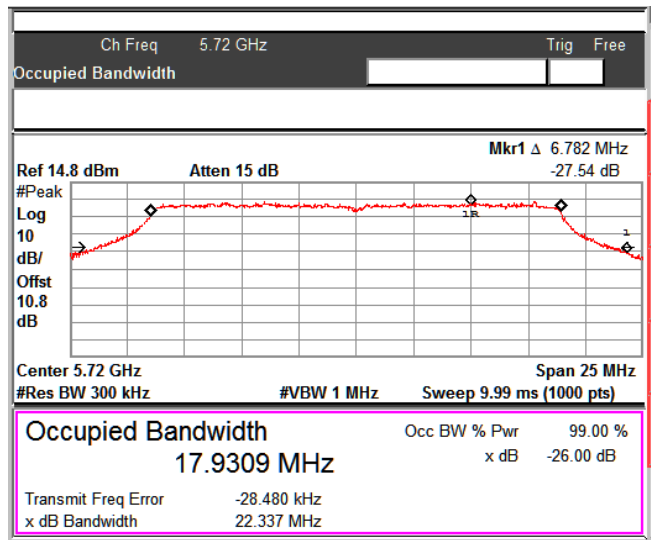
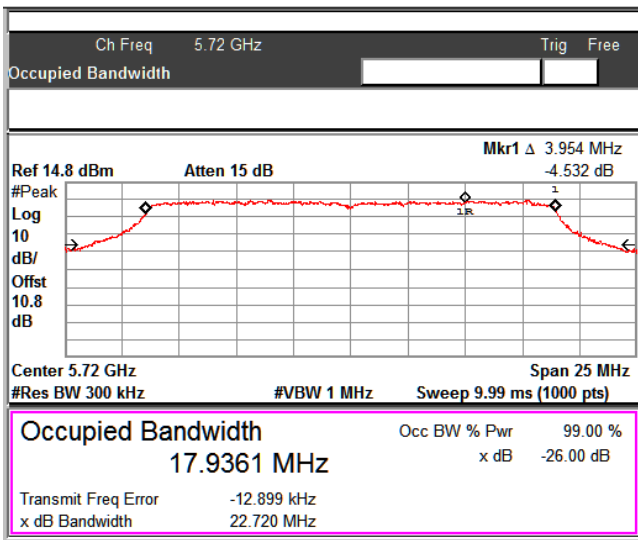
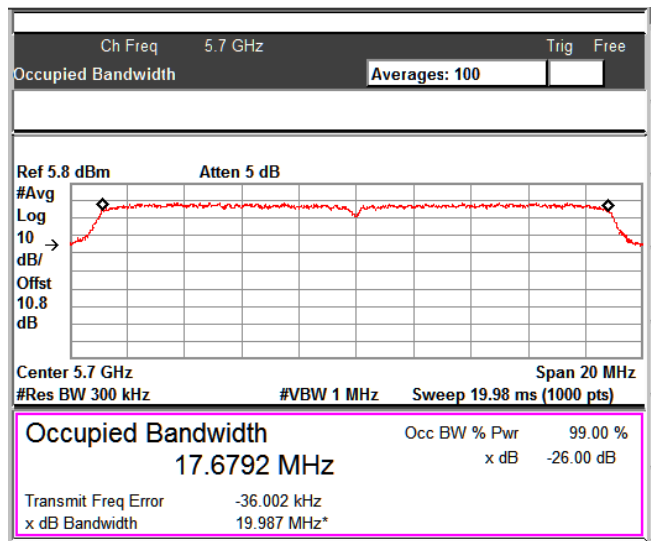
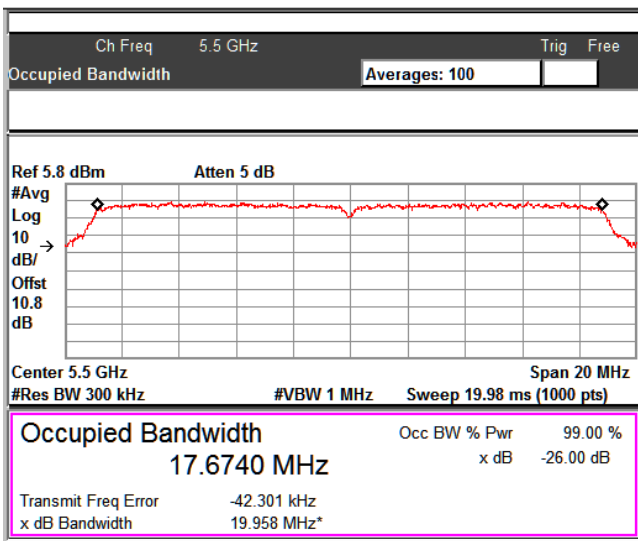


**Data Rate MCS8**



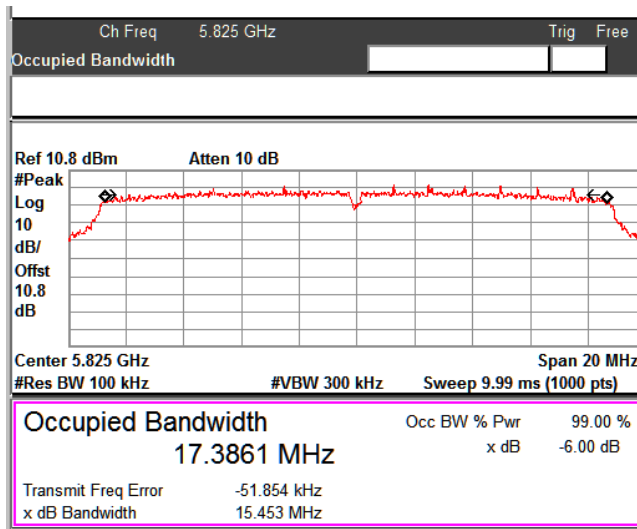
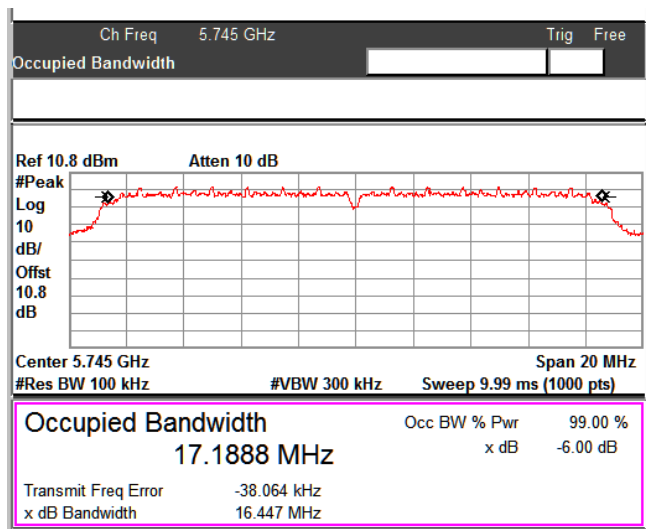
**99% Bnadwidth**

**26dB Bandwidth**

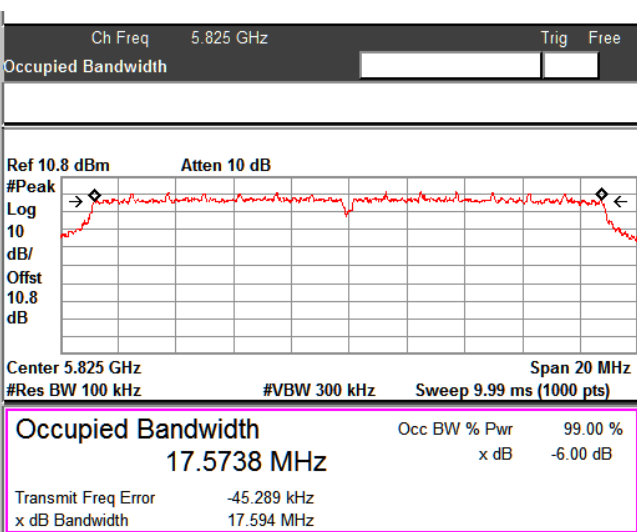
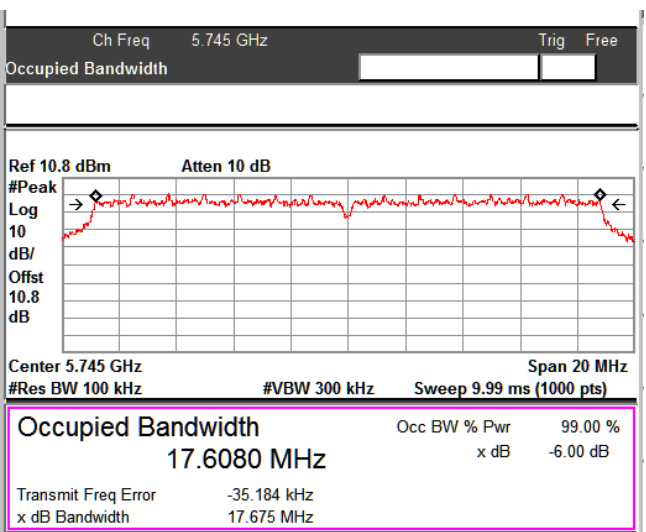
**Modulation: 802.11ac-VHT20MHz: UNII 3**

Data rate (Mbps)	Measured Frequency (MHz)	6 dB emission bandwidth (MHz)	Minimum Limit (MHz)
MCS0	5745	16.45	0.5
	5825	15.45	0.5
MCS8	5745	17.67	0.5
	5825	17.59	0.5

**Data Rate: MCS 0**

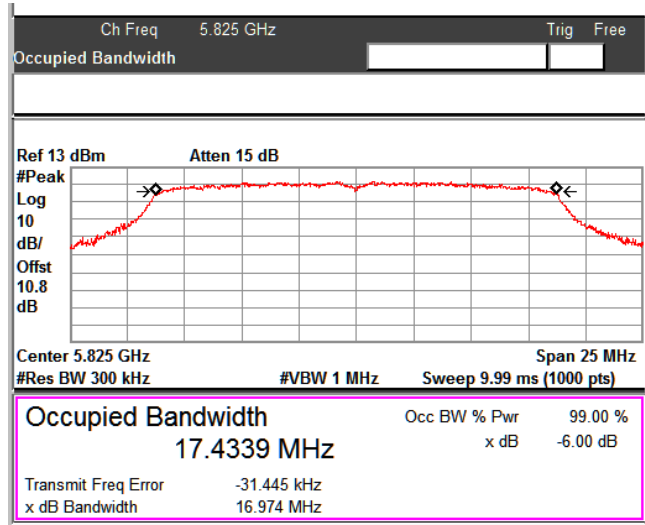
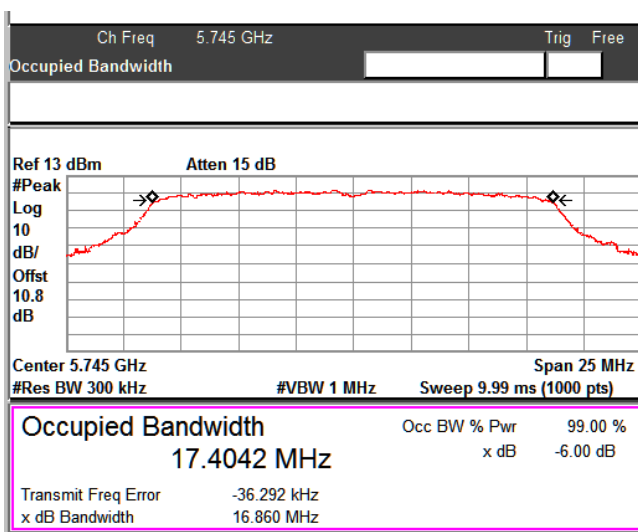


**Data Rate: MCS 8**

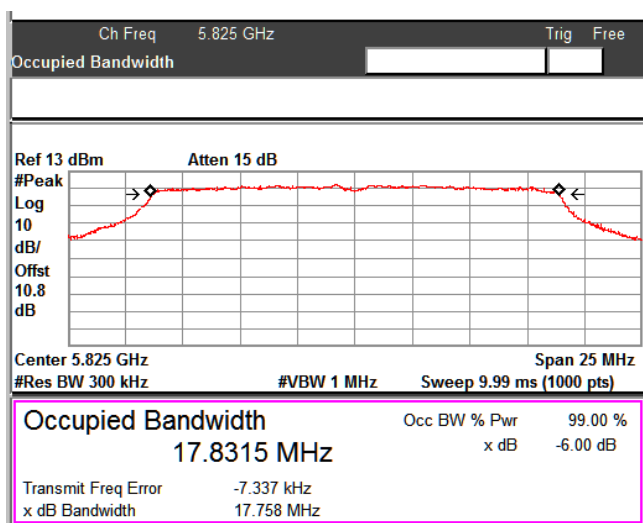
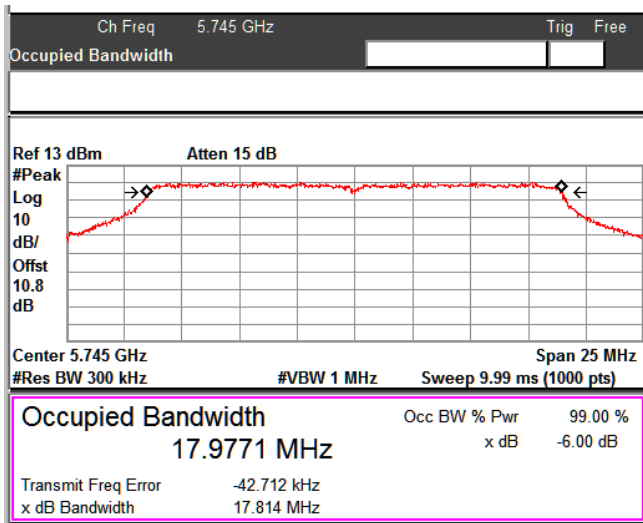


Data rate (Mbps)	Measured Frequency (MHz)	99% Occupied Bandwidth (MHz)
MCS0	5745	17.40
	5825	17.43
MCS8	5745	17.98
	5825	17.83

**Data Rate: MCS 0**



**Data Rate: MCS 8**



**Prüfbericht - Nr.:**  
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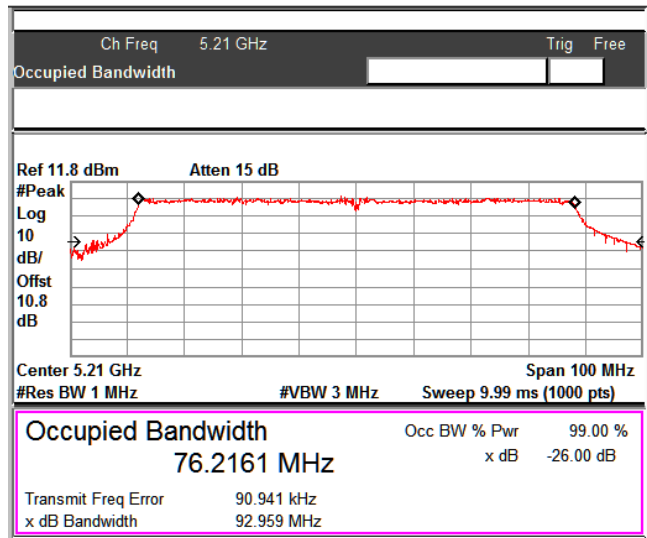
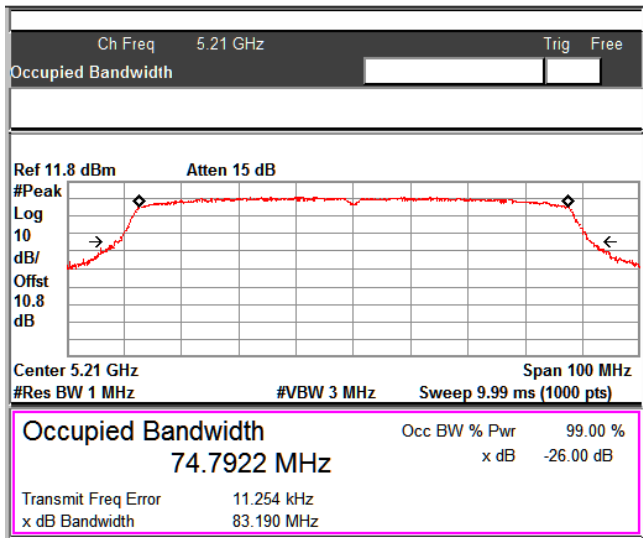
**ULR-TC56882130000034F**

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**Modulation: 802.11ac-VHT80MHz: UNII 1**

Data rate (Mbps)	Measured Frequency (MHz)	26 dB emission bandwidth (MHz)	99% Occupied Bandwidth (MHz)
MCS0	5210	83.19	74.79
MCS9	5210	92.95	76.21

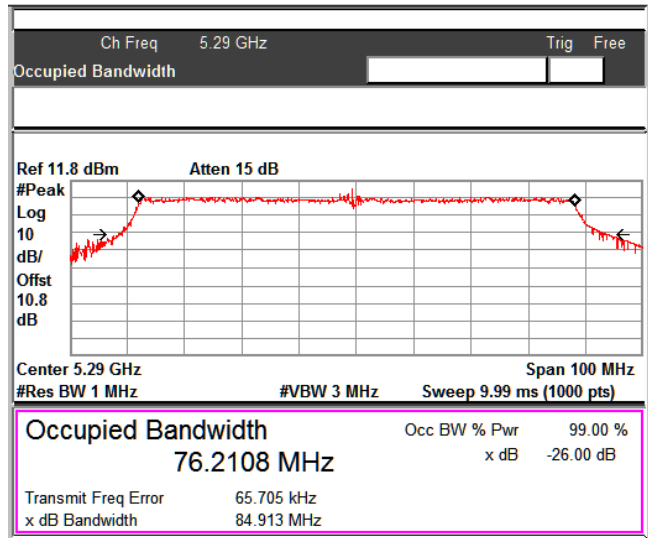
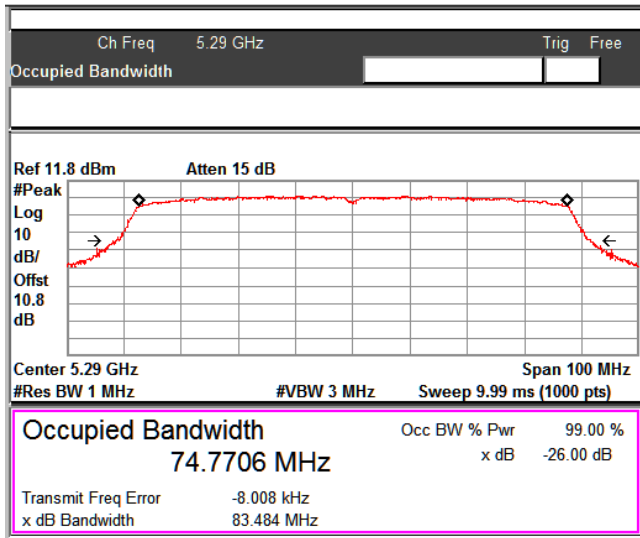
**Data Rate: MCS 0 & MCS9**



**Modulation: 802.11ac-VHT80MHz: UNII 2a**

Data rate (Mbps)	Measured Frequency (MHz)	26 dB emission bandwidth (MHz)	99% Occupied Bandwidth (MHz)
MCS0	5290	83.84	74.77
MCS9	5290	84.91	76.21

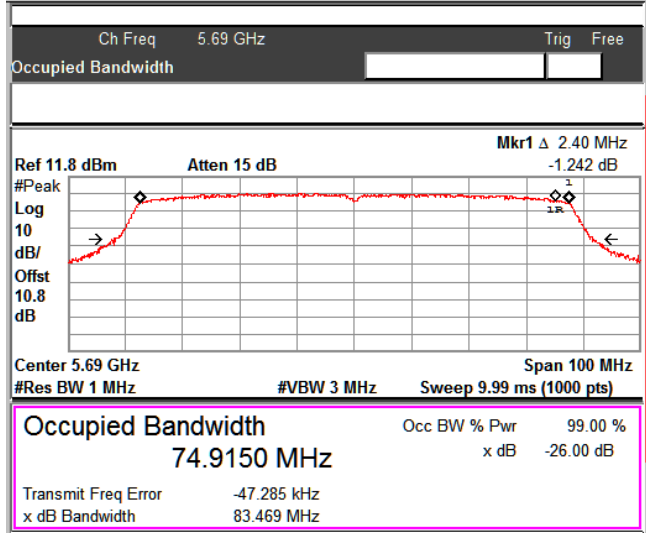
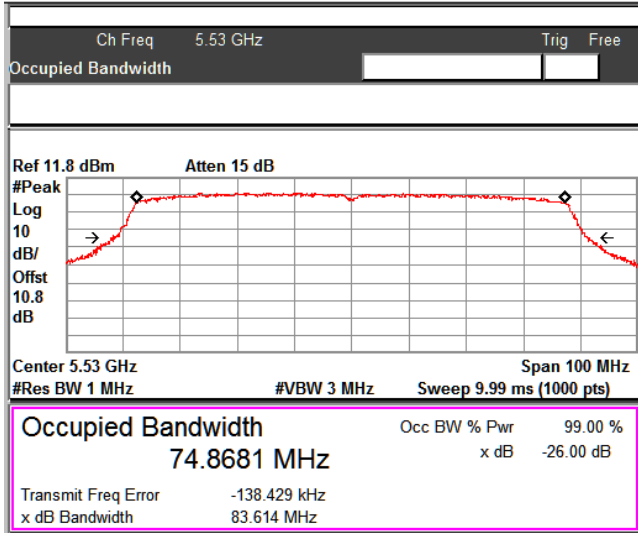
**Data Rate: MCS 0 & MCS9**



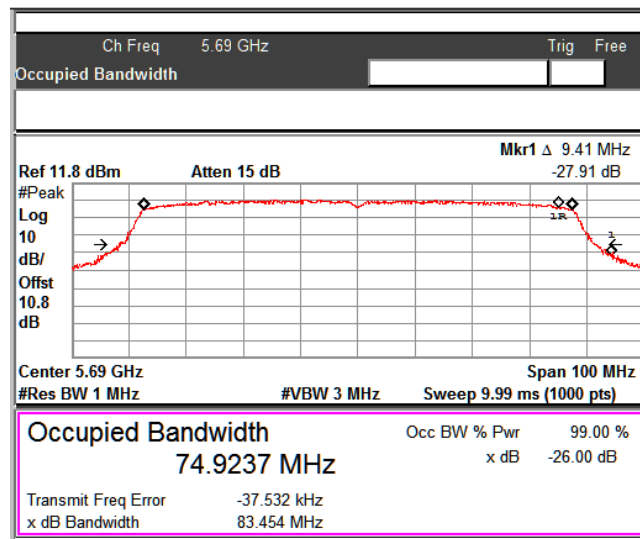
**Modulation: 802.11ac-VHT80MHz: UNII 2c**

Data rate (Mbps)	Measured Frequency (MHz)	26 dB emission bandwidth (MHz)	99% Occupied Bandwidth (MHz)
MCS0	5530	83.61	74.86
	5690	83.45 74.04-UNII 2C 9.41- UNII 3	74.91 72.51 - UNII 2C 2.40 - UNII 3
MCS9	5530	86.76	76.18
	5690	87.43 75.82 -UNII 2C 11.61- UNII 3	76.25 73.15 - UNII 2C 3.10 - UNII 3

**Data Rate: MCS 0**

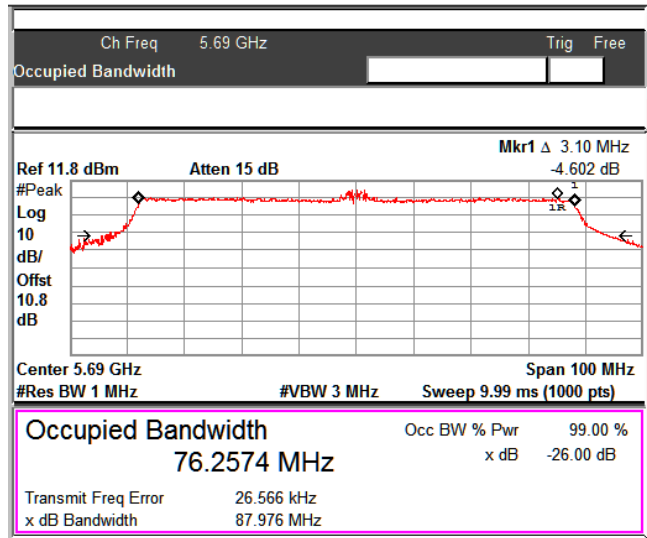
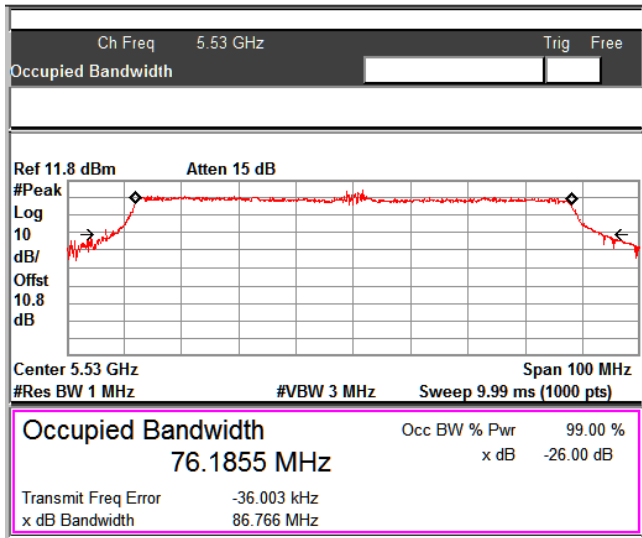


**99% Bandwidth**

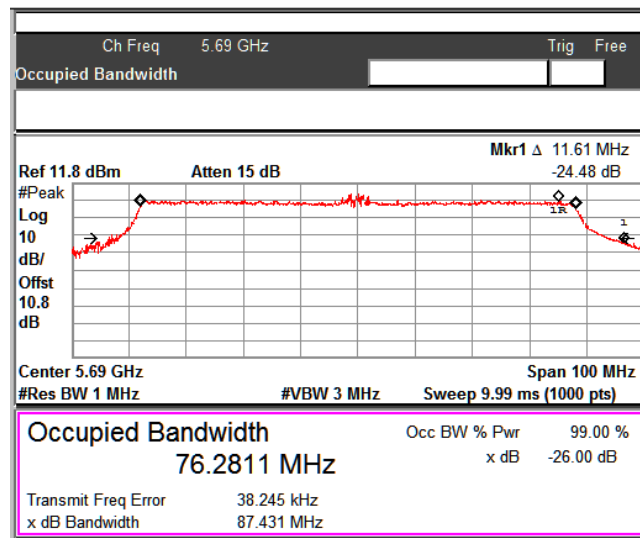


**26dB Bandwidth**

**Data Rate: MCS 9**



**99% Bandwidth**

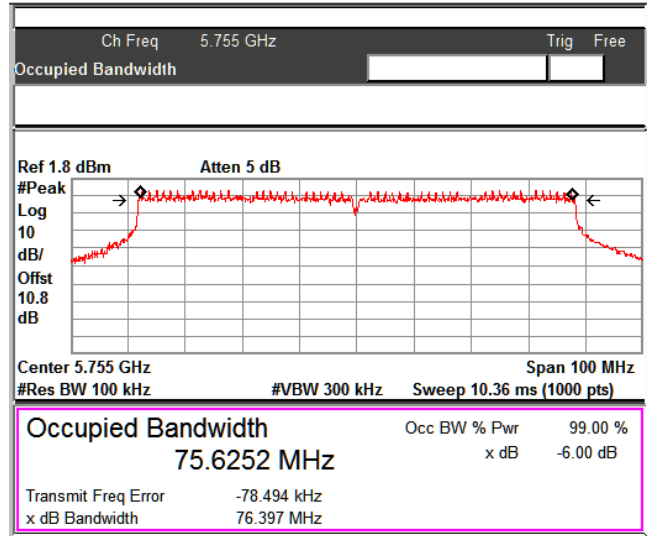
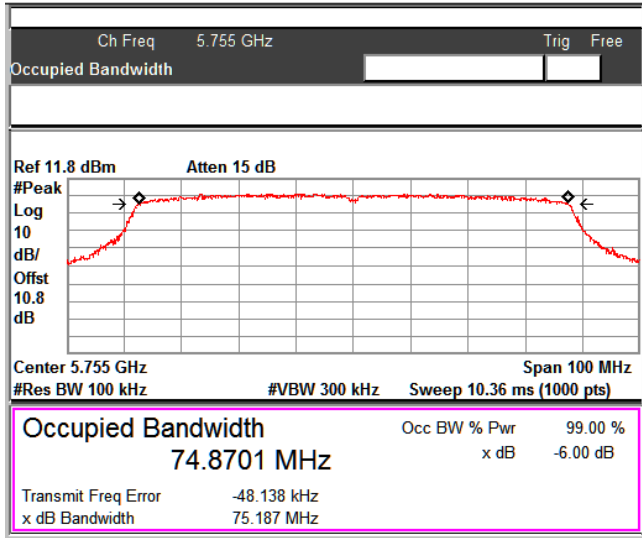


**26dB Bandwidth**

**Modulation: 802.11ac-VHT80MHz: UNII 3**

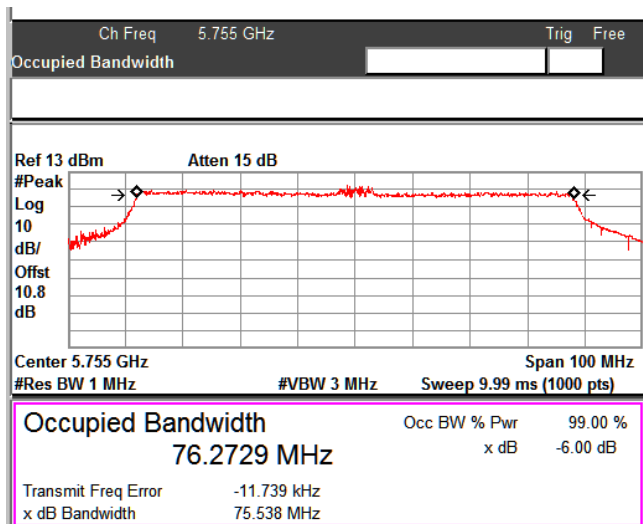
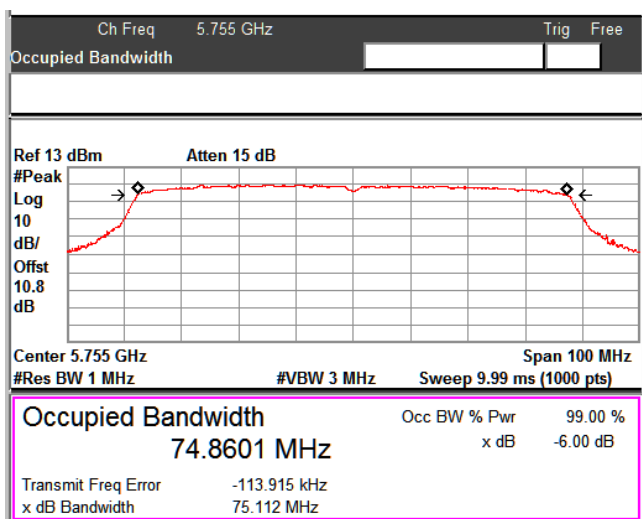
Data rate (Mbps)	Measured Frequency (MHz)	6 dB emission bandwidth (MHz)	Minimum Limit (MHz)
MCS0	5755	75.18	0.5
MCS9	5755	76.39	0.5

**Data Rate: MCS 0 & MCS9**



Data rate (Mbps)	Measured Frequency (MHz)	99% Occupied Bandwidth (MHz)
MCS0	5755	74.86
MCS9	5755	76.27

**Data Rate: MCS 0 & MCS9**





## 8.2 Maximum Conducted Output Power

**Result**

**Pass**

Test Specification

FCC part 15 Subpart C 15.407 (a) / RSS 247 Issue 2  
Section 6.2.1; 6.2.2; 6.2.3; & Section 6.2.4

Test Method

Subclause 12.3.2.4 of ANSI C63.10

Measurement Bandwidth

Refer the remarks below

Detector

Average sample detector mode

Port of testing

Antenna port

Requirement for FCC

1. For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW

2. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or  $11 \text{ dBm} + 10 \log B$ , where B is the 26 dB emission bandwidth in megahertz

3. For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W

Requirement for IC

1. For the band 5.15-5.25 GHz, the maximum e.i.r.p. shall not exceed 200 mW or  $10 + 10 \log_{10}(B)$ , dBm, whichever power is less. B is the 99% emission bandwidth in megahertz

2a. For the band 5.250 -5.350 GHz, the maximum conducted output power shall not exceed 250 mW or  $11 + 10 \log_{10}B$ , dBm, whichever is less

2b. For the band 5.250 -5.350 GHz, the maximum e.i.r.p. shall not exceed 1.0 W or  $17 + 10 \log_{10}B$ , dBm, whichever is less. B is the 99% emission bandwidth in megahertz

3a. For the band 5.470-5.725GHz, The maximum conducted output power shall not exceed 250 mW or  $11 + 10 \log_{10}B$ , dBm, whichever is less

3b. For the band 5.470-5.725GHz, The maximum e.i.r.p. shall not exceed 1.0 W or  $17 + 10 \log_{10}B$ , dBm, whichever is less. B is the 99% emission bandwidth in megahertz

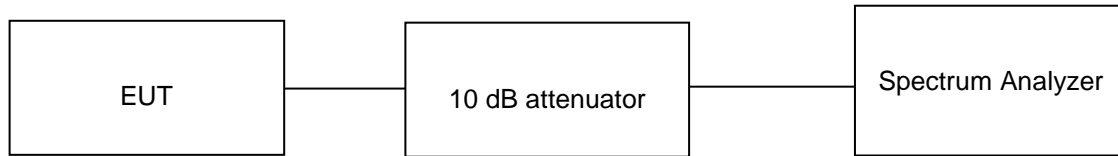
4. For the band 5.725-5.85 GHz, The maximum conducted output power shall not exceed 1 W

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**Test Method**



**The following procedure shall be used (trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction):**

1. Set center frequency to the nominal EUT channel center frequency
2. Set span to encompass the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
3. Set RBW = 1MHz
4. Set VBW  $\geq 3 \times$  RBW
5. Number of points in sweep  $\geq 2 \times$  span / RBW. (This ensures that bin-to-bin spacing is  $\leq$  RBW/2, so that narrowband signals are not lost between frequency bins.)
6. Sweep time = auto
7. Detector = power averaging (rms), if available. Otherwise, use sample detector mode
8. Do not use sweep triggering. Allow the sweep to “free run.”
9. Trace average at least 100 traces and Compute power by integrating the spectrum across the EBW
10. Add  $10 \log (1/x)$ , where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission)

**Test Condition:**

**Normal Test Condition:**

Temperature (Norm) = + 25 °C      Voltage = 5.0 V DC      Relative humidity: 62 %

**KDB Guidelines applied:**

Measurements were made as per section E (2) sub-section (d) in KDB 789033 D02 General UNII Test Procedures New Rules v02r01

**Test results:**

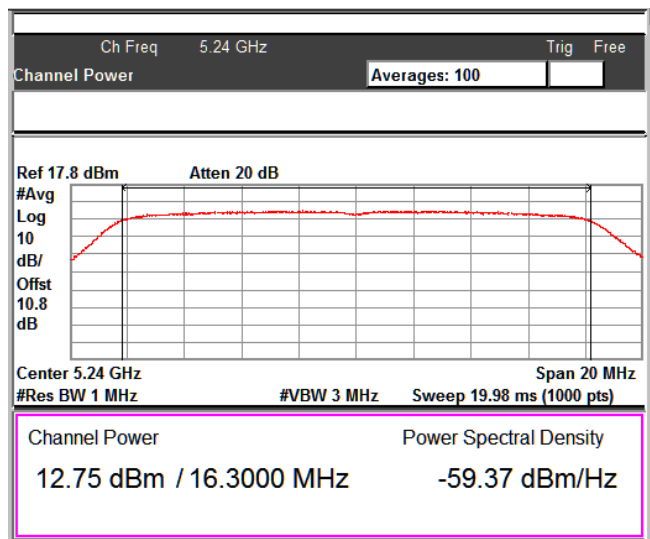
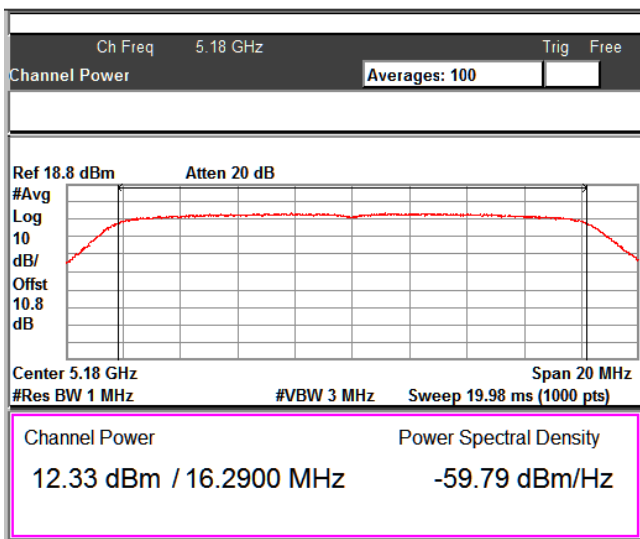
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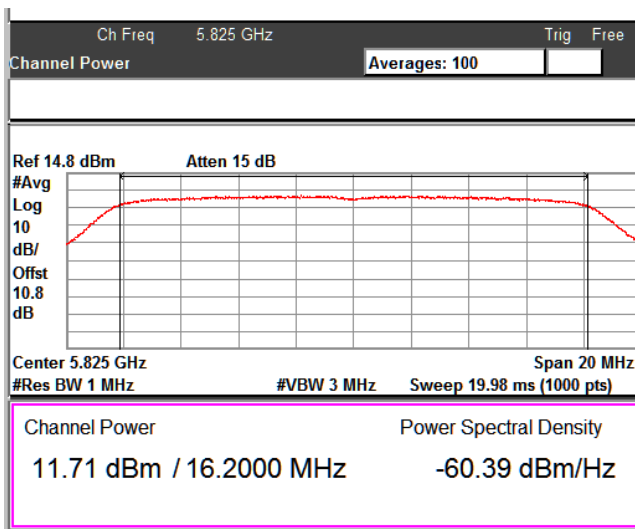
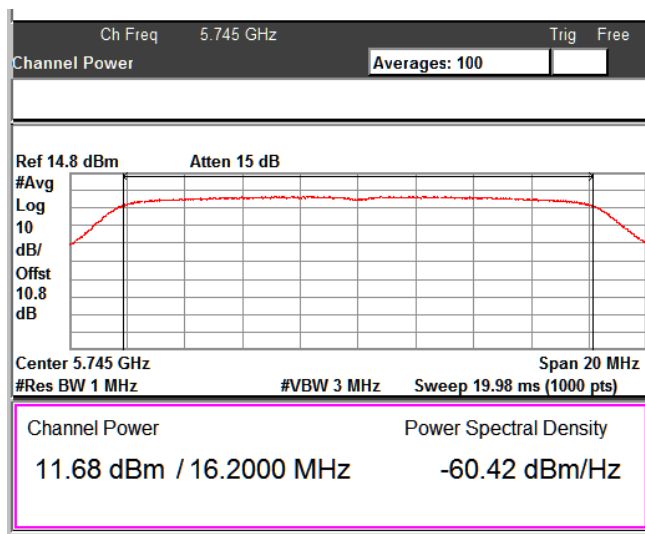
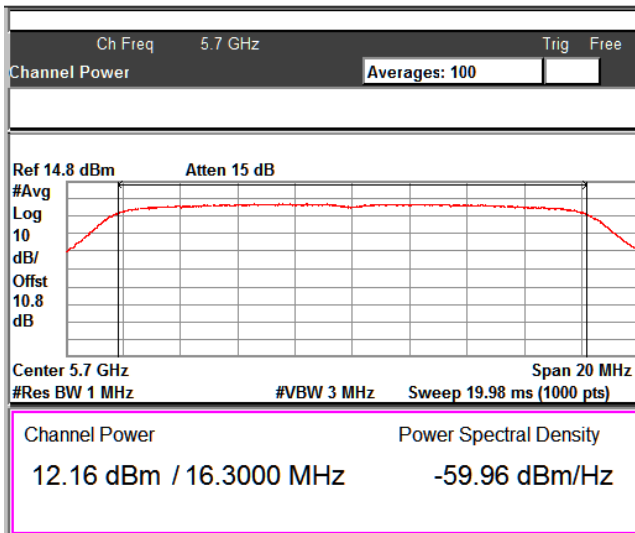
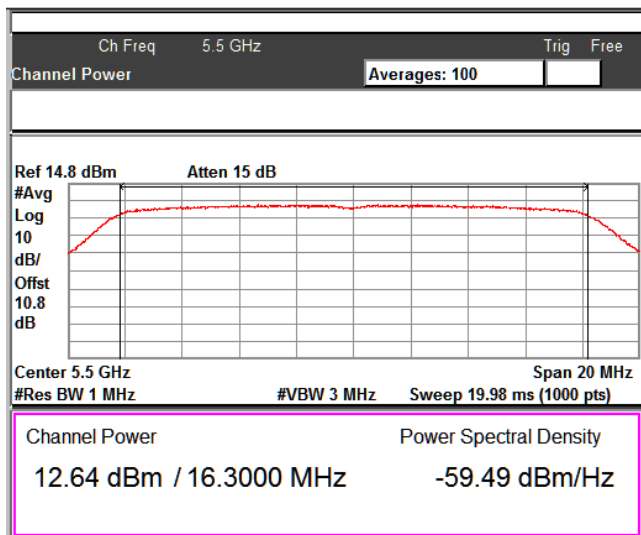
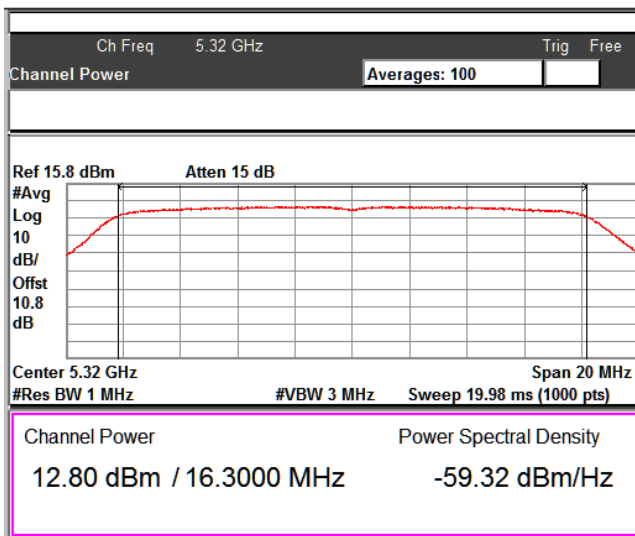
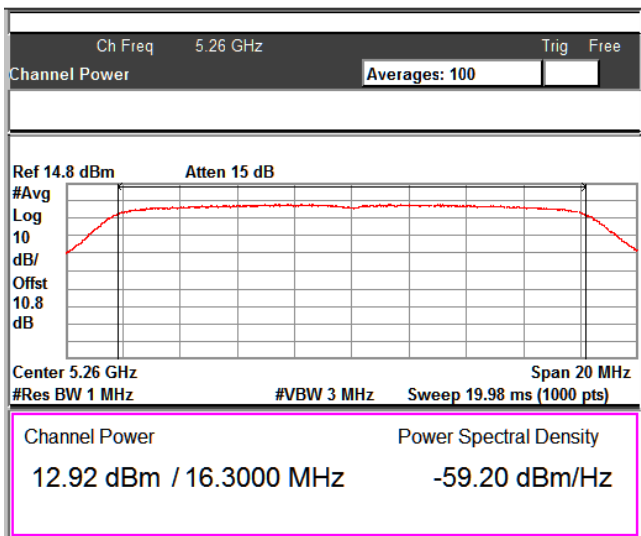
1. All the losses are included during measurement and final values are mentioned in the test report  
10 dB attenuator + 0.8 dB Cable loss = 10.8 dB total offset
2. Duty cycle correction factor is considered in Final Average power  
Duty cycle Correction factor =  $10 \cdot \text{LOG} (1/X)$  Where X is Duty Cycle
3. This product do not support additional beamforming gain / directional gain, it uses signal antenna and hence directional gain of the single antenna is (3.37 dBi)
4. e.i.r.p = Maximum Average output power (dBm) + Antenna gain in dBi

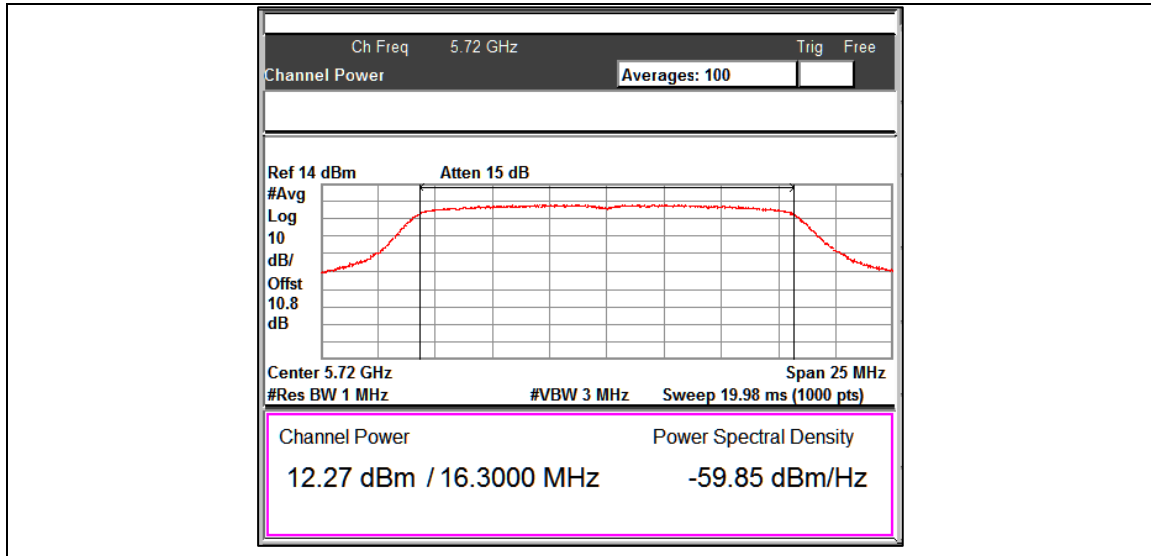
**Modulation: 802.11a**

Data rate (Mbps)	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)
a_mode-6Mbps	5180	12.33	95.00	0.22	12.55	15.92	24.00	-	22.11
	5240	12.75	95.00	0.22	12.97	16.34	24.00	-	22.11
	5260	12.92	95.00	0.22	13.14	16.51	24.00	23.12	29.12
	5320	12.80	95.00	0.22	13.02	16.39	24.00	23.12	29.12
	5500	12.64	95.00	0.22	12.86	16.23	24.00	23.12	29.12
	5700	12.16	95.00	0.22	12.38	15.75	24.00	23.12	29.12
	5720	12.27	95.00	0.22	12.49	15.86	24.00	23.12	29.12
	5745	11.68	95.00	0.22	11.90	15.27	30.00	30.00	-
	5825	11.71	95.00	0.22	11.93	15.30	30.00	30.00	-
a_mode-54Mbps	5180	11.61	57.00	2.44	14.05	17.42	24.00	-	22.50
	5240	11.50	57.00	2.44	13.94	17.31	24.00	-	22.50
	5260	11.22	57.00	2.44	13.66	17.03	24.00	23.25	29.25
	5320	11.99	57.00	2.44	14.43	17.80	24.00	23.25	29.25
	5500	11.43	57.00	2.44	13.87	17.24	24.00	23.25	29.25
	5700	11.50	57.00	2.44	13.94	17.31	24.00	23.25	29.25
	5720	10.90	57.00	2.44	13.34	16.71	24.00	23.25	29.25
	5745	10.36	57.00	2.44	12.80	16.17	30.00	30.00	-
	5825	10.41	57.00	2.44	12.85	16.22	30.00	30.00	-

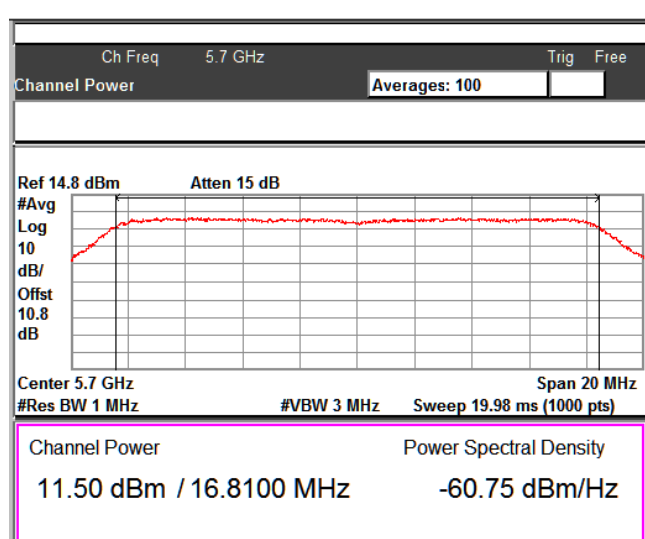
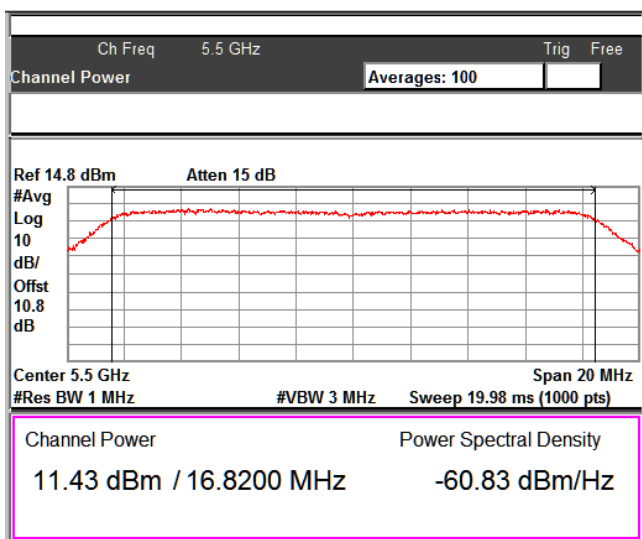
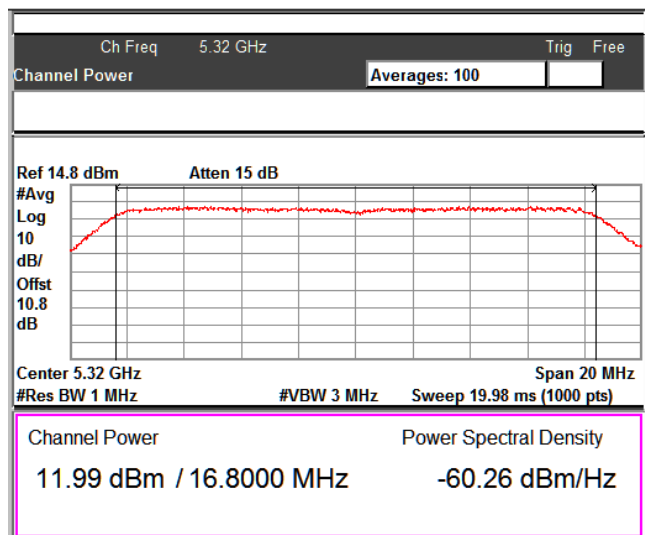
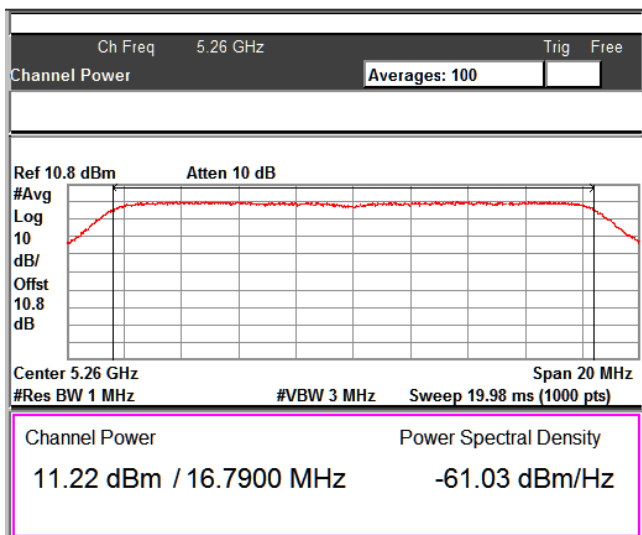
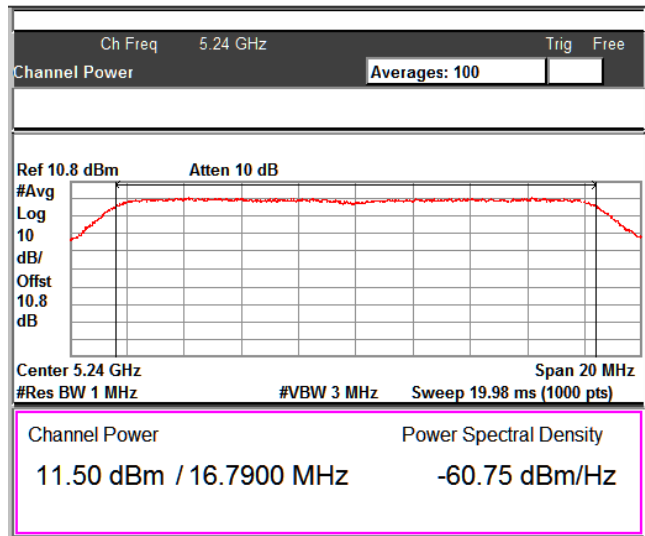
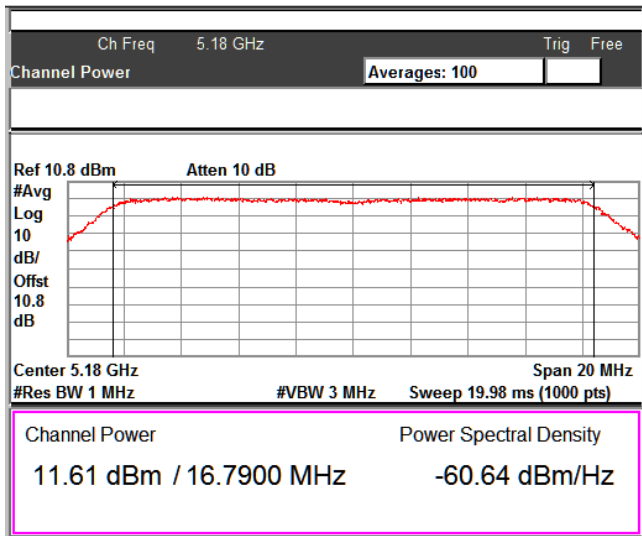
**Data Rate : 6Mbps**

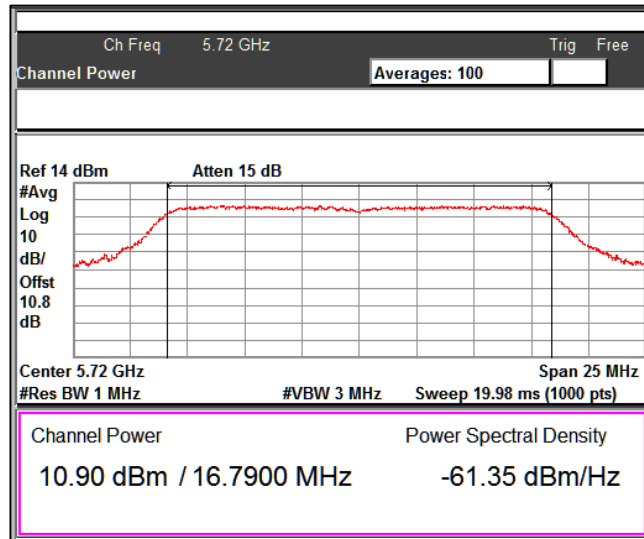
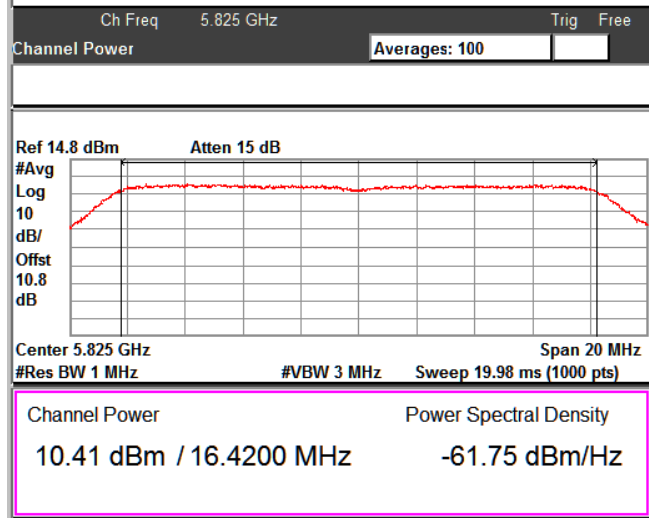
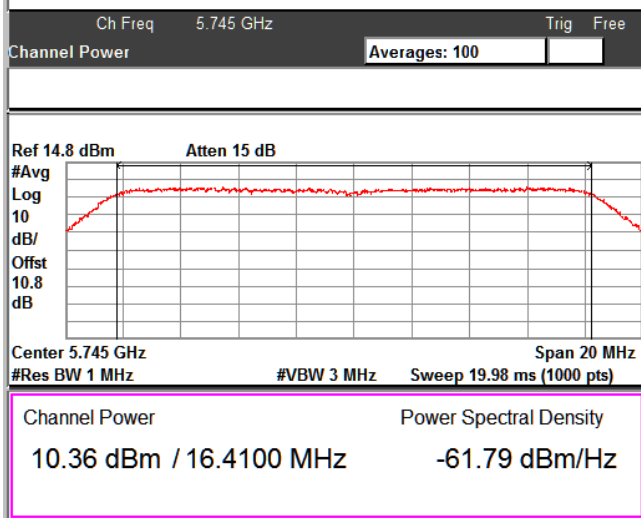






**Data Rate: 54Mbps**





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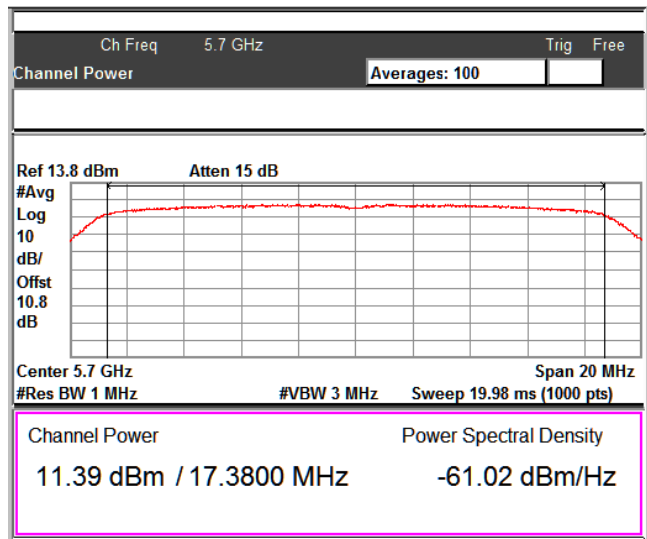
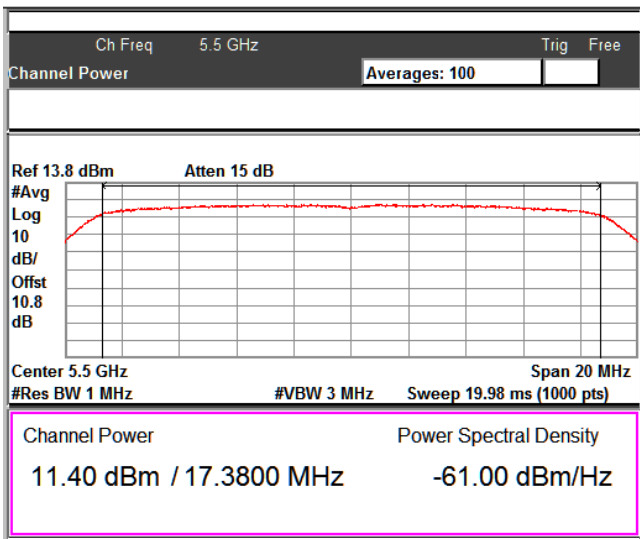
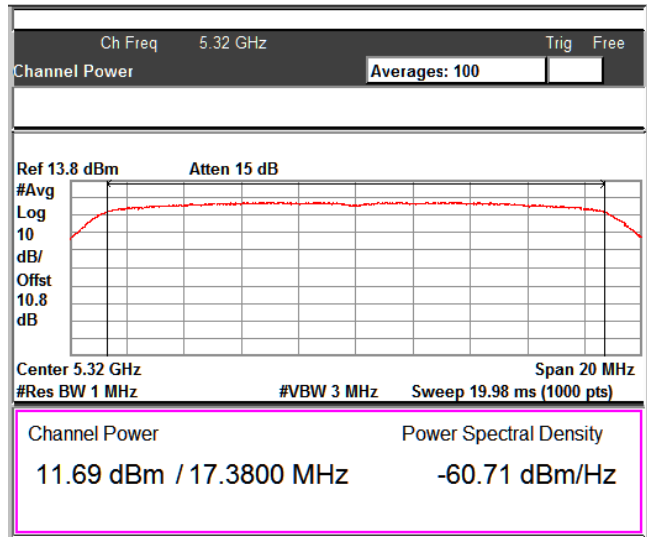
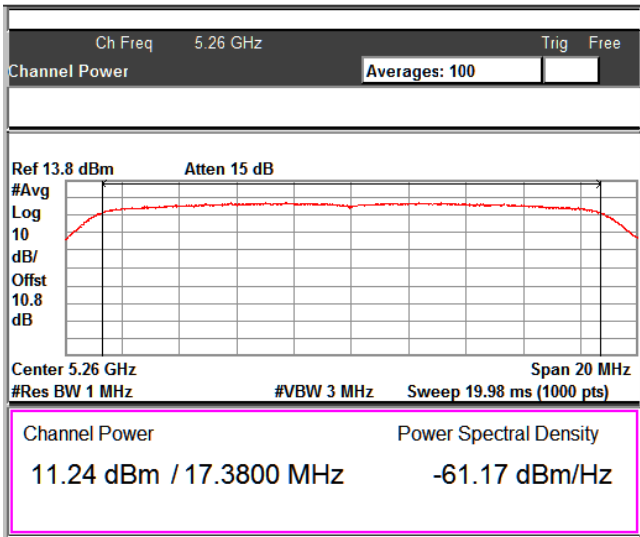
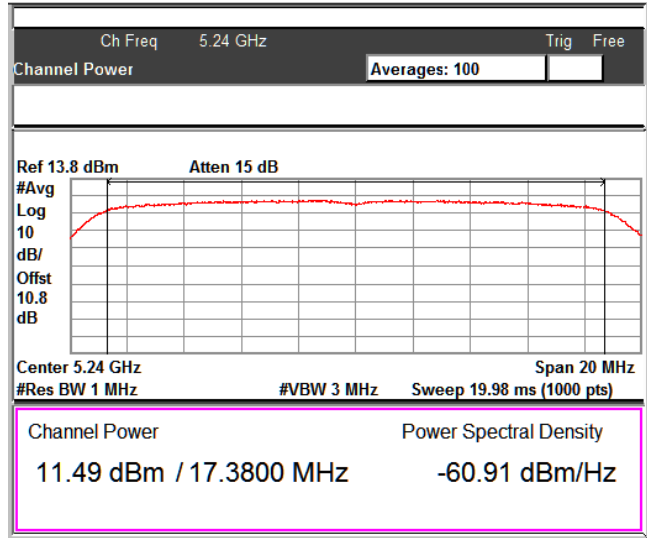
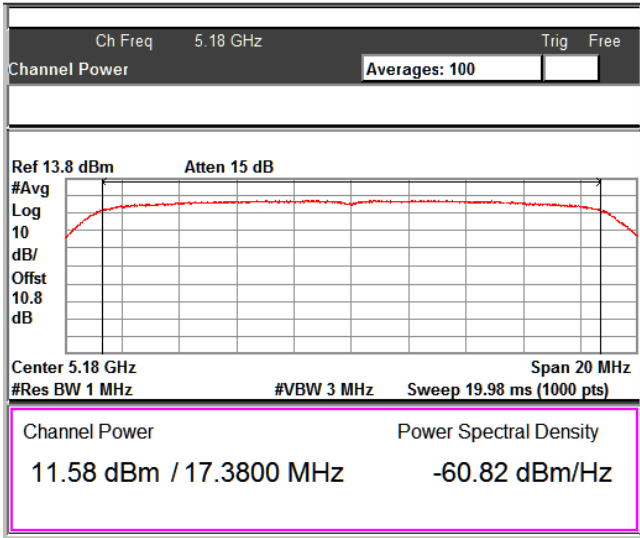
**ULR-TC56882130000034F**

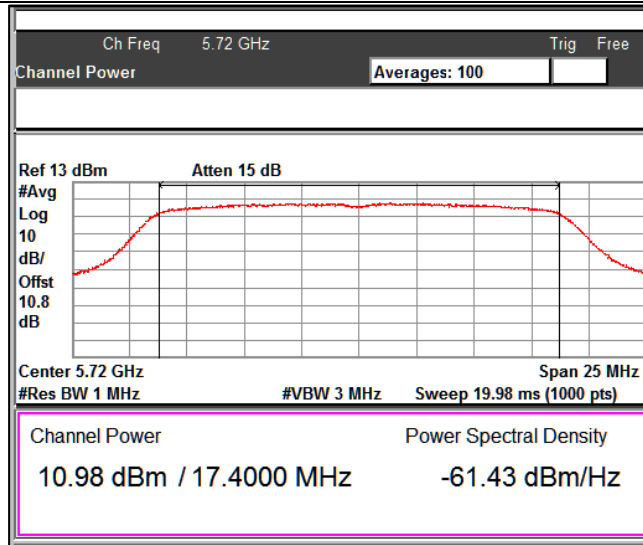
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**Modulation: 802.11n-20MHz**

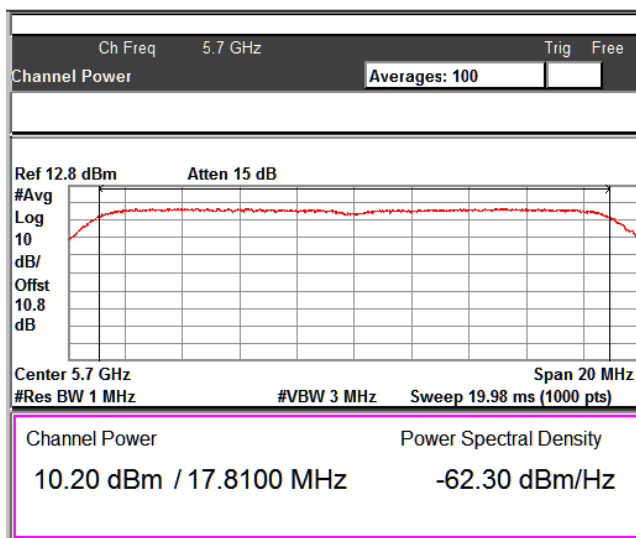
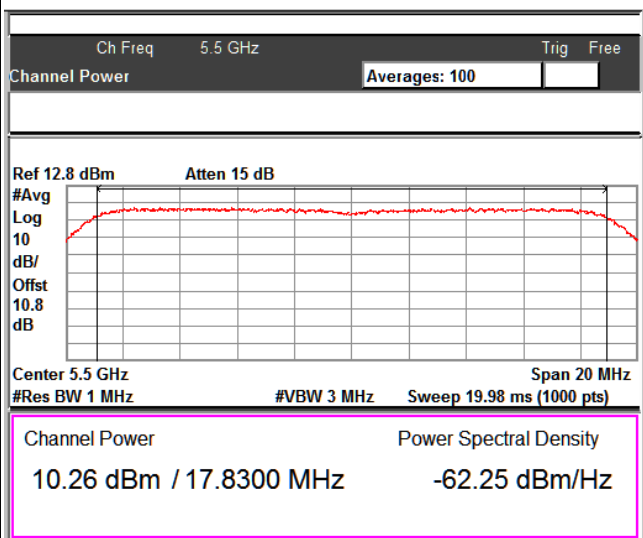
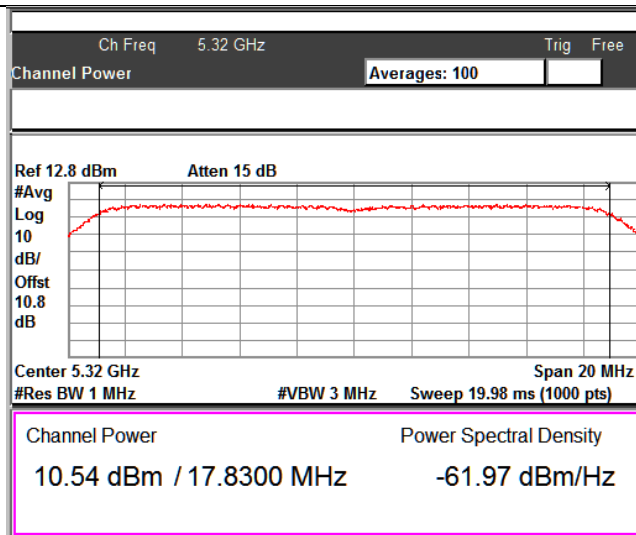
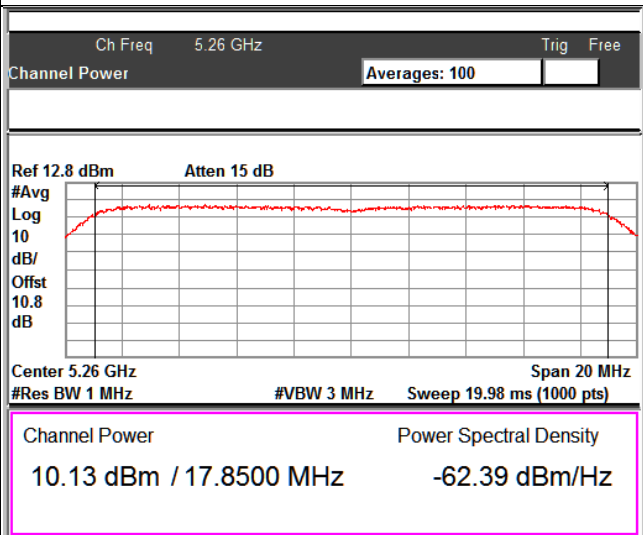
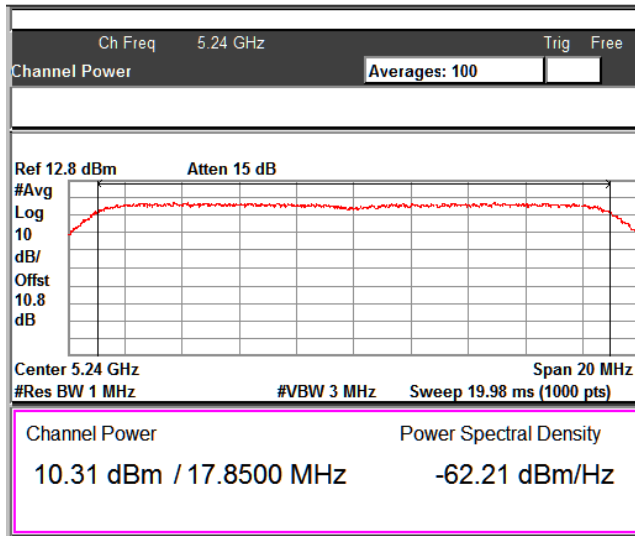
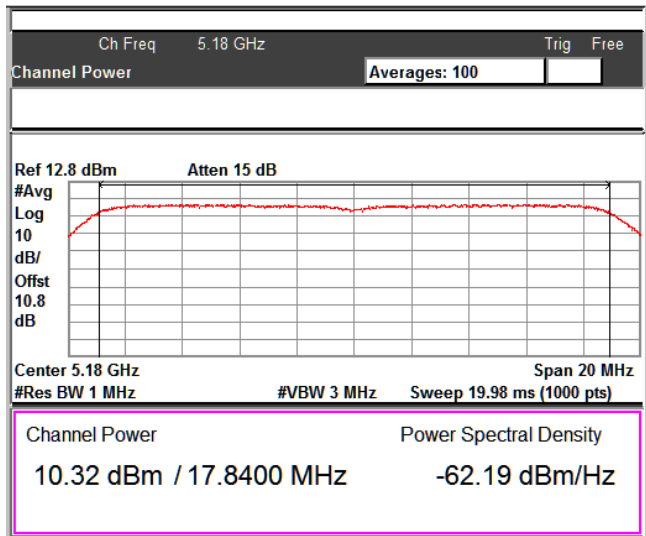
Data rate (Mbps)	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)
n_mode-HT20MHz-MCS0	5180	11.58	92.00	0.36	11.94	15.31	24.00	-	22.51
	5240	11.49	92.00	0.36	11.85	15.22	24.00	-	22.51
	5260	11.24	92.00	0.36	11.60	14.97	24.00	23.51	29.51
	5320	11.69	92.00	0.36	12.05	15.42	24.00	23.51	29.51
	5500	11.40	92.00	0.36	11.76	15.13	24.00	23.40	29.40
	5700	11.39	92.00	0.36	11.75	15.12	24.00	23.40	29.40
	5720	10.98	92.00	0.36	11.34	13.69	24.00	23.40	29.40
	5745	11.51	92.00	0.36	11.87	15.24	30.00	30.00	-
	5825	11.55	92.00	0.36	11.91	15.28	30.00	30.00	-
n_mode-HT20MHz-MCS7	5180	10.32	57.00	2.44	12.76	16.13	24.00	-	22.51
	5240	10.31	57.00	2.44	12.75	16.12	24.00	-	22.51
	5260	10.13	57.00	2.44	12.57	15.94	24.00	23.51	29.51
	5320	10.54	57.00	2.44	12.98	16.35	24.00	23.51	29.51
	5500	10.26	57.00	2.44	12.70	16.07	24.00	23.40	29.40
	5700	10.20	57.00	2.44	12.64	16.01	24.00	23.40	29.40
	5720	9.83	57.00	2.44	12.27	14.62	24.00	23.40	29.40
	5745	10.32	57.00	2.44	12.76	16.13	30.00	30.00	-
	5825	10.38	57.00	2.44	12.82	16.19	30.00	30.00	-

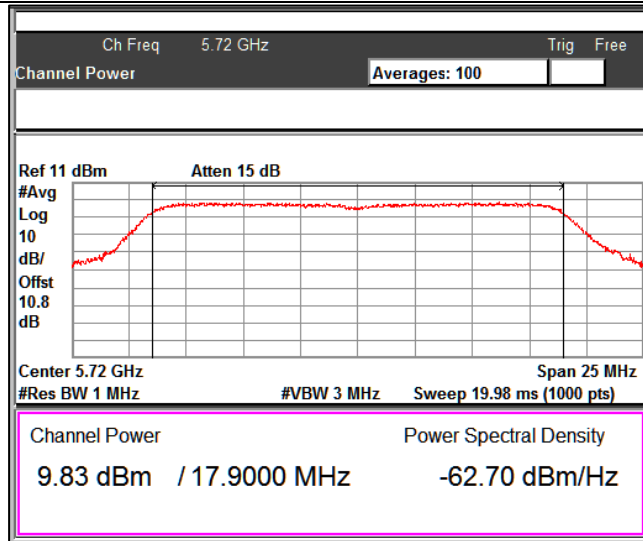


**MCS0**




MCS 7

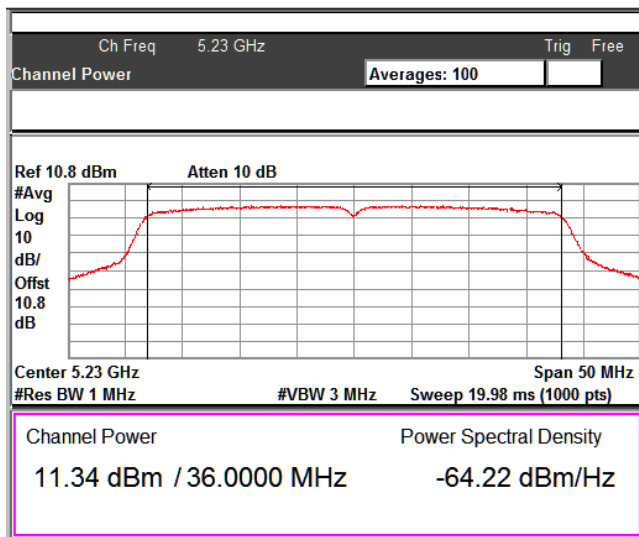
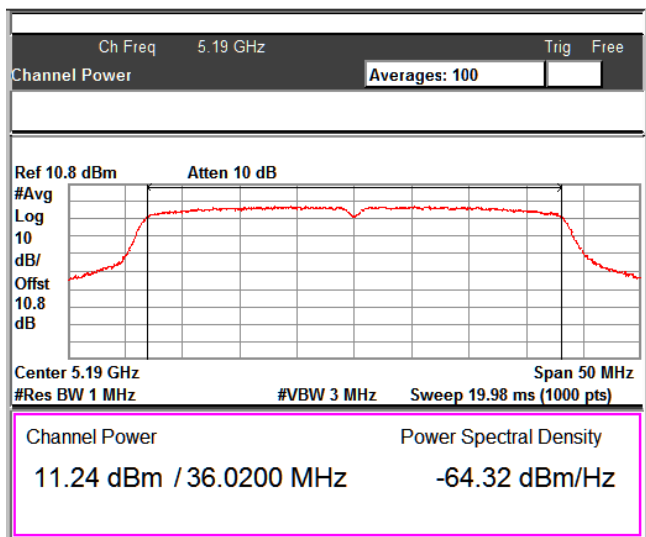


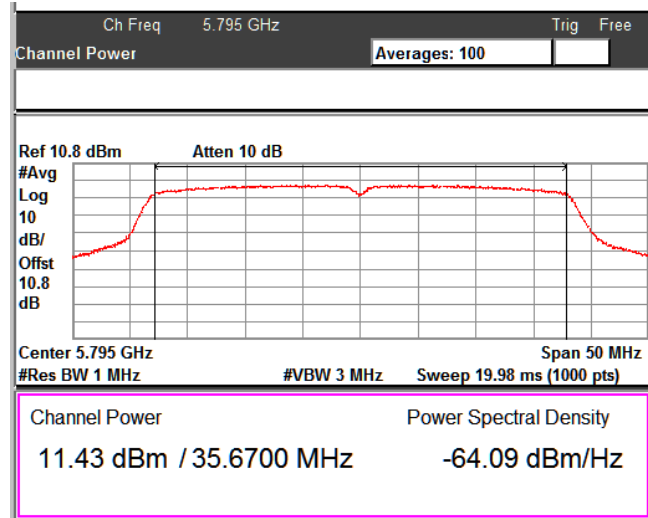
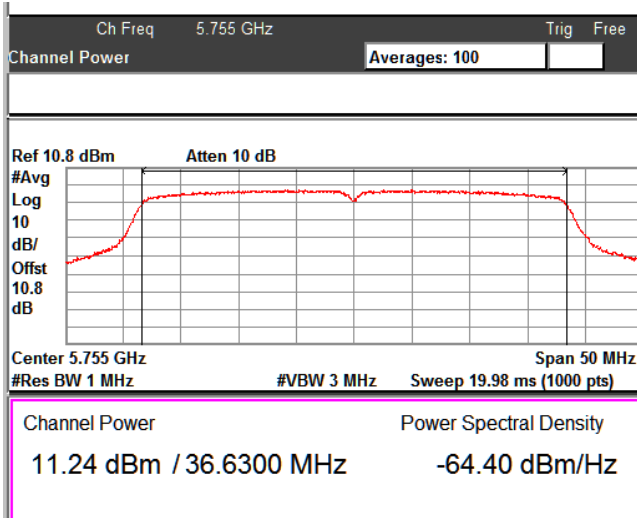
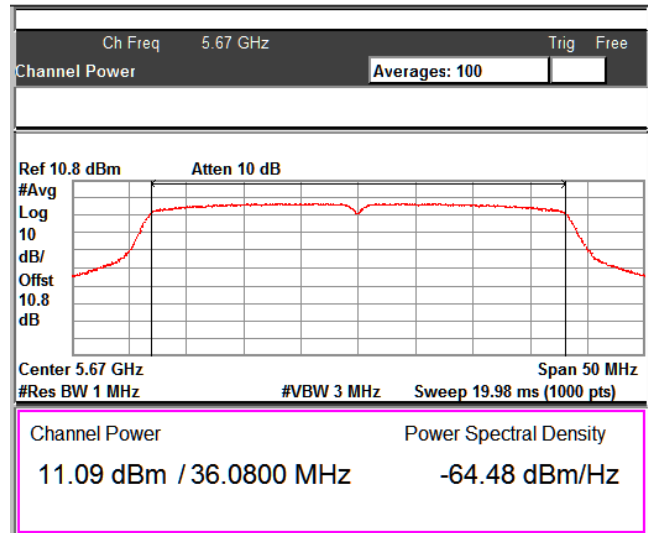
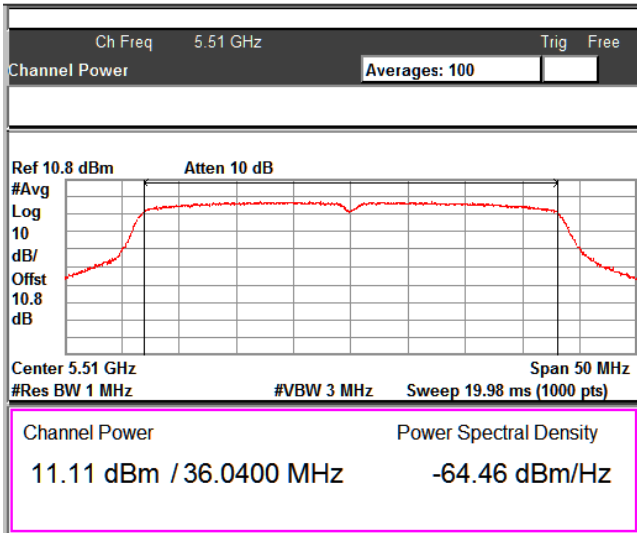
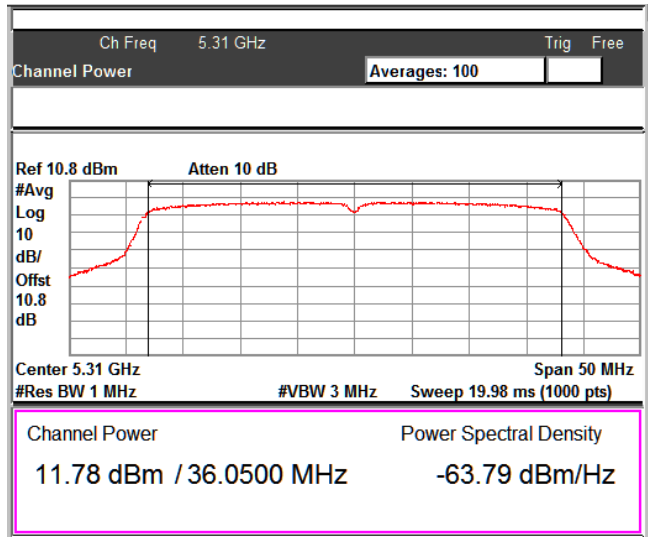
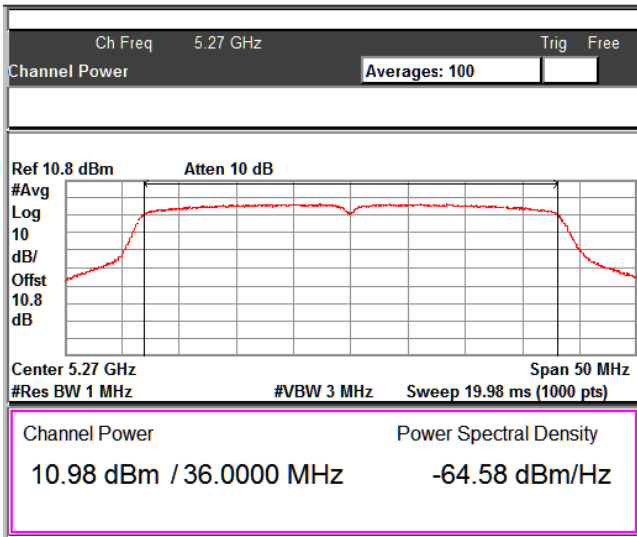


**Modulation: 802.11n-40MHz**

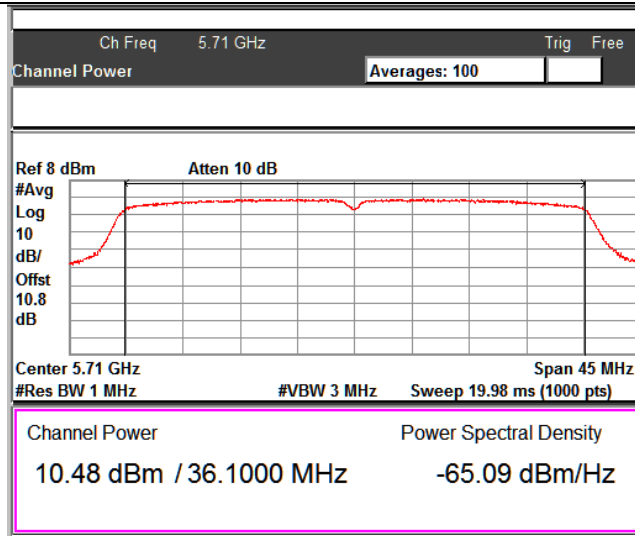
Data rate (Mbps)	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)
n_mode-HT40MHz_MCS0	5190	11.24	85.00	0.71	11.95	15.32	24.00	-	23.00
	5230	11.34	85.00	0.71	12.05	15.42	24.00	-	23.00
	5270	10.98	85.00	0.71	11.69	15.06	24.00	23.97	30.00
	5310	11.78	85.00	0.71	12.49	15.86	24.00	23.97	30.00
	5510	11.11	85.00	0.71	11.82	15.19	24.00	23.97	30.00
	5590	11.19	85.00	0.71	11.90	15.27	24.00	23.97	30.00
	5670	11.09	85.00	0.71	11.80	15.17	24.00	23.97	30.00
	5710	10.48	85.00	0.71	11.19	13.54	24.00	23.97	30.00
	5755	11.24	85.00	0.71	11.95	15.32	30.00	30.00	-
	5795	11.43	85.00	0.71	12.14	15.51	30.00	30.00	-
n_mode-HT40MHz_MCS7	5190	8.63	40.00	3.98	12.61	15.98	24.00	-	23.00
	5230	8.72	40.00	3.98	12.70	16.07	24.00	-	23.00
	5270	8.42	40.00	3.98	12.40	15.77	24.00	23.97	30.00
	5310	9.40	40.00	3.98	13.38	16.75	24.00	23.97	30.00
	5510	8.56	40.00	3.98	12.54	15.91	24.00	23.97	30.00
	5590	8.59	40.00	3.98	12.57	15.94	24.00	23.97	30.00
	5670	8.46	40.00	3.98	12.44	15.81	24.00	23.97	30.00
	5710	8.13	40.00	3.98	12.11	14.46	24.00	23.97	30.00
	5755	8.73	40.00	3.98	12.71	16.08	30.00	30.00	-
5795	8.95	40.00	3.98	12.93	16.30	30.00	30.00	-	

**MCS0**



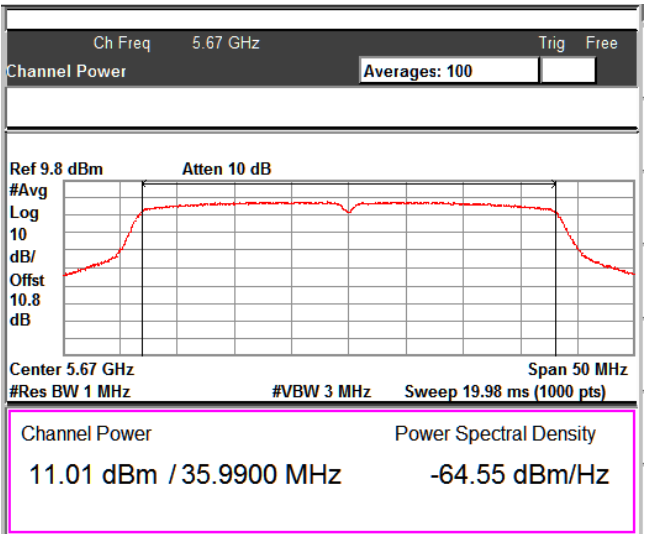
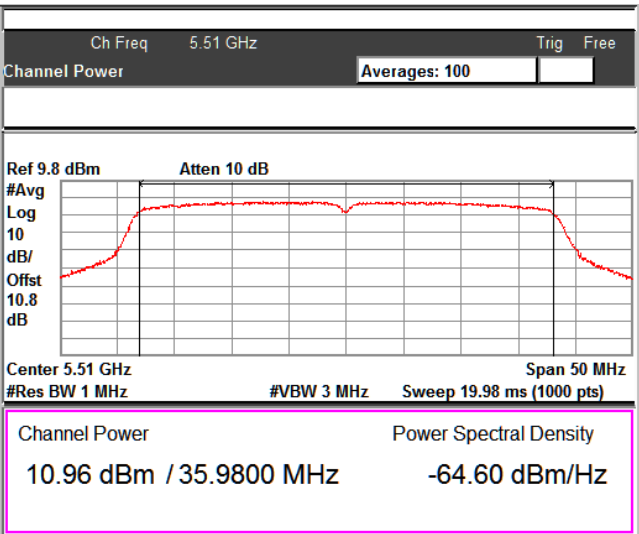
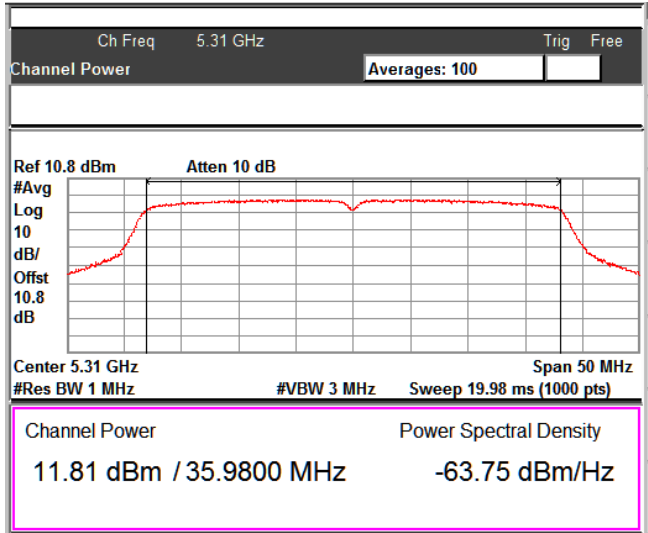
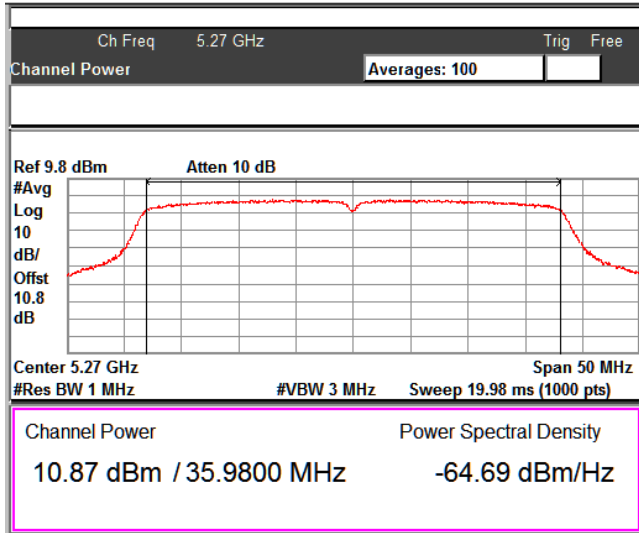
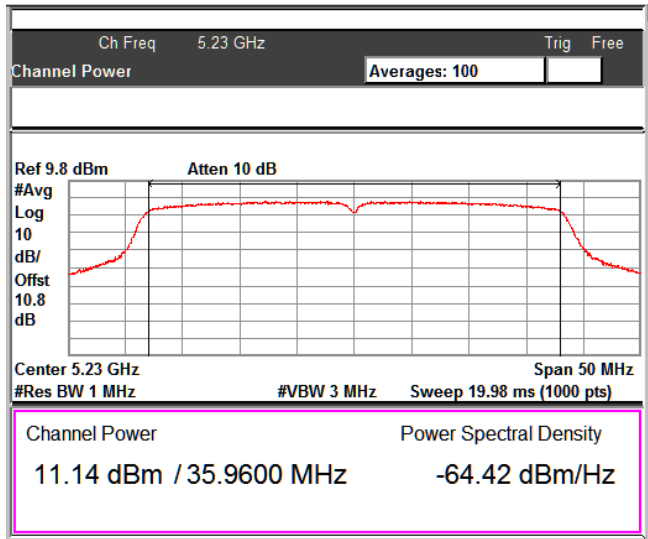
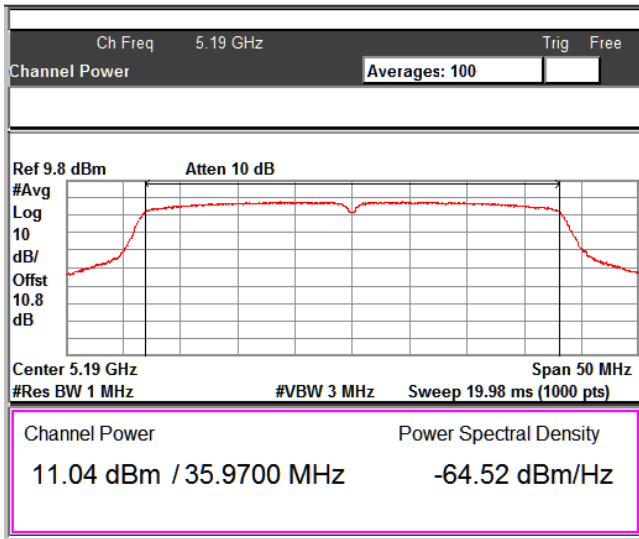


Only MCS 0 graphs are copied



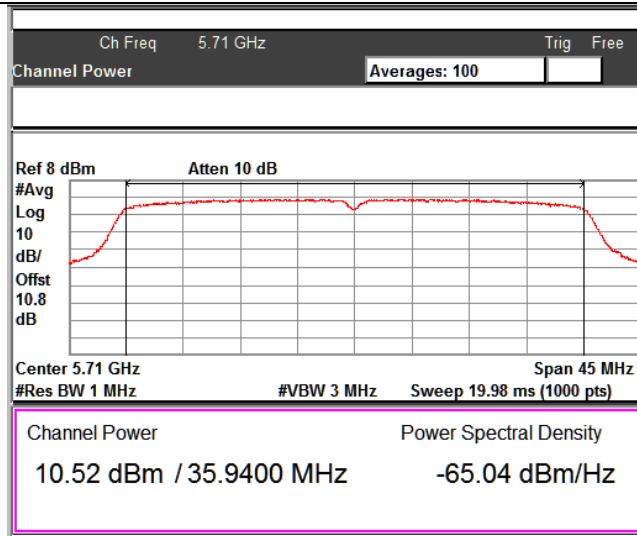
**Modulation: 802.11n-VHT40MHz**

Data rate (Mbps)	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)
n_mode_VHT40MHz_MCS0	5190	11.04	85.00	0.71	11.75	15.12	24.00	-	23.00
	5230	11.14	85.00	0.71	11.85	15.22	24.00	-	23.00
	5270	10.87	85.00	0.71	11.58	14.95	24.00	23.97	30.00
	5310	11.81	85.00	0.71	12.52	15.89	24.00	23.97	30.00
	5510	10.96	85.00	0.71	11.67	15.04	24.00	23.97	30.00
	5590	11.02	85.00	0.71	11.73	15.10	24.00	23.97	30.00
	5670	11.01	85.00	0.71	11.72	15.09	24.00	23.97	30.00
	5710	10.52	85.00	0.71	11.23	13.58	24.00	23.97	30.00
	5755	11.12	85.00	0.71	11.83	15.20	30.00	30.00	-
	5795	11.36	85.00	0.71	12.07	15.44	30.00	30.00	-
n_mode_VHT40MHz_MCS9	5190	8.30	21.00	6.78	15.08	18.45	24.00	-	23.00
	5230	8.22	21.00	6.78	15.00	18.37	24.00	-	23.00
	5270	7.98	21.00	6.78	14.76	18.13	24.00	23.97	30.00
	5310	9.04	21.00	6.78	15.82	19.19	24.00	23.97	30.00
	5510	8.05	21.00	6.78	14.83	18.20	24.00	23.97	30.00
	5590	8.14	21.00	6.78	14.92	18.29	24.00	23.97	30.00
	5670	7.96	21.00	6.78	14.74	18.11	24.00	23.97	30.00
	5710	7.54	21.00	6.78	14.32	16.67	24.00	23.97	30.00
	5755	8.27	21.00	6.78	15.05	18.42	30.00	30.00	-
	5795	8.43	21.00	6.78	15.21	18.58	30.00	30.00	-

**MCS0**


Only MCS 0 graphs are copied

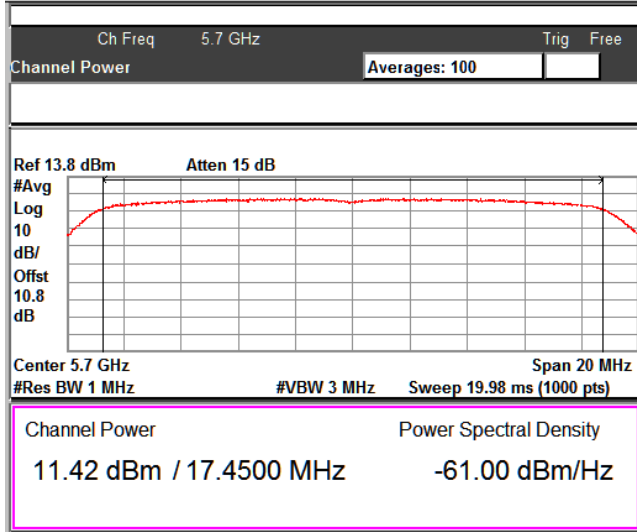
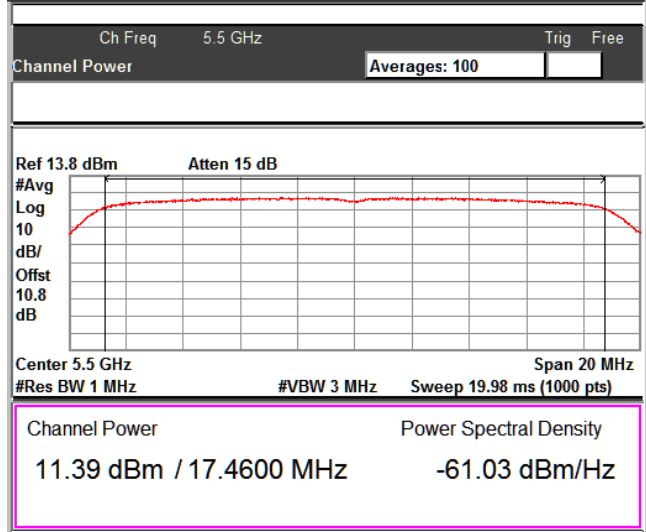
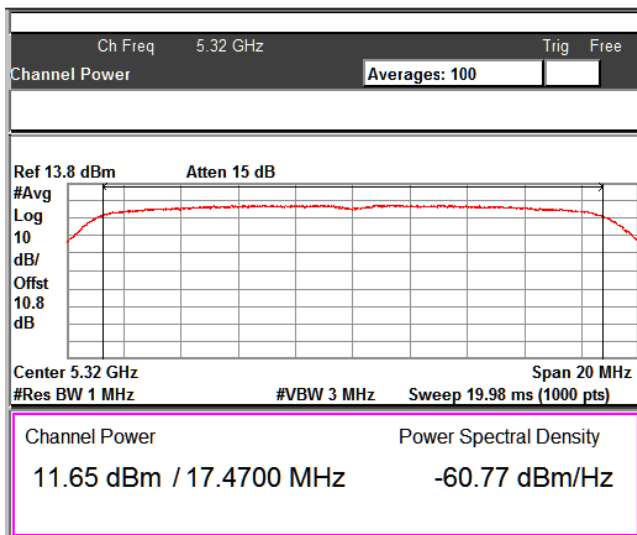
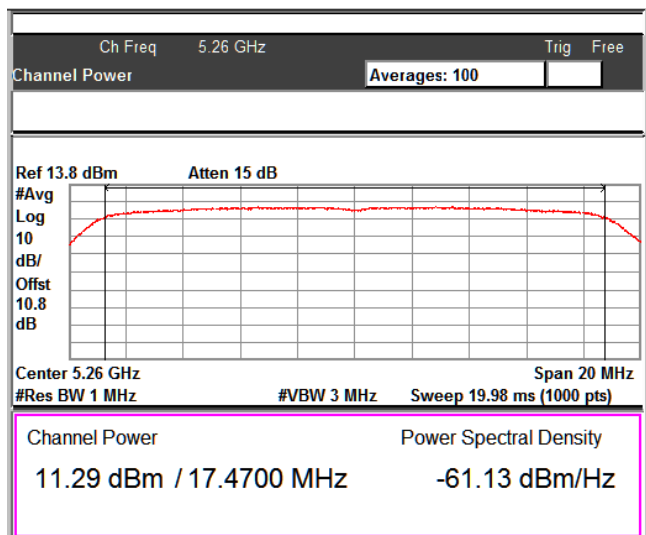
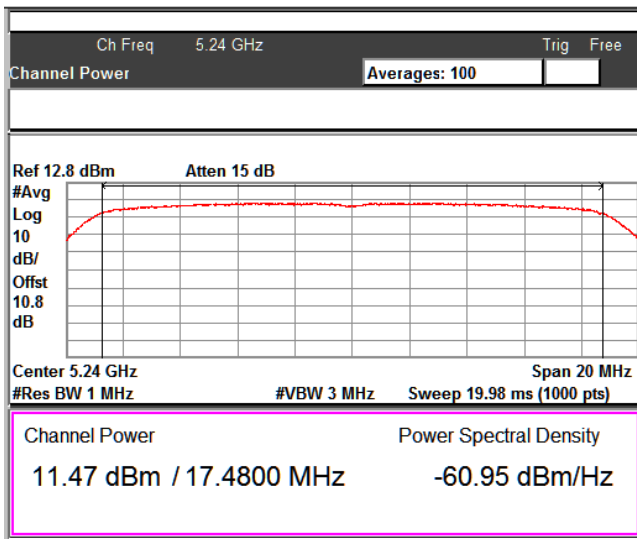
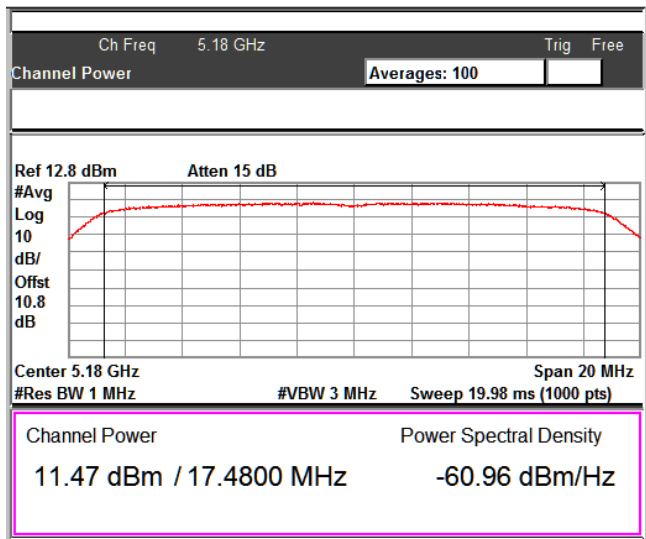


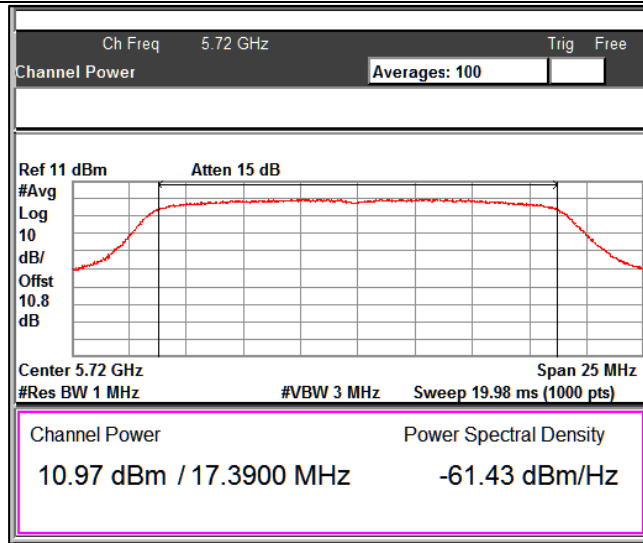


**Modulation: 802.11ac-VHT20MHz**

Data rate (Mbps)	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)	
ac_mode-VHT20MHz-MCS0	5180	11.47	92.00	0.36	11.83	15.20	24.00	-	22.42	
	5240	11.47	92.00	0.36	11.83	15.20	24.00	-	22.42	
	5260	11.29	92.00	92.00	0.36	11.65	15.02	24.00	23.42	29.42
	5320	11.65	92.00	92.00	0.36	12.01	15.38	24.00	23.42	29.42
	5500	11.39	92.00	92.00	0.36	11.75	15.12	24.00	23.42	29.42
	5700	11.42	92.00	92.00	0.36	11.78	15.15	24.00	23.42	29.42
	5720	10.97	92.00	92.00	0.36	11.33	13.68	24.00	23.42	29.42
	5745	11.45	92.00	92.00	0.36	11.81	15.18	30.00	30.00	-
5825	11.50	92.00	92.00	0.36	11.86	15.23	30.00	30.00	-	
ac_mode-VHT20MHz-MCS8	5180	9.23	47.00	3.28	12.51	15.88	24.00	-	22.46	
	5240	9.14	47.00	3.28	12.42	15.79	24.00	-	22.46	
	5260	8.98	47.00	47.00	3.28	12.26	15.63	24.00	23.46	29.46
	5320	9.39	47.00	47.00	3.28	12.67	16.04	24.00	23.46	29.46
	5500	9.20	47.00	47.00	3.28	12.48	15.85	24.00	23.47	29.47
	5700	9.16	47.00	47.00	3.28	12.44	15.81	24.00	23.47	29.47
	5720	8.72	47.00	47.00	3.28	12.00	14.35	24.00	23.47	29.47
	5745	9.15	47.00	47.00	3.28	12.43	15.80	30.00	30.00	-
5825	9.10	47.00	47.00	3.28	12.38	15.75	30.00	30.00	-	

MCS0



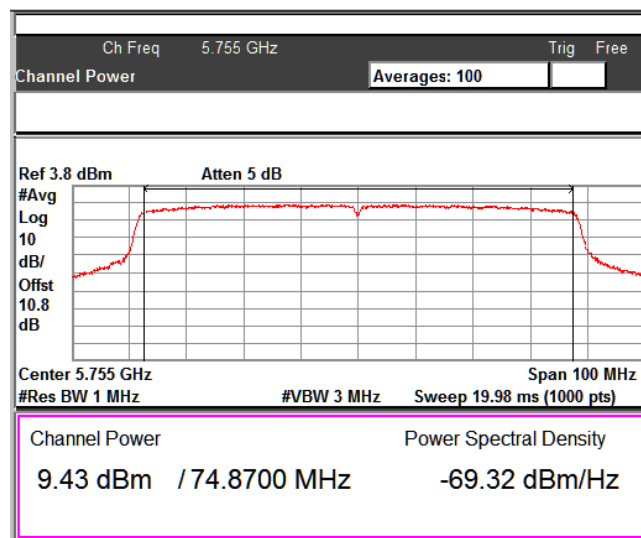
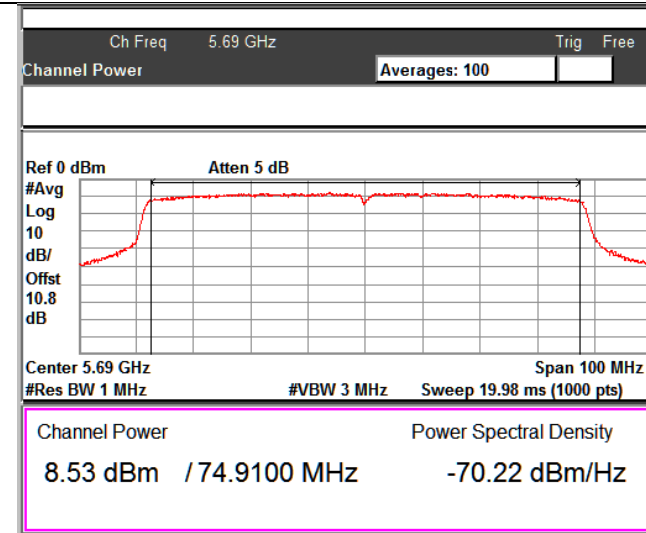
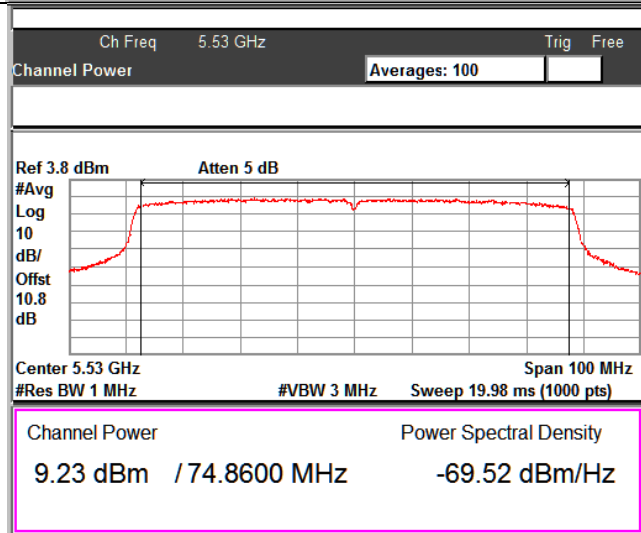
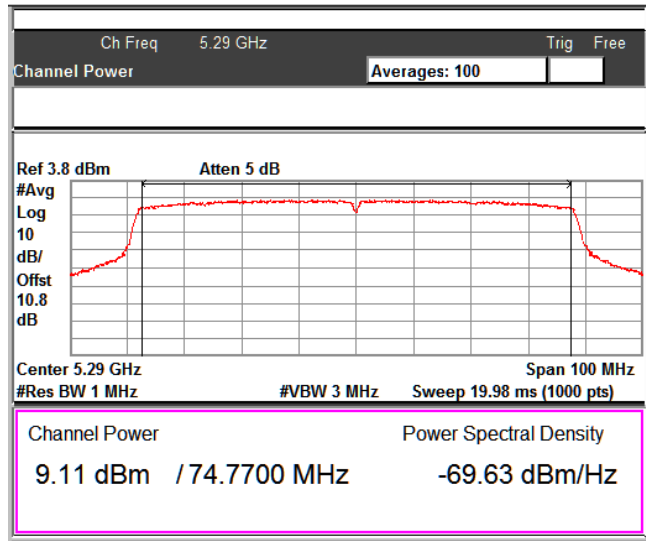
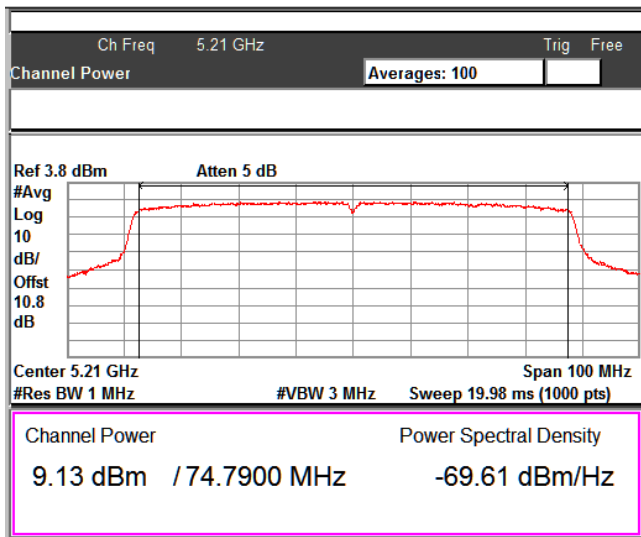


Only MCS 0 graphs are copied

**Modulation: 802.11ac-VHT80MHz**

Data rate (Mbps)	Measured Frequency (MHz)	Measured Average Power (dBm)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average output power (dBm)	e.i.r.p (dBm)	FCC Power Limit (dBm)	IC power (dBm)	IC e.i.r.p Limit (dBm)
ac_mode-VHT80MHz_MCS0	5210	9.13	64.00	1.94	11.07	14.44	24.00	23.97	23.00
	5290	9.11	64.00	1.94	11.05	14.42	24.00	23.97	23.00
	5530	9.23	64.00	1.94	11.17	14.54	24.00	23.97	23.00
	5690	8.53	64.00	1.94	10.47	12.82	24.00	23.97	23.00
	5755	9.43	64.00	1.94	11.37	14.74	30.00	30.00	23.00
ac_mode-VHT80MHz_MCS9	5210	6.08	27.00	5.69	11.77	15.14	24.00	23.97	23.00
	5290	6.07	27.00	5.69	11.76	15.13	24.00	23.97	23.00
	5530	6.10	27.00	5.69	11.79	15.16	24.00	23.97	23.00
	5690	5.47	27.00	5.69	11.16	13.51	24.00	23.97	23.00
	5755	6.31	27.00	5.69	12.00	15.37	30.00	30.00	23.00

MCS0



Only MCS 0 graphs are copied

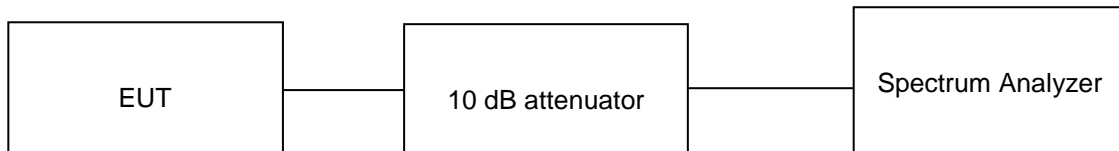
### 8.3 Maximum Power Spectral Density

**Result**

**Pass**

Test Specification	FCC part 15 Subpart C 15.407 (a) / RSS 247 Issue 2 Section 6.2.1; 6.2.2; 6.2.3; & Section 6.2.4
Test Method	Subclause 12.5 of ANSI C63.10
Measurement Bandwidth	1 MHz
Detector	Average sample detector
Port of testing	Antenna port
Requirement for FCC	<ol style="list-style-type: none"> <li>1. For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 MHz band</li> <li>2. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band</li> <li>3. For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band</li> </ol>
Requirement for IC	<ol style="list-style-type: none"> <li>1. For the band 5.15-5.25 GHz, The e.i.r.p. spectral density shall not exceed 10 dBm in any 1 MHz band</li> <li>2. For the 5.25-5.35 GHz, the power spectral density shall not exceed 11 dBm in any 1.0 MHz band</li> <li>3. For the 5.47-5.725 GHz, the power spectral density shall not exceed 11 dBm in any 1.0 MHz band</li> <li>4. For the band 5.725-5.85 GHz, The output power spectral density shall not exceed 30 dBm in any 500 kHz band</li> </ol>

**Test Method:**



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**The following procedure shall be used:**

1. Set center frequency to the nominal EUT channel center frequency
2. Set span to encompass the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal
3. Set RBW = 1MHz (5.15-5.25 GHz band) / 500kHz (5.725-5.85 GHz band)
4. Set VBW  $\geq 3 \times$  RBW
5. Number of points in sweep  $\geq 2 \times$  span / RBW. (This ensures that bin-to-bin spacing is  $\leq$  RBW/2, so that narrowband signals are not lost between frequency bins.)
6. Sweep time = auto
7. Detector = power averaging (rms), if available. Otherwise, use sample detector mode
8. Do not use sweep triggering. Allow the sweep to "free run."
9. Trace average at least 100 traces and Compute power by integrating the spectrum across the EBW
10. Add  $10 \log (1/x)$ , where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission)
11. If measurements are performed using a reduced resolution bandwidth ( $< 1$  MHz, or  $< 500$  kHz) and integrated over 1 MHz, or 500 kHz bandwidth, the following adjustments to the procedures apply:
  - a. Set RBW = 300 kHz
  - b. Set VBW  $\geq 3$  RBW
  - c. If measurement bandwidth of Maximum PSD is specified in 500 kHz

$$\text{PSD bandwidth correction Factor} = 10 * \log (500 \text{ kHz} / \text{RBW})$$

**Test Condition:**

**Normal Test Condition:**

Temperature (Norm) = + 25 °C

Voltage = 5.0 V DC

Relative humidity: 62 %

**KDB Guidelines applied:**

Measurements were made as per section F in KDB 789033 D02 General UNII Test Procedures New Rules v02r01

**Test results:**

**Note:**

1. All the losses are included during measurement and final values are mentioned in the test report  
10 dB attenuator + 0.8dB Cable loss = 10.8 dB total offset
2. Duty cycle correction factor is considered in Final Average power  
Duty cycle Correction factor =  $10 * \text{LOG} (1/X)$  Where X is Duty Cycle
3. This product do not support additional beamforming gain / directional gain, it uses signal antenna and hence directional gain of the single antenna is (3.37 dBi)
4. e.i.r.p = Maximum Average PSD (dBm) + Antenna gain in dBi

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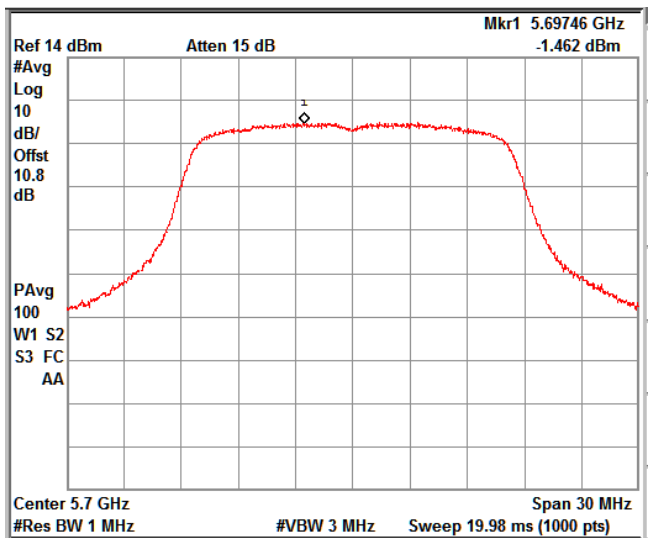
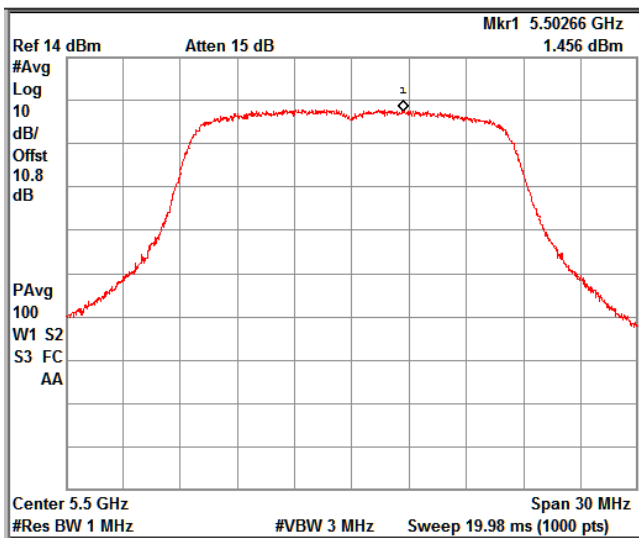
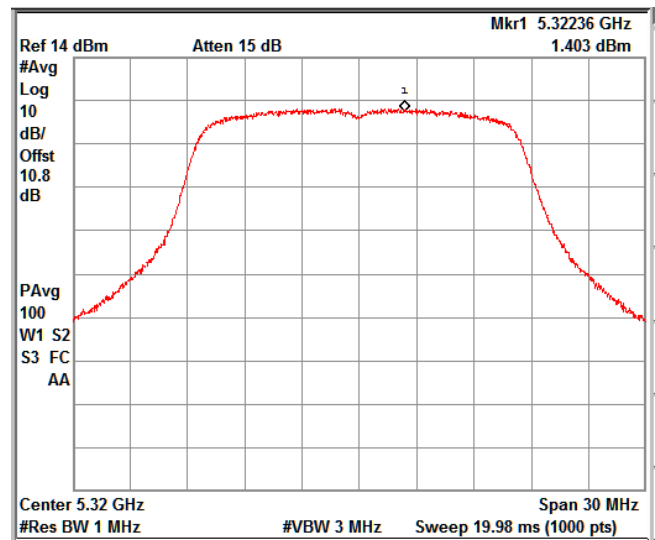
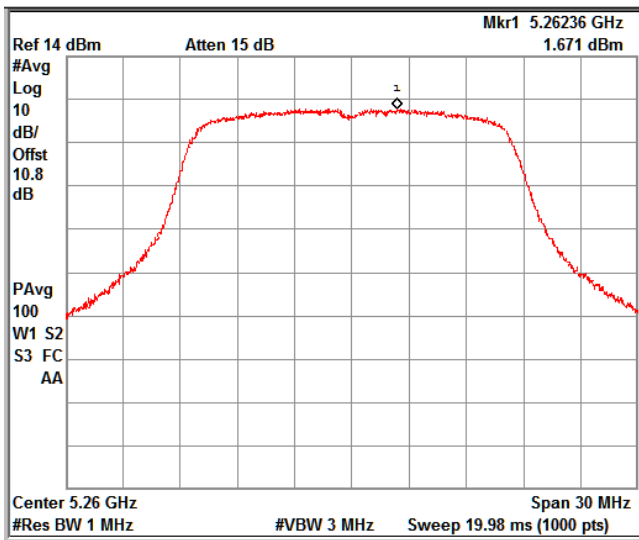
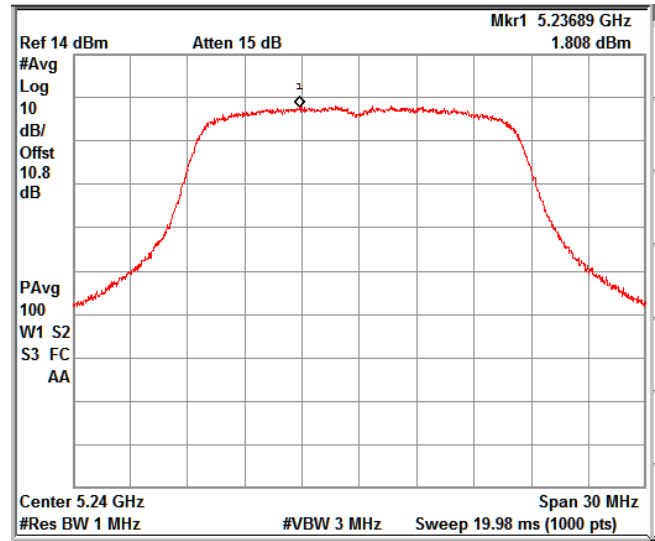
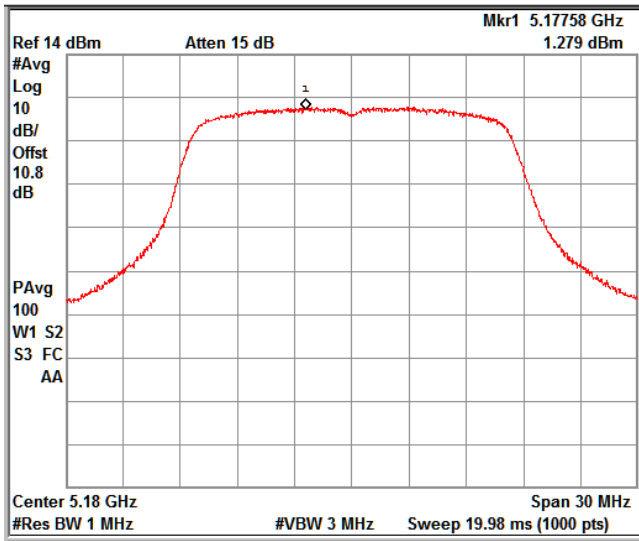
**Modulation: 802.11a – UNII 1, UNII2a, UNII2c**

Data rate (Mbps)	Measured Frequency (MHz)	Measured Average PSD (dBm/1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average PSD (dBm/1MHz)	PSD (e.i.r.p) (dBm/1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/1MHz)
a_mode-6Mbps	5180	1.27	95.00	0.22	1.49	4.86	11.00	10.00
	5240	1.80	95.00	0.22	2.02	5.39	11.00	10.00
	5260	1.67	95.00	0.22	1.89	5.26	11.00	10.00
	5320	1.40	95.00	0.22	1.62	4.99	11.00	10.00
	5500	1.45	95.00	0.22	1.67	5.04	11.00	10.00
	5700	-1.46	95.00	0.22	-1.24	2.13	11.00	10.00
	5720	1.79	95.00	0.22	2.01	5.38	11.00	10.00
a_mode-54Mbps	5180	0.78	57.00	2.44	3.22	6.59	11.00	10.00
	5240	0.16	57.00	2.44	2.60	5.97	11.00	10.00
	5260	0.03	57.00	2.44	2.47	5.84	11.00	10.00
	5320	1.13	57.00	2.44	3.57	6.94	11.00	10.00
	5500	0.59	57.00	2.44	3.03	6.40	11.00	10.00
	5700	0.63	57.00	2.44	3.07	6.44	11.00	10.00
	5720	-1.14	57.00	2.44	1.30	4.67	11.00	10.00

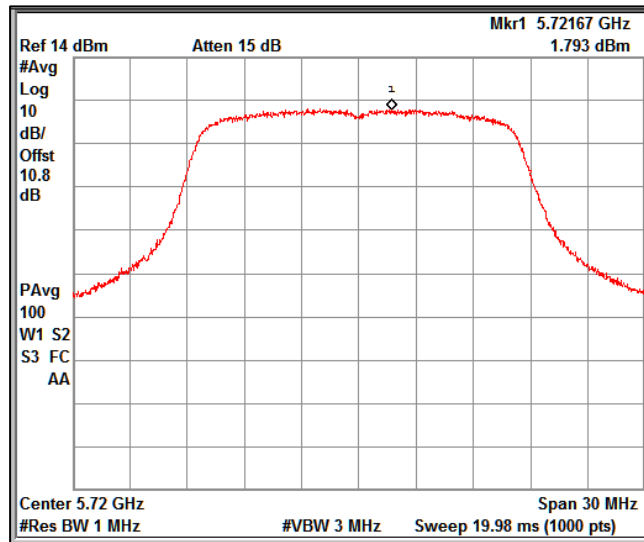
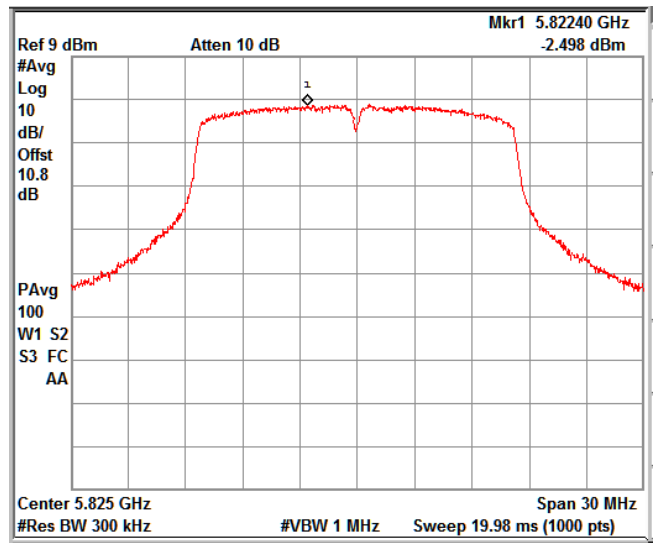
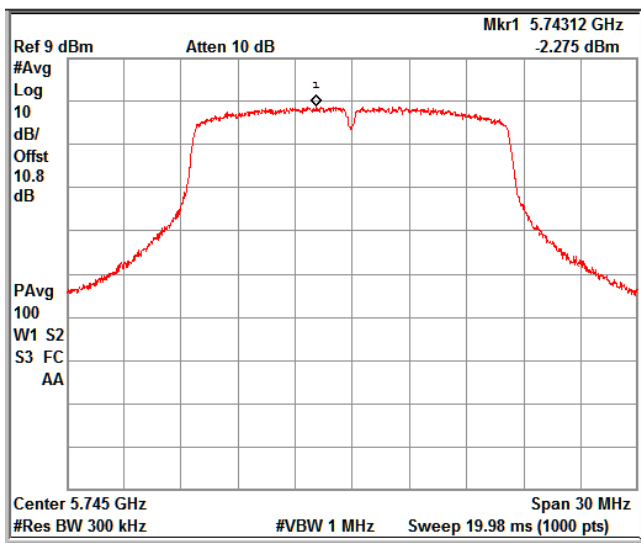
**Modulation: 802.11a – UNII 3**

Data rate (Mbps)	Measured Frequency (MHz)	Measured Average PSD (dBm/0.3MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Bandwidth Correction (dB)	Maximum Average PSD (dBm/500kHz)	PSD (e.i.r.p) (dBm/500kHz)	FCC PSD Limit (dBm/500kHz)	IC e.i.r.p PSD (dBm/500kHz)
a_mode-6Mbps	5745	-2.27	95.00	0.22	2.21	0.16	3.53	30.00	10.00
	5825	-2.49	95.00	0.22	2.21	-0.06	3.31	30.00	10.00
a_mode-54Mbps	5745	-4.31	57.00	2.44	2.21	0.34	3.71	30.00	10.00
	5825	-4.45	57.00	2.44	2.21	0.20	3.57	30.00	10.00

**Data Rate: 6 Mbps**







Only 6 Mbps plots are copied

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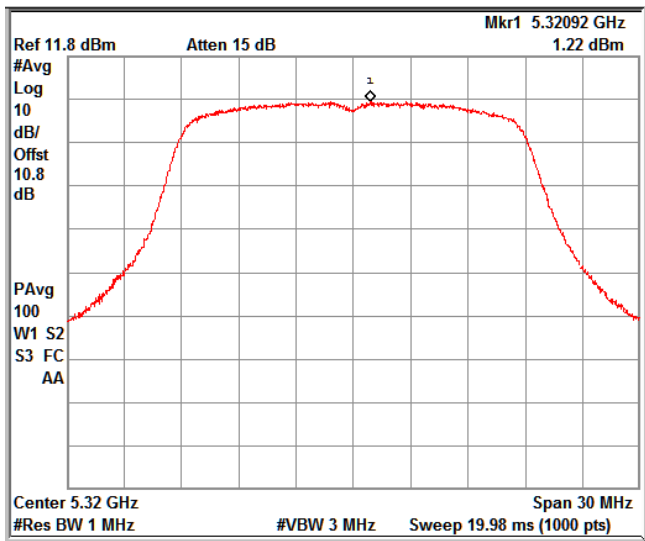
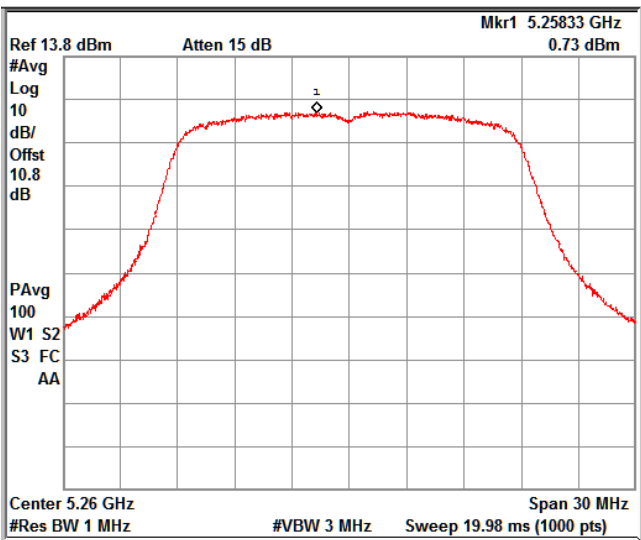
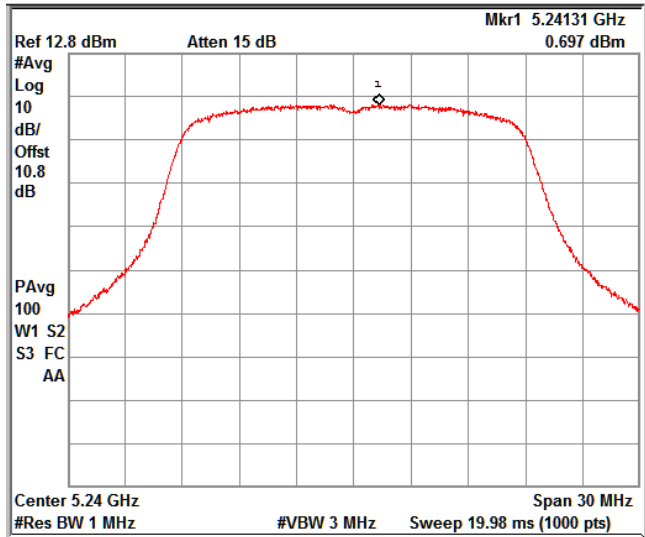
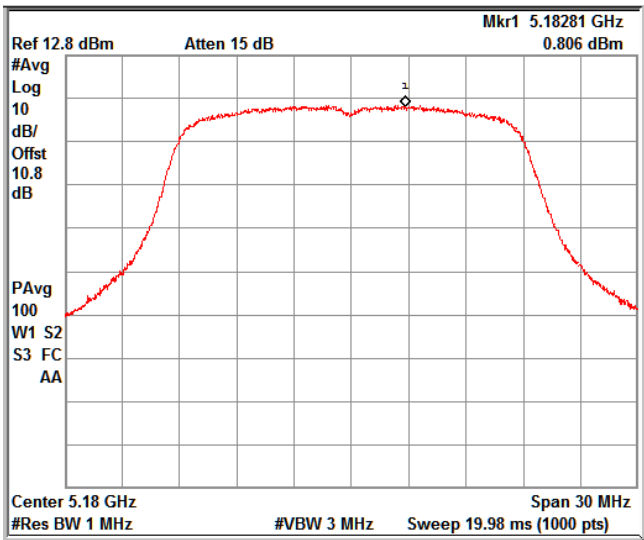
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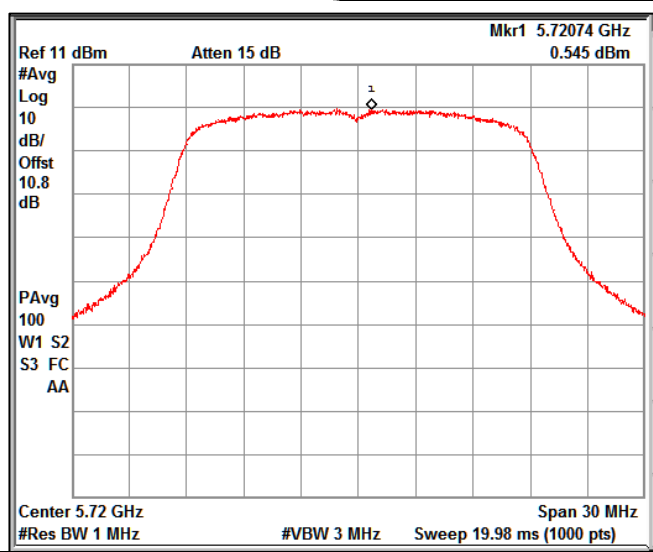
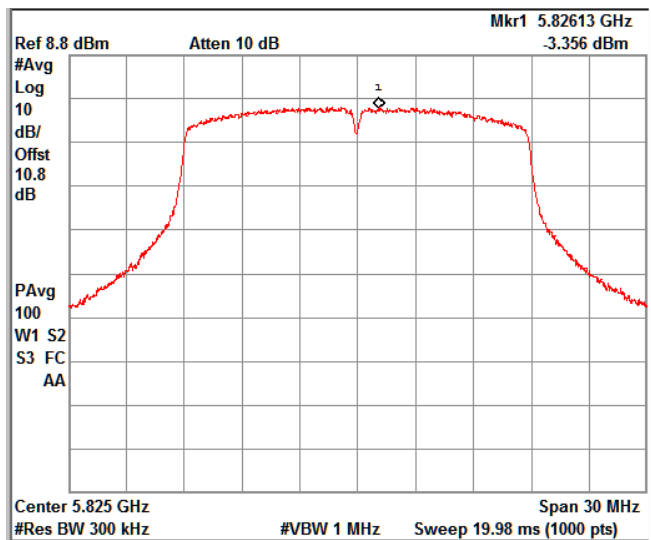
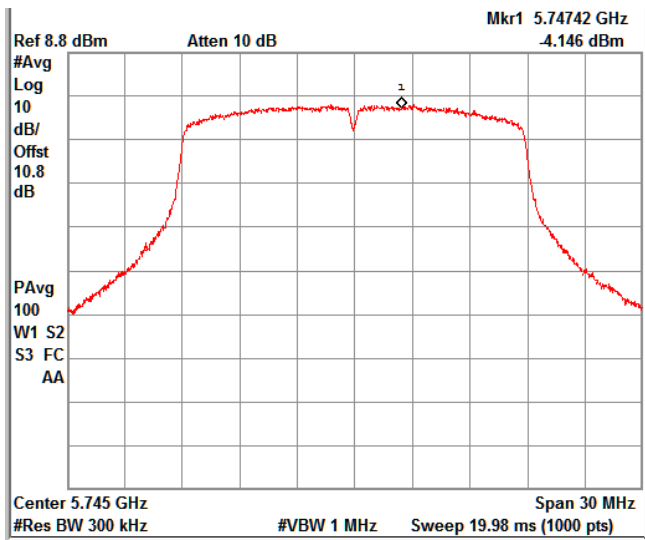
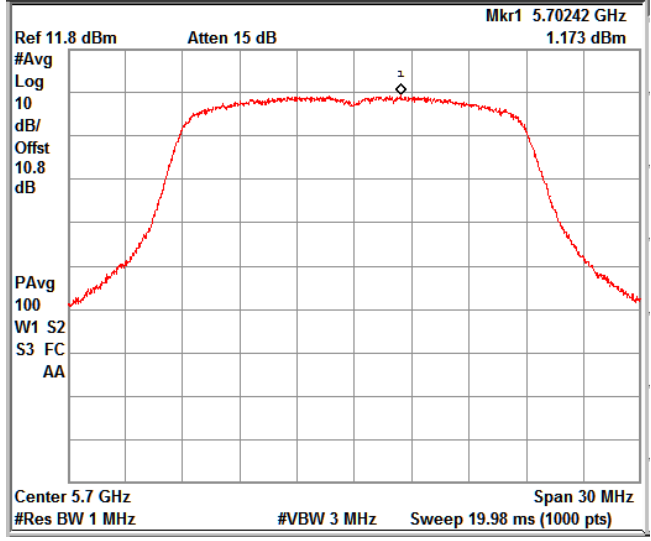
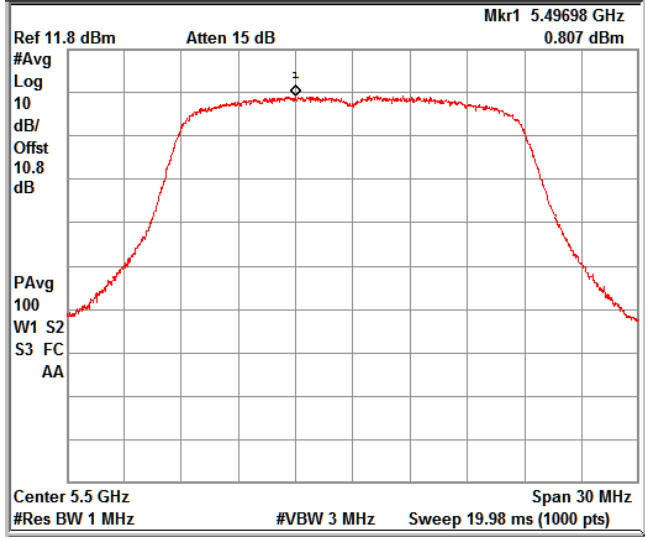
**Modulation: 802.11n – 20MHz - UNII 1, UNII2a, UNII2c**

Data rate (Mbps)	Measured Frequency (MHz)	Measured Average PSD (dBm/1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average PSD (dBm/1MHz)	PSD (e.i.r.p) (dBm/1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/1MHz)
n_mode-HT20MHz-MCS0	5180	0.80	92.00	0.36	1.16	4.53	11.00	10.00
	5240	0.69	92.00	0.36	1.05	4.42	11.00	10.00
	5260	0.73	92.00	0.36	1.09	4.46	11.00	10.00
	5320	1.22	92.00	0.36	1.58	4.95	11.00	10.00
	5500	0.80	92.00	0.36	1.16	4.53	11.00	10.00
	5700	1.17	92.00	0.36	1.53	4.90	11.00	10.00
	5720	0.54	92.00	0.36	0.90	4.27	11.00	10.00
n_mode-HT20MHz-MCS7	5180	-0.18	57.00	2.44	2.26	5.63	11.00	10.00
	5240	-0.25	57.00	2.44	2.19	5.56	11.00	10.00
	5260	-0.67	57.00	2.44	1.77	5.14	11.00	10.00
	5320	-0.01	57.00	2.44	2.43	5.80	11.00	10.00
	5500	0.48	57.00	2.44	2.92	6.29	11.00	10.00
	5700	-0.32	57.00	2.44	2.12	5.49	11.00	10.00
	5720	-1.11	57.00	2.44	1.33	4.70	11.00	10.00

**Modulation: 802.11n – 20MHz - UNII 3**

Data rate (Mbps)	Measured Frequency (MHz)	Measured Average PSD (dBm/0.3MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Bandwidth Correction (dB)	Maximum Average PSD (dBm/500kHz)	PSD (e.i.r.p) (dBm/500kHz)	FCC PSD Limit (dBm/500kHz)	IC e.i.r.p PSD (dBm/500kHz)
n_mode-HT20MHz-MCS0	5745	-4.14	92.00	0.36	2.21	-1.57	1.80	30.00	10.00
	5825	-3.35	92.00	0.36	2.21	-0.78	2.59	30.00	10.00
n_mode-HT20MHz-MCS7	5745	-5.01	57.00	2.44	2.21	-0.36	3.01	30.00	10.00
	5825	-4.17	57.00	2.44	2.21	0.48	3.85	30.00	10.00

**Data Rate: MCS0**




Only MCS0 plots are copied

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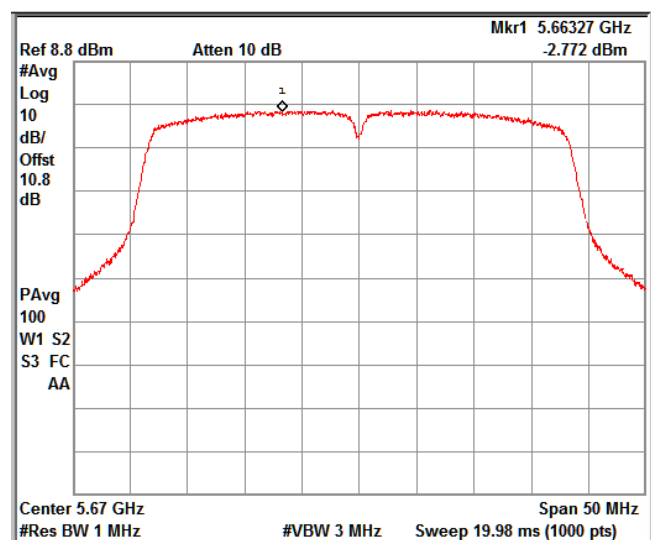
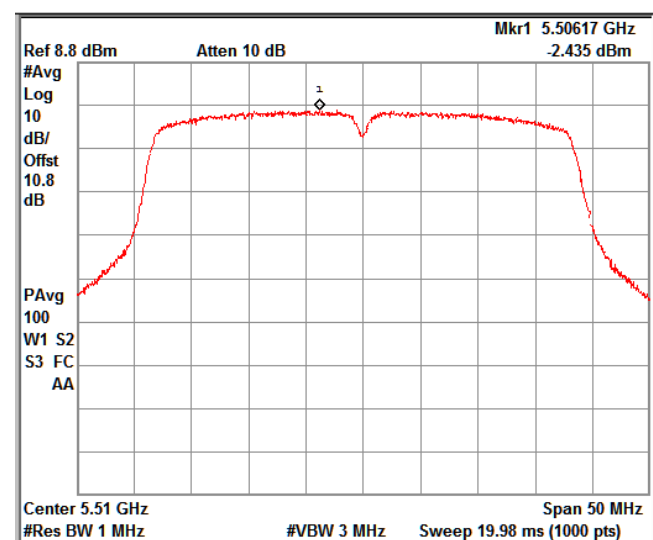
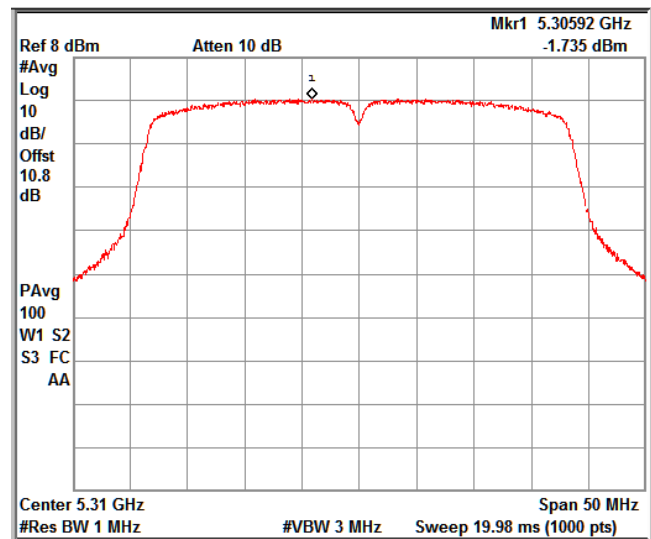
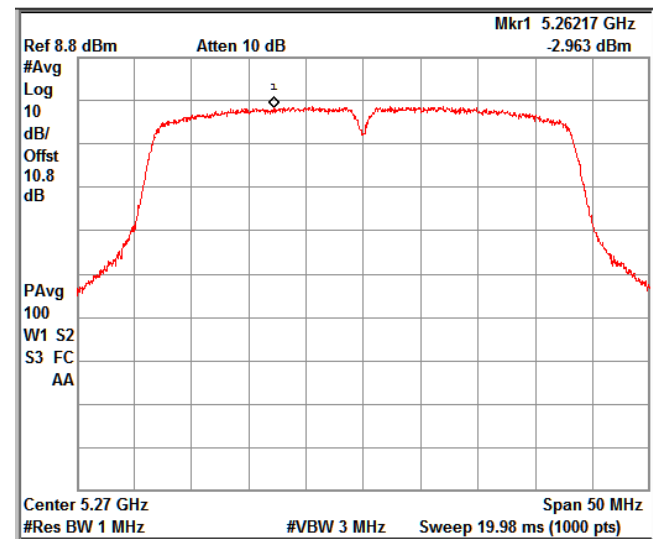
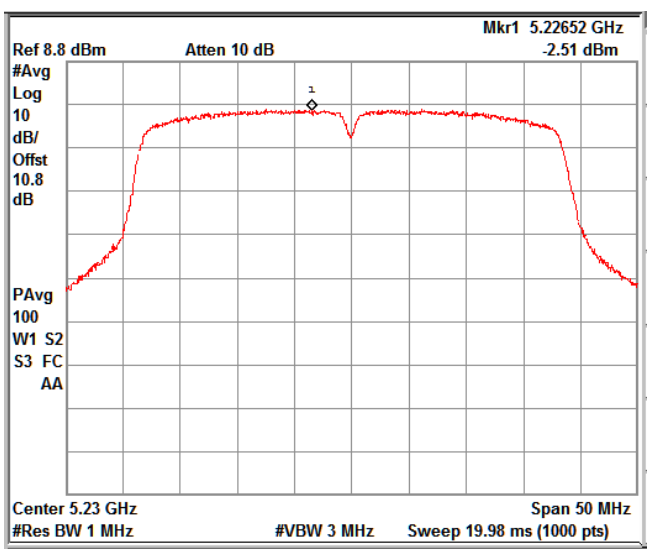
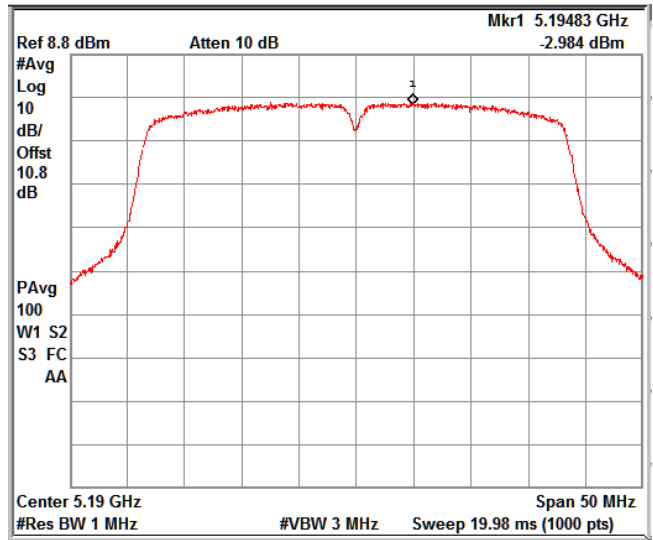
**Modulation: 802.11n – 40MHz - UNII 1, UNII2a, UNII2c**

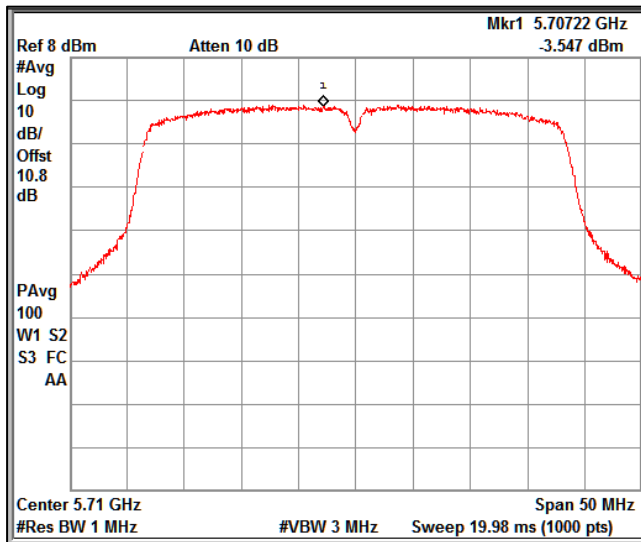
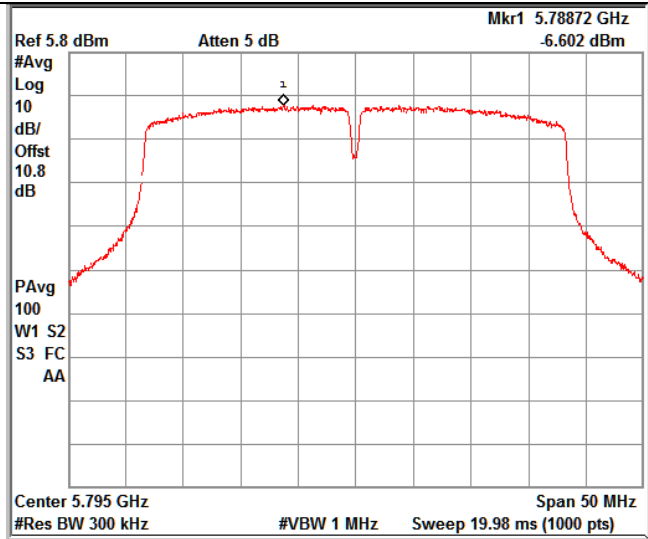
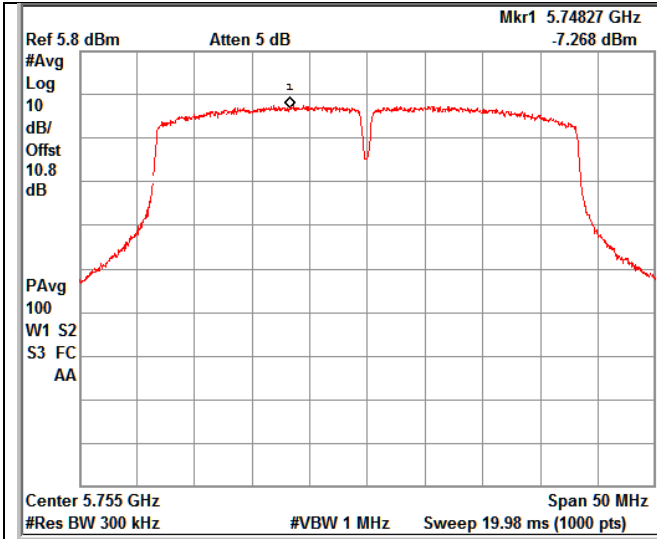
Data rate (Mbps)	Measured Frequency (MHz)	Measured Average PSD (dBm/1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average PSD (dBm/1MHz)	PSD (e.i.r.p) (dBm/1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/1MHz)
n_mode-HT40MHz_MCS0	5190	-2.98	85.00	0.71	-2.27	1.10	11.00	10.00
	5230	-2.51	85.00	0.71	-1.80	1.57	11.00	10.00
	5270	-2.96	85.00	0.71	-2.25	1.12	11.00	10.00
	5310	-1.73	85.00	0.71	-1.02	2.35	11.00	10.00
	5510	-2.43	85.00	0.71	-1.72	1.65	11.00	10.00
	5590	-2.33	85.00	0.71	-1.62	1.75	11.00	10.00
	5670	-2.77	85.00	0.71	-2.06	1.31	11.00	10.00
	5710	-3.54	85.00	0.71	-2.83	0.54	11.00	10.00
n_mode-HT40MHz_MCS7	5190	-5.24	40.00	3.98	-1.26	2.11	11.00	10.00
	5230	-5.00	40.00	3.98	-1.02	2.35	11.00	10.00
	5270	-5.47	40.00	3.98	-1.49	1.88	11.00	10.00
	5310	-3.70	40.00	3.98	0.28	3.65	11.00	10.00
	5510	-4.33	40.00	3.98	-0.35	3.02	11.00	10.00
	5590	-4.87	40.00	3.98	-0.89	2.48	11.00	10.00
	5670	-5.02	40.00	3.98	-1.04	2.33	11.00	10.00
	5710	-8.98	40.00	3.98	-5.00	-1.63	11.00	10.00

**Modulation: 802.11n – 40MHz - UNII 3**

Data rate (Mbps)	Measured Frequency (MHz)	Measured Average PSD (dBm/0.3MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Bandwidth Correction (dB)	Maximum Average PSD (dBm/500kHz)	PSD (e.i.r.p) (dBm/500kHz)	FCC PSD Limit (dBm/500kHz)	IC e.i.r.p PSD (dBm/500kHz)
n_mode-HT40MHz_MCS0	5755	-7.26	85.00	0.71	2.21	-4.34	-0.97	30.00	10.00
	5795	-6.60	85.00	0.71	2.21	-3.68	-0.31	30.00	10.00
n_mode-HT40MHz_MCS7	5755	-8.97	40.00	3.98	2.21	-2.78	0.59	30.00	10.00
	5795	-8.47	40.00	3.98	2.21	-2.28	1.09	30.00	10.00

Data Rate : MCS0





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**Modulation: 802.11n – VHT40MHz - UNII 1, UNII2a, UNII2c**

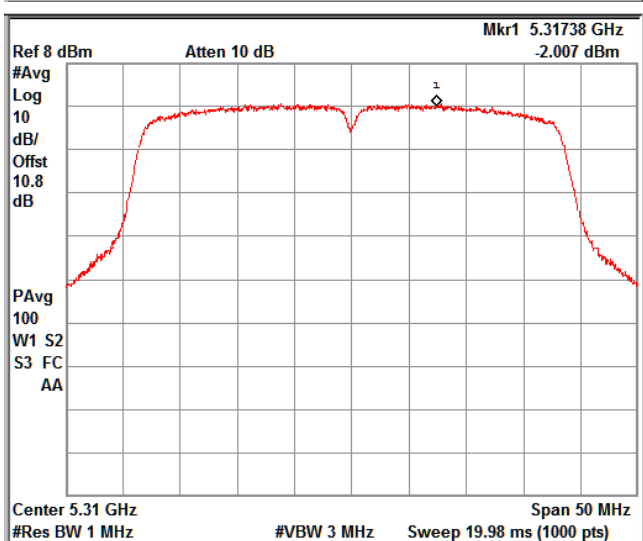
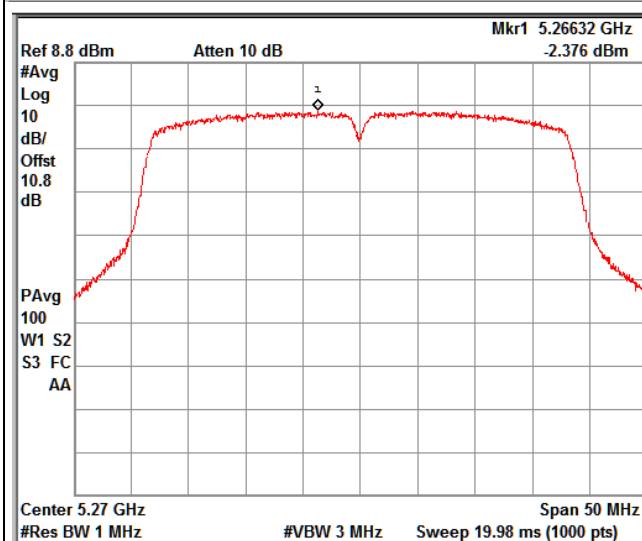
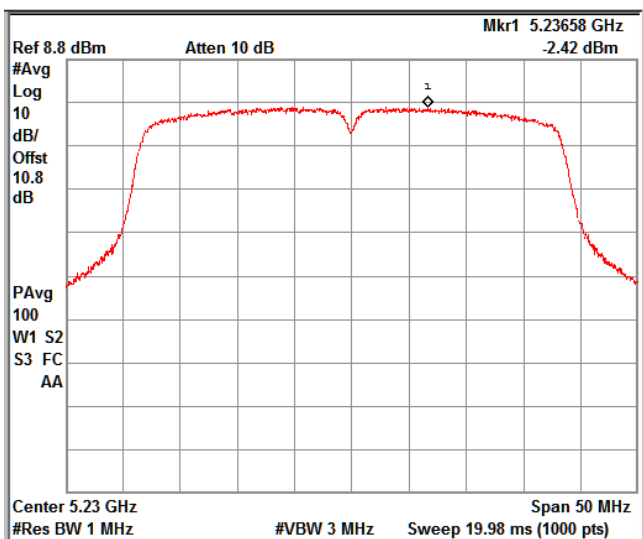
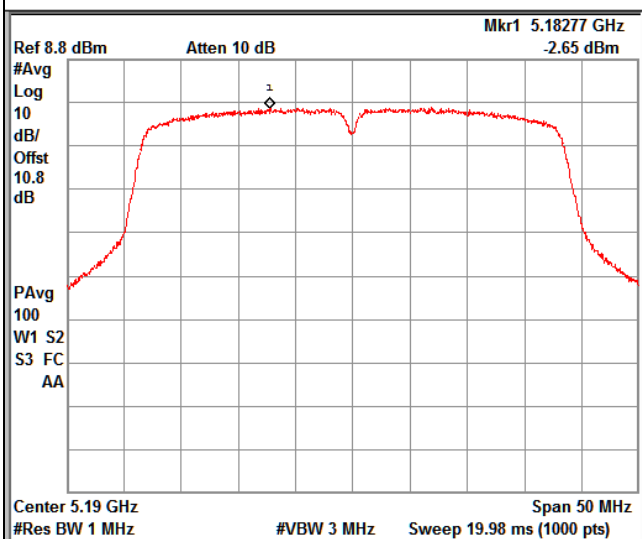
Data rate (Mbps)	Measured Frequency (MHz)	Measured Average PSD (dBm/1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average PSD (dBm/1MHz)	PSD (e.i.r.p) (dBm/1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/1MHz)
n_mode_VHT40MHz - MCS0	5190	-2.65	85.00	0.71	-1.94	1.43	11.00	10.00
	5230	-2.42	85.00	0.71	-1.71	1.66	11.00	10.00
	5270	-2.37	85.00	0.71	-1.66	1.71	11.00	10.00
	5310	-2.00	85.00	0.71	-1.29	2.08	11.00	10.00
	5510	-2.58	85.00	0.71	-1.87	1.50	11.00	10.00
	5590	-2.89	85.00	0.71	-2.18	1.19	11.00	10.00
	5670	-2.33	85.00	0.71	-1.62	1.75	11.00	10.00
	5710	-3.07	85.00	0.71	-2.36	1.01	11.00	10.00
n_mode_VHT40MHz - MCS9	5190	-5.35	21.00	6.78	1.43	4.80	11.00	10.00
	5230	-5.39	21.00	6.78	1.39	4.76	11.00	10.00
	5310	-4.19	21.00	6.78	2.59	5.96	11.00	10.00
	5270	-5.63	21.00	6.78	1.15	4.52	11.00	10.00
	5510	-6.58	21.00	6.78	0.20	3.57	11.00	10.00
	5590	-5.57	21.00	6.78	1.21	4.58	11.00	10.00
	5670	-5.25	21.00	6.78	1.53	4.90	11.00	10.00
	5710	-6.07	21.00	6.78	0.71	4.08	11.00	10.00

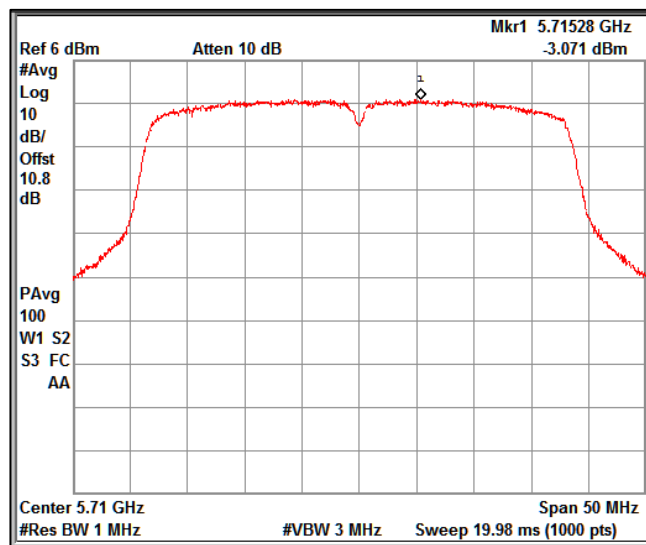
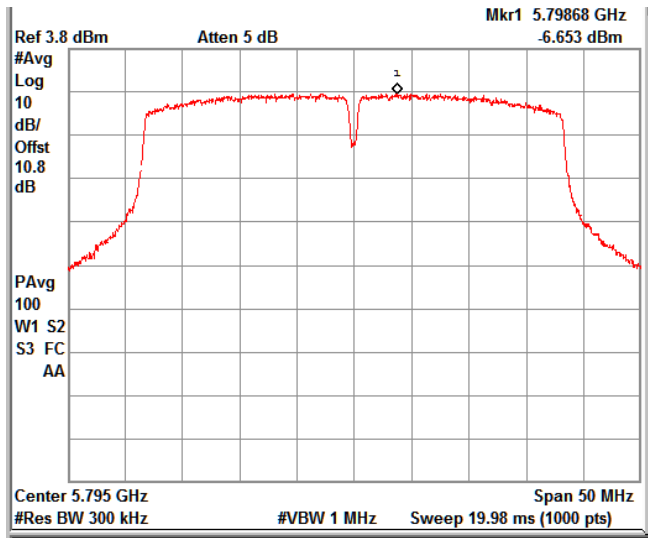
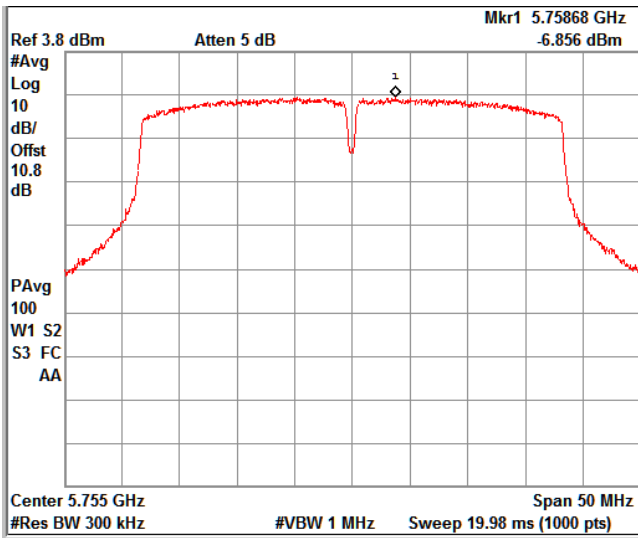
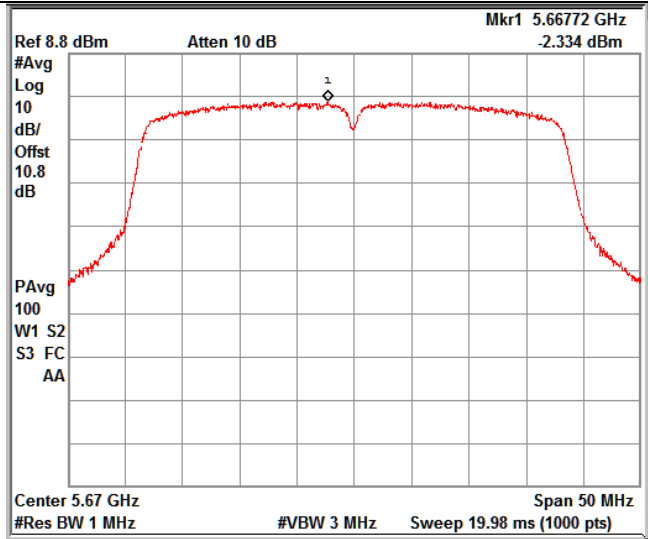
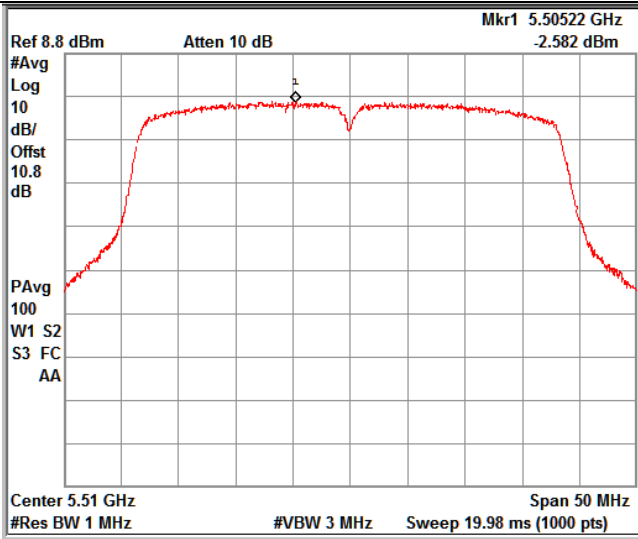


Modulation: 802.11n – VHT40MHz - UNII 3

Data rate (Mbps)	Measured Frequency (MHz)	Measured Average PSD (dBm/0.3MHz)	Duty Cycle %	Duty cycle correction factor (dB)	Bandwidth Correction (dB)	Maximum Average PSD (dBm/500kHz)	PSD (e.i.r.p) (dBm/500kHz)	FCC PSD Limit (dBm/500kHz)	IC e.i.r.p PSD (dBm/500kHz)
n_mode VHT40 MHz_ MCS0	5755	-6.85	85.00	0.71	2.21	-3.93	-0.56	30.00	10.00
	5795	-6.65	85.00	0.71	2.21	-3.73	-0.36	30.00	10.00
n_mode VHT40 MHz_ MCS9	5755	-9.11	21.00	6.78	2.21	-0.12	3.25	30.00	10.00
	5795	-8.50	21.00	6.78	2.21	0.49	3.86	30.00	10.00

Data Rate : MCS0





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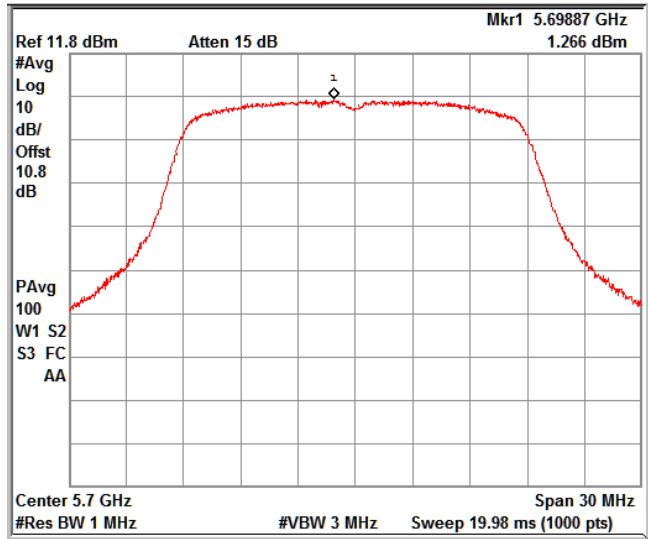
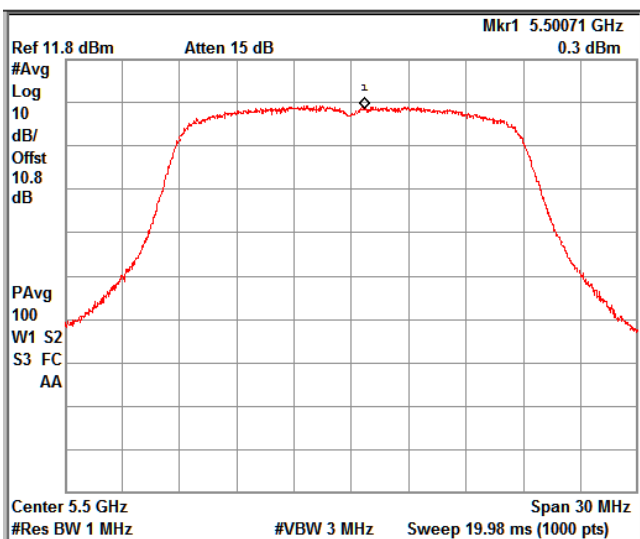
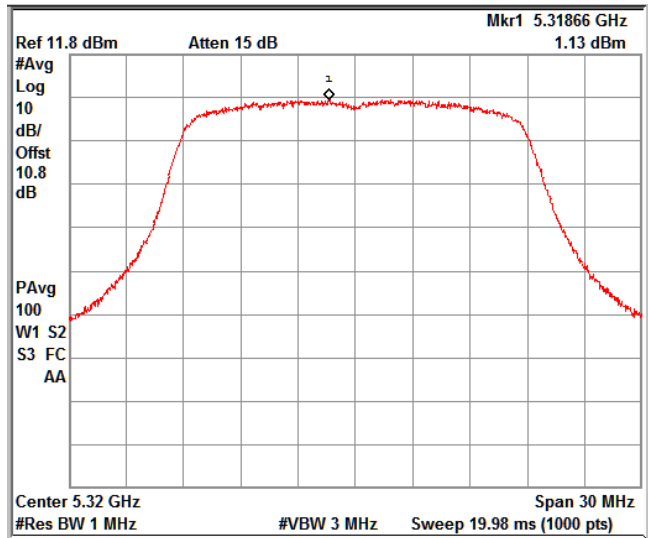
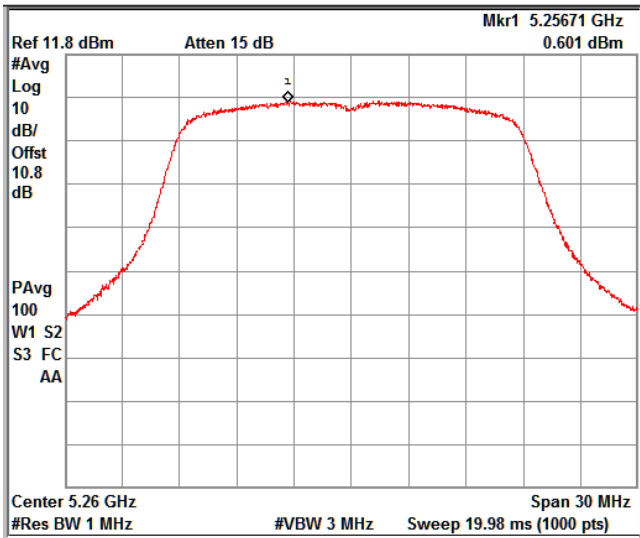
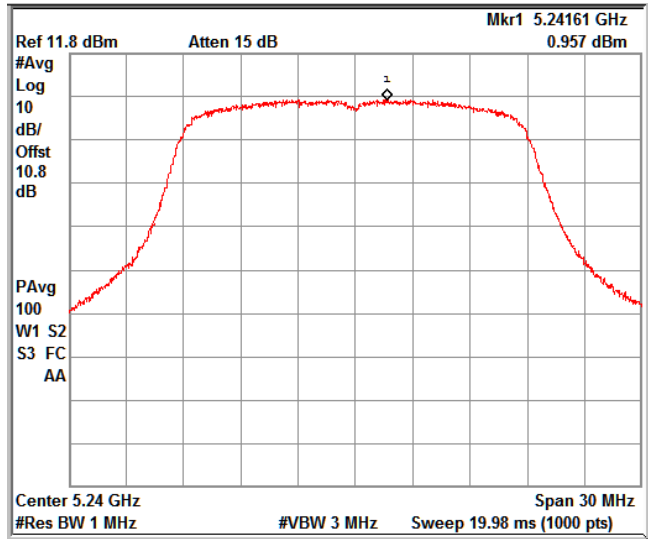
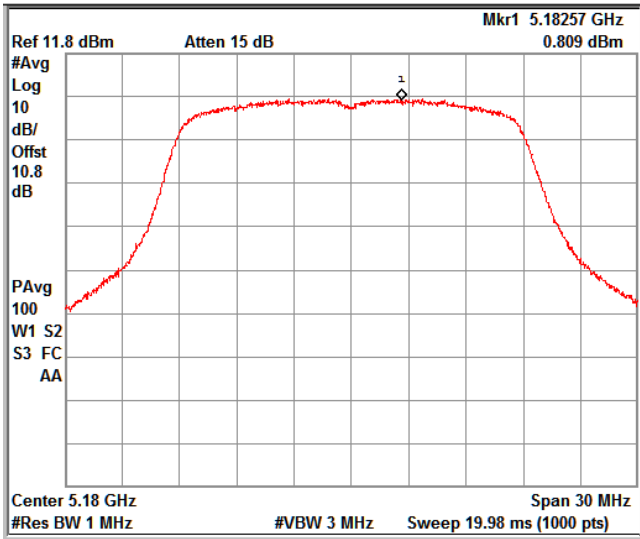
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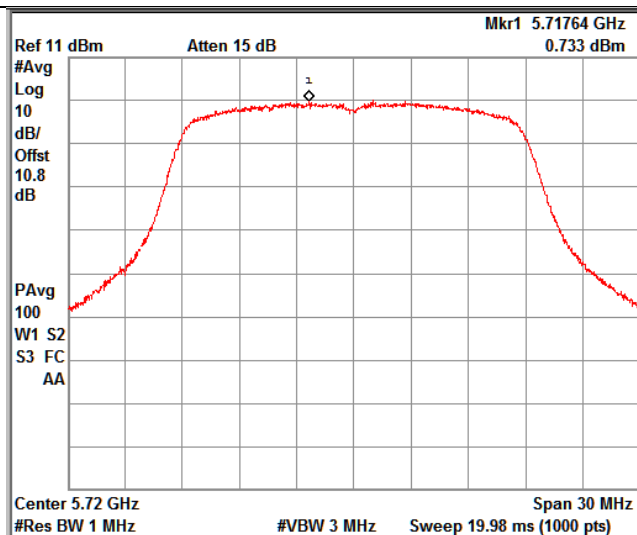
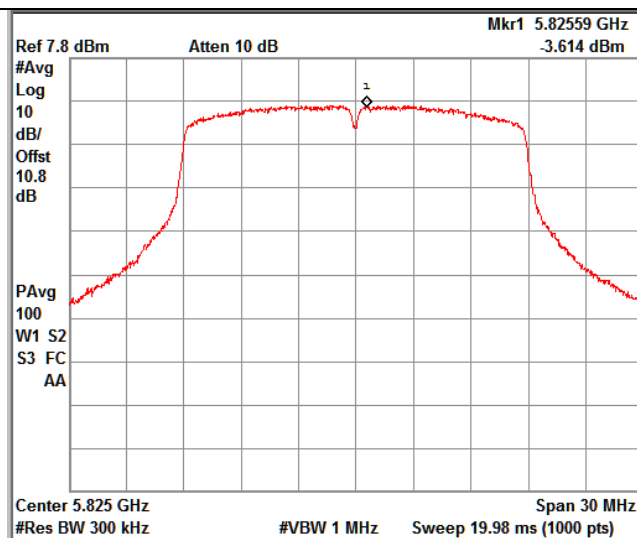
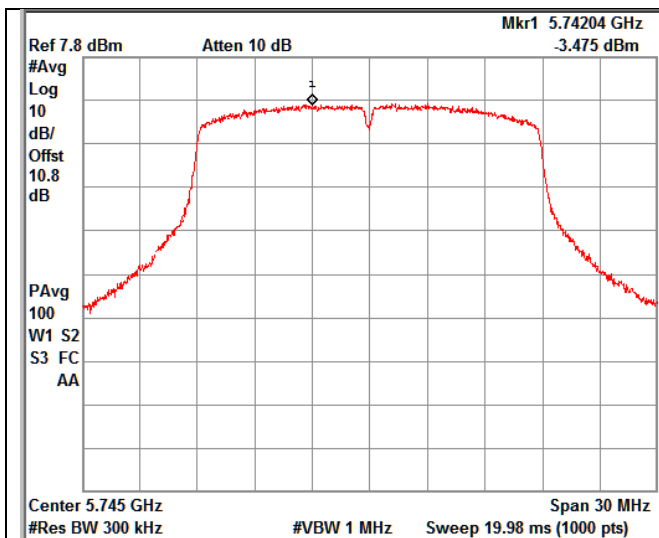
**Modulation: 802.11ac – VHT20MHz - UNII 1, UNII2a, UNII2c**

Data rate (Mbps)	Measured Frequency (MHz)	Measured Average PSD (dBm/1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average PSD (dBm/ 1MHz)	PSD (e.i.r.p) (dBm/ 1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/ 1MHz)
ac_mode-VHT 20MHz-MCS0	5180	0.80	92.00	0.36	1.16	4.53	11.00	10.00
	5240	0.95	92.00	0.36	1.31	4.68	11.00	10.00
	5260	0.60	92.00	0.36	0.96	4.33	11.00	10.00
	5320	1.13	92.00	0.36	1.49	4.86	11.00	10.00
	5500	0.30	92.00	0.36	0.66	4.03	11.00	10.00
	5700	1.26	92.00	0.36	1.62	4.99	11.00	10.00
	5720	0.73	92.00	0.36	1.09	4.46	11.00	10.00
ac_mode-VHT 20MHz-MCS8	5180	-1.52	47.00	3.28	1.76	5.13	11.00	10.00
	5240	-1.50	47.00	3.28	1.78	5.15	11.00	10.00
	5260	-1.69	47.00	3.28	1.59	4.96	11.00	10.00
	5320	-1.14	47.00	3.28	2.14	5.51	11.00	10.00
	5500	-1.18	47.00	3.28	2.10	5.47	11.00	10.00
	5700	-2.23	47.00	3.28	1.05	4.42	11.00	10.00
	5720	-1.98	47.00	3.28	1.30	4.67	11.00	10.00

**Modulation: 802.11ac – VHT20MHz - UNII 3**

Data rate (Mbps)	Measured Frequency (MHz)	Measured Average PSD (dBm/0.3MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Bandwidth Correction (dB)	Maximum Average PSD (dBm/ 500kHz)	PSD (e.i.r.p) (dBm/ 500kHz)	FCC PSD Limit (dBm/ 500kHz)	IC e.i.r.p PSD (dBm/ 500kHz)
ac_mode-VHT 20MHz-MCS0	5745	-3.47	92.00	0.36	2.21	-0.90	2.47	30.00	10.00
	5825	-3.61	92.00	0.36	2.21	-1.04	2.33	30.00	10.00
ac_mode-VHT 20MHz-MCS8	5745	-5.08	47.00	3.28	2.21	0.41	3.78	30.00	10.00
	5825	-5.58	47.00	3.28	2.21	-0.09	3.28	30.00	10.00

**Data Rate : MCS0**




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**Modulation: 802.11ac – VHT80MHz - UNII 1, UNII2a, UNII2c**

Data rate (Mbps)	Measured Frequency (MHz)	Measured Average PSD (dBm/1MHz)	Duty Cycle X %	Duty cycle correction factor (dB)	Maximum Average PSD (dBm/ 1MHz)	PSD (e.i.r.p) (dBm/ 1MHz)	FCC PSD Limit (dBm/1MHz)	IC e.i.r.p SD (dBm/ 1MHz)
ac_mode-VHT 80MHz_ MCS0	5210	-7.45	64.00	1.94	-5.51	-2.14	11.00	10.00
	5290	-7.55	64.00	1.94	-5.61	-2.24	11.00	10.00
	5530	-7.80	64.00	1.94	-5.86	-2.49	11.00	10.00
	5690	-8.35	64.00	1.94	-6.41	-4.06	11.00	10.00
ac_mode-VHT 80MHz_ MCS9	5210	-9.81	27.00	5.69	-4.12	-0.75	11.00	10.00
	5290	-10.70	27.00	5.69	-5.01	-1.64	11.00	10.00
	5530	-9.52	27.00	5.69	-3.83	-0.46	11.00	10.00
	5690	-10.22	27.00	5.69	-4.53	-1.16	11.00	10.00

**Modulation: 802.11ac – VHT80MHz - UNII 3**

Data rate (Mbps)	Measured Frequency (MHz)	Measured Average PSD (dBm/0.3MHz)	Duty Cycle %	Duty cycle correction factor (dB)	Bandwidth Correction (dB)	Maximum Average PSD (dBm/500kHz)	PSD (e.i.r.p) (dBm/500kHz)	FCC PSD Limit (dBm/500kHz)	IC e.i.r.p PSD (dBm/500kHz)
ac_mode-VHT80MHz_MCS0	5755	-12.93	64.00	1.94	2.21	-8.78	-5.41	30.00	10.00
ac_mode-VHT80MHz_MCS9	5755	-13.20	27.00	5.69	2.21	-5.30	-1.93	30.00	10.00

**Data Rate: MCS0**
