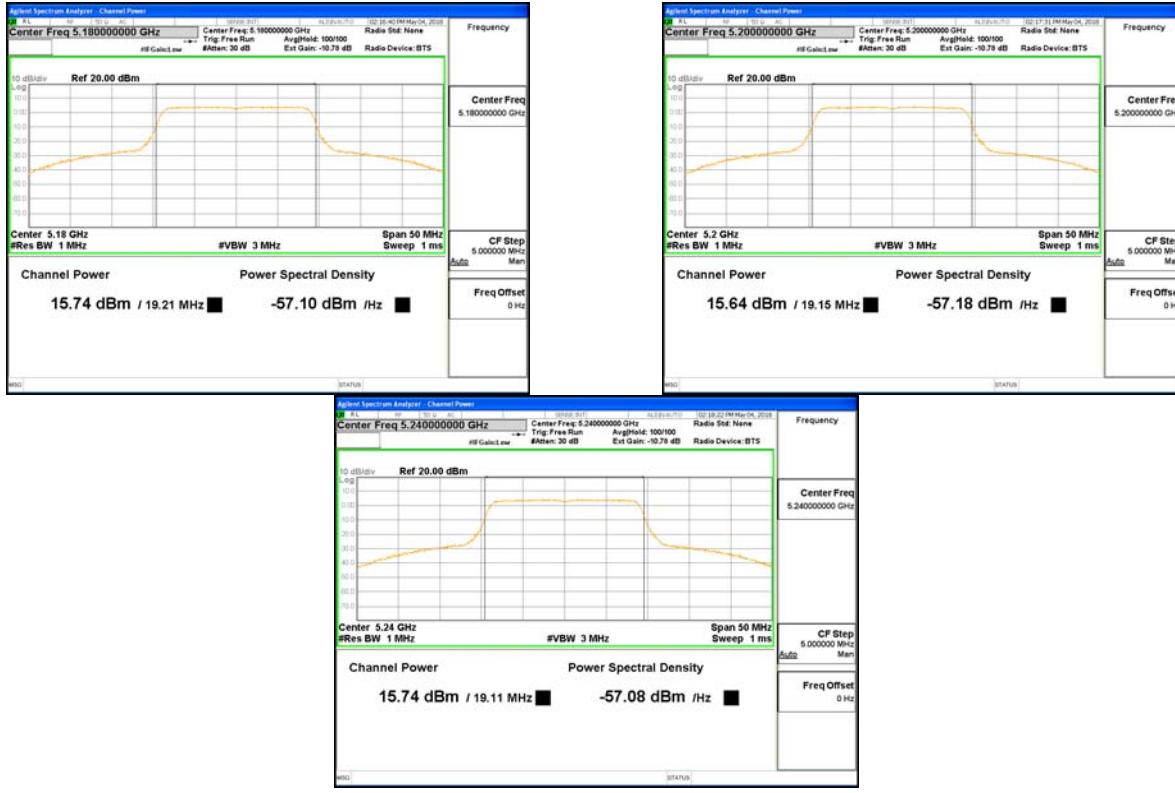
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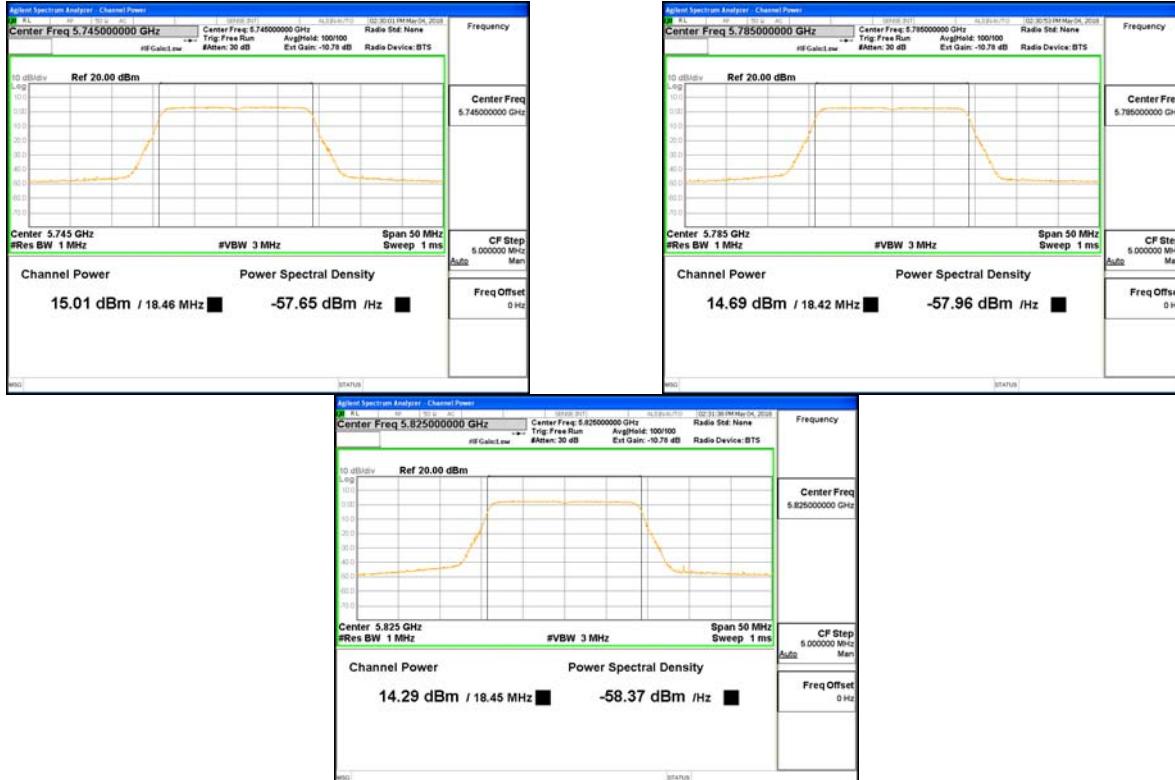
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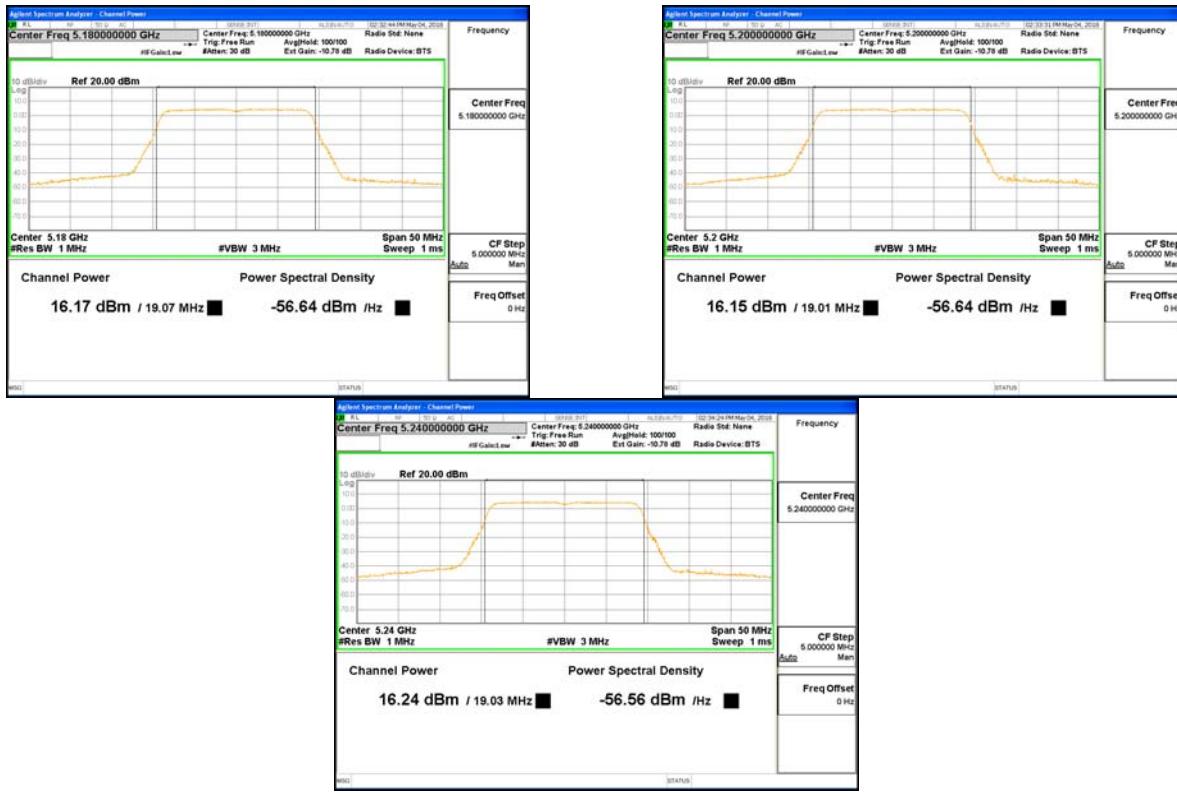
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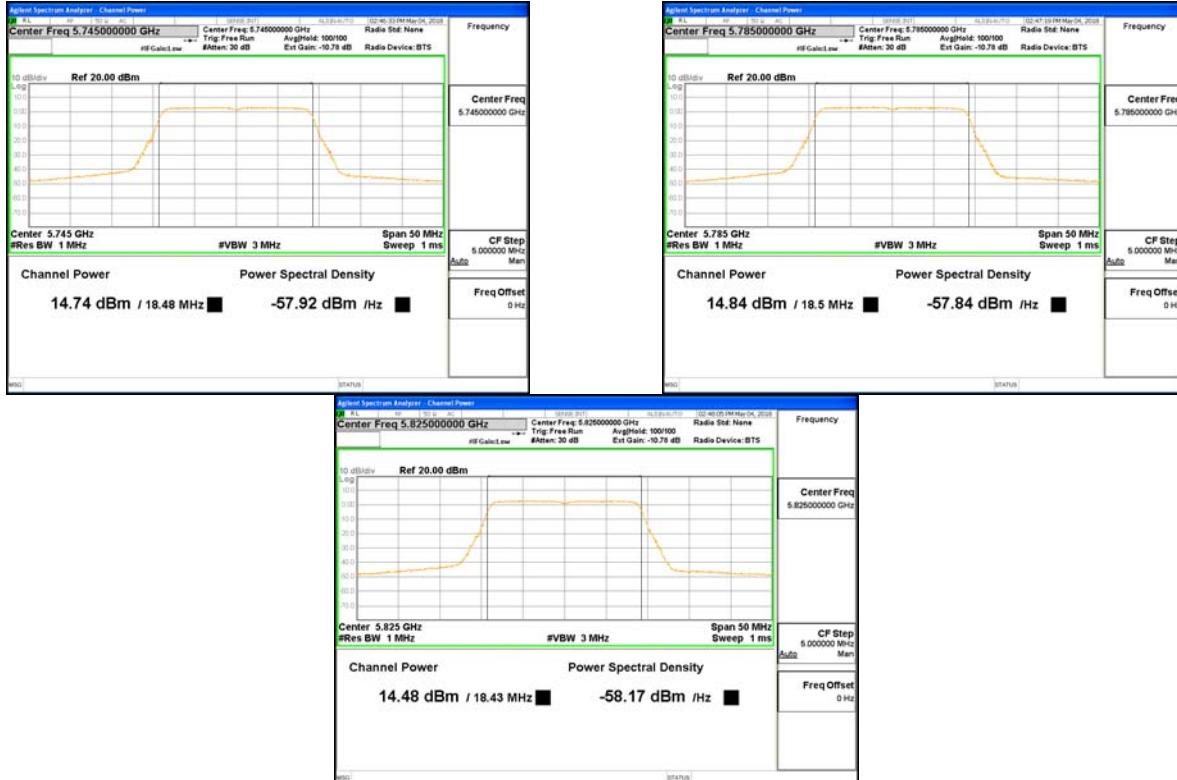
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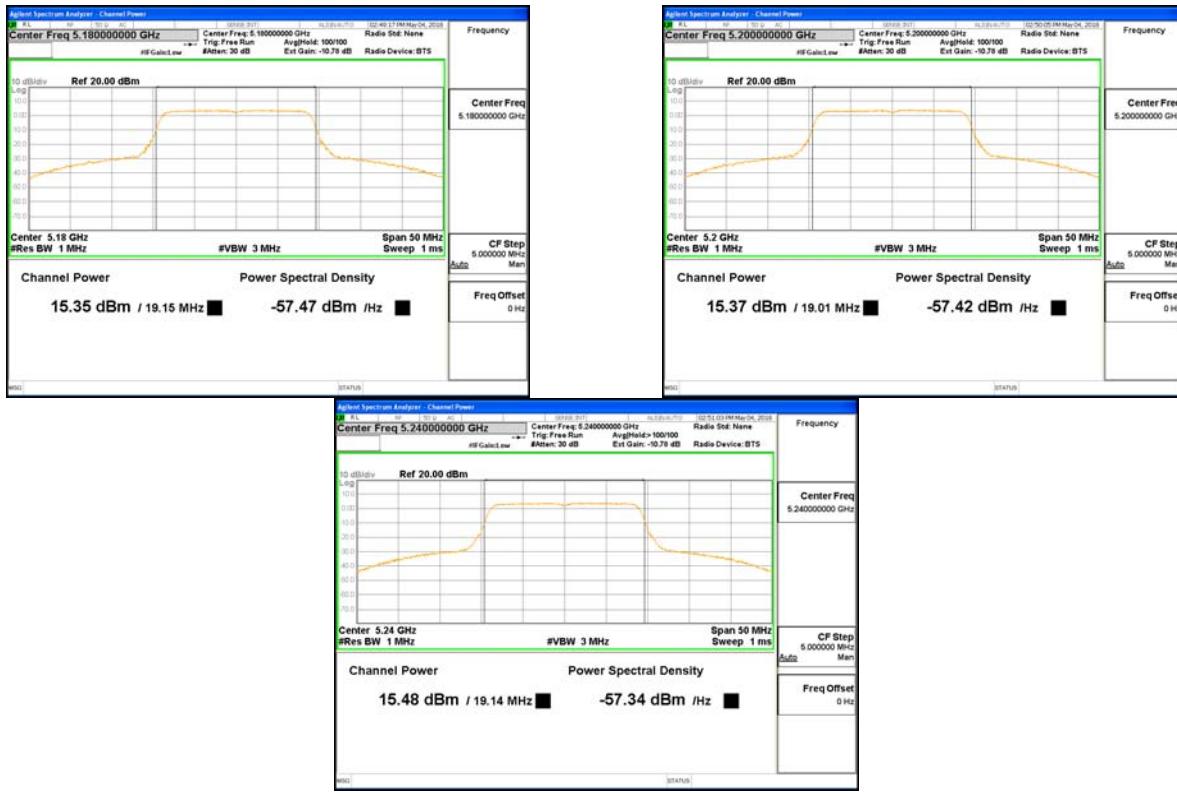
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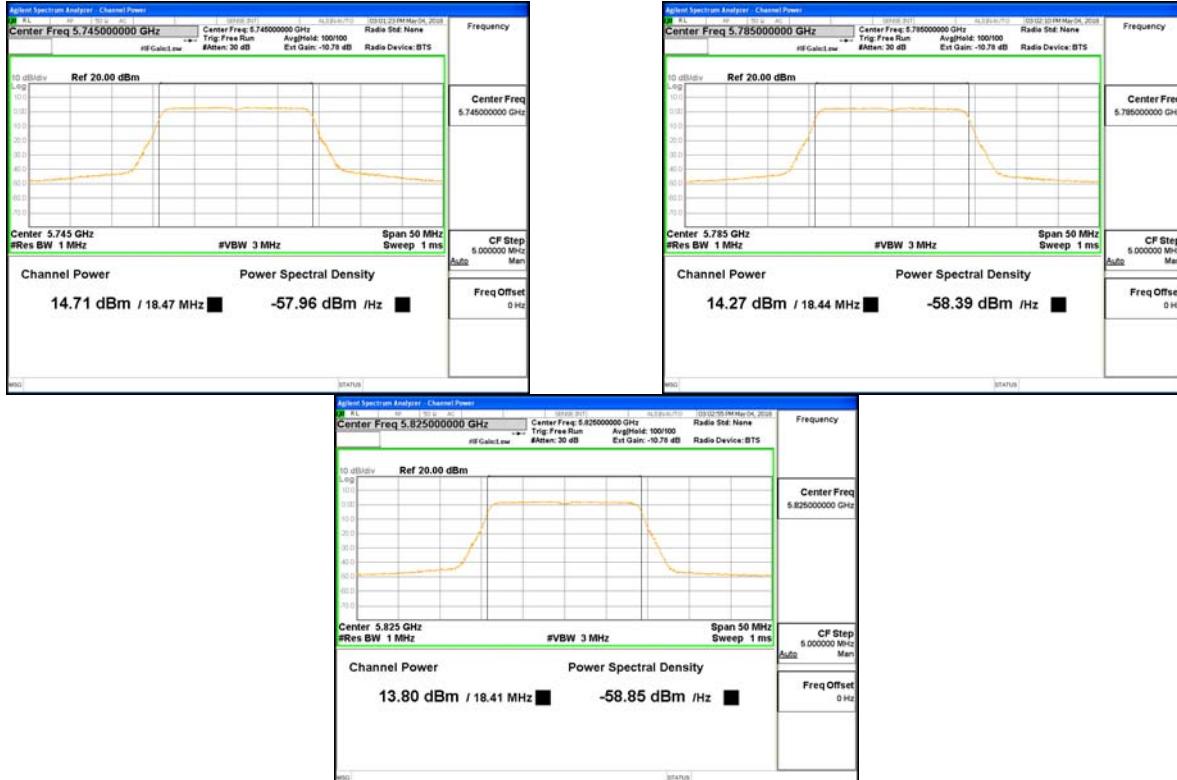
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CDD Mode_ANT3_802.11n_HT20_UNII-1



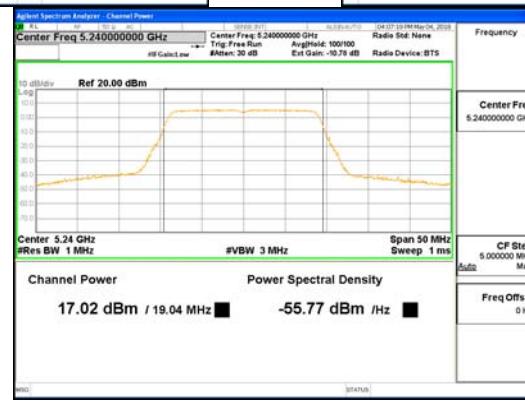
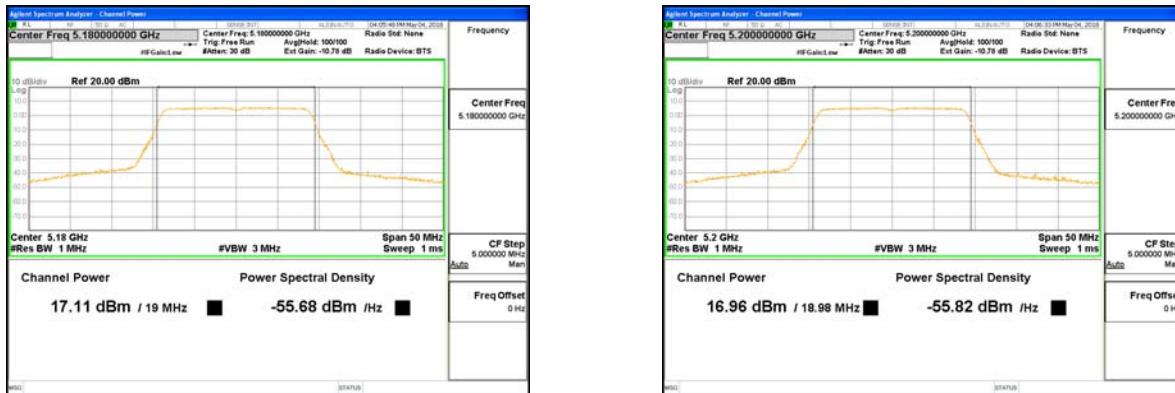
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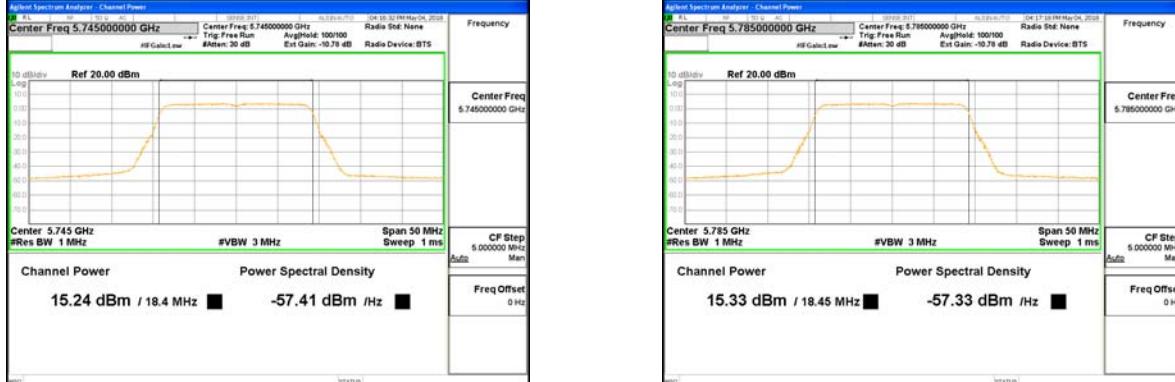
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CDD Mode_ANTO_802.11ac_VHT20_UNII-1



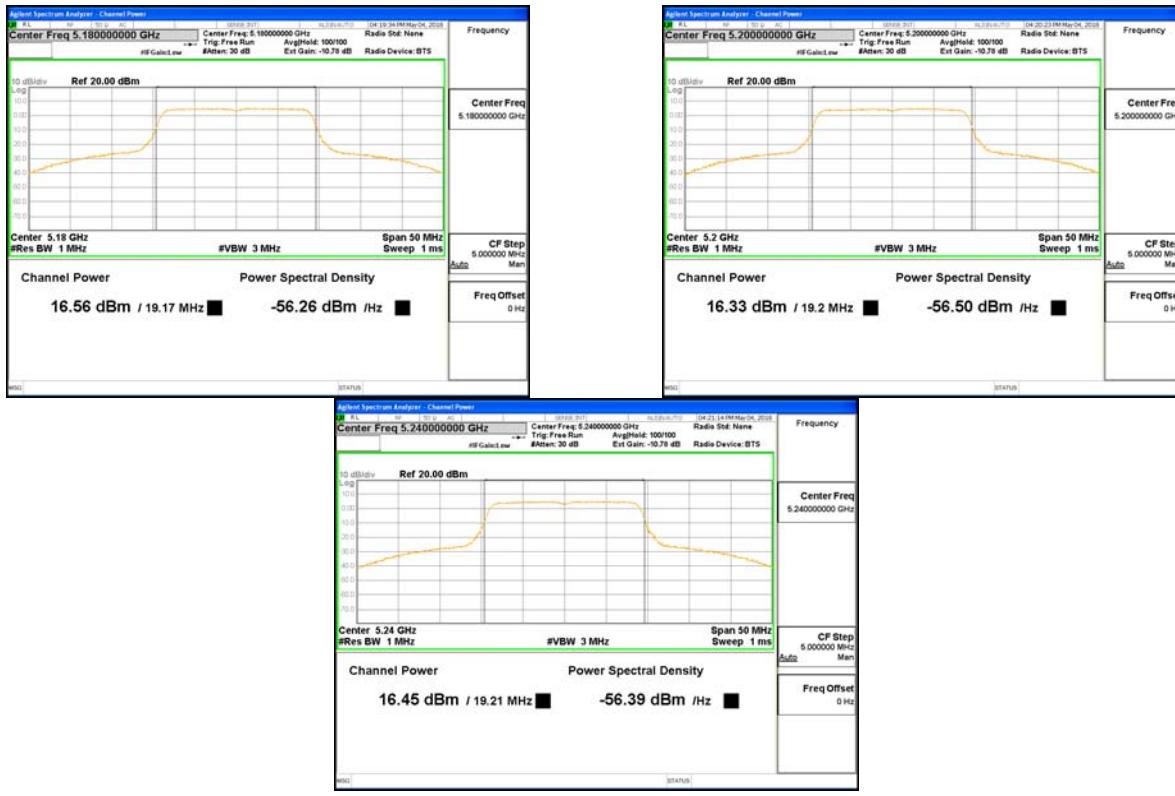
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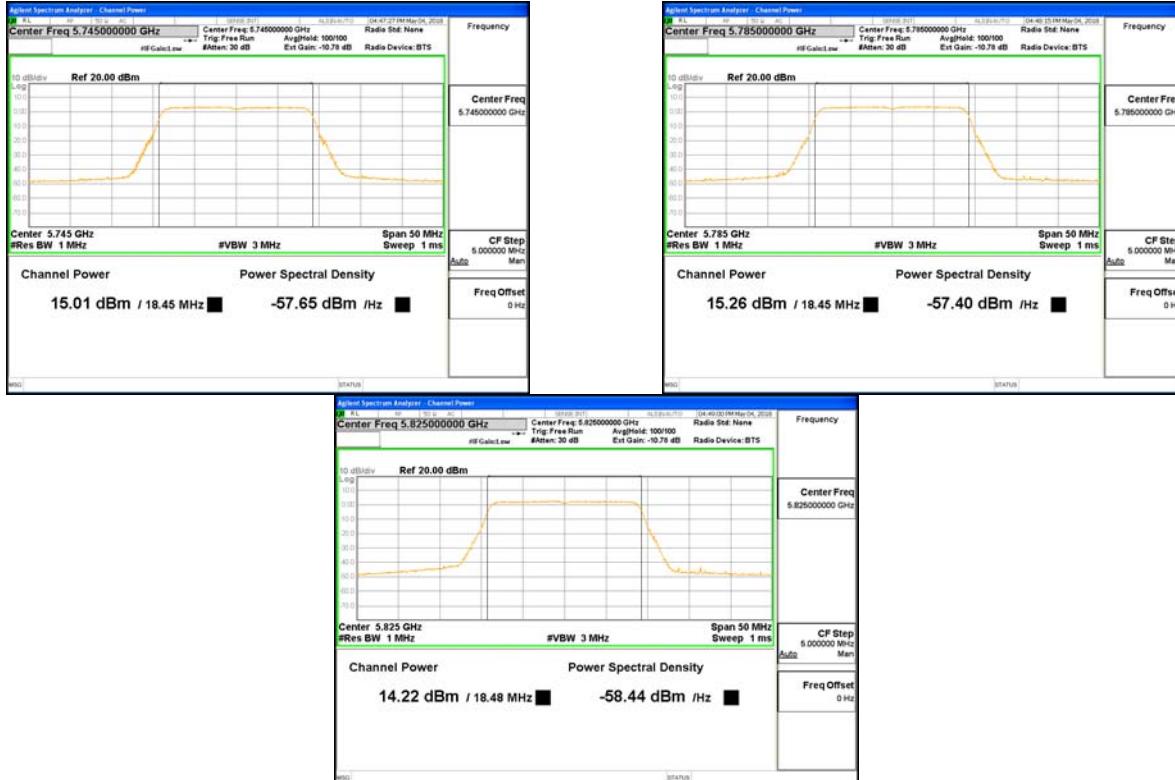
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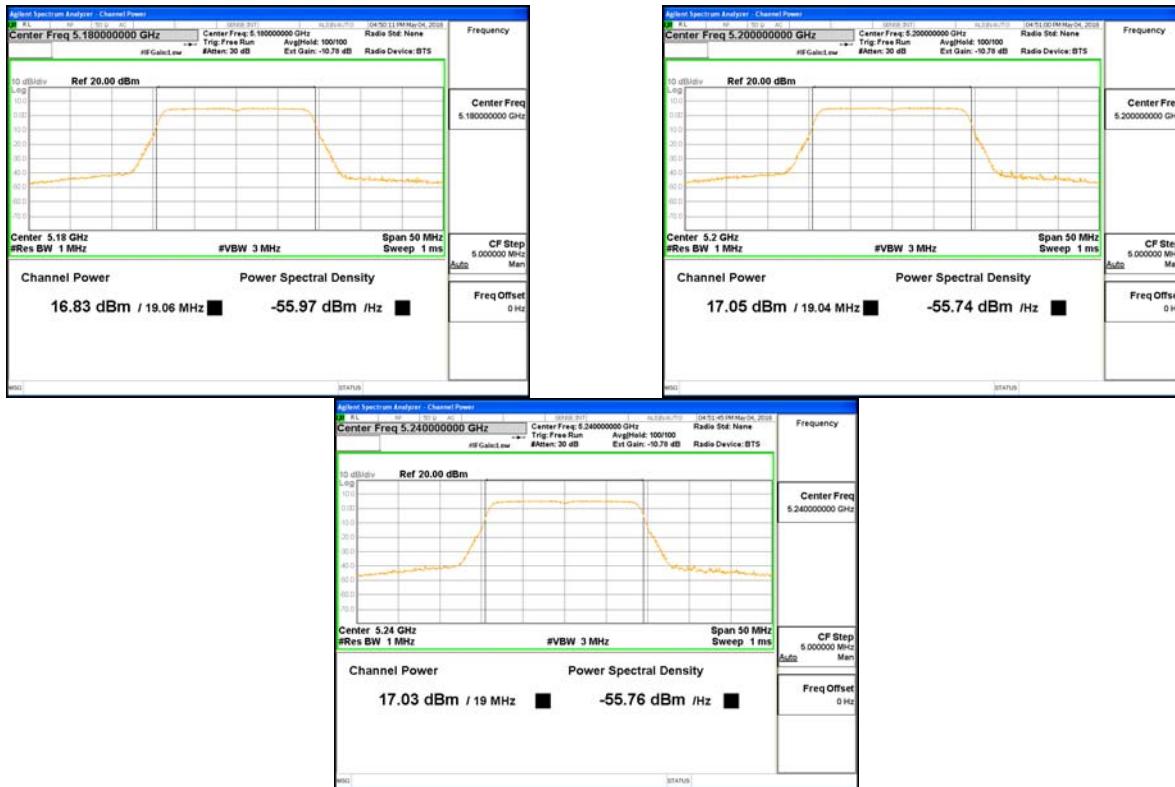
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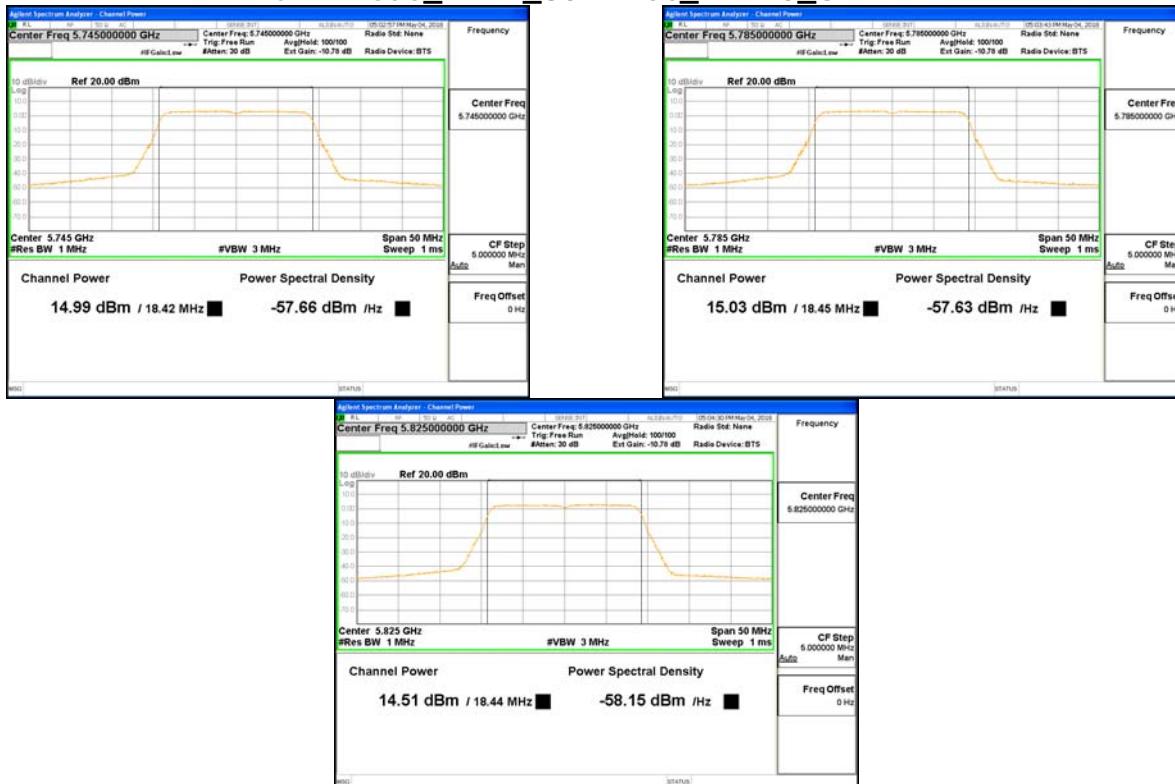
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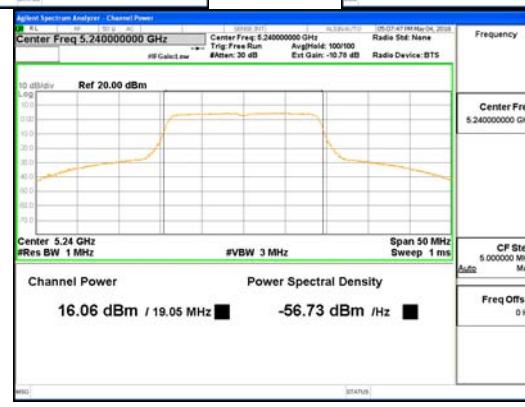
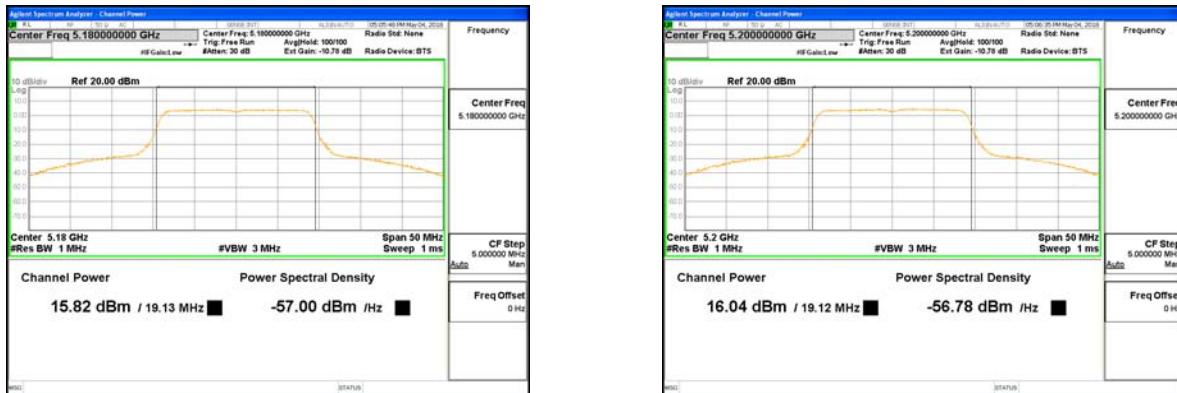
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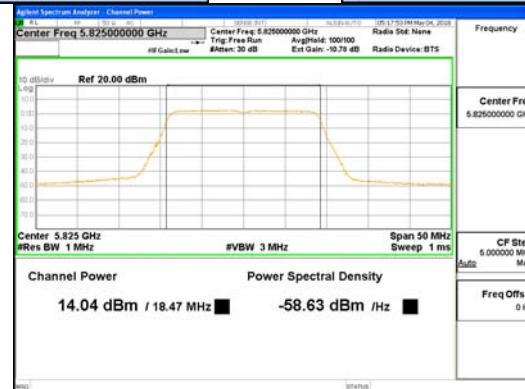
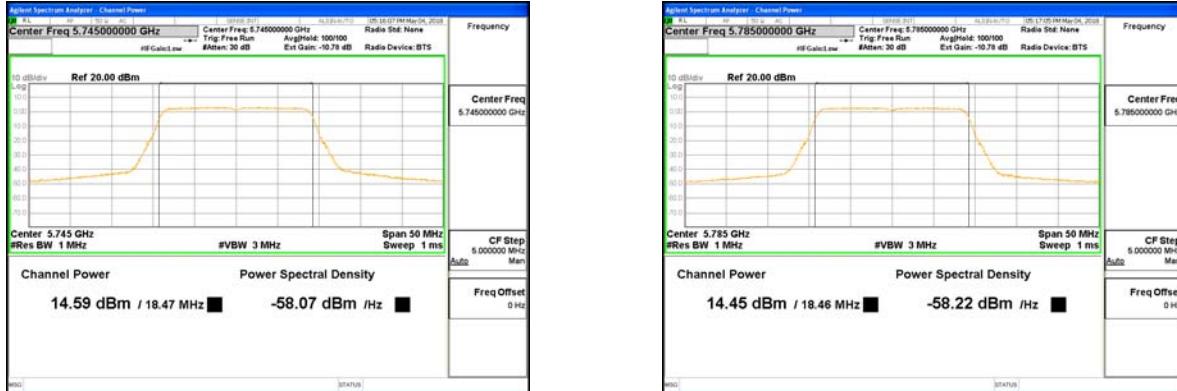
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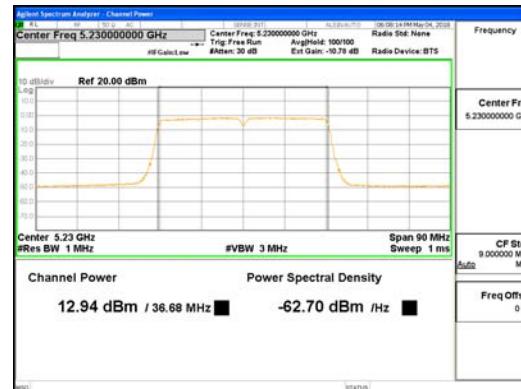
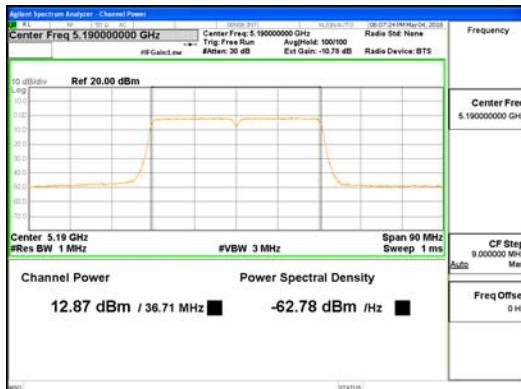


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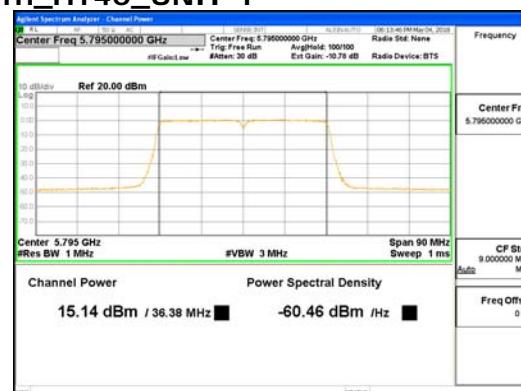
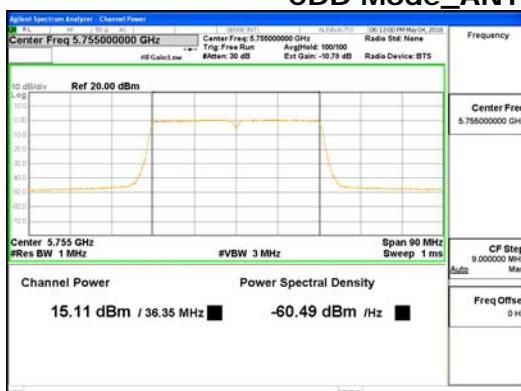
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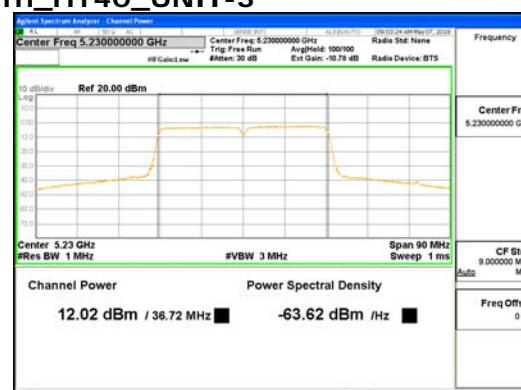
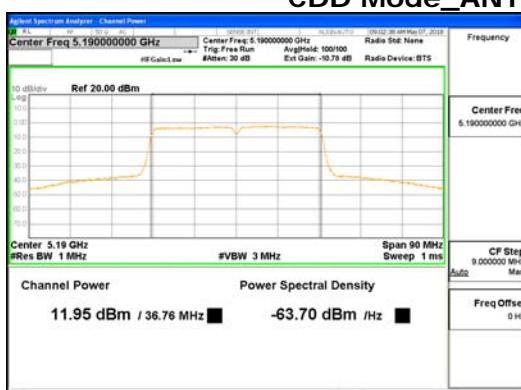
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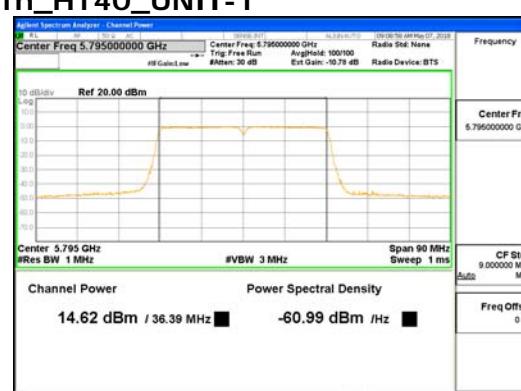
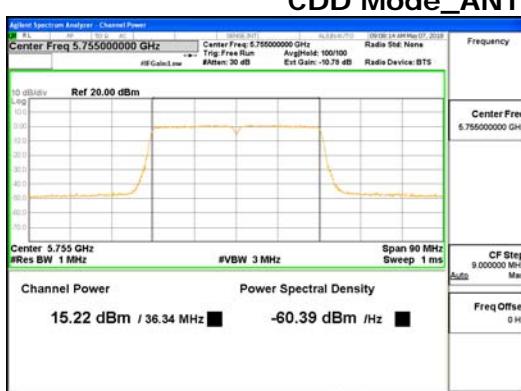
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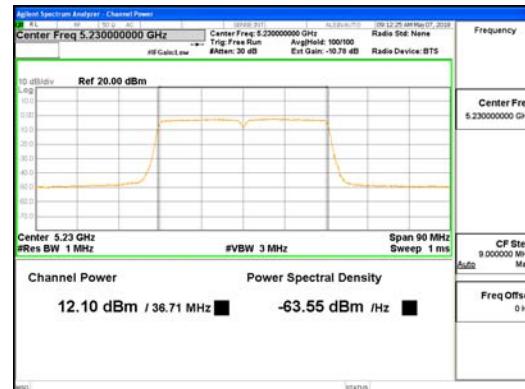
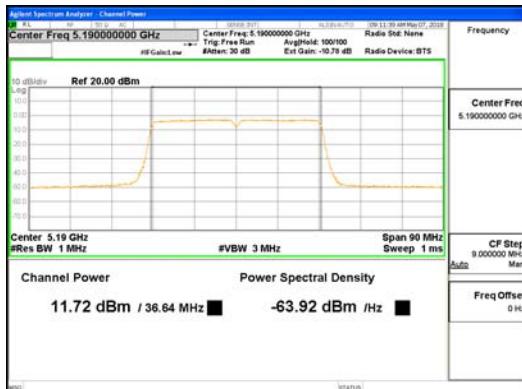


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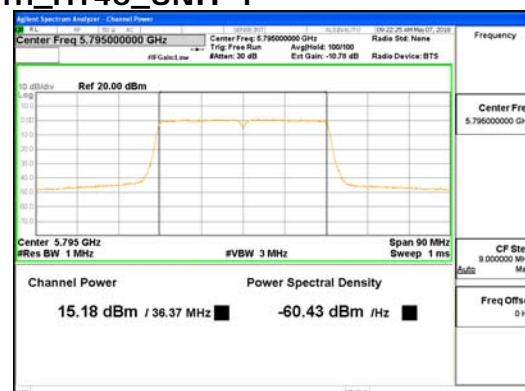
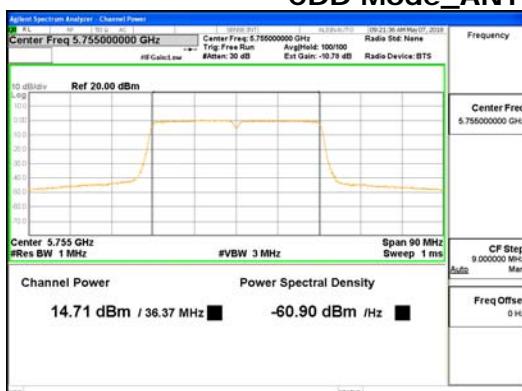
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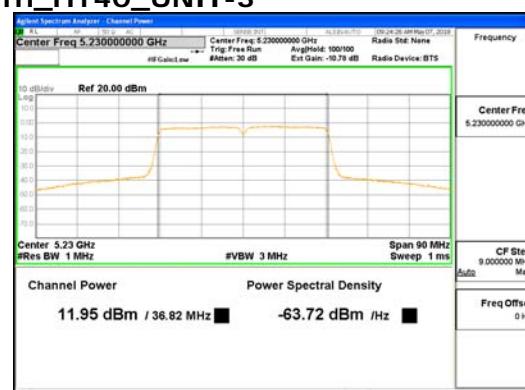
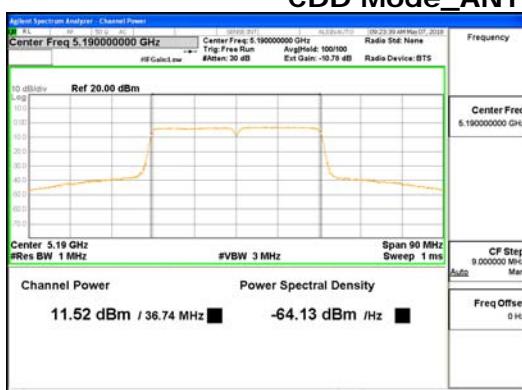
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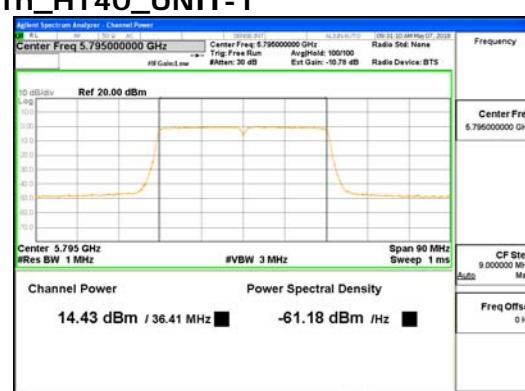
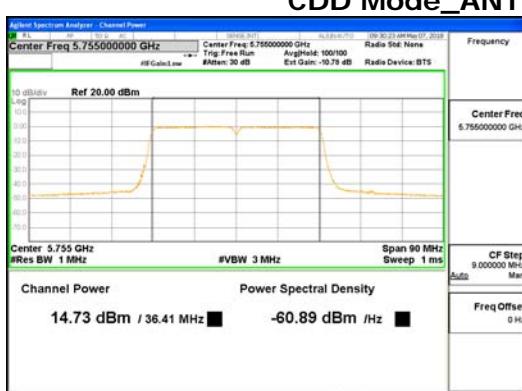
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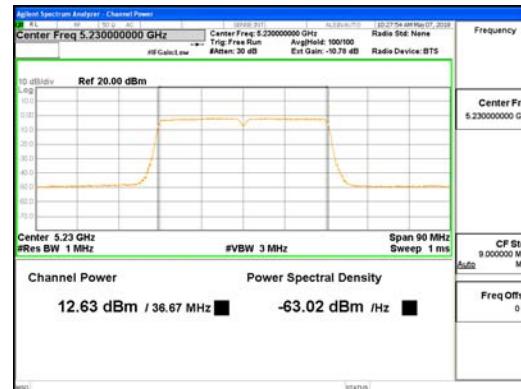
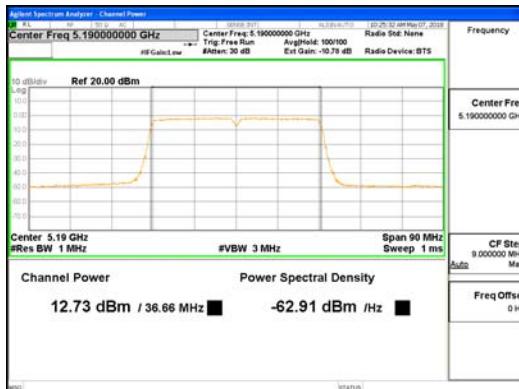


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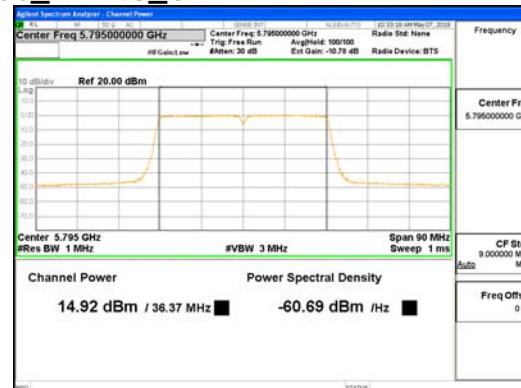
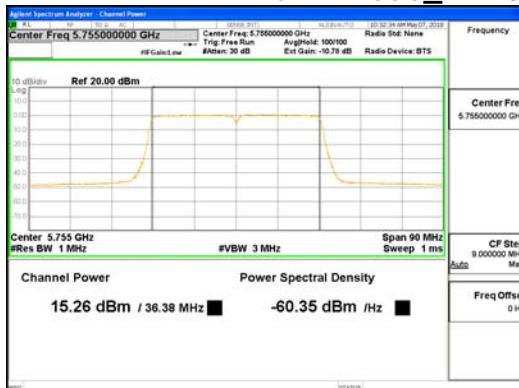
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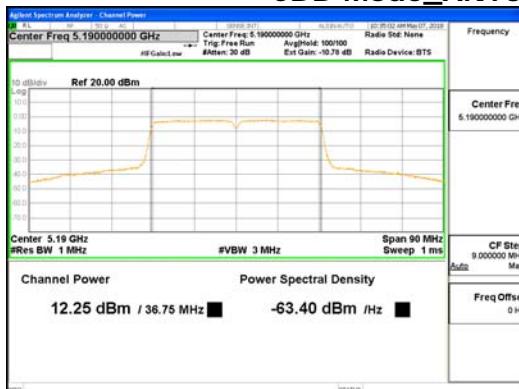
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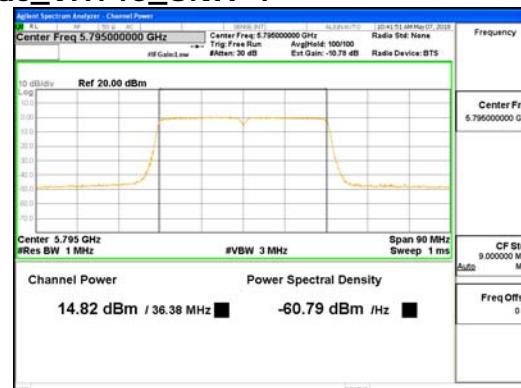
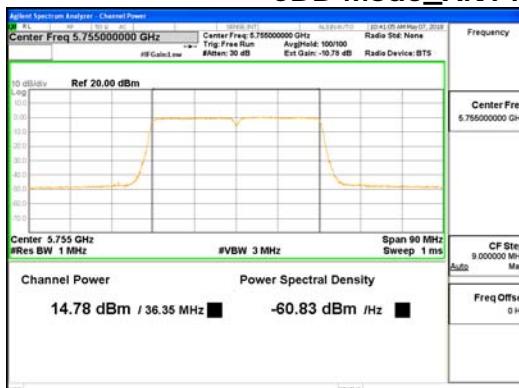
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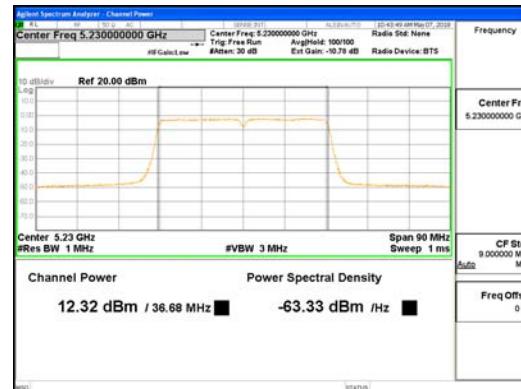
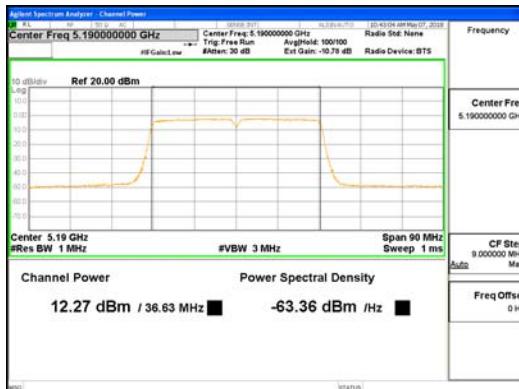


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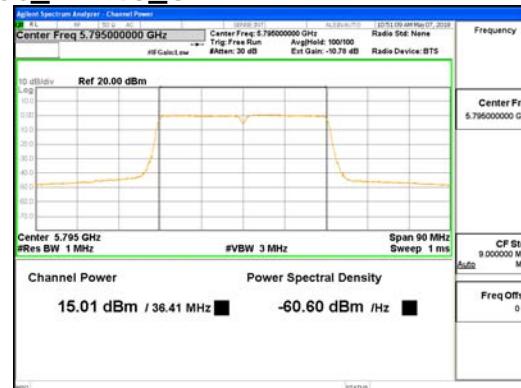
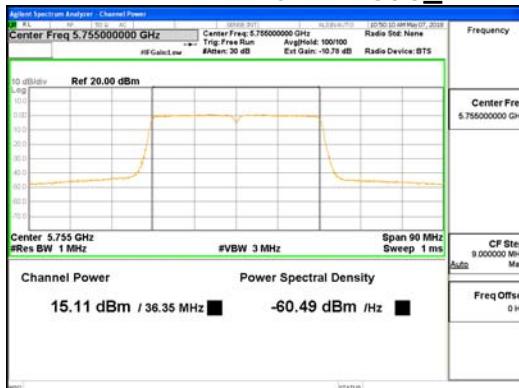
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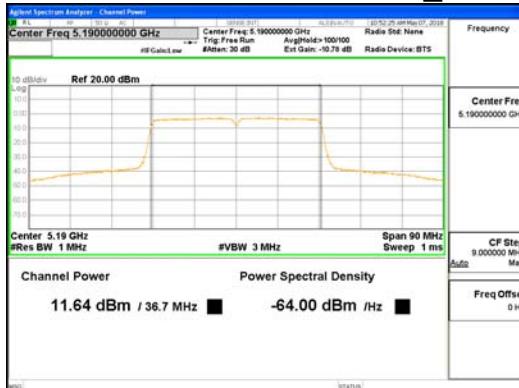
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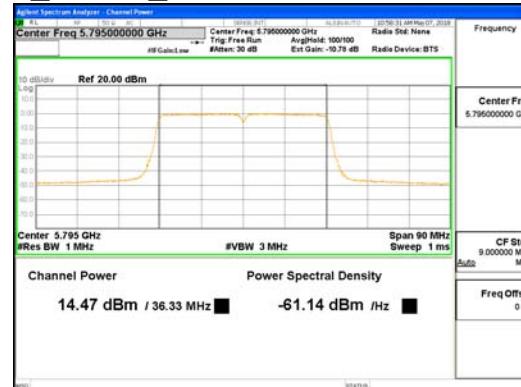
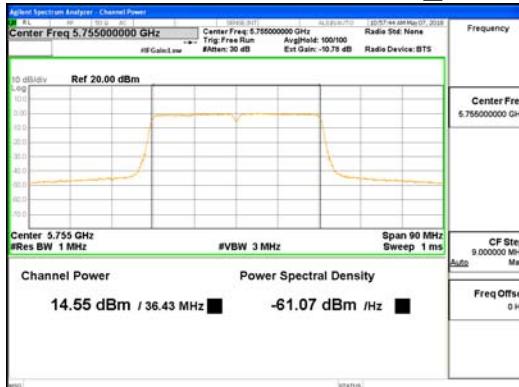
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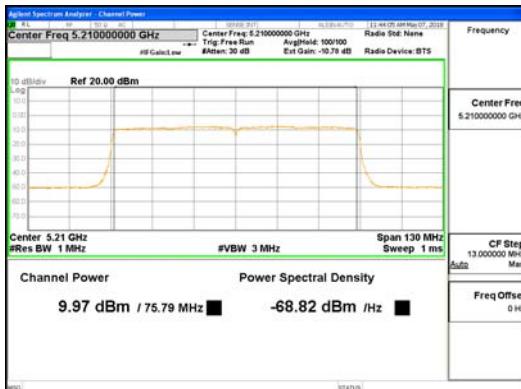
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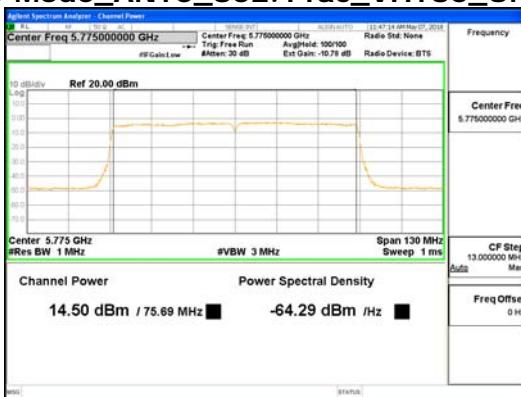
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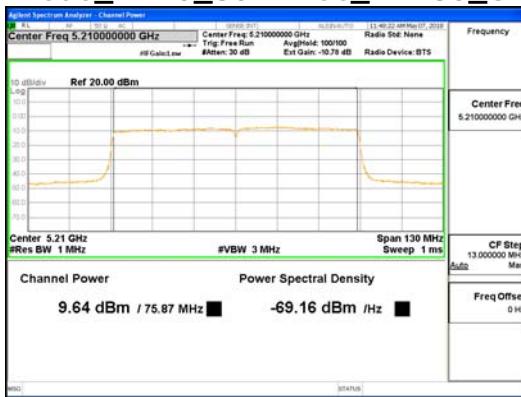
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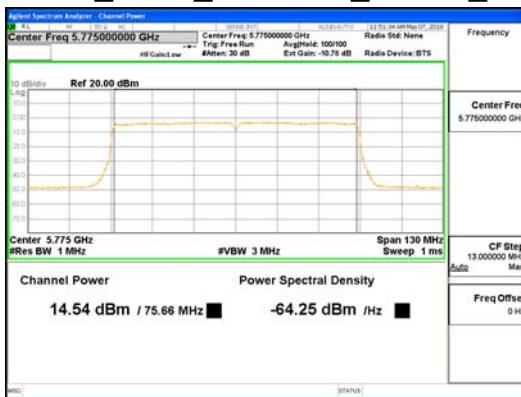
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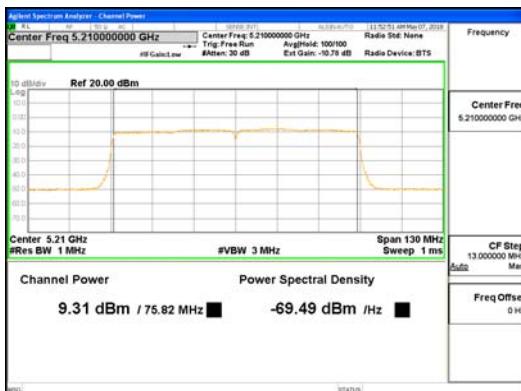
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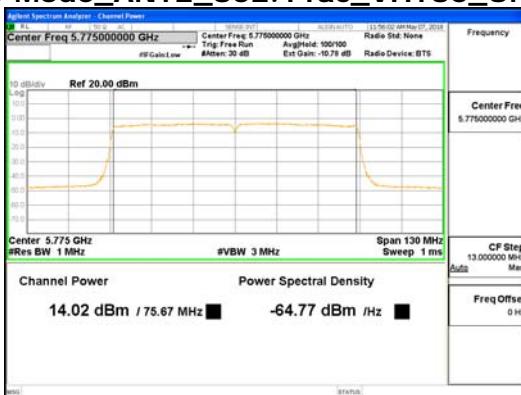
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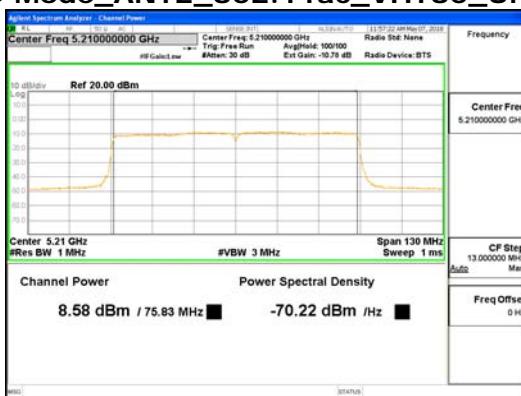
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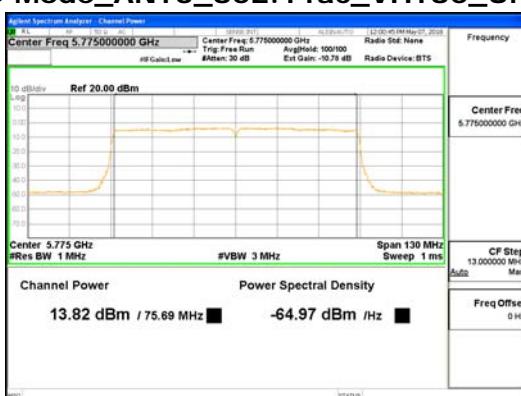
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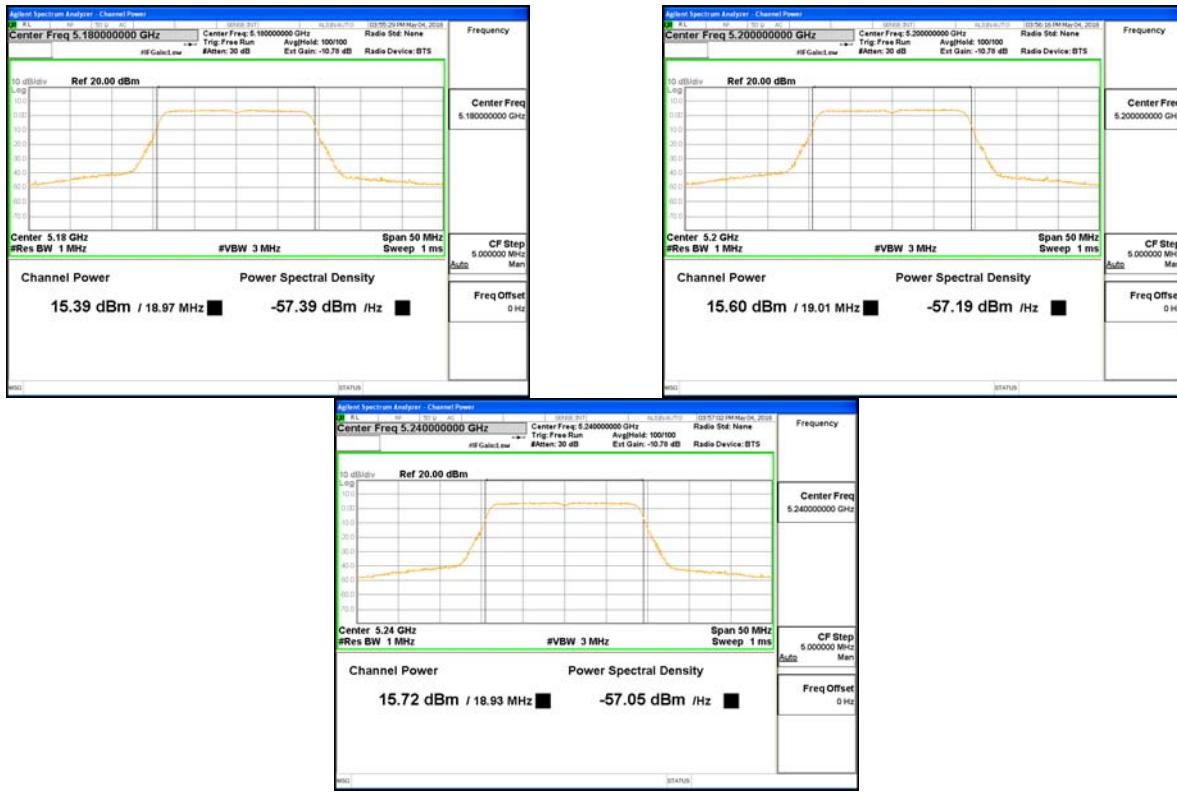
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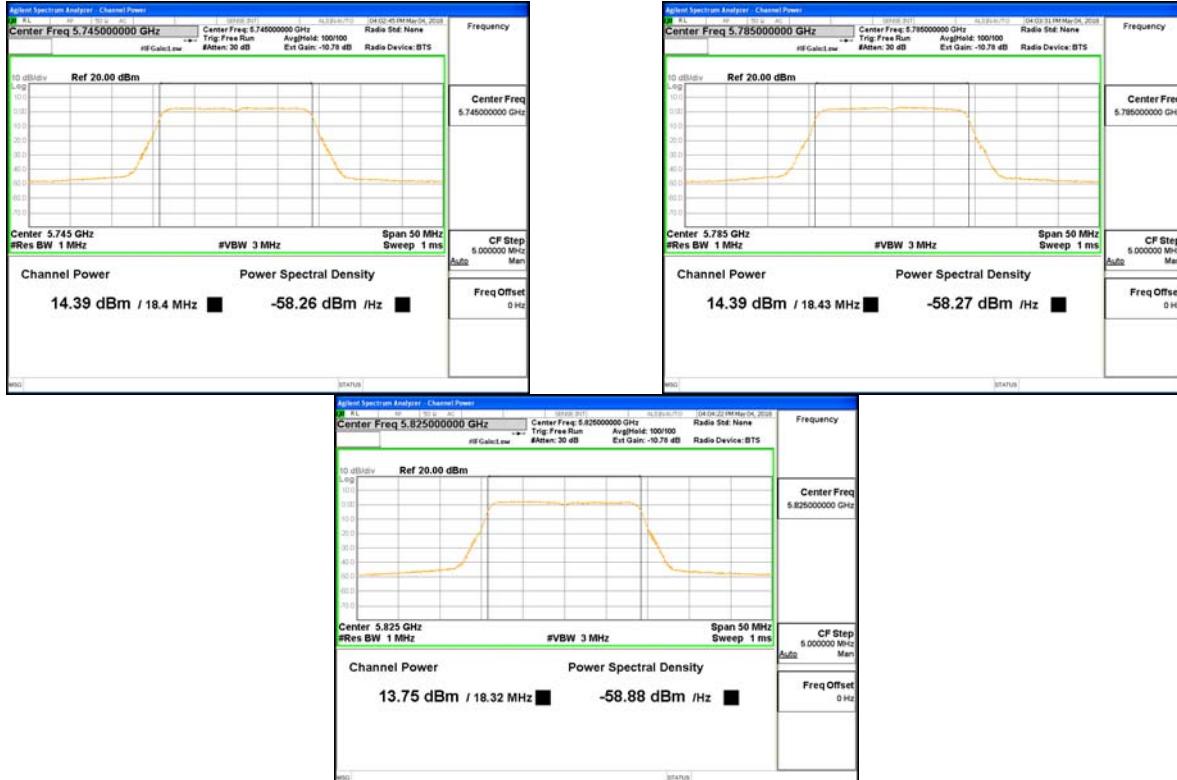
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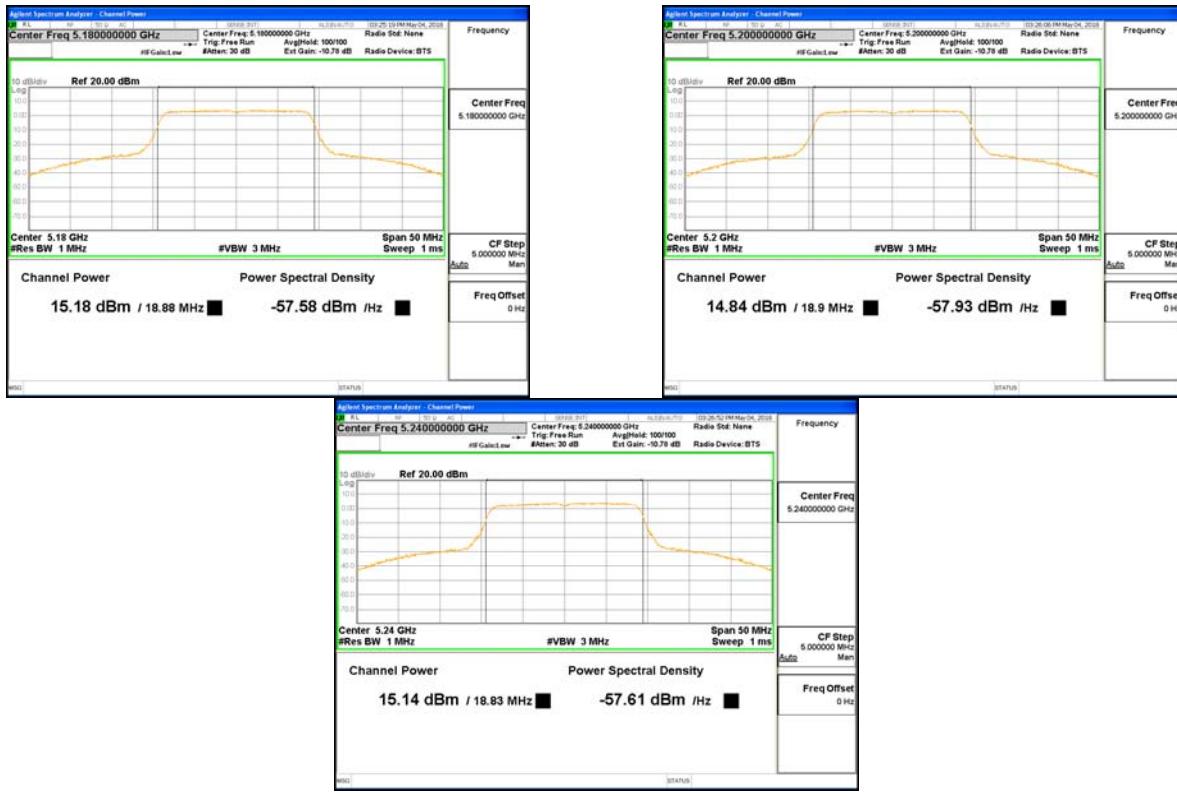
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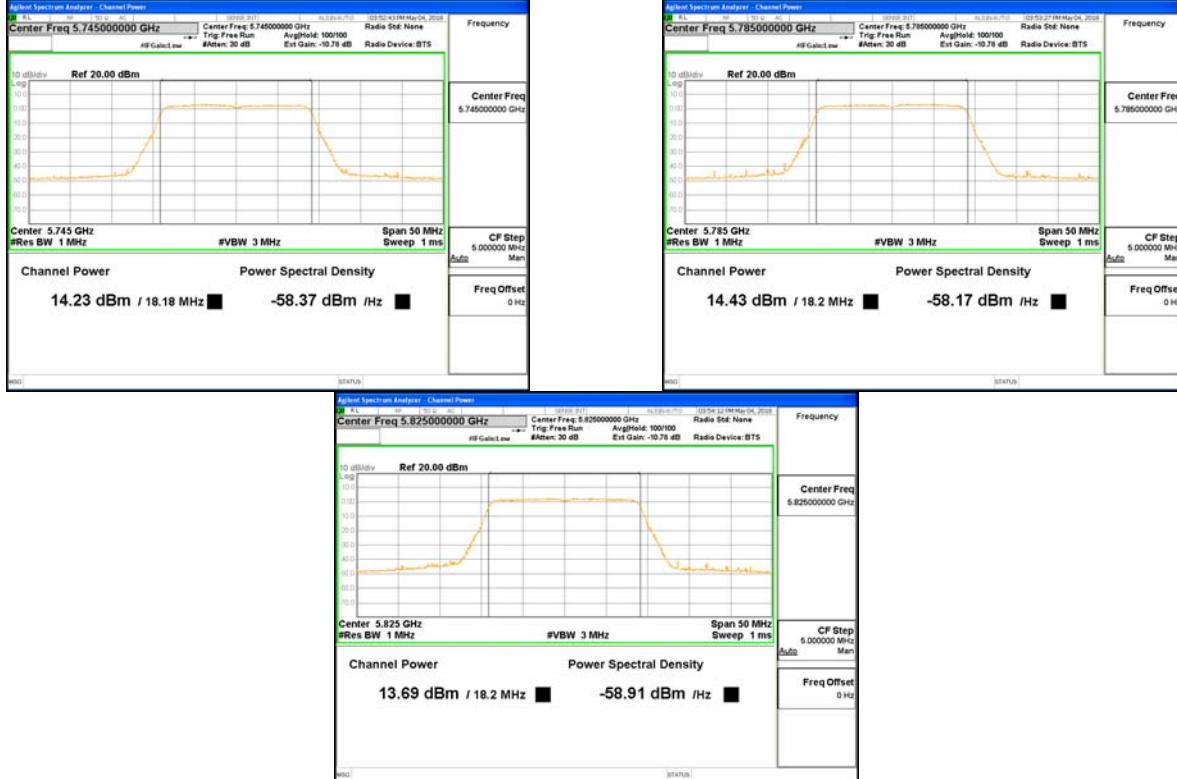
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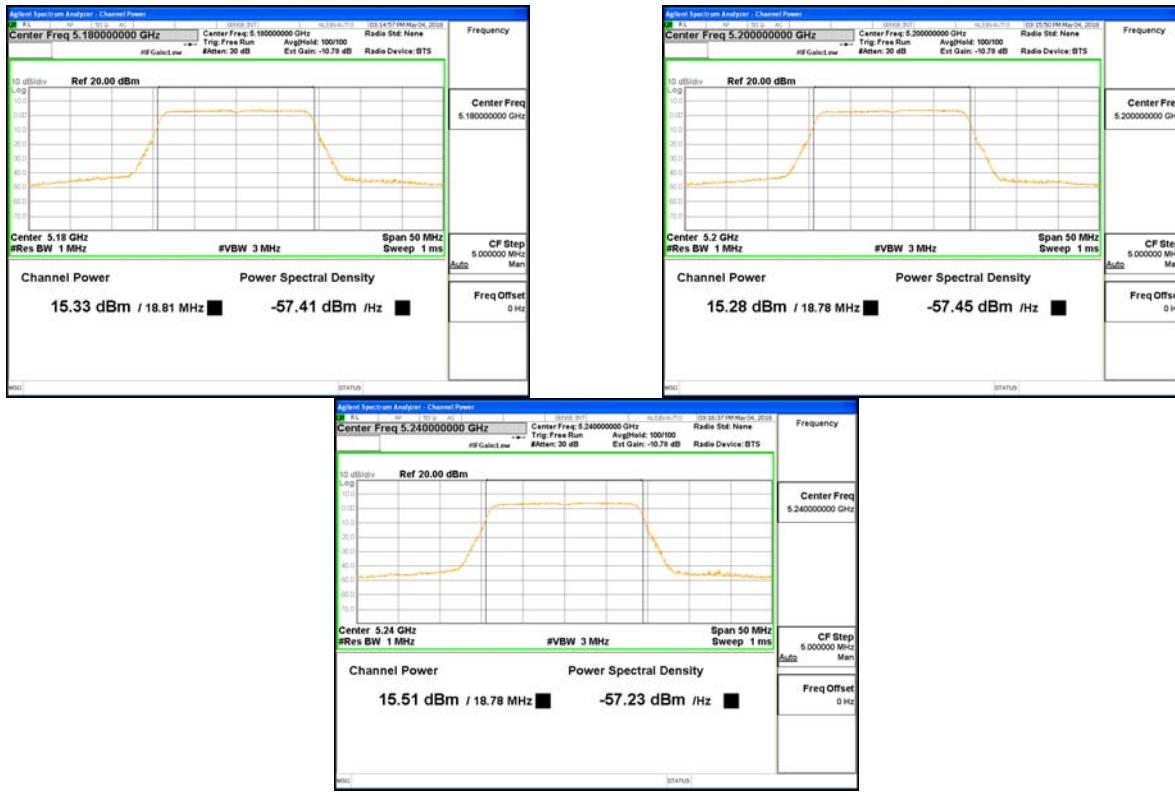
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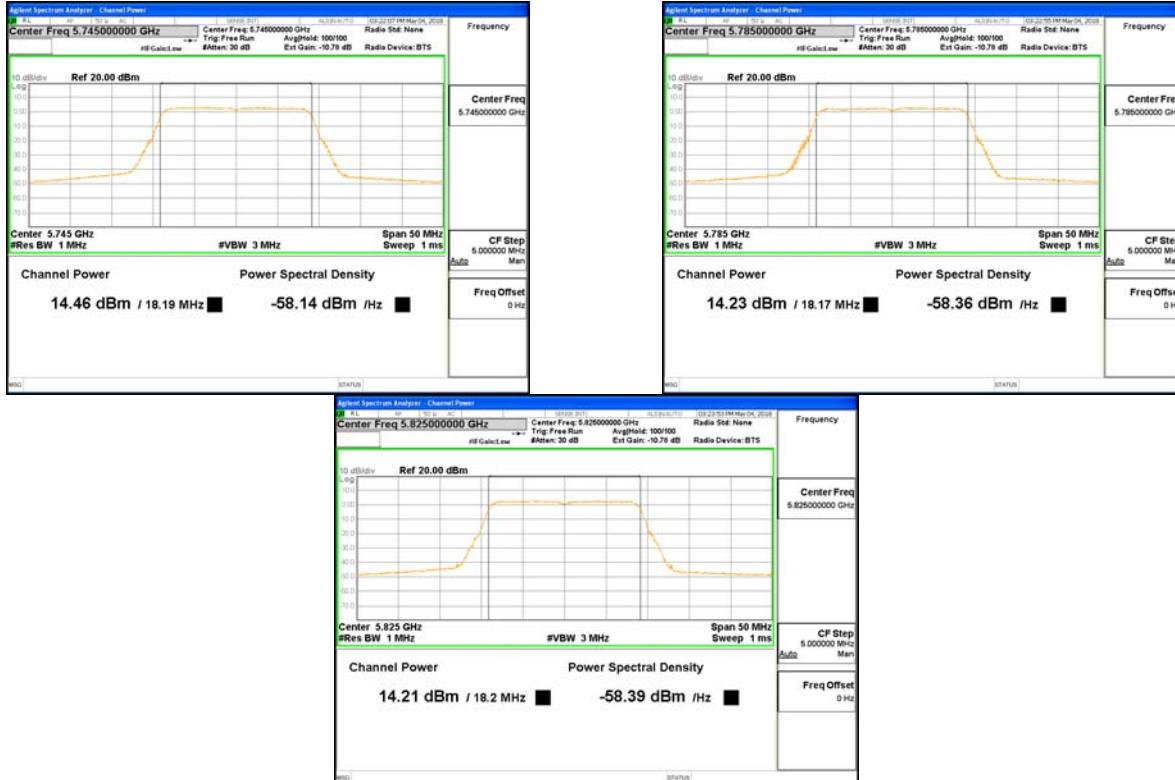
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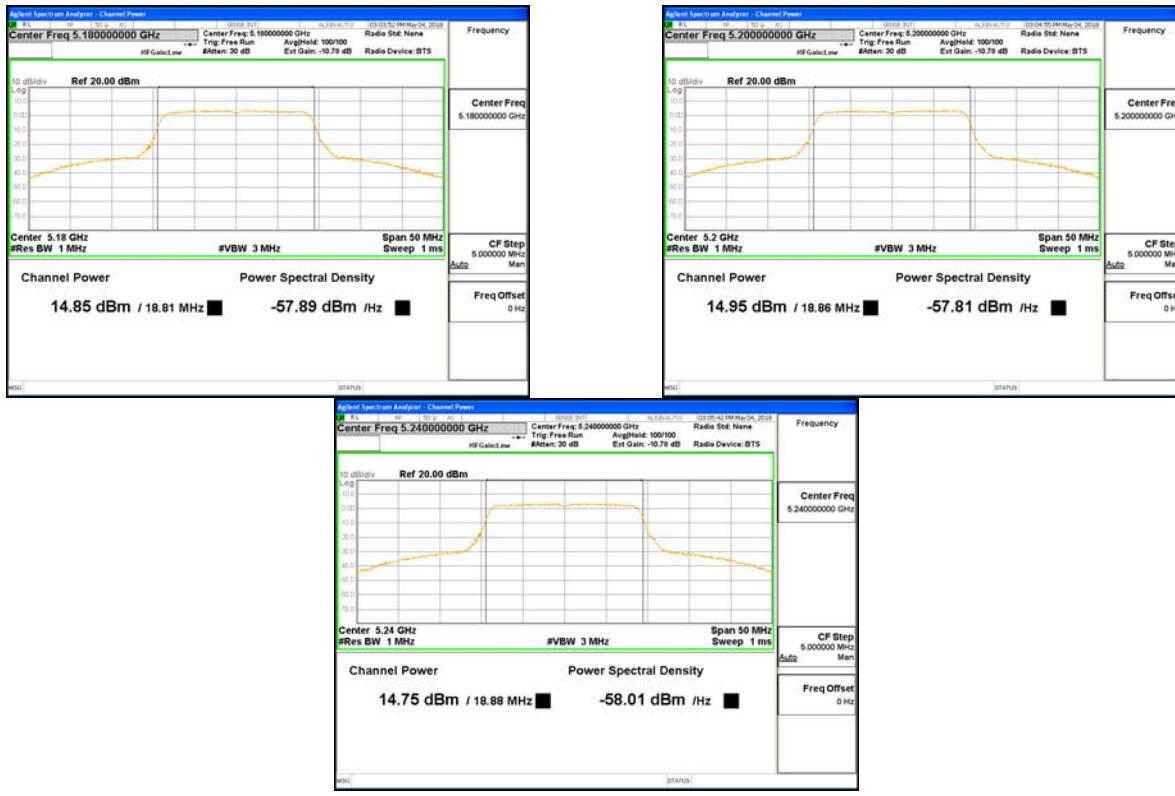
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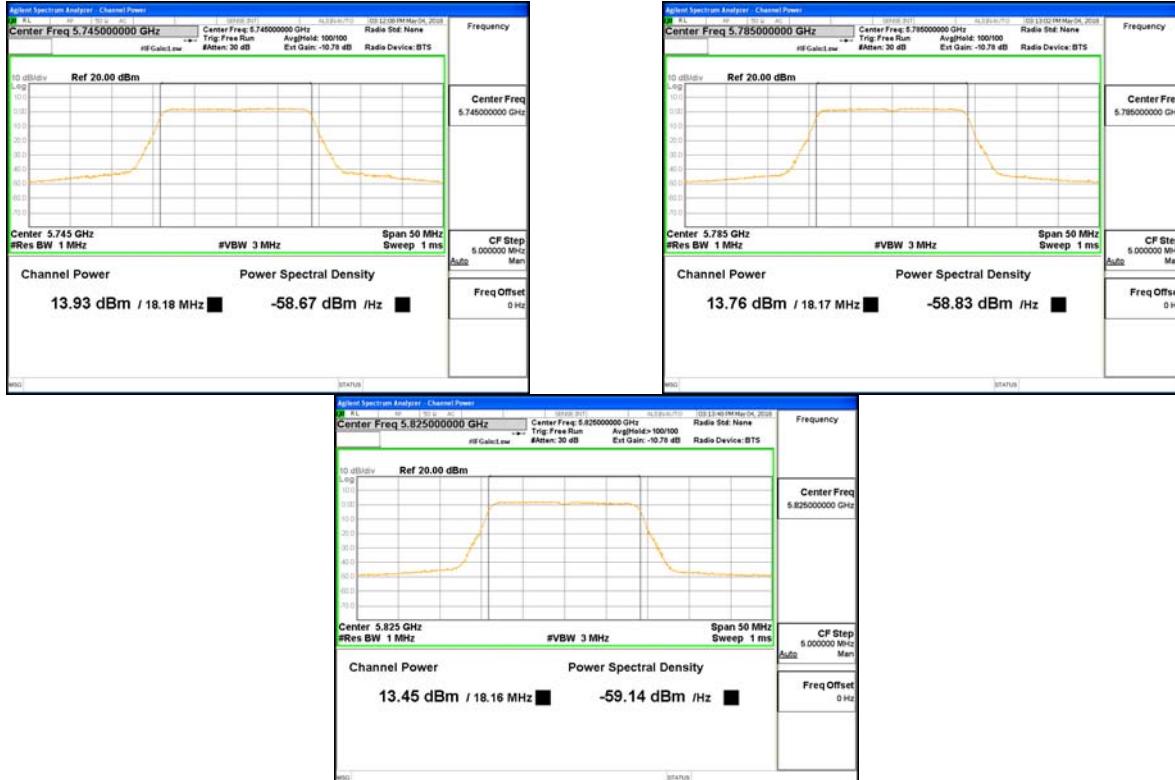
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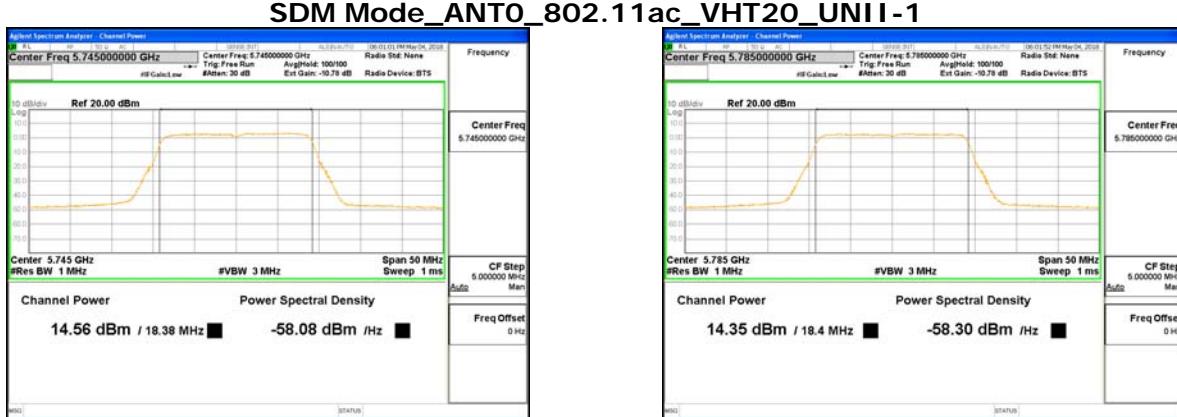
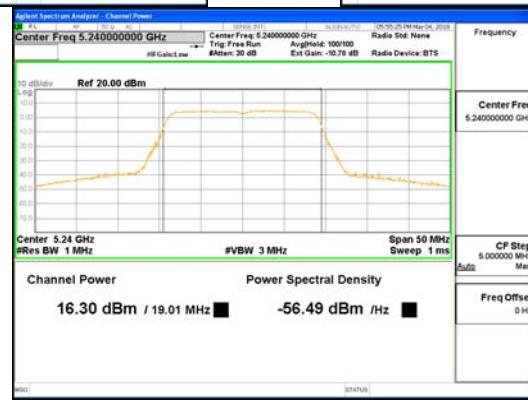
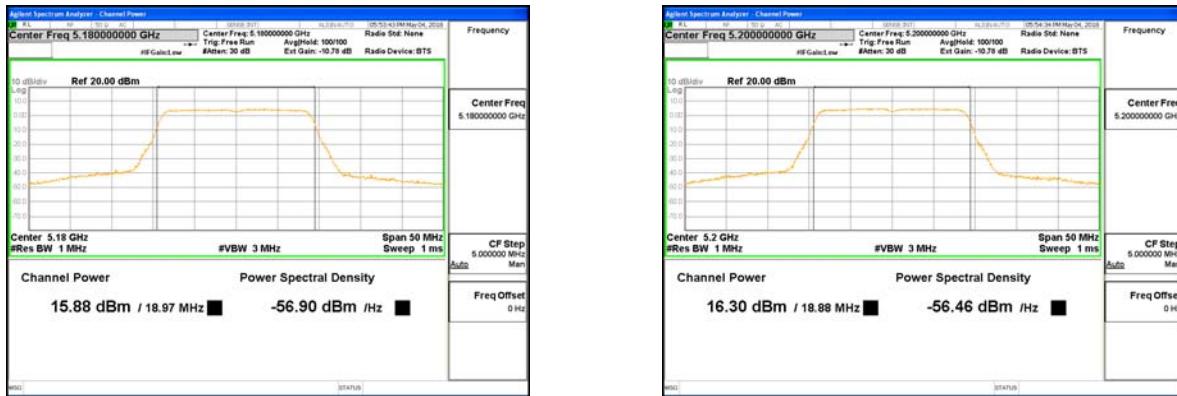
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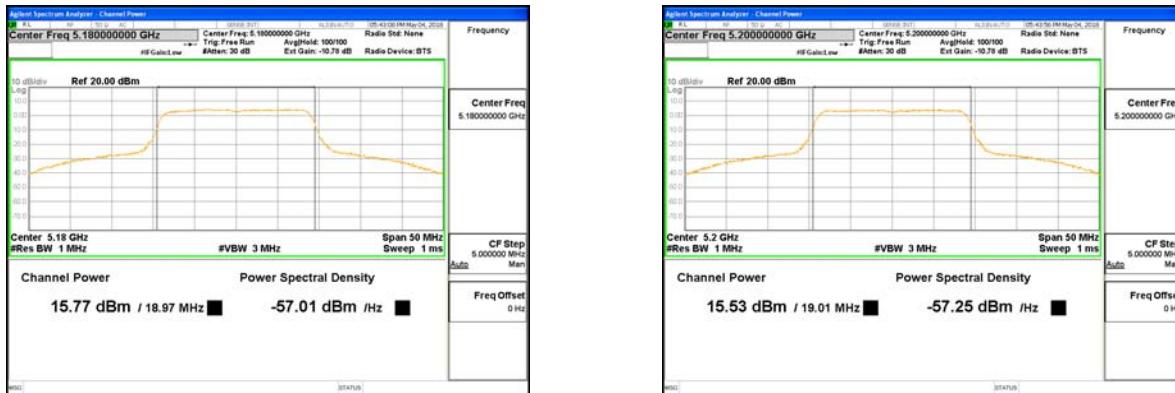
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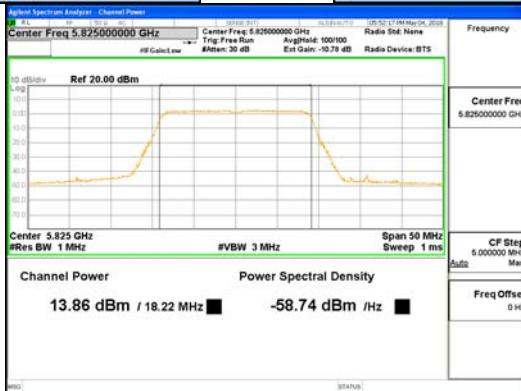
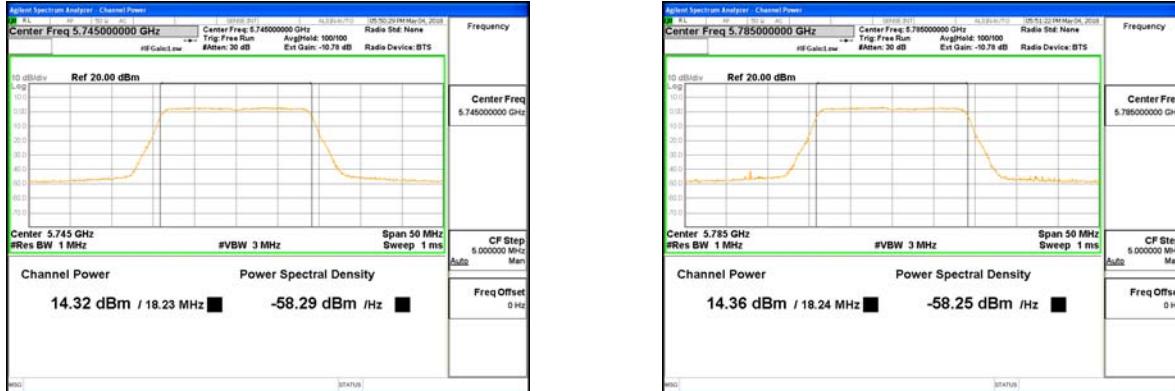
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SDM Mode_ANT1_802.11ac_VHT20_UNII-1



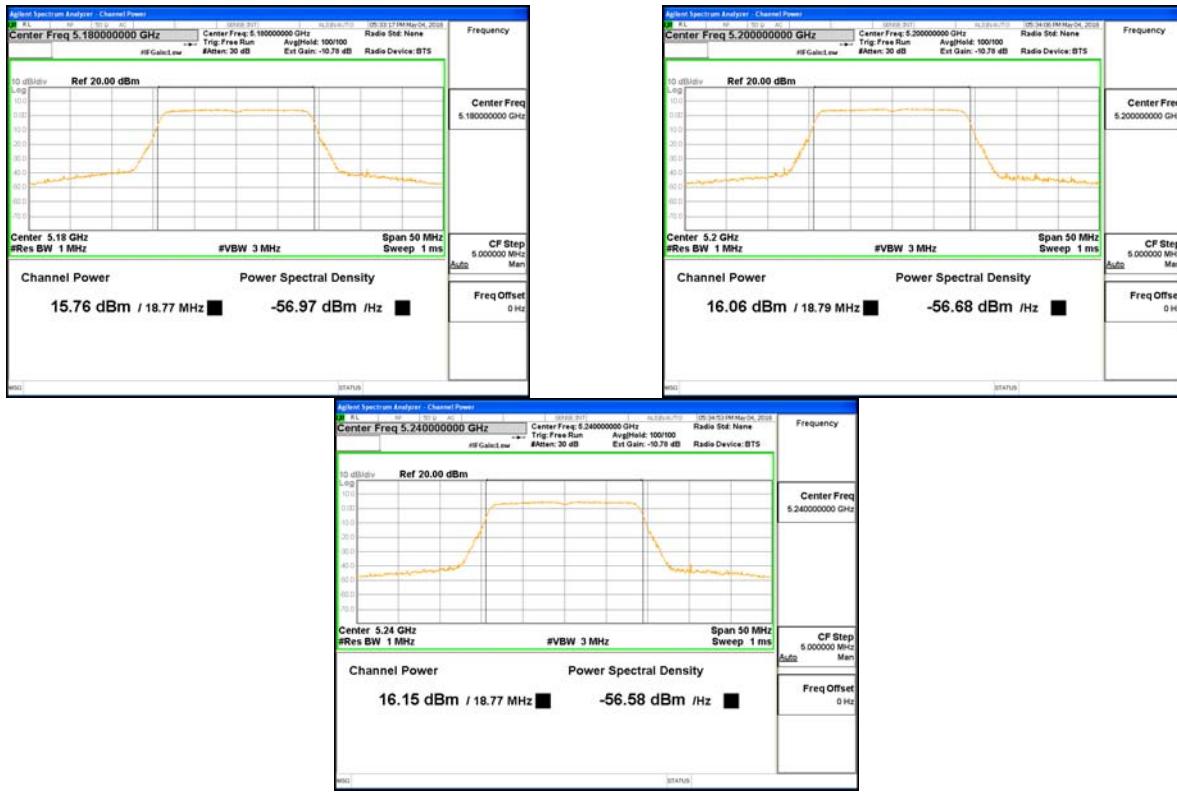
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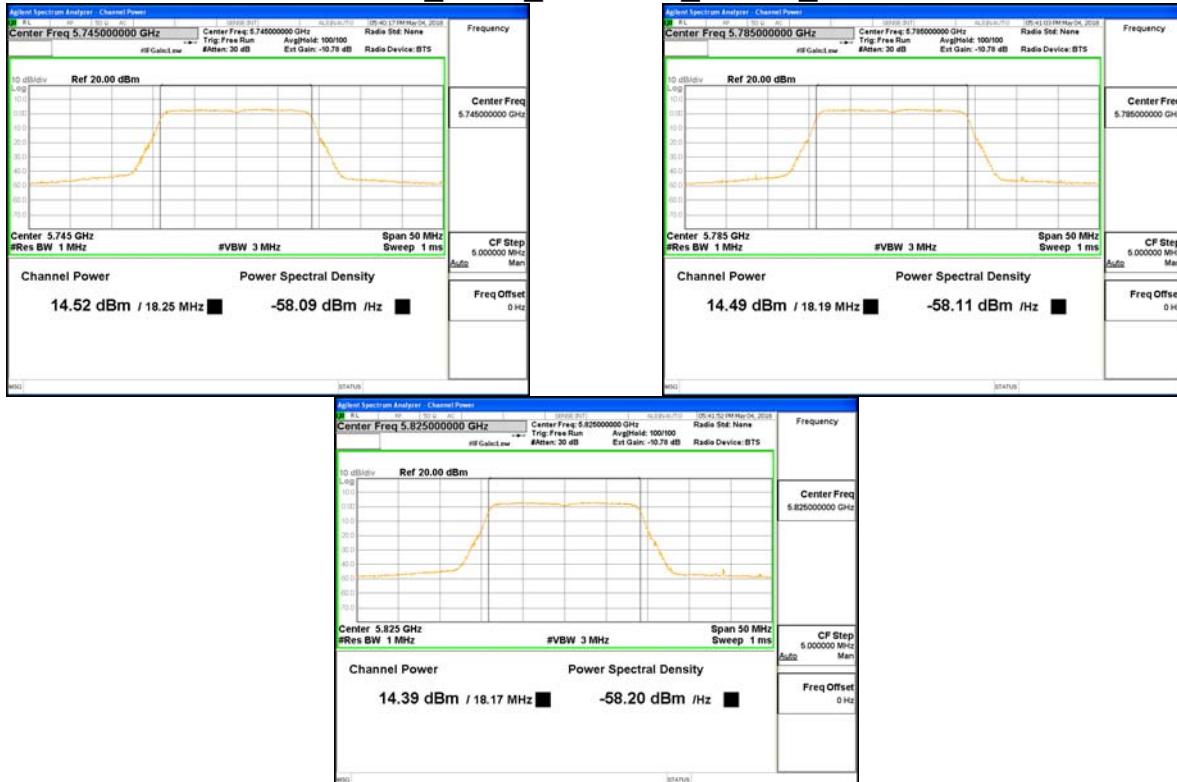
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SDM Mode_ANT2_802.11ac_VHT20_UNII-1



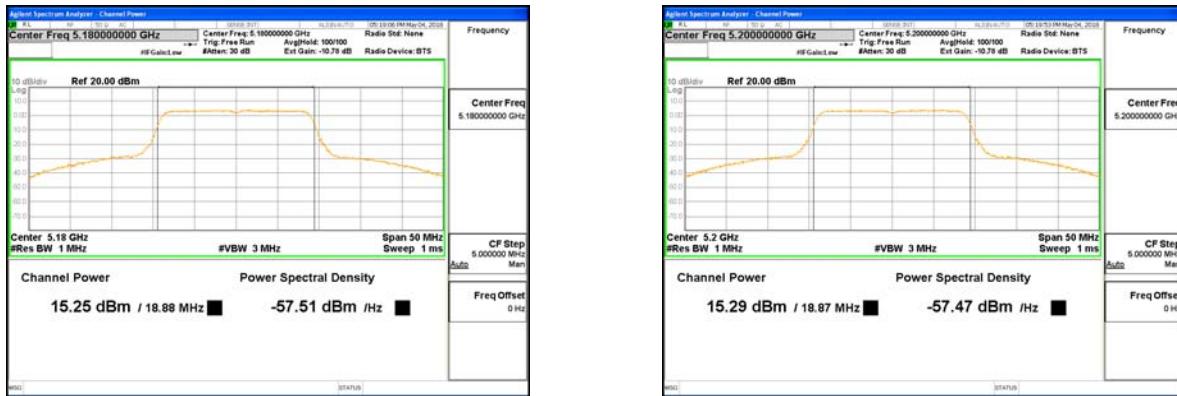
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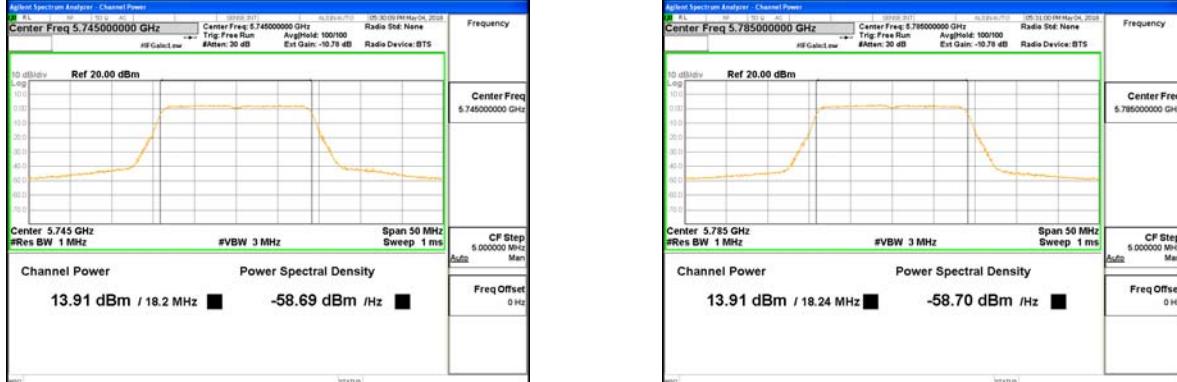
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SDM Mode_AN3_802.11ac_VHT20_UNII-1



SDM Mode_AN3_802.11ac_VHT20_UNII-3

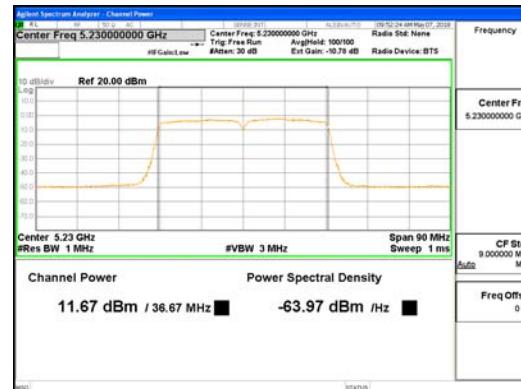
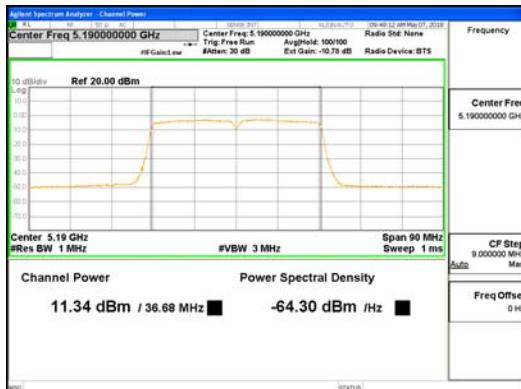


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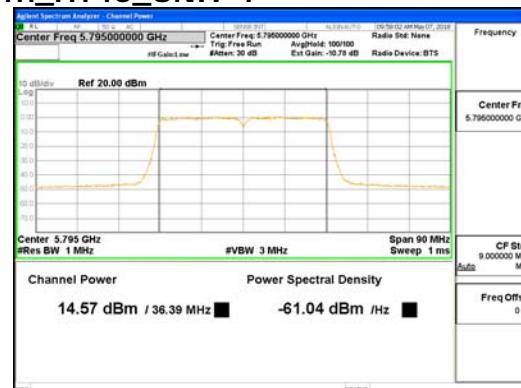
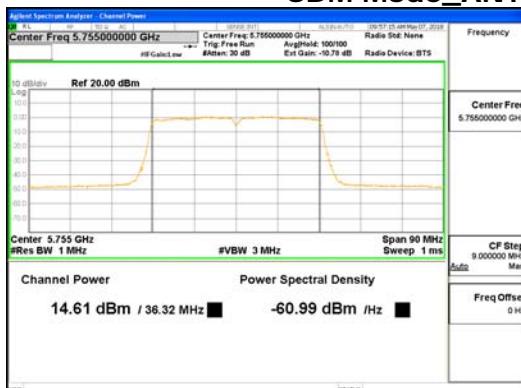
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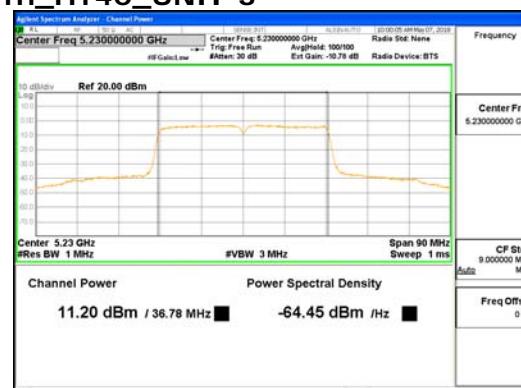
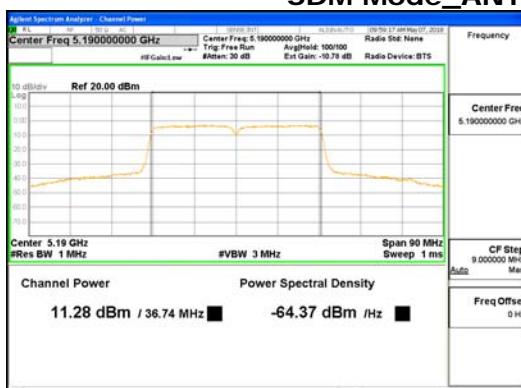
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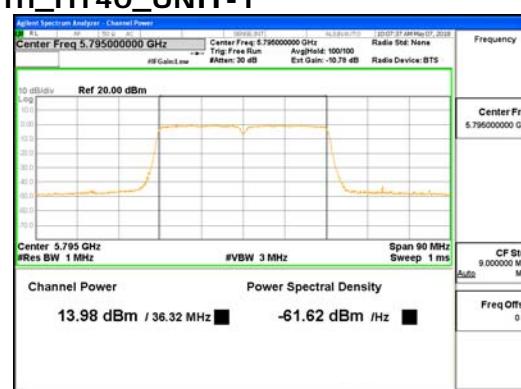
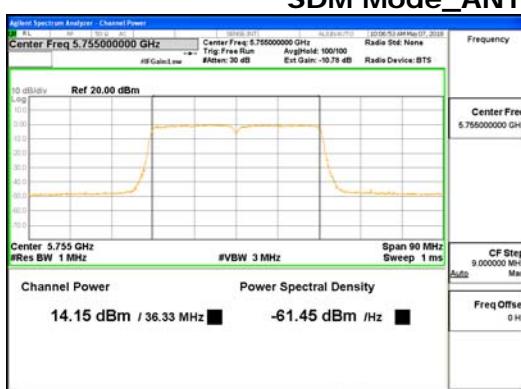
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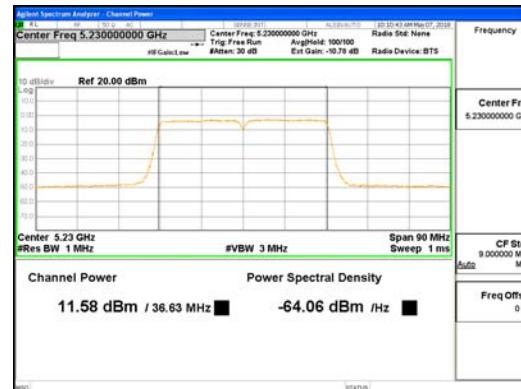
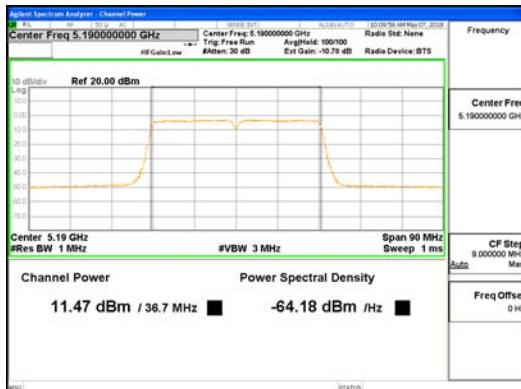


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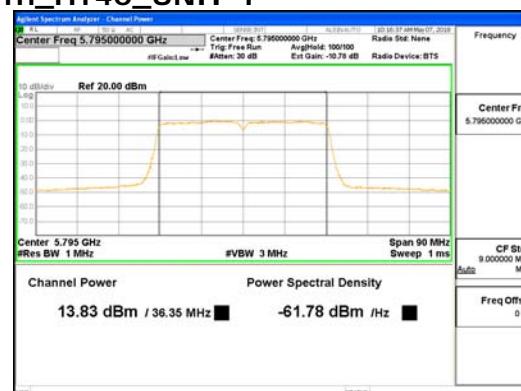
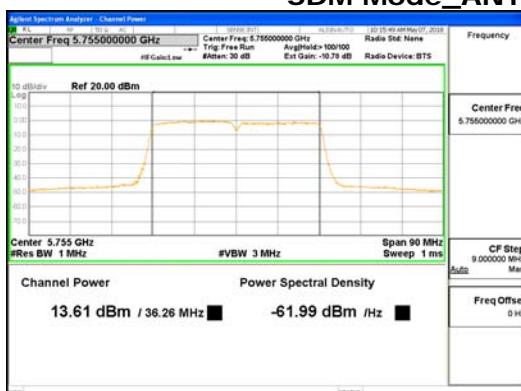
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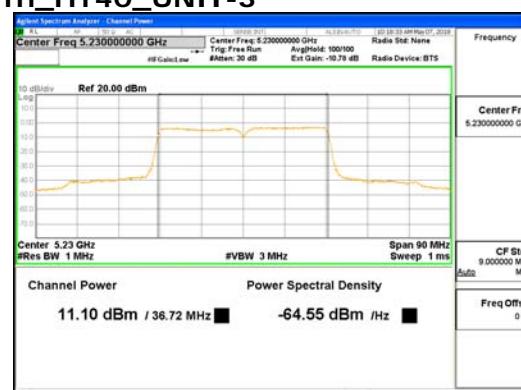
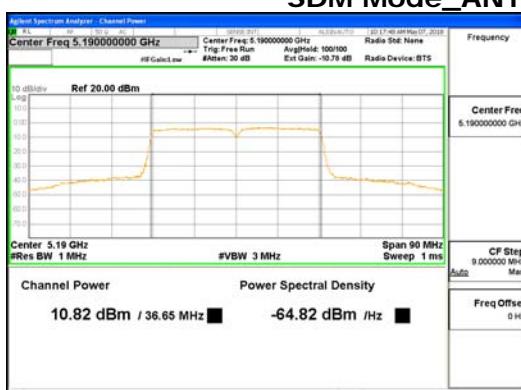
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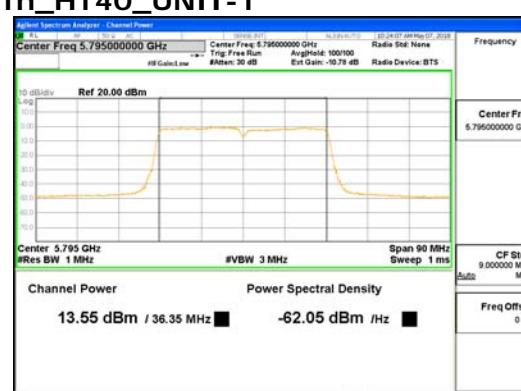
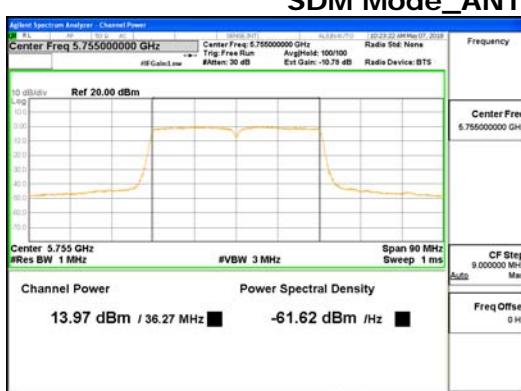
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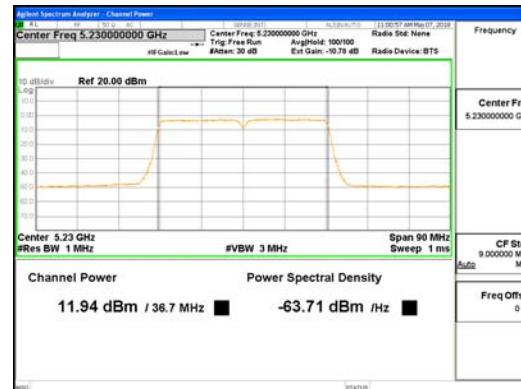
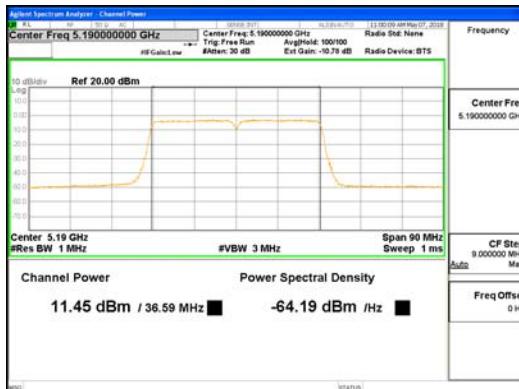


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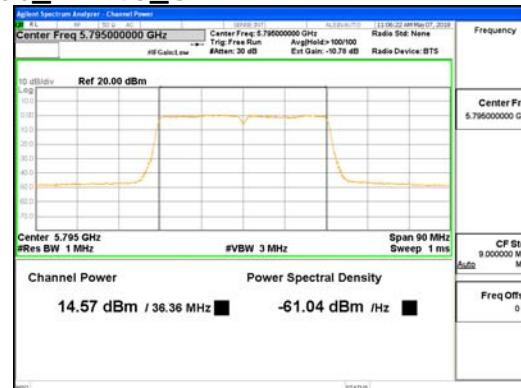
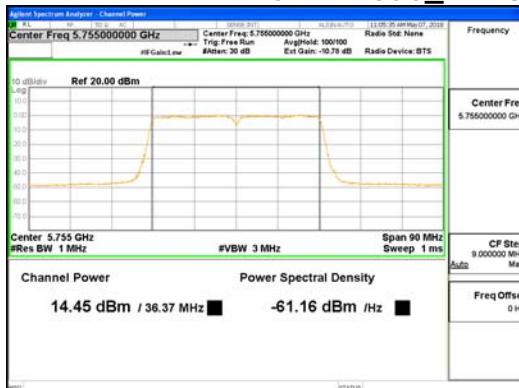
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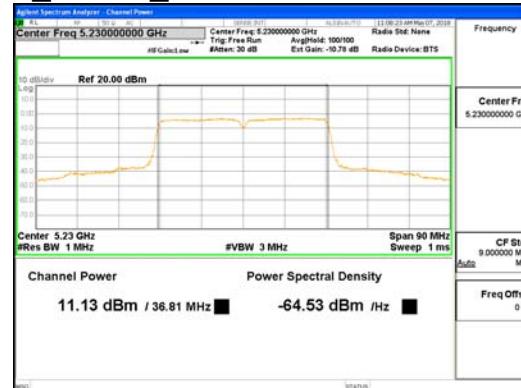
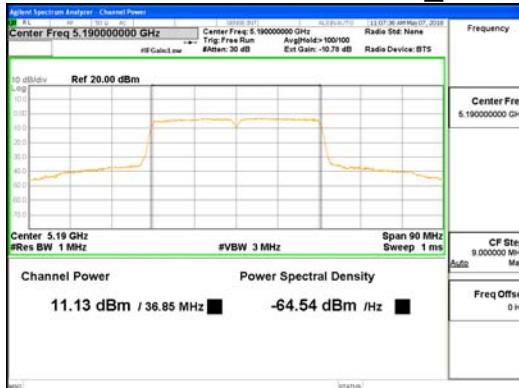
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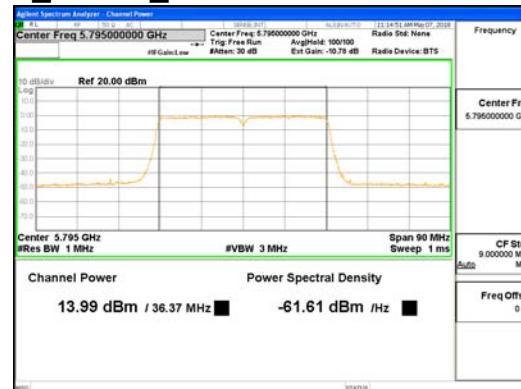
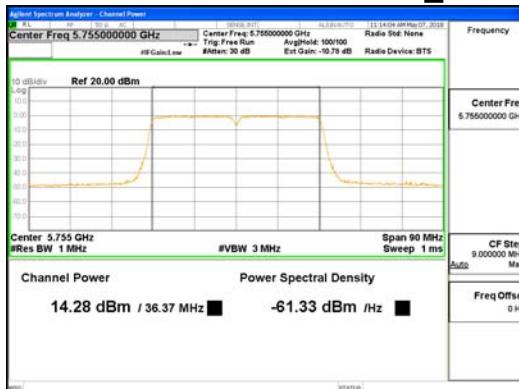
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SDM Mode_ANT1_802.11ac_VHT40_UNII-1



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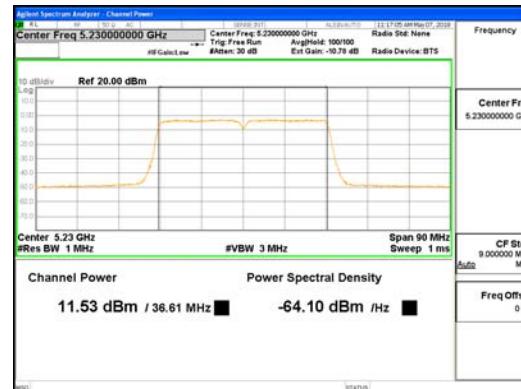
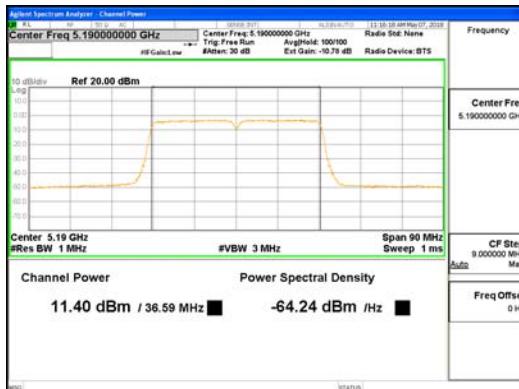


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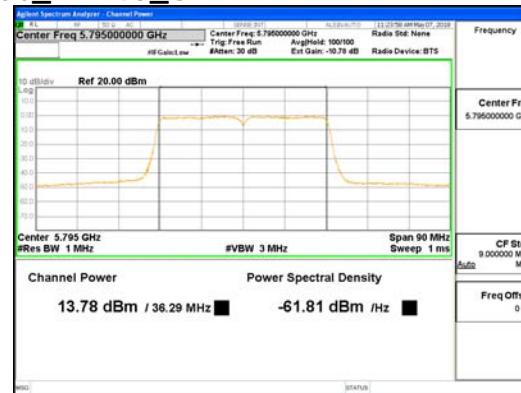
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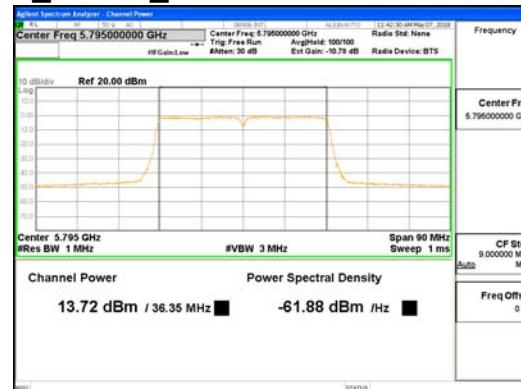
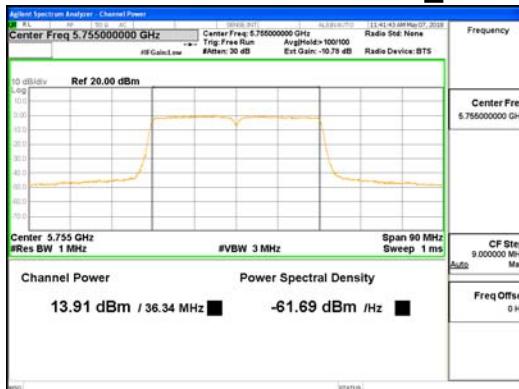
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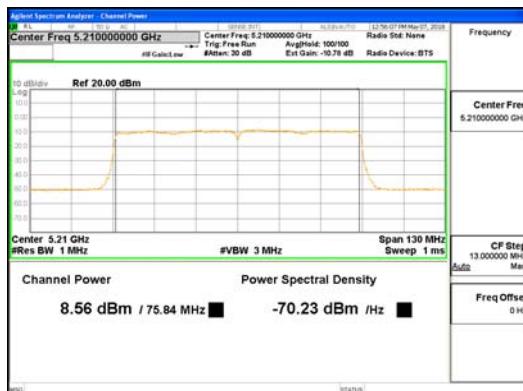


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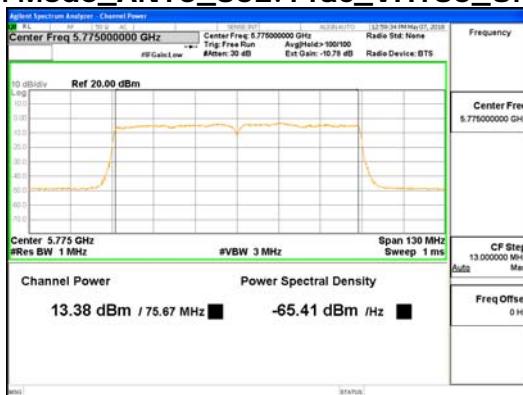
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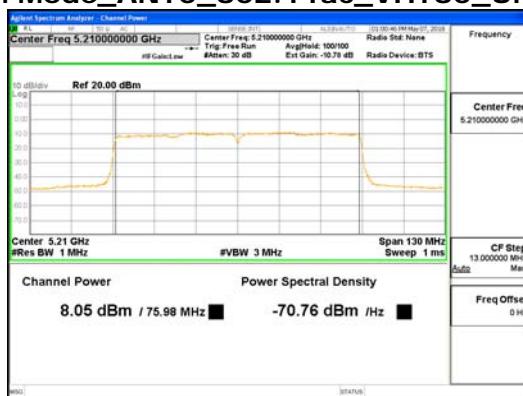
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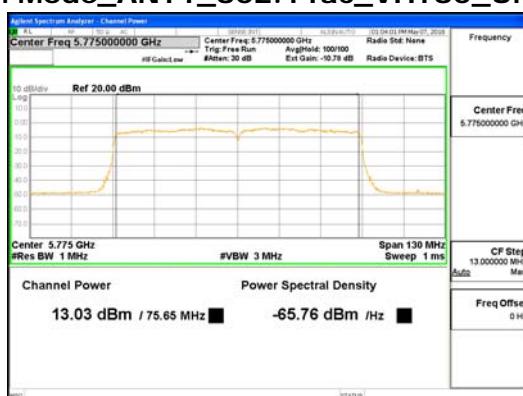
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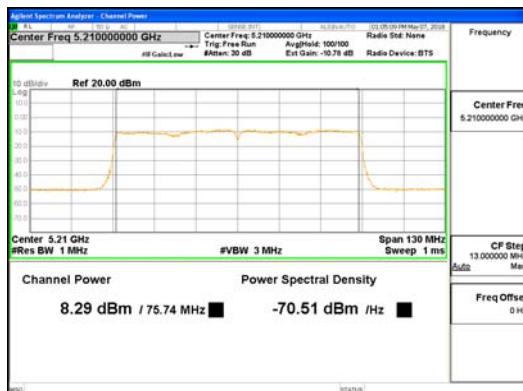
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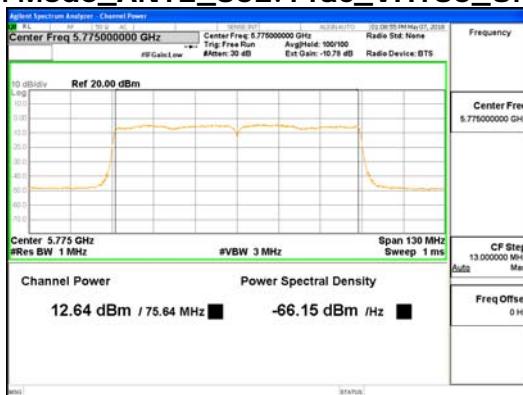
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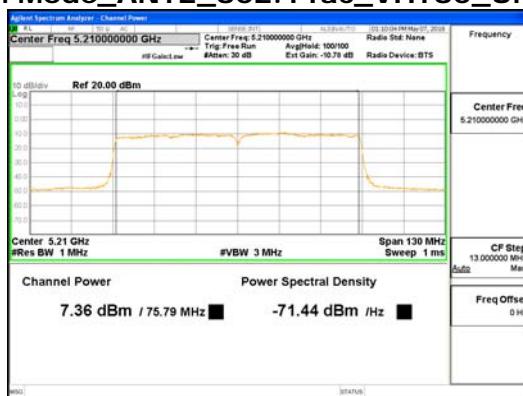
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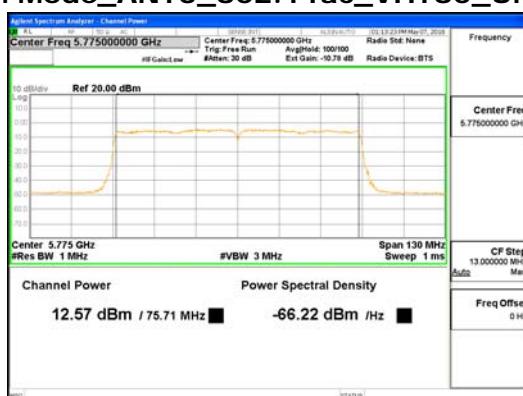
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