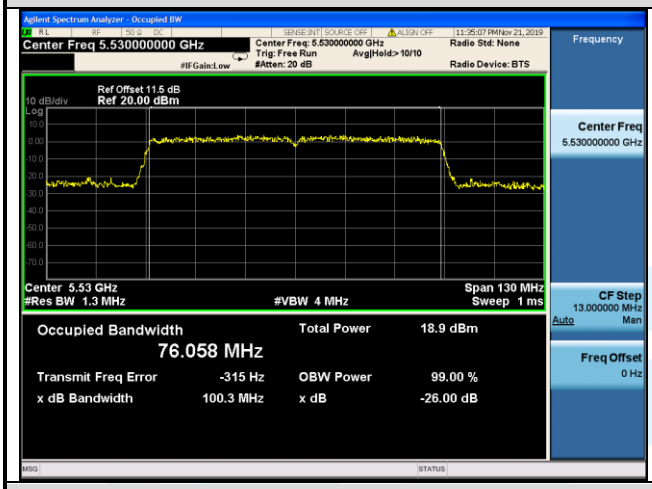
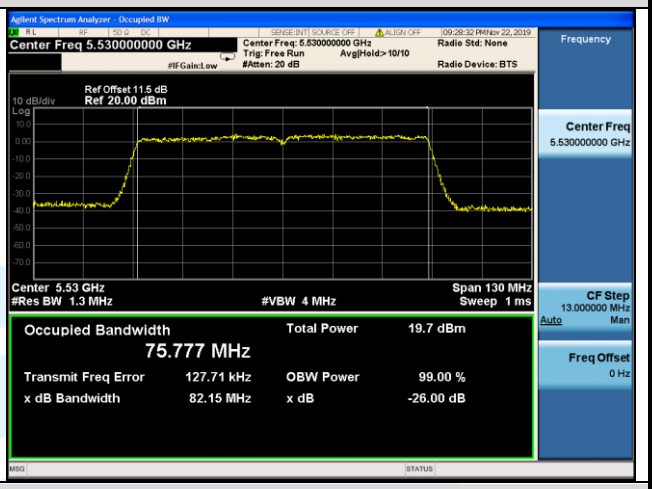
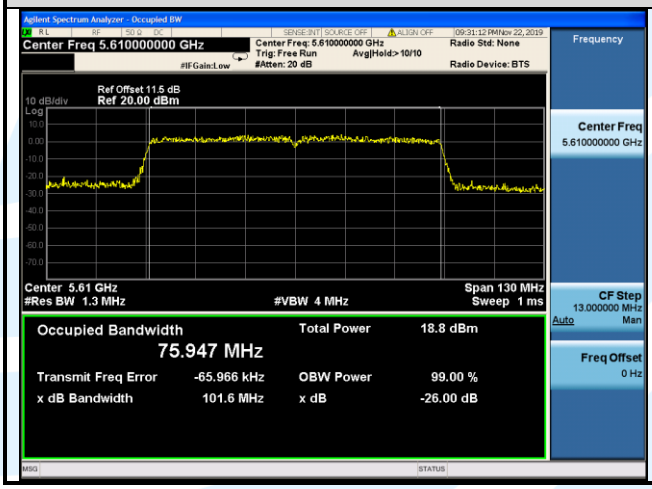
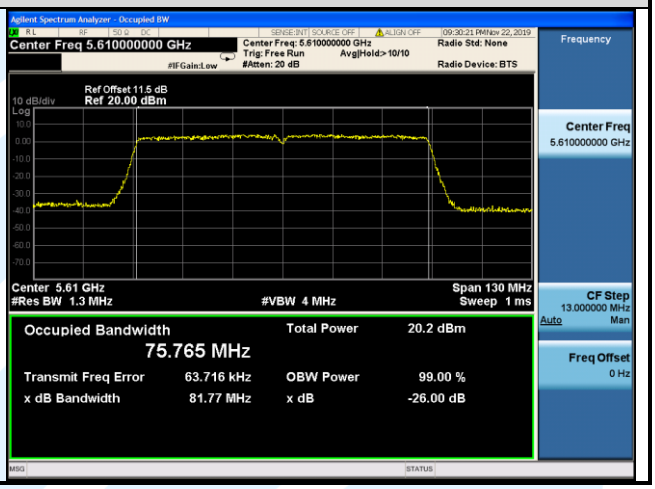
Channel 106





Channel 122





5.46 DB BANDWIDTH

Test Requirement: FCC 47 CFR Part 15 Subpart C Section 15.407 (e)

Test Method: KDB 789033 D02 v02r01Section C.2

Limit: Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Test Procedure:

The output from the transmitter was connected to an attenuator and then to the input of the RF Spectrum Analyzer.

Spectrum analyzer according to the following Settings:
a) Set RBW = 100 kHz.
b) Set the video bandwidth (VBW) ≥ 3 * RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Sweep = auto couple.
f) Allow the trace to stabilize.
g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

Test Setup: Refer to section 4.5.3 for details.

Instruments Used: Refer to section 3 for details

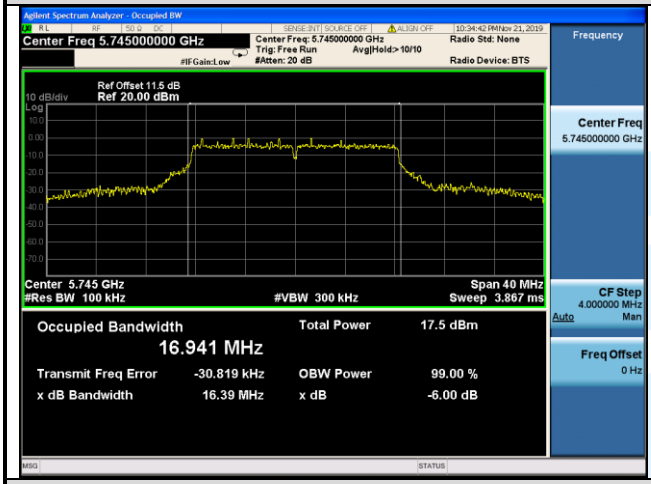
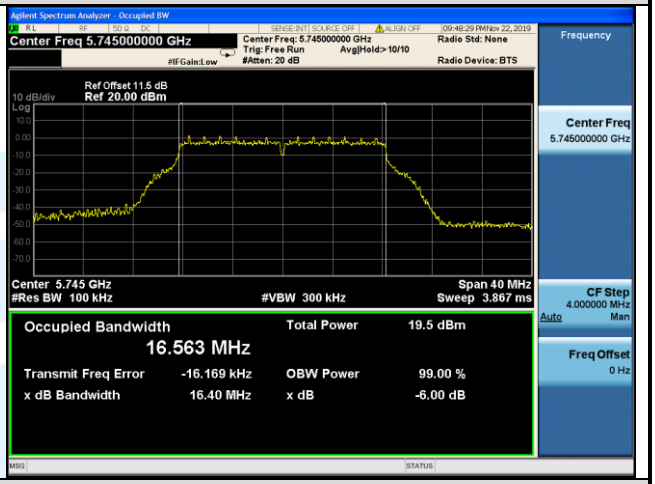
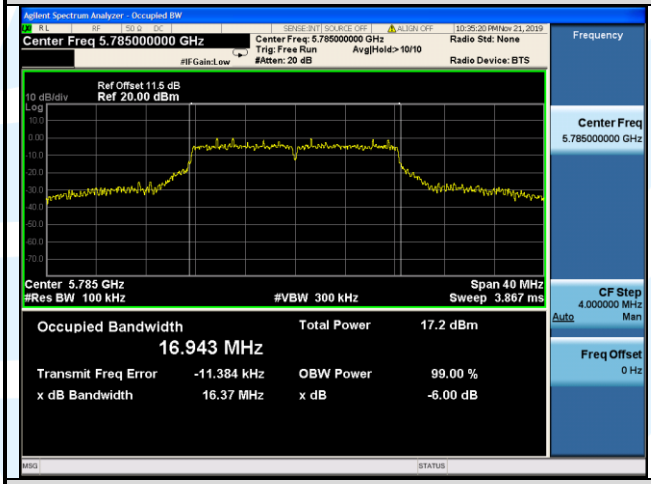
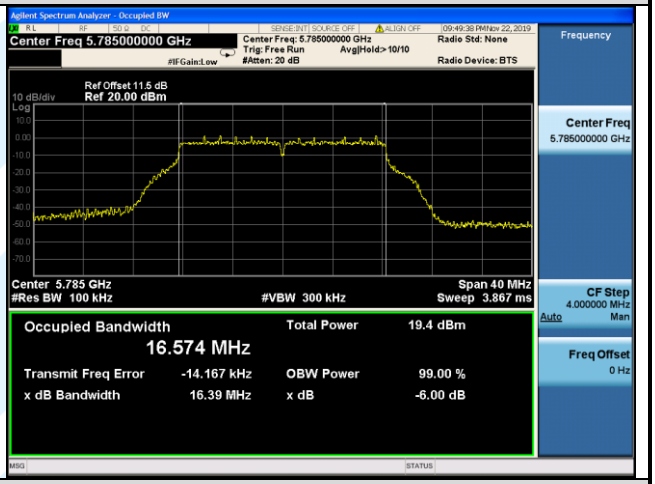
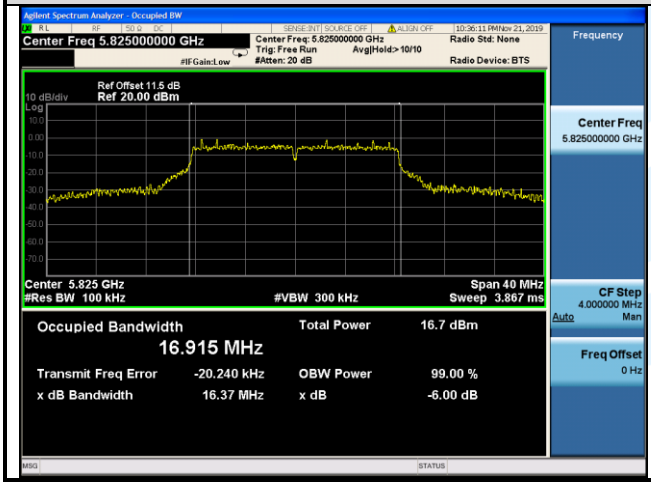
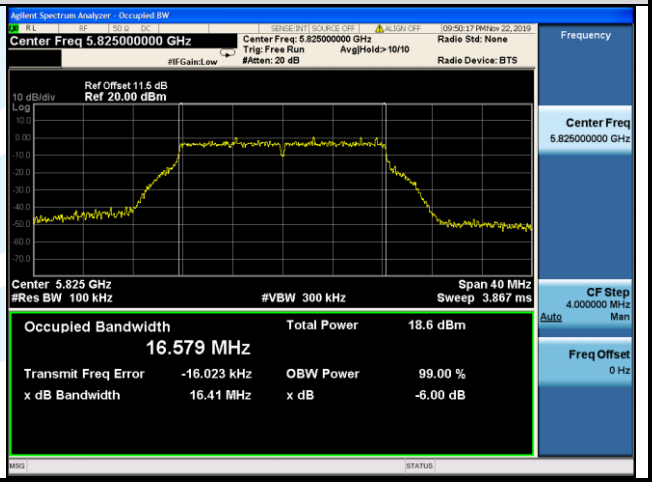
Test Mode: Transmitter mode

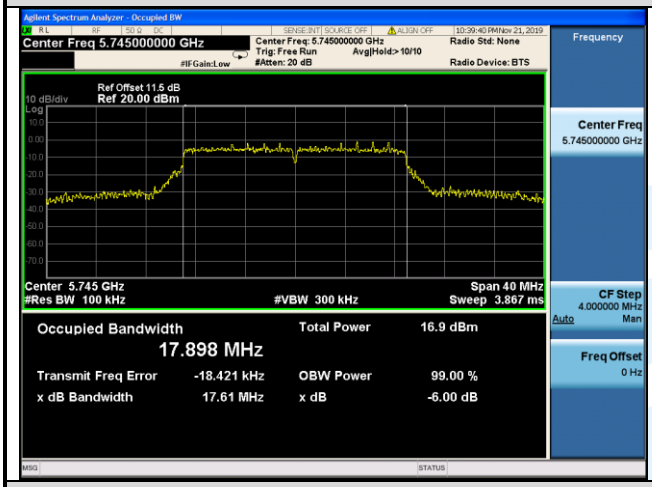
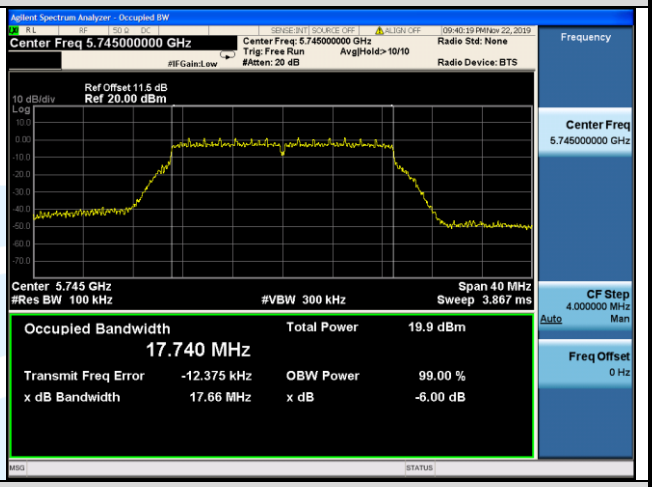
Test Results: Pass

Test Data:

Mode	Channel/ Frequency (MHz)	6 dB Bandwidth (MHz)		99% Bandwidth (MHz)		6 dB Bandwidth Limit	Pass / Fail
		Chain 0	Chain 1	Chain 0	Chain 1		
IEEE 802.11a	149 (5745)	16.39	16.40	16.941	16.563	> 500 kHz	Pass
	157 (5785)	16.37	16.39	16.943	16.574	> 500 kHz	Pass
	165 (5825)	16.37	16.41	16.915	16.579	> 500 kHz	Pass
IEEE 802.11n-HT20	149 (5745)	17.61	17.66	17.898	17.740	> 500 kHz	Pass
	157 (5785)	17.61	17.66	17.832	17.732	> 500 kHz	Pass
	165 (5825)	17.67	17.63	18.018	17.766	> 500 kHz	Pass
IEEE 802.11n-HT40	151 (5755)	36.39	36.42	36.363	36.194	> 500 kHz	Pass
	159 (5795)	36.39	36.42	36.321	36.199	> 500 kHz	Pass
IEEE 802.11ac-VHT20	149 (5745)	17.38	17.66	17.851	17.728	> 500 kHz	Pass
	157 (5785)	17.60	17.65	17.895	17.733	> 500 kHz	Pass
	165 (5825)	17.56	17.65	17.830	17.753	> 500 kHz	Pass
IEEE 802.11ac-VHT40	151 (5755)	36.3.5	36.40	36.335	36.170	> 500 kHz	Pass
	159 (5795)	36.38	36.39	36.313	36.193	> 500 kHz	Pass
IEEE 802.11ac-VHT80	155 (5775)	75.58	76.40	75.768	75.591	> 500 kHz	Pass

The test plots as follows:

IEEE 802.11a	
Chain 0	**Chain 1**
Channel 149	
	
Channel 157	
	
Channel 165	
	

IEEE 802.11n-HT20	
Chain 0	Chain 1
Channel 149	
	
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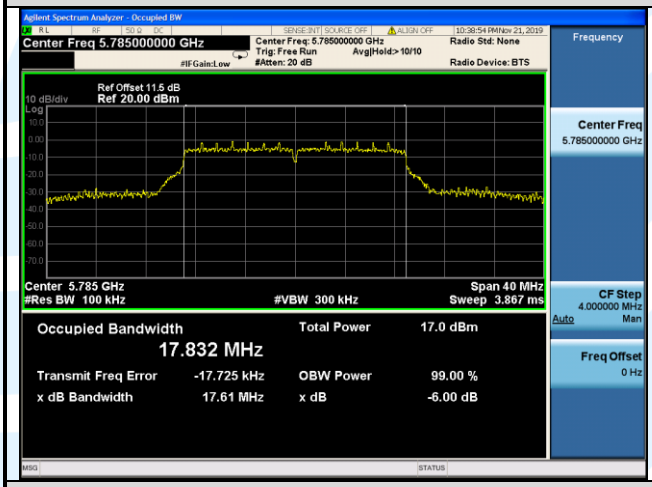
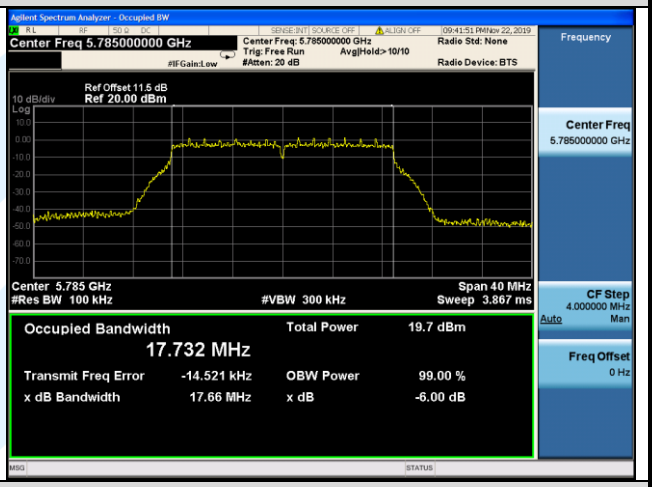
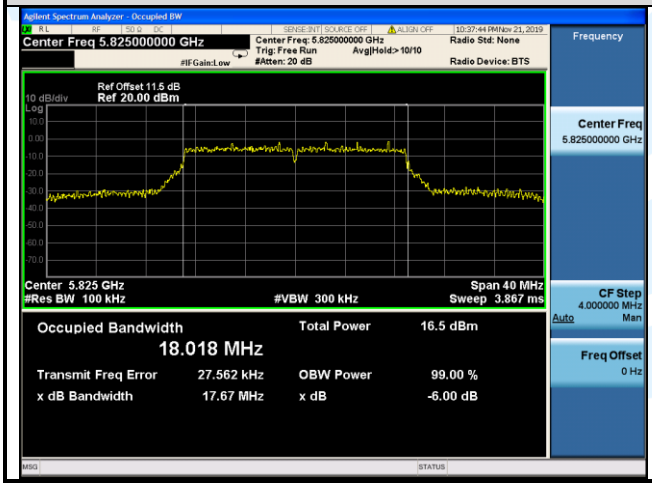
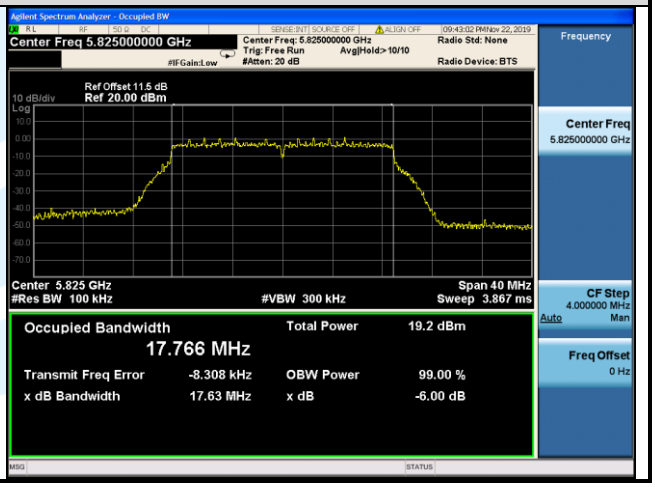
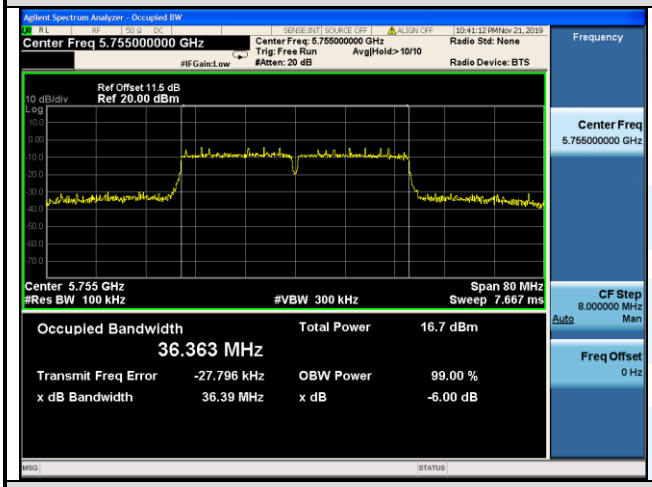
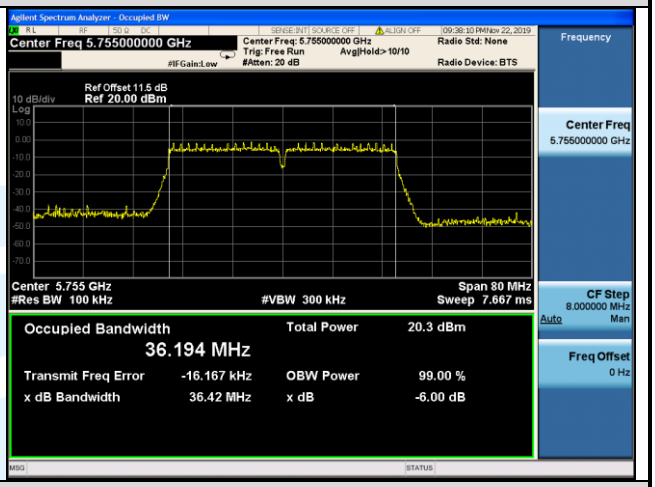
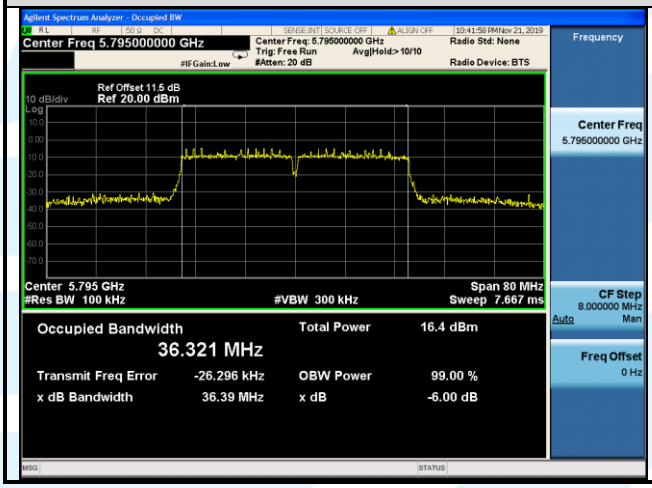
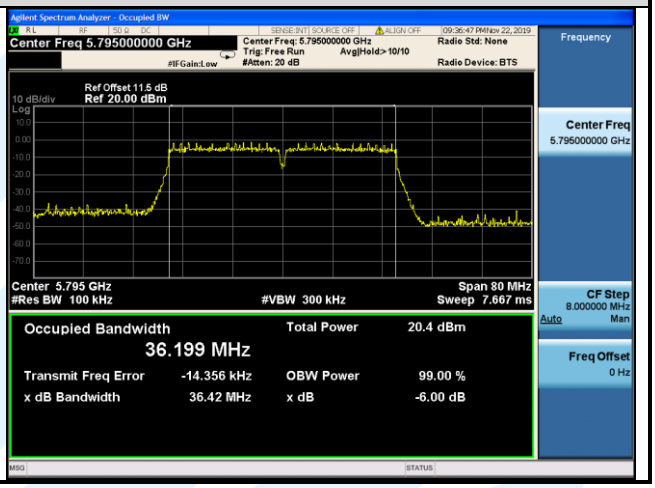
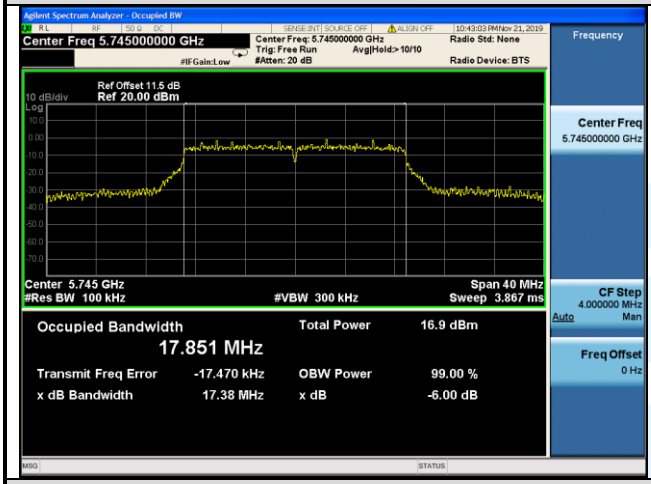
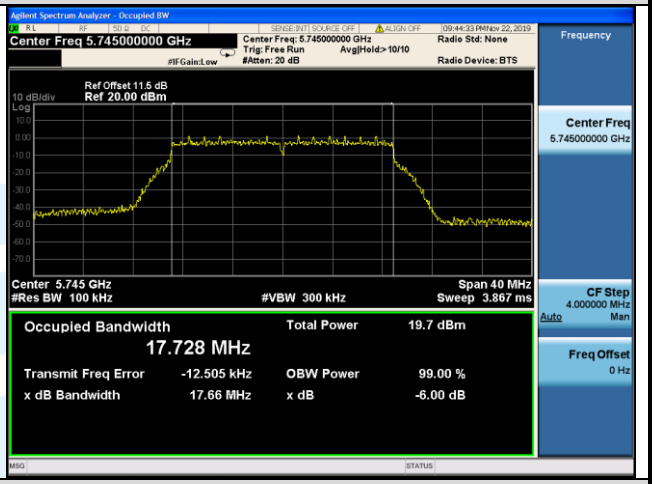
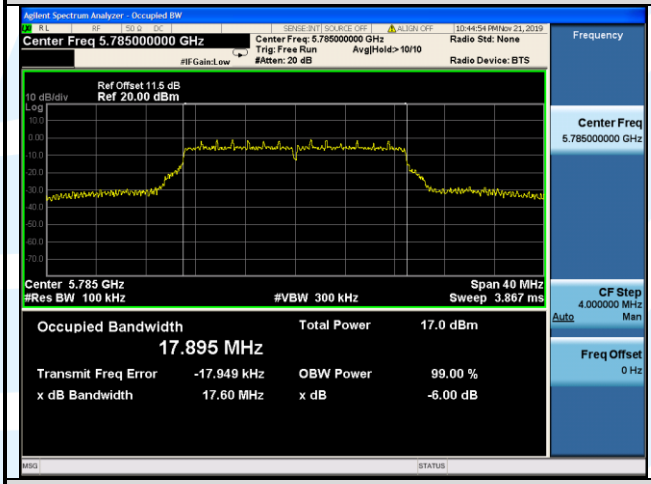
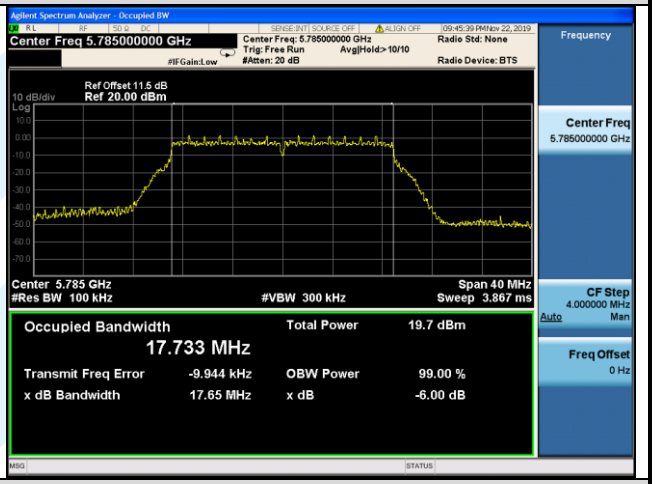
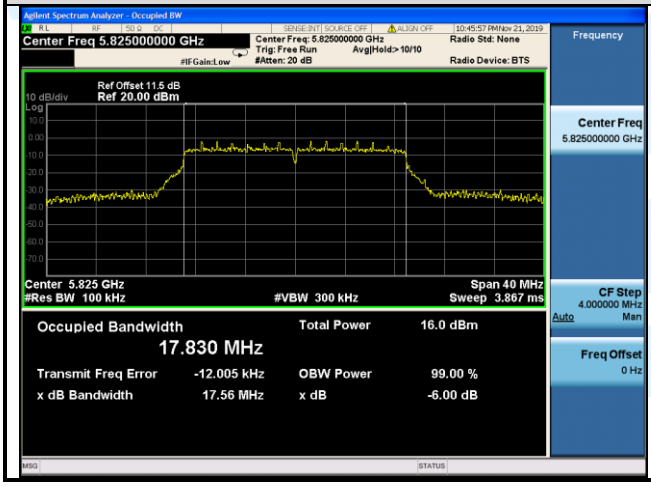
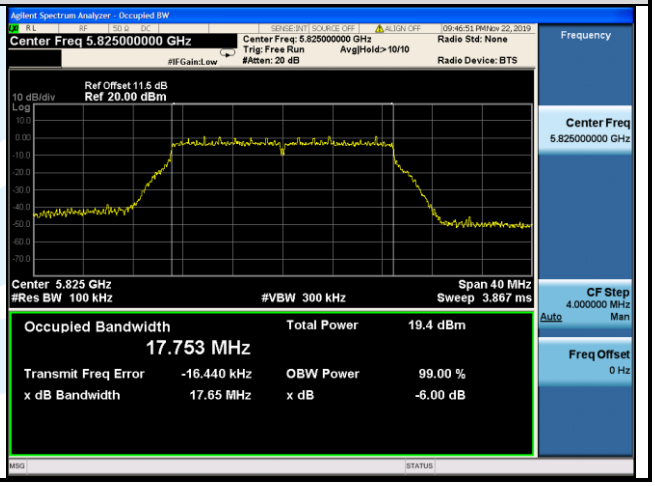
	
Channel 165	
	

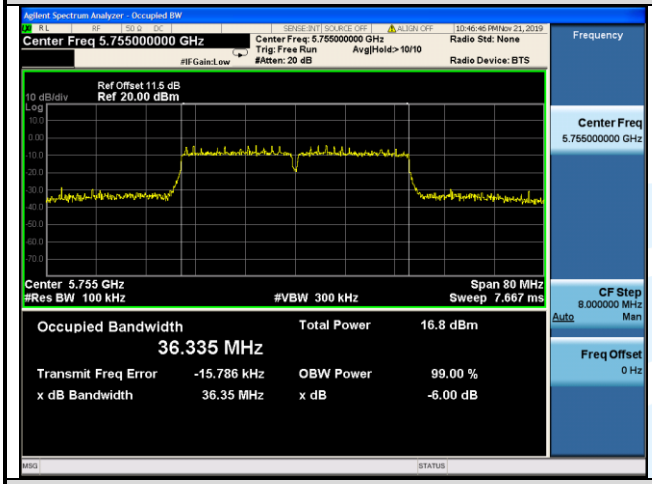
IEEE 802.11n-HT40	
Chain 0	Chain 1
Channel 151	
	
Channel 159	
	

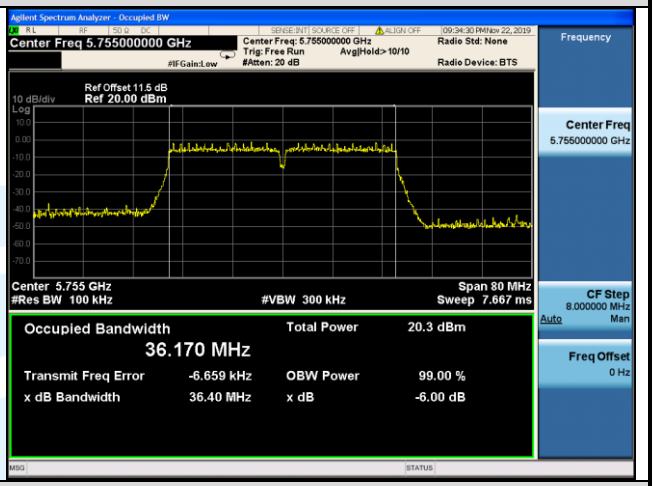
IEEE 802.11ac-VHT20	
Chain 0	Chain 1
Channel 149	
	
Channel 157	
	
Channel 165	
	

IEEE 802.11ac-VHT40

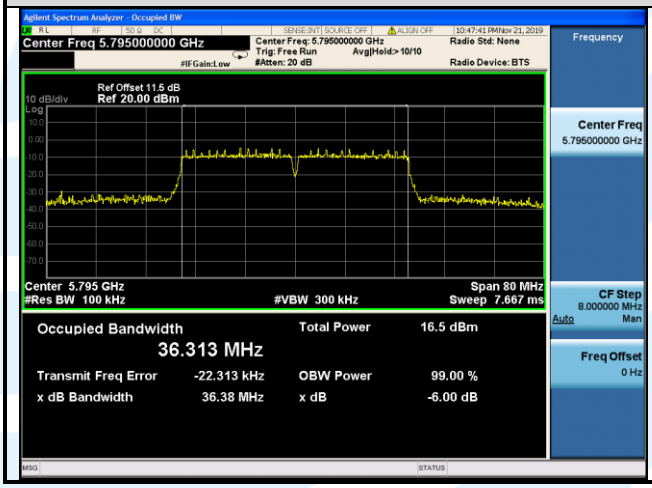
Chain 0	Chain 1

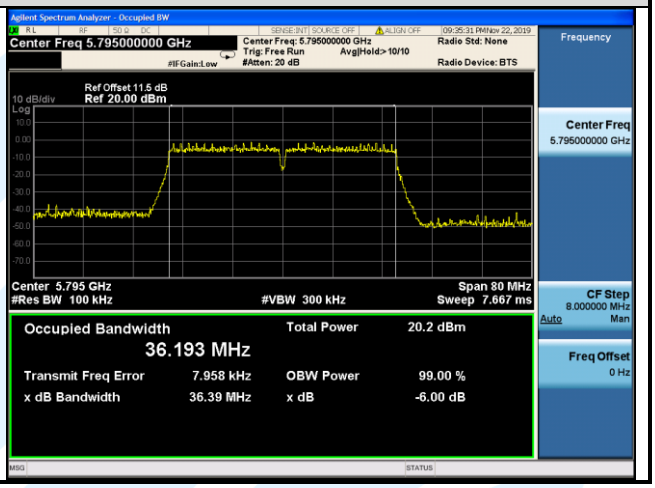
Channel 151





Channel 159

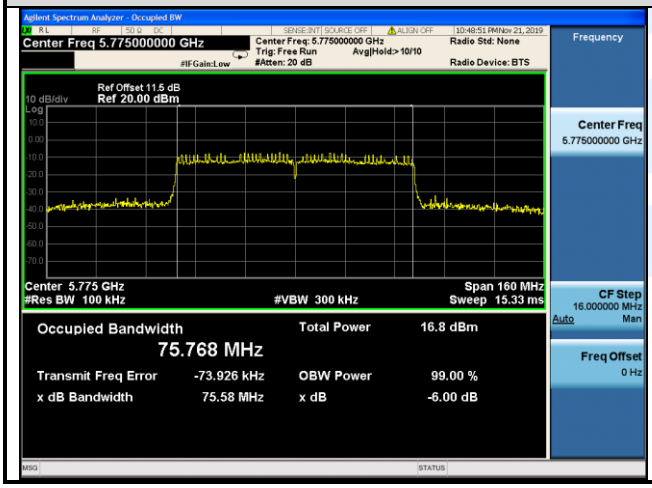


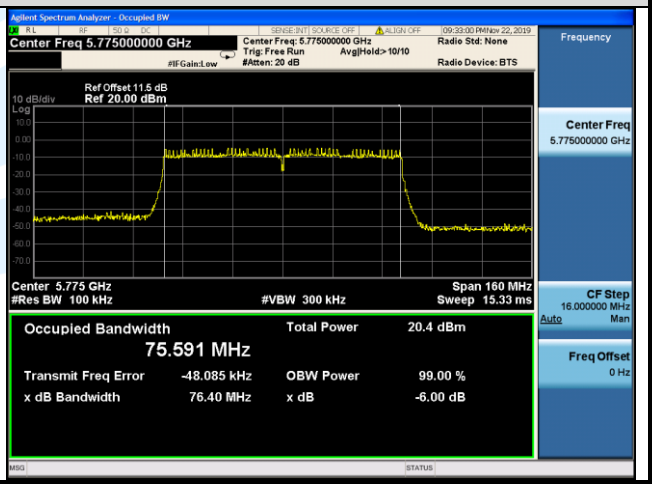


IEEE 802.11ac-VHT80

Chain 0	Chain 1

Channel 155





5.5 MAXIMUM CONDUCTED OUTPUT POWER

Test Requirement: FCC 47 CFR Part 15 Subpart E Section 15.407 (a)(1)(2)(3)
Test Method: KDB 789033 D02 v02r01 Section E.3.a (Method PM)
Limits:

1. For the band 5.15-5.25 GHz.
   (i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

   (ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

   (iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

   (iv) 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 provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Test Procedure:

1. Connected the EUT's antenna port to measure device by 10dB attenuator.
2. Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of Tx on burst.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

Test Setup: Refer to section 4.5.3 for details.

Instruments Used: Refer to section 3 for details

Test Mode: Transmitter mode

Test Results: Pass

Test Data:

For U-NII-2A, U-NII-2C Band:

For IEEE 802.11 a/n/ac, the minimum 26 dB emission bandwidth is 21.48 MHz

11 dBm + $10\log_{10}$ (21.48) = 24.32 dBm > 24 dBm (250mW)

So the 24 dB limit applicable

Directional gain and the maximum output power limit.

Frequency Band	Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated chains directional gain (dBi)	Peak Power Limits (dBm)
U-NII-1	3.05	3.04	6.06	23.94
U-NII-2A	3.05	3.04	6.06	23.94
U-NII-2C	3.21	2.92	6.08	23.92
U-NII-3	3.37	2.93	6.16	29.84
Unequal antenna gains, with equal transmit powers. Directional gain is to be computed as follows:				
If transmit signals are correlated, then				
Directional gain = 10 log[(10^G1 /20 + 10^G2 /20 + … + 10^GN /20)^2 /NANT] dBi [Note the "20"s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]				

Mode	Channel/ Frequency (MHz)	Maximum Conducted Output Power (dBm)						
		SISO				Total Power MIMO_ Chain 0+1	Limits (dBm)	Pass / Fail
		Chain 0		Chain 1				
		Meas Power	Corr'd Power	Meas Power	Corr'd Power			
IEEE 802.11a	36 (5180)	11.31	11.46	13.51	13.66	15.71	24	Pass
	44 (5220)	11.53	11.68	13.88	14.03	16.03	24	Pass
	48 (5240)	11.77	11.92	13.65	13.80	15.98	24	Pass
	52 (5260)	10.99	11.14	12.88	13.03	15.97	24	Pass
	60 (5300)	11.35	11.50	12.85	13.00	15.94	24	Pass
	64 (5320)	11.62	11.77	12.81	12.96	15.90	24	Pass
	100 (5500)	13.37	13.52	11.90	12.05	15.86	24	Pass
	116 (5580)	12.84	12.99	11.77	11.92	15.50	24	Pass
	140 (5700)	11.49	11.64	11.91	12.06	14.87	24	Pass
	149 (5745)	10.93	11.08	12.51	12.66	14.96	30	Pass
	157 (5785)	10.51	10.66	12.66	12.81	14.88	30	Pass
	165 (5825)	10.27	10.42	12.35	12.50	14.60	30	Pass

Mode	Channel/ Frequency (MHz)	Maximum Conducted Output Power (dBm)						
		MIMO				Total Power MIMO_ Chain 0+1	Limits (dBm)	Pass / Fail
		Chain 0		Chain 1				
		Meas Power	Corr'd Power	Meas Power	Corr'd Power			
IEEE 802.11n-HT20	36 (5180)	11.26	11.39	13.68	13.81	15.78	23.94	Pass
	44 (5220)	11.51	11.64	13.52	13.65	15.77	23.94	Pass
	48 (5240)	11.56	11.69	13.71	13.84	15.91	23.94	Pass
	52 (5260)	10.81	10.94	12.86	12.99	15.10	23.94	Pass
	60 (5300)	11.04	11.17	12.78	12.91	15.14	23.94	Pass
	64 (5320)	11.29	11.42	12.74	12.87	15.22	23.94	Pass
	100 (5500)	13.13	13.26	11.72	11.85	15.62	23.92	Pass
	120 (5600)	12.22	12.35	11.72	11.85	15.12	23.92	Pass
	140 (5700)	10.52	10.65	11.83	11.96	14.37	23.92	Pass
	149 (5745)	10.11	10.24	12.42	12.55	14.56	29.84	Pass
	157 (5785)	9.51	9.64	12.36	12.49	14.31	29.84	Pass
	165 (5825)	9.13	9.26	12.31	12.44	14.15	29.84	Pass

Mode	Channel/ Frequency (MHz)	Maximum Conducted Output Power (dBm)						
		MIMO				Total Power MIMO_ Chain 0+1	Limits (dBm)	Pass / Fail
		Chain 0		Chain 1				
		Meas Power	Corr'd Power	Meas Power	Corr'd Power			
IEEE 802.11n-HT40	38 (5190)	10.88	11.13	12.81	13.06	15.22	23.94	Pass
	46 (5230)	11.20	11.45	12.79	13.04	15.33	23.94	Pass
	54 (5270)	11.32	11.57	13.08	13.33	15.55	23.94	Pass
	62 (5310)	11.85	12.10	13.05	13.30	15.76	23.94	Pass
	102 (5510)	12.81	13.06	11.96	12.21	15.67	23.92	Pass
	118 (5590)	12.41	12.66	12.01	12.26	15.48	23.92	Pass
	134 (5670)	10.56	10.81	12.15	12.40	14.69	23.92	Pass
	151 (5755)	9.77	10.02	12.69	12.94	14.74	29.84	Pass
	159 (5795)	9.20	9.45	12.61	12.86	14.50	29.84	Pass

Mode	Channel/ Frequency (MHz)	Maximum Conducted Output Power (dBm)						
		MIMO				Total Power MIMO_ Chain 0+1	Limits (dBm)	Pass / Fail
		Chain 0		Chain 1				
		Meas Power	Corr'd Power	Meas Power	Corr'd Power			
IEEE 802.11ac-VHT20	36 (5180)	11.31	11.44	13.49	13.62	15.68	23.94	Pass
	44 (5220)	11.51	11.64	13.66	13.79	15.86	23.94	Pass
	48 (5240)	11.69	11.82	13.51	13.64	15.84	23.94	Pass
	52 (5260)	10.86	10.99	12.81	12.94	15.08	23.94	Pass
	60 (5300)	11.09	11.22	12.77	12.90	15.15	23.94	Pass
	64 (5320)	11.48	11.61	12.71	12.84	15.28	23.94	Pass
	100 (5500)	12.98	13.11	11.75	11.88	15.55	23.92	Pass
	120 (5600)	12.15	12.28	11.69	11.82	15.07	23.92	Pass
	140 (5700)	10.68	10.81	11.79	11.92	14.41	23.92	Pass
	149 (5745)	10.10	10.23	12.45	12.58	14.57	29.84	Pass
	157 (5785)	9.81	9.94	12.33	12.46	14.39	29.84	Pass
	165 (5825)	9.36	9.49	12.19	12.32	14.14	29.84	Pass

Mode	Channel/ Frequency (MHz)	Maximum Conducted Output Power (dBm)						
		MIMO				Total Power MIMO_ Chain 0+1	Limits (dBm)	Pass / Fail
		Chain 0		Chain 1				
		Meas Power	Corr'd Power	Meas Power	Corr'd Power			
IEEE 802.11ac-VHT40	38 (5190)	10.82	11.09	12.88	13.15	15.25	23.94	Pass
	46 (5230)	11.25	11.52	12.81	13.08	15.38	23.94	Pass
	54 (5270)	11.30	11.57	12.98	13.25	15.50	23.94	Pass
	62 (5310)	11.78	12.05	13.08	13.35	15.76	23.94	Pass
	102 (5510)	12.89	13.16	12.21	12.48	15.84	23.92	Pass
	118 (5590)	12.56	12.83	11.98	12.25	15.56	23.92	Pass
	134 (5670)	10.67	10.94	12.09	12.36	14.72	23.92	Pass
	151 (5755)	9.87	10.14	12.66	12.93	14.77	29.84	Pass
	159 (5795)	9.25	9.52	12.57	12.84	14.50	29.84	Pass

Mode	Channel/ Frequency (MHz)	Maximum Conducted Output Power (dBm)						
		MIMO				Total Power MIMO_ Chain 0+1	Limits (dBm)	Pass / Fail
		Chain 0		Chain 1				
		Meas Power	Corr'd Power	Meas Power	Corr'd Power			
IEEE 802.11ac-VHT80	42 (5230)	10.06	10.57	11.89	12.40	14.59	23.94	Pass
	58 (5290)	10.71	11.22	12.21	12.72	15.04	23.94	Pass
	106 (5530)	11.81	12.32	11.22	11.73	15.04	23.94	Pass
	122 (5610)	10.93	11.44	11.15	11.66	14.56	23.94	Pass
	155 (5775)	9.01	9.52	11.77	12.28	14.13	29.84	Pass

Remark:
1. Corr'd Power = Meas Power + Duty Cycle Factor
2. Total (Chain 0+1) = $10*\log[(10^{\text{Chain 0}/10})+(10^{\text{Chain 1}/10})]$

5.6 PEAK POWER SPECTRAL DENSITY

Test Requirement: FCC 47 CFR Part 15 Subpart E Section 15.407 (a)(1)(2)(3)

Test Method: KDB 789033 D02 v02r01 Section F

Limits:

1. For the band 5.15-5.25 GHz.
   (i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

   (ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

   (iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

   (iv) 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 provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
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. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Test Procedure:

The output from the transmitter was connected to an attenuator and then to the input of the RF Spectrum Analyzer.

Spectrum analyzer according to the following Settings:

1. For U-NII-1, U-NII-2A, U-NII-2C band:

Using method SA-2

a) Set span to encompass the entire emission bandwidth (EBW) of the signal.
b) Set RBW = 1 MHz, Set VBW ≥ 3 RBW, Detector = RMS
c) Sweep time = auto, trigger set to “free run”.
d) Trace average at least 100 traces in power averaging mode.
e) Record the max value and add 10 log (1/duty cycle)

2. For U-NII-3 band:

a) Set span to encompass the entire emission bandwidth (EBW) of the signal.
b) Set RBW = 500 kHz, Set VBW ≥ 3 RBW, Detector = RMS
c) Use the peak marker function to determine the maximum power level in any 500 kHz band segment within the fundamental EBW.
d) Sweep time = auto, trigger set to “free run”.
e) Trace average at least 100 traces in power averaging mode.
f) Record the max value and add 10 log (1/duty cycle)

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

Test Setup: Refer to section 4.5.3 for details.
Instruments Used: Refer to section 3 for details
Test Mode: Transmitter mode
Test Results: Pass
Test Data:

Directional gain and the maximum output power limit.

Frequency Band	Chain 0 Antenna Gain (dBi)	Chain 1 Antenna Gain (dBi)	Correlated chains directional gain (dBi)	PSD Limits (dBm/MHz or dBm/500kHz)
U-NII-1	3.05	3.04	6.06	10.94
U-NII-2A	3.05	3.04	6.06	10.94
U-NII-2C	3.21	2.92	6.08	10.92
U-NII-3	3.37	2.93	6.16	29.84
Unequal antenna gains, with equal transmit powers. Directional gain is to be computed as follows:				
If transmit signals are correlated, then				
Directional gain = 10 log[(10^G1 /20 + 10^G2 /20 + … + 10^GN /20)^2 /NANT] dBi [Note the “20”s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]				

For U-NII-1, U-NII-2A, U-NII-2C band

Mode	Channel/ Frequency (MHz)	Maximum Power Spectral Density (dBm/MHz)						
		SISO				Total PSD MIMO_ Chain 0+1	Limits	Pass / Fail
		Chain 0		Chain 1				
		Meas PSD	Corr'd PSD	Meas PSD	Corr'd PSD			
IEEE 802.11a	36 (5180)	0.801	0.96	2.39	2.54	---	11	Pass
	44 (5220)	0.940	1.09	2.17	2.32	---	11	Pass
	48 (5240)	1.059	1.21	2.22	2.37	---	11	Pass
	52 (5260)	0.182	0.34	1.596	1.75	---	11	Pass
	60 (5300)	0.145	0.30	1.345	1.50	---	11	Pass
	64 (5320)	0.261	0.42	1.492	1.65	---	11	Pass
	100 (5500)	1.403	1.56	0.386	0.54	---	11	Pass
	120 (5600)	1.558	1.71	0.600	0.75	---	11	Pass
	140 (5700)	0.385	0.54	1.256	1.41	---	11	Pass

Mode	Channel/ Frequency (MHz)	Maximum Power Spectral Density (dBm/MHz)						
		MIMO				Total PSD MIMO_ Chain 0+1	Limits	Pass / Fail
		Chain 0		Chain 1				
		Meas PSD	Corr'd PSD	Meas PSD	Corr'd PSD			
IEEE 802.11n-HT20	36 (5180)	0.026	0.16	2.660	2.79	4.68	10.48	Pass
	44 (5220)	0.443	0.57	2.480	2.61	4.72	10.48	Pass
	48 (5240)	0.505	0.64	2.700	2.83	4.88	10.48	Pass
	52 (5260)	-0.358	-0.23	1.447	1.58	3.78	10.48	Pass
	60 (5300)	-0.067	0.06	1.589	1.72	3.98	10.48	Pass
	64 (5320)	0.240	0.37	1.321	1.45	3.95	10.48	Pass
	100 (5500)	1.115	1.25	-0.484	-0.35	3.53	10.48	Pass
	120 (5600)	0.612	0.74	0.638	0.77	3.77	10.48	Pass
	140 (5700)	-0.565	-0.43	1.010	1.14	3.43	10.48	Pass

Mode	Channel/ Frequency (MHz)	Maximum Power Spectral Density (dBm/MHz)						
		MIMO				Total PSD MIMO_ Chain 0+1	Limits	Pass / Fail
		Chain 0		Chain 1				
		Meas PSD	Corr'd PSD	Meas PSD	Corr'd PSD			
IEEE 802.11n-HT40	38 (5190)	-3.290	-3.04	-1.046	-0.79	1.24	11.48	Pass
	46 (5230)	-2.837	-2.58	-1.289	-1.04	1.27	11.48	Pass
	54 (5270)	-2.732	-2.48	-1.063	-0.81	1.45	11.48	Pass
	62 (5310)	-2.622	-2.37	-1.436	-1.18	1.28	11.48	Pass
	102 (5510)	-2.707	-2.45	-3.436	-3.18	0.21	11.48	Pass
	118 (5590)	-3.605	-3.35	-3.118	-2.86	-0.09	11.48	Pass
	134 (5670)	-4.742	-4.49	-2.879	-2.63	-0.45	11.48	Pass

Mode	Channel/ Frequency (MHz)	Maximum Power Spectral Density (dBm/MHz)						
		MIMO				Total PSD MIMO_ Chain 0+1	Limits	Pass / Fail
		Chain 0		Chain 1				
		Meas PSD	Corr'd PSD	Meas PSD	Corr'd PSD			
IEEE 802.11ac-VHT20	36 (5180)	1.101	1.23	2.05	2.18	4.74	10.48	Pass
	44 (5220)	0.514	0.64	2.258	2.39	4.61	10.48	Pass
	48 (5240)	0.252	0.38	2.187	2.32	4.47	10.48	Pass
	52 (5260)	-0.384	-0.25	1.715	1.85	3.93	10.48	Pass
	60 (5300)	0.104	0.23	1.089	1.22	3.76	10.48	Pass
	64 (5320)	0.134	0.26	1.219	1.35	3.85	10.48	Pass
	100 (5500)	1.159	1.29	0.126	0.26	3.81	10.48	Pass
	120 (5600)	0.713	0.84	0.278	0.41	3.64	10.48	Pass
	140 (5700)	-0.973	-0.84	0.945	1.08	3.23	10.48	Pass

Mode	Channel/ Frequency (MHz)	Maximum Power Spectral Density (dBm/MHz)						
		MIMO				Total PSD MIMO_ Chain 0+1	Limits	Pass / Fail
		Chain 0		Chain 1				
		Meas PSD	Corr'd PSD	Meas PSD	Corr'd PSD			
IEEE 802.11ac-VHT40	38 (5190)	-3.203	-2.93	-1.54	-1.27	0.99	11.48	Pass
	46 (5230)	-3.097	-2.83	-1.40	-1.13	1.12	11.48	Pass
	54 (5270)	-2.716	-2.45	-1.12	-0.85	1.44	11.48	Pass
	62 (5310)	-2.605	-2.33	-1.54	-1.27	1.24	11.48	Pass
	102 (5510)	-2.793	-2.52	-3.59	-3.32	0.11	11.48	Pass
	118 (5590)	-3.646	-3.38	-3.15	-2.88	-0.11	11.48	Pass
	134 (5670)	-4.852	-4.58	-3.16	-2.89	-0.64	11.48	Pass

Mode	Channel/ Frequency (MHz)	Maximum Power Spectral Density (dBm/MHz)						
		MIMO				Total PSD MIMO_ Chain 0+1	Limits	Pass / Fail
		Chain 0		Chain 1				
		Meas PSD	Corr'd PSD	Meas PSD	Corr'd PSD			
IEEE 802.11ac-VHT80	42 (5230)	-7.173	-6.67	-5.04	-4.53	-2.46	11.48	Pass
	58 (5290)	-6.466	-5.96	-4.94	-4.43	-2.12	11.48	Pass
	106 (5530)	-6.857	-6.35	-6.98	-6.47	-3.40	11.48	Pass
	122 (5610)	-7.372	-6.87	-6.81	-6.30	-3.56	11.48	Pass

For U-NII-3 band

Mode	Channel/ Frequency (MHz)	Maximum Power Spectral Density (dBm/500kHz)						
		SISO				Total PSD MIMO_ Chain 0+1	Limit	Pass / Fail
		Chain 0		Chain 1				
		Meas PSD	Corr'd PSD	Meas PSD	Corr'd PSD			
IEEE 802.11a	149 (5745)	-3.645	-3.49	-1.29	-1.14	---	30	Pass
	157 (5785)	-3.614	-3.46	-1.03	-0.88	---	30	Pass
	165 (5825)	-3.697	-3.54	-1.10	-0.94	---	30	Pass

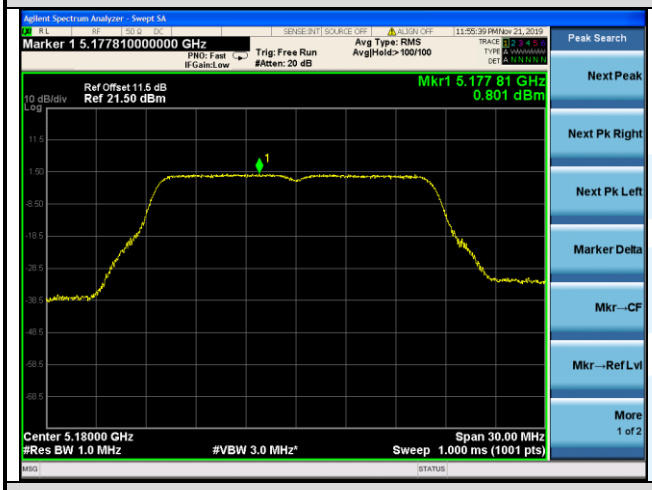
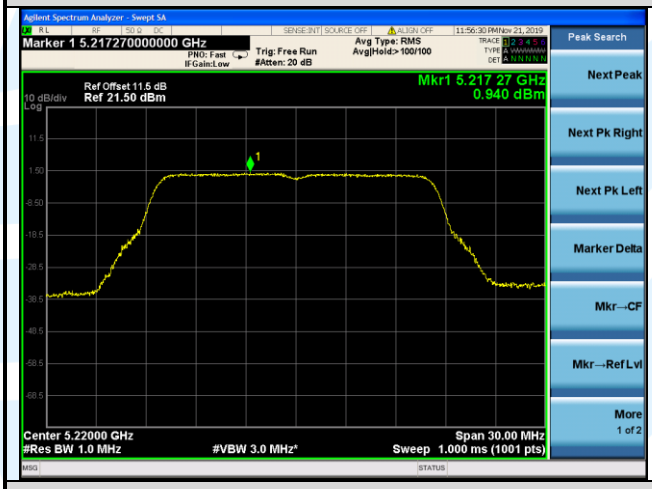
Mode	Channel/ Frequency (MHz)	Maximum Power Spectral Density (dBm/500kHz)						
		MIMO				Total PSD MIMO_ Chain 0+1	Limit	Pass / Fail
		Chain 0		Chain 1				
		Meas PSD	Corr'd PSD	Meas PSD	Corr'd PSD			
IEEE 802.11n-HT20	149 (5745)	-4.302	-4.17	-1.650	-1.52	0.36	29.48	Pass
	157 (5785)	-4.441	-4.31	-1.385	-1.25	0.49	29.48	Pass
	165 (5825)	-4.713	-4.58	-1.559	-1.43	0.29	29.48	Pass
IEEE 802.11n-HT40	151 (5755)	-8.379	-8.13	-4.96	-4.70	-3.07	29.48	Pass
	159 (5795)	-8.294	-8.04	-4.68	-4.42	-2.86	29.48	Pass

Mode	Channel/ Frequency (MHz)	Maximum Power Spectral Density (dBm/500kHz)						
		MIMO				Total PSD MIMO_ Chain 0+1	Limit	Pass / Fail
		Chain 0		Chain 1				
		Meas PSD	Corr'd PSD	Meas PSD	Corr'd PSD			
IEEE 802.11ac-VHT20	149 (5745)	-4.391	-4.26	-1.65	-1.52	0.33	29.48	Pass
	157 (5785)	-4.626	-4.50	-1.44	-1.31	0.39	29.48	Pass
	165 (5825)	-5.006	-4.88	-1.77	-1.64	0.05	29.48	Pass
IEEE 802.11ac -VHT40	151 (5755)	-8.008	-7.74	-5.05	-4.78	-3.00	29.48	Pass
	159 (5795)	-8.688	-8.42	-4.76	-4.49	-3.01	29.48	Pass

Mode	Channel/ Frequency (MHz)	Maximum Power Spectral Density (dBm/500kHz)						
		MIMO				Total PSD MIMO_ Chain 0+1	Limit	Pass / Fail
		Chain 0		Chain 1				
		Meas PSD	Corr'd PSD	Meas PSD	Corr'd PSD			
IEEE 802.11ac-VHT80	155 (5775)	-11.812	-11.31	-8.66	-8.16	-6.44	29.48	Pass

Remark:
1. Corr'd PSD = Meas PSD + Duty Cycle Factor
2. Total (Chain 0+1) = $10*\log[(10^{Chain\ 0/10})+(10^{Chain\ 1/10})]$

The test plots as follows:

IEEE 802.11a	
Chain 0	Chain 1
Channel 36	
	
Channel 44	
	
Channel 48	

IEEE 802.11a

Channel 52

Channel 60

Channel 64