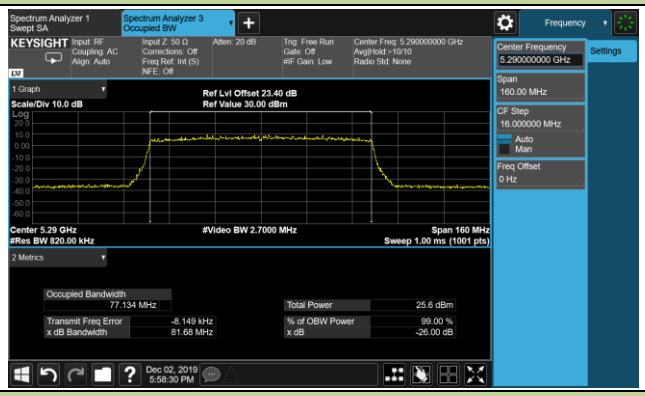
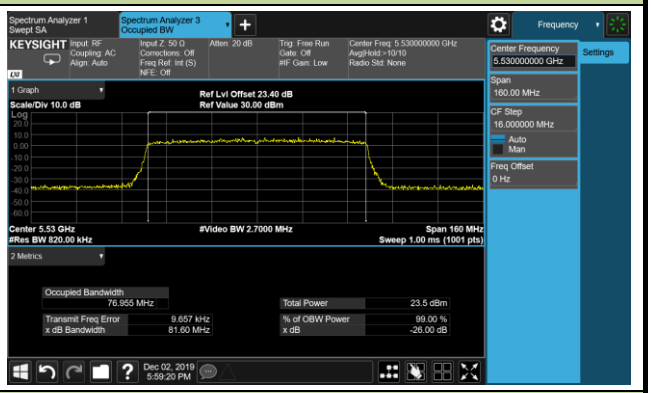
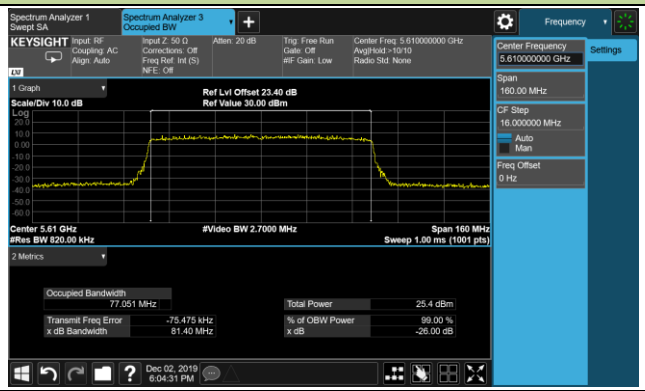
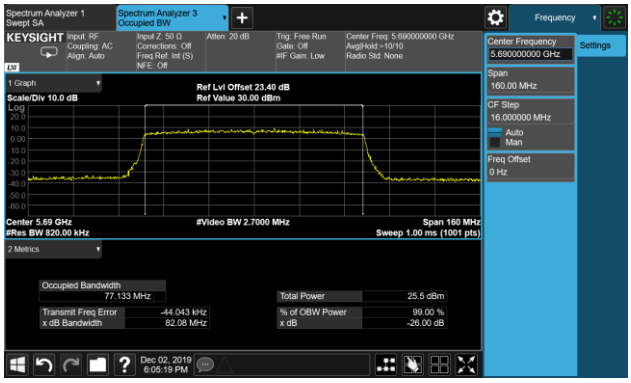
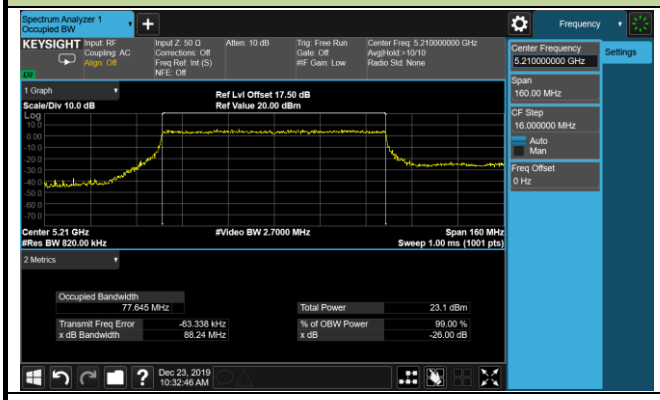
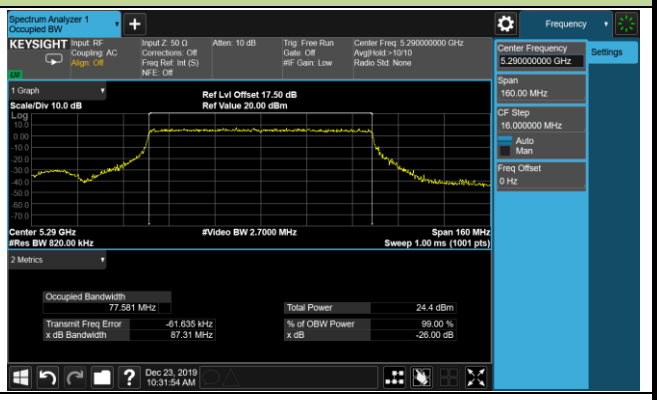
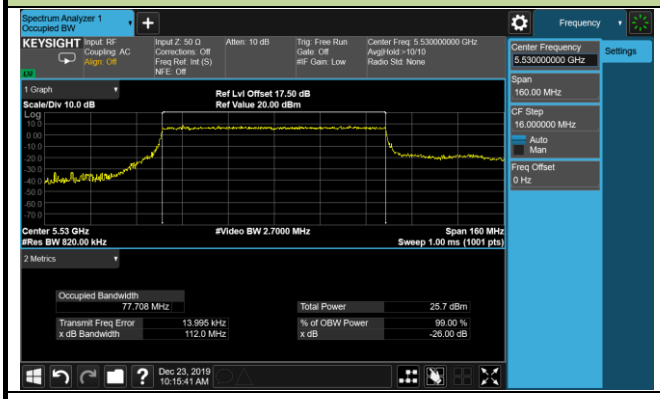
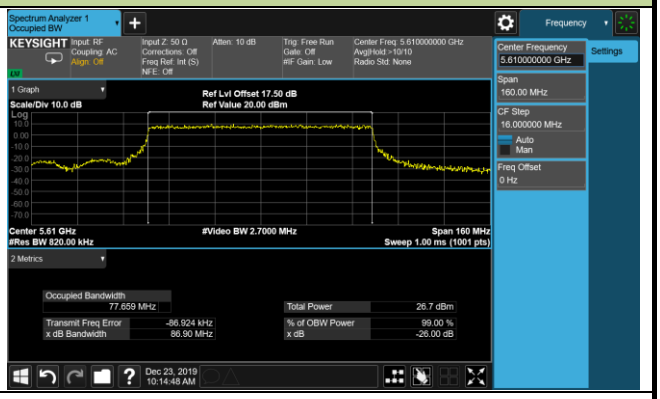
802.11ax-HE80 26dB Bandwidth & 99% Bandwidth - Ant 0 / Ant 0 + 1 + 2 + 3	
Channel 58 (5290MHz)	Channel 106 (5530MHz)
	
Channel 122 (5610MHz)	Channel 138 (5690MHz)
	

802.11ax-HE80+80 Contiguous 26dB Bandwidth & 99% Bandwidth - Ant 0 + 1 + 2 + 3	
Channel 42 (5210MHz)	**Channel 58 (5290MHz)**
	
Note: 26dB OCW = [5290 + (87.31/2)] - [5210 - (88.24/2)] = 167.78 MHz 99% OCW = [5290 + (77.58/2)] - [5210 - (77.65/2)] = 157.62 MHz	
802.11ax-HE80+80 Contiguous 26dB Bandwidth & 99% Bandwidth - Ant 0 + 1 + 2 + 3	
Channel 106 (5530MHz)	**Channel 122 (5610MHz)**
	
Note: 26dB OCW = [5610 + (86.90/2)] - [5530 - (112.0/2)] = 179.45 MHz 99% OCW = [5610 + (77.66/2)] - [5530 - (77.71/2)] = 157.68 MHz	

7.3. 6dB Bandwidth Measurement

7.3.1.Test Limit

The minimum 6dB bandwidth shall be at least 500 kHz.

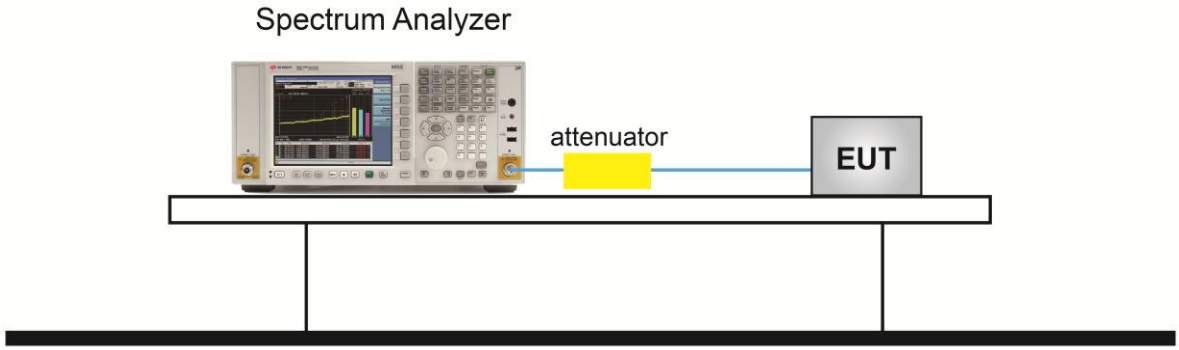
7.3.2.Test Procedure used

ANSI C63.10-2013 - Section 6.9.2

7.3.3.Test Setting

1. Set center frequency to the nominal EUT channel center frequency.
2. RBW = 100 kHz.
3. VBW≧ 3 × RBW.
4. Detector = Peak.
5. Trace mode = max hold.
6. Sweep = auto couple.
7. Allow the trace to stabilize.
8. 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.

7.3.4.Test Setup



7.3.5.Test Result

Not Applicable.

7.4. Output Power Measurement

7.4.1.Test Limit

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.

If transmitting antennas of directional gain greater than 6dBi are used, the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

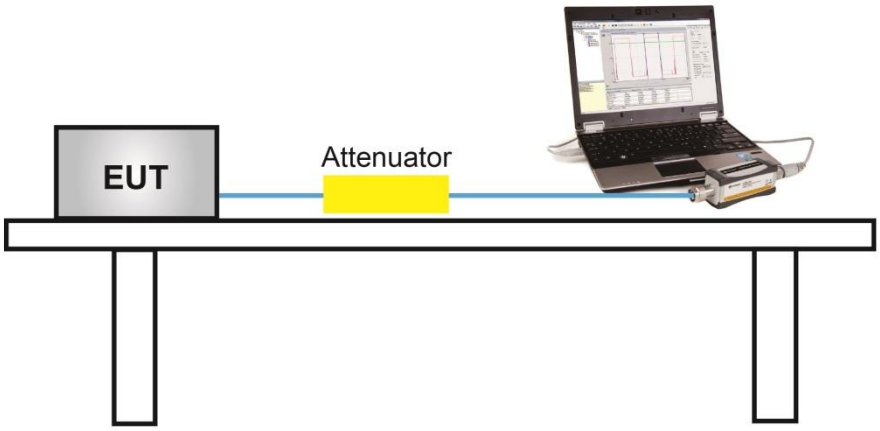
7.4.2.Test Procedure Used

KDB 789033 D02v02r01 - Section E) 3) b) Method PM-G

7.4.3.Test Setting

Average power measurements were perform only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

7.4.4.Test Setup



7.4.5.Test Result

Power output test was verified over all data rates of each mode shown as below table, and then choose the maximum power output (yellow marker) for final test of each channel.

For Ant 0 / Ant 0 + 1 + 2 + 3 port:

Test Mode	Bandwidth	Channel	Frequency (MHz)	Data Rate/ MCS	Average Power (dBm)
802.11a	20	60	5320	6Mbps	16.93
				24Mbps	16.73
				54Mbps	16.57
802.11n	20	60	5320	MCS0	17.39
				MCS3	17.11
				MCS7	16.93
802.11n	40	62	5310	MCS0	17.30
				MCS3	17.18
				MCS7	16.94
802.11ac	20	60	5320	MCS0	17.32
				MCS4	17.10
				MCS8	16.87
802.11ac	40	62	5310	MCS0	17.20
				MCS4	16.98
				MCS9	16.74
802.11ac	80	58	5290	MCS0	17.16
				MCS4	16.86
				MCS9	16.63
802.11ac	80+80 Contiguous	106	5530	MCS0	15.04
				MCS4	14.87
				MCS9	14.62
802.11ax	20	60	5320	MCS0	17.12
				MCS4	16.92
				MCS11	16.79
802.11ax	40	62	5310	MCS0	17.46
				MCS4	17.21
				MCS11	17.03
802.11ax	80	58	5290	MCS0	17.40
				MCS4	17.18
				MCS11	17.03

802.11ax	80+80 Contiguous	106	5530	MCS0	15.30
				MCS4	15.14
				MCS11	14.89

Product	GigaSpire	Temperature	23 ~ 25°C
Test Engineer	Bacon Dong	Relative Humidity	49 ~ 58%
Test Site	TR3	Test Date	2019/12/02 ~ 2019/12/17
Test Item	Output Power Test		

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Ant 2 Average Power (dBm)	Ant 3 Average Power (dBm)	Total Average Power (dBm)	Average Power Limit (dBm)	Result
Non Beam-Forming mode										
11a	6Mbps	52	5260	16.59	16.65	16.64	16.22	22.55	≤ 23.79	Pass
11a	6Mbps	60	5300	17.00	16.82	17.07	16.64	22.91	≤ 23.79	Pass
11a	6Mbps	64	5320	16.93	17.06	17.23	16.89	23.05	≤ 23.79	Pass
11a	6Mbps	100	5500	17.35	16.79	16.33	16.25	22.72	≤ 23.79	Pass
11a	6Mbps	120	5600	17.62	16.82	16.86	16.75	23.05	≤ 23.79	Pass
11a	6Mbps	140	5700	17.21	16.86	17.18	17.53	23.22	≤ 23.79	Pass
11a	6Mbps	144	5720	16.91	16.65	17.20	17.20	23.02	≤ 23.79	Pass
11n-HT20	MCS0	52	5260	17.45	17.51	17.59	16.97	23.41	≤ 23.98	Pass
11n-HT20	MCS0	60	5300	17.35	17.14	17.43	16.87	23.22	≤ 23.98	Pass
11n-HT20	MCS0	64	5320	17.39	17.36	17.58	17.09	23.38	≤ 23.98	Pass
11n-HT20	MCS0	100	5500	18.03	17.29	16.65	16.78	23.24	≤ 23.98	Pass
11n-HT20	MCS0	120	5600	18.16	17.30	17.14	17.19	23.49	≤ 23.98	Pass
11n-HT20	MCS0	140	5700	17.59	17.30	17.46	17.80	23.56	≤ 23.98	Pass
11n-HT20	MCS0	144	5720	17.24	17.03	17.55	17.57	23.37	≤ 23.98	Pass
11n-HT40	MCS0	54	5270	17.40	17.24	17.54	17.62	23.47	≤ 23.98	Pass
11n-HT40	MCS0	62	5310	17.30	17.18	17.87	17.64	23.53	≤ 23.98	Pass
11n-HT40	MCS0	102	5510	17.49	16.98	17.31	17.33	23.30	≤ 23.98	Pass
11n-HT40	MCS0	118	5590	17.17	17.30	17.22	17.67	23.37	≤ 23.98	Pass
11n-HT40	MCS0	134	5670	17.08	17.39	17.37	17.68	23.41	≤ 23.98	Pass
11n-HT40	MCS0	142	5710	17.22	17.63	17.67	18.03	23.67	≤ 23.98	Pass
11ac-VHT20	MCS0	52	5260	17.42	17.37	17.72	17.74	23.59	≤ 23.98	Pass
11ac-VHT20	MCS0	60	5300	17.53	17.38	17.99	17.80	23.70	≤ 23.98	Pass
11ac-VHT20	MCS0	64	5320	17.32	17.14	17.86	17.80	23.56	≤ 23.98	Pass
11ac-VHT20	MCS0	100	5500	17.72	17.31	17.68	17.69	23.62	≤ 23.98	Pass
11ac-VHT20	MCS0	120	5600	17.19	17.04	17.21	17.61	23.29	≤ 23.98	Pass
11ac-VHT20	MCS0	140	5700	17.03	17.30	17.62	17.80	23.47	≤ 23.98	Pass
11ac-VHT20	MCS0	144	5720	16.88	17.42	17.38	17.60	23.35	≤ 23.98	Pass

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Ant 2 Average Power (dBm)	Ant 3 Average Power (dBm)	Total Average Power (dBm)	Average Power Limit (dBm)	Result
Non Beam-Forming mode										
11ac-VHT40	MCS0	54	5270	17.23	17.21	17.52	17.49	23.39	≤ 23.98	Pass
11ac-VHT40	MCS0	62	5310	17.20	17.20	17.78	17.64	23.48	≤ 23.98	Pass
11ac-VHT40	MCS0	102	5510	17.68	17.35	17.79	17.81	23.68	≤ 23.98	Pass
11ac-VHT40	MCS0	118	5590	17.33	17.39	17.25	17.73	23.45	≤ 23.98	Pass
11ac-VHT40	MCS0	134	5670	17.09	17.61	17.52	17.77	23.53	≤ 23.98	Pass
11ac-VHT40	MCS0	142	5710	16.94	17.30	17.12	17.58	23.26	≤ 23.98	Pass
11ac-VHT80	MCS0	58	5290	17.16	17.09	17.66	17.56	23.40	≤ 23.98	Pass
11ac-VHT80	MCS0	106	5530	17.29	17.15	17.31	17.38	23.30	≤ 23.98	Pass
11ac-VHT80	MCS0	122	5610	17.47	17.20	17.25	17.72	23.44	≤ 23.98	Pass
11ac-VHT80	MCS0	138	5690	17.13	17.48	17.62	17.98	23.58	≤ 23.98	Pass
11ac-VHT80+80	MCS0	42	5210	15.5	15.12	--	--	18.32	≤ 30.00	Pass
(Contiguous mode)	MCS0	58	5290	--	--	15.87	15.69	18.79	≤ 23.98	Pass
11ac-VHT80+80	MCS0	106	5530	15.14	15.18	--	--	21.26	≤ 23.98	Pass
(Contiguous mode)	MCS0	122	5610	--	--	15.58	15.04			
11ax-HE20	MCS0	52	5260	17.24	16.96	17.54	17.38	23.31	≤ 23.98	Pass
11ax-HE20	MCS0	60	5300	17.36	17.17	17.77	17.62	23.51	≤ 23.98	Pass
11ax-HE20	MCS0	64	5320	17.12	16.98	17.57	17.58	23.34	≤ 23.98	Pass
11ax-HE20	MCS0	100	5500	17.42	16.74	17.46	17.59	23.34	≤ 23.98	Pass
11ax-HE20	MCS0	120	5600	17.35	17.45	17.47	17.63	23.50	≤ 23.98	Pass
11ax-HE20	MCS0	140	5700	17.30	17.79	17.77	18.04	23.75	≤ 23.98	Pass
11ax-HE20	MCS0	144	5720	17.08	17.48	17.74	17.74	23.54	≤ 23.98	Pass
11ax-HE40	MCS0	54	5270	17.35	17.37	17.65	17.72	23.55	≤ 23.98	Pass
11ax-HE40	MCS0	62	5310	17.46	17.35	17.92	17.72	23.64	≤ 23.98	Pass
11ax-HE40	MCS0	102	5510	17.72	17.23	17.37	17.47	23.47	≤ 23.98	Pass
11ax-HE40	MCS0	118	5590	17.71	17.47	17.32	17.89	23.62	≤ 23.98	Pass
11ax-HE40	MCS0	134	5670	17.29	17.62	17.58	17.90	23.62	≤ 23.98	Pass
11ax-HE40	MCS0	142	5710	17.03	17.49	17.40	17.79	23.46	≤ 23.98	Pass
11ax-HE80	MCS0	58	5290	17.40	17.28	17.92	17.65	23.59	≤ 23.98	Pass
11ax-HE80	MCS0	106	5530	17.85	17.33	17.56	17.65	23.62	≤ 23.98	Pass
11ax-HE80	MCS0	122	5610	17.56	17.59	17.52	18.03	23.70	≤ 23.98	Pass
11ax-HE80	MCS0	138	5690	17.04	17.50	17.49	17.88	23.51	≤ 23.98	Pass

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Ant 2 Average Power (dBm)	Ant 3 Average Power (dBm)	Total Average Power (dBm)	Average Power Limit (dBm)	Result
Non Beam-Forming mode										
11ax-HE80+80	MCS0	42	5210	16.35	16.80	--	--	19.59	≤ 30.00	Pass
(Contiguous mode)	MCS0	58	5290	--	--	17.24	16.96	20.11	≤ 23.98	Pass
11ax-HE80+80	MCS0	106	5530	16.32	16.57	--	--	22.53	≤ 23.98	Pass
(Contiguous mode)	MCS0	122	5610	--	--	16.81	16.30			

Note 1: Total Average Power (dBm) = 10*log {$10^{(\text{Ant 0 Average Power /10})}$ + $10^{(\text{Ant 1 Average Power /10})}$ + $10^{(\text{Ant 2 Average Power /10})}$ + $10^{(\text{Ant 3 Average Power /10})}$}.

Note 2: For 802.11ac-VHT80+80/ax-HE80+80 Contiguous Mode

5210MHz fall within UNII-1: Total Average Power (dBm) = 10*log {$10^{(\text{Ant 0 Average Power /10})}$ + $10^{(\text{Ant 1 Average Power /10})}$}.

5290MHz fall within UNII-2A: Total Average Power (dBm) = 10*log {$10^{(\text{Ant 2 Average Power /10})}$ + $10^{(\text{Ant 3 Average Power /10})}$}.

5530MHz & 5610MHz Fall within UNII-2C: Total Average Power (dBm) = 10*log {$10^{(\text{Ant 0 Average Power /10})}$ + $10^{(\text{Ant 1 Average Power /10})}$ + $10^{(\text{Ant 2 Average Power /10})}$ + $10^{(\text{Ant 3 Average Power /10})}$}.

Note 3: Average Power Limit Calculation as below:

For 5150-5250MHz: Limit = 30.00dBm.

For 5250-5350MHz & 5470-5725MHz:

802.11a: Limit =11+10*log(19.00) = 23.79dBm < 23.98dBm.

802.11n-HT20: 11+10*log(19.98) = 24.01dBm > 23.98dBm, Limit = 23.98dBm

802.11ac-VHT20: Limit = 11+10*log(19.86) =23.98dBm.

802.11ax-HE20: 11+10*log(20.60) = 24.14dBm > 23.98dBm, Limit = 23.98dBm

802.11n-HT40/ac-VHT40/ac-VHT80/ac-VHT80+80/ax-HE40/ax-HE80/ ax-HE80+80: Limit = 23.98dBm.

For 5725-5825MHz: Limit = 30.00dBm.

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Ant 2 Average Power (dBm)	Ant 3 Average Power (dBm)	Total Average Power (dBm)	Average Power Limit (dBm)	Result
Beam-Forming mode										
11ac-VHT20	MCS0	52	5260	14.51	15.28	15.15	15.35	21.11	≤ 23.08	Pass
11ac-VHT20	MCS0	60	5300	14.51	15.01	15.53	15.51	21.18	≤ 23.08	Pass
11ac-VHT20	MCS0	64	5320	14.24	15.02	15.39	15.03	20.96	≤ 23.08	Pass
11ac-VHT20	MCS0	100	5500	13.96	14.56	14.83	14.79	20.57	≤ 22.54	Pass
11ac-VHT20	MCS0	120	5600	14.85	14.51	14.91	15.04	20.85	≤ 22.54	Pass
11ac-VHT20	MCS0	140	5700	14.59	14.31	14.19	14.46	20.41	≤ 22.54	Pass
11ac-VHT20	MCS0	144	5720	14.94	14.39	14.42	14.59	20.61	≤ 22.54	Pass
11ac-VHT40	MCS0	54	5270	16.83	16.43	16.77	16.36	22.62	≤ 23.08	Pass
11ac-VHT40	MCS0	62	5310	17.42	16.98	17.16	16.45	23.04	≤ 23.08	Pass
11ac-VHT40	MCS0	102	5510	16.38	16.11	15.96	15.36	21.99	≤ 22.54	Pass
11ac-VHT40	MCS0	118	5590	16.15	15.84	16.17	16.09	22.09	≤ 22.54	Pass
11ac-VHT40	MCS0	134	5670	16.52	15.99	16.21	16.26	22.27	≤ 22.54	Pass
11ac-VHT40	MCS0	142	5710	16.55	15.99	15.93	16.12	22.17	≤ 22.54	Pass
11ac-VHT80	MCS0	58	5290	17.10	16.73	17.01	16.53	22.87	≤ 23.08	Pass
11ac-VHT80	MCS0	106	5530	16.87	16.32	16.36	16.06	22.43	≤ 22.54	Pass
11ac-VHT80	MCS0	122	5610	16.41	15.95	16.44	16.28	22.29	≤ 22.54	Pass
11ac-VHT80	MCS0	138	5690	16.62	16.09	16.16	16.53	22.38	≤ 22.54	Pass
11ac-VHT80+80	MCS0	42	5210	15.08	14.75	--	--	17.93	≤ 29.10	Pass
(Contiguous mode)	MCS0	58	5290	--	--	15.53	15.33	18.44	≤ 23.08	Pass
11ac-VHT80+80	MCS0	106	5530	15.20	14.72	--	--	21.39	≤ 22.54	Pass
(Contiguous mode)	MCS0	122	5610	--	--	15.86	15.63			
11ax-HE20	MCS0	52	5260	14.93	15.56	15.51	15.81	21.48	≤ 23.08	Pass
11ax-HE20	MCS0	60	5300	15.52	15.46	15.62	15.79	21.62	≤ 23.08	Pass
11ax-HE20	MCS0	64	5320	14.63	15.43	15.52	15.52	21.31	≤ 23.08	Pass
11ax-HE20	MCS0	100	5500	14.42	14.96	15.33	14.96	20.95	≤ 22.54	Pass
11ax-HE20	MCS0	120	5600	14.64	14.28	14.46	14.84	20.58	≤ 22.54	Pass
11ax-HE20	MCS0	140	5700	14.87	14.49	14.46	14.71	20.66	≤ 22.54	Pass
11ax-HE20	MCS0	144	5720	15.05	14.61	14.59	14.78	20.78	≤ 22.54	Pass

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Ant 2 Average Power (dBm)	Ant 3 Average Power (dBm)	Total Average Power (dBm)	Average Power Limit (dBm)	Result
Beam-Forming mode										
11ax-HE40	MCS0	54	5270	17.27	16.84	16.98	16.53	22.93	≤ 23.08	Pass
11ax-HE40	MCS0	62	5310	17.24	16.77	16.96	16.33	22.86	≤ 23.08	Pass
11ax-HE40	MCS0	102	5510	16.62	16.35	16.41	15.83	22.33	≤ 22.54	Pass
11ax-HE40	MCS0	118	5590	16.31	15.92	16.21	16.25	22.20	≤ 22.54	Pass
11ax-HE40	MCS0	134	5670	16.56	16.17	16.38	16.39	22.40	≤ 22.54	Pass
11ax-HE40	MCS0	142	5710	16.62	16.09	16.09	16.28	22.30	≤ 22.54	Pass
11ax-HE80	MCS0	58	5290	16.97	17.18	17.25	16.56	23.02	≤ 23.08	Pass
11ax-HE80	MCS0	106	5530	16.20	15.65	16.01	15.75	21.93	≤ 22.54	Pass
11ax-HE80	MCS0	122	5610	16.21	15.66	16.09	16.12	22.05	≤ 22.54	Pass
11ax-HE80	MCS0	138	5690	16.42	15.73	15.88	16.25	22.10	≤ 22.54	Pass
11ax-HE80+80	MCS0	42	5210	16.19	15.97	--	--	19.09	≤ 29.10	Pass
(Contiguous mode)	MCS0	58	5290	--	--	16.55	16.32	19.45	≤ 23.08	Pass
11ax-HE80+80	MCS0	106	5530	16.51	15.9	--	--	22.64	≤ 22.54	Pass
(Contiguous mode)	MCS0	122	5610	--	--	16.80	17.17			

Note 1: Total Average Power (dBm) = $10*\log\{10^{(\text{Ant 0 Average Power }/10)} + 10^{(\text{Ant 1 Average Power }/10)} + 10^{(\text{Ant 2 Average Power }/10)} + 10^{(\text{Ant 3 Average Power }/10)}\}$.

Note 2: For 802.11ac-VHT80+80/ax-HE80+80 Contiguous Mode

5210MHz fall within UNII-1: Total Average Power (dBm) = $10*\log\{10^{(\text{Ant 0 Average Power }/10)} + 10^{(\text{Ant 1 Average Power }/10)}\}$.

5290MHz fall within UNII-2A: Total Average Power (dBm) = $10*\log\{10^{(\text{Ant 2 Average Power }/10)} + 10^{(\text{Ant 3 Average Power }/10)}\}$.

5530MHz & 5610MHz Fall within UNII-2C: Total Average Power (dBm) = $10*\log\{10^{(\text{Ant 0 Average Power }/10)} + 10^{(\text{Ant 1 Average Power }/10)} + 10^{(\text{Ant 2 Average Power }/10)} + 10^{(\text{Ant 3 Average Power }/10)}\}$.

Note 3: Average Power Limit Calculation as below:

For 5150-5250MHz: Limit = 30.00 - (6.90 - 6.00) = 29.10dBm.

For 5250-5350MHz: = 23.98 - (6.90 - 6.00) = 23.08dBm.

For 5470-5725MHz: = 23.98 - (7.44 - 6.00) = 22.54dBm.

For 5725-5825MHz: Limit = 30.00 - (6.34 - 6.00) = 29.66dBm.

7.5. Transmit Power Control

7.5.1.Test Limit

The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm.

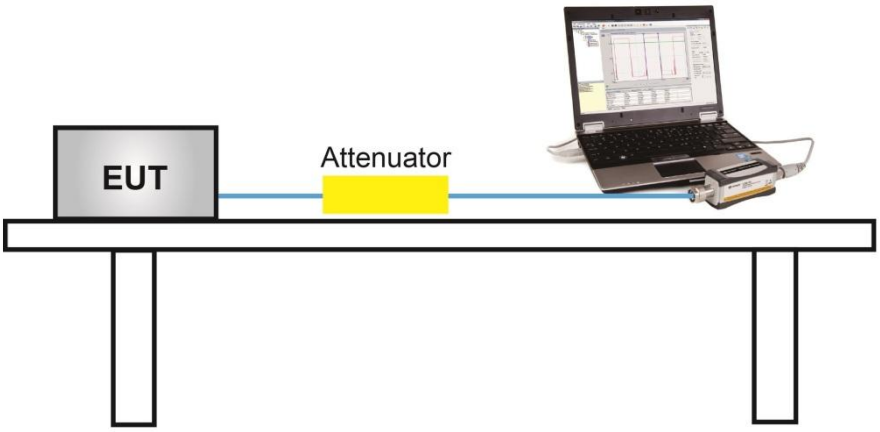
7.5.2.Test Procedure Used

KDB 789033 D02v01 - Section E) 3) b) Method PM-G

7.5.3.Test Setting

Average power measurements were perform only when the EUT was transmitting at its maximum power control level using a broadband power meter with a pulse sensor. The power meter implemented triggering and gating capabilities which were set up such that power measurements were recorded only during the ON time of the transmitter.

7.5.4.Test Setup



7.5.5.Test Result

Product	GigaSpire	Temperature	23 ~ 25°C
Test Engineer	Bacon Dong	Relative Humidity	49 ~ 58%
Test Site	TR3	Test Date	2019/12/02 ~ 2019/12/17
Test Item	Transmit Power Control		

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 TPC Power (dBm)	Ant 1 TPC Power (dBm)	Ant 2 TPC Power (dBm)	Ant 3 TPC Power (dBm)	EIRP TPC Power (dBm)	TPC Limit (dBm)	Result
Non Beam-Forming Mode										
11a	6Mbps	52	5260	15.63	15.30	15.22	15.47	23.32	≤ 24.00	Pass
11a	6Mbps	60	5300	15.63	15.42	15.53	15.74	23.49	≤ 24.00	Pass
11a	6Mbps	64	5320	15.56	15.52	15.54	15.71	23.49	≤ 24.00	Pass
11a	6Mbps	100	5500	15.72	15.29	15.76	15.45	23.61	≤ 24.00	Pass
11a	6Mbps	116	5580	15.29	15.60	15.29	15.63	23.51	≤ 24.00	Pass
11a	6Mbps	120	5600	15.25	15.54	15.72	15.42	23.54	≤ 24.00	Pass
11a	6Mbps	140	5700	15.72	15.68	15.18	15.46	23.57	≤ 24.00	Pass
11a	6Mbps	144	5720	15.20	15.78	15.29	15.81	23.58	≤ 24.00	Pass
11n-HT20	MCS0	52	5260	15.56	15.57	15.33	15.58	23.42	≤ 24.00	Pass
11n-HT20	MCS0	60	5300	15.62	15.48	15.41	15.54	23.42	≤ 24.00	Pass
11n-HT20	MCS0	64	5320	15.73	15.58	15.65	15.25	23.47	≤ 24.00	Pass
11n-HT20	MCS0	100	5500	15.40	15.23	15.69	15.22	23.44	≤ 24.00	Pass
11n-HT20	MCS0	116	5580	15.45	15.72	15.71	15.24	23.59	≤ 24.00	Pass
11n-HT20	MCS0	120	5600	15.34	15.69	15.51	15.63	23.60	≤ 24.00	Pass
11n-HT20	MCS0	140	5700	15.39	15.67	15.58	15.68	23.63	≤ 24.00	Pass
11n-HT20	MCS0	144	5720	15.47	15.47	15.39	15.62	23.54	≤ 24.00	Pass
11n-HT40	MCS0	54	5270	15.82	15.58	15.39	15.63	23.52	≤ 24.00	Pass
11n-HT40	MCS0	62	5310	15.35	15.65	15.28	15.35	23.32	≤ 24.00	Pass
11n-HT40	MCS0	102	5510	15.47	15.26	15.31	15.58	23.46	≤ 24.00	Pass
11n-HT40	MCS0	110	5550	15.44	15.24	15.39	15.43	23.43	≤ 24.00	Pass
11n-HT40	MCS0	118	5590	15.62	15.32	15.49	15.66	23.58	≤ 24.00	Pass
11n-HT40	MCS0	134	5670	15.74	15.21	15.69	15.81	23.67	≤ 24.00	Pass
11n-HT40	MCS0	142	5710	15.67	15.80	15.26	15.66	23.65	≤ 24.00	Pass

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 TPC Power (dBm)	Ant 1 TPC Power (dBm)	Ant 2 TPC Power (dBm)	Ant 3 TPC Power (dBm)	EIRP TPC Power (dBm)	TPC Limit (dBm)	Result
Non Beam-Forming Mode										
11ac-VHT20	MCS0	52	5260	15.46	15.56	15.37	15.51	23.39	≤ 24.00	Pass
11ac-VHT20	MCS0	60	5300	15.60	15.7	15.44	15.25	23.41	≤ 24.00	Pass
11ac-VHT20	MCS0	64	5320	15.32	15.40	15.50	15.46	23.33	≤ 24.00	Pass
11ac-VHT20	MCS0	100	5500	15.70	15.59	15.64	15.25	23.60	≤ 24.00	Pass
11ac-VHT20	MCS0	116	5580	15.55	15.33	15.20	15.43	23.43	≤ 24.00	Pass
11ac-VHT20	MCS0	120	5600	15.65	15.47	15.80	15.43	23.64	≤ 24.00	Pass
11ac-VHT20	MCS0	140	5700	15.29	15.34	15.34	15.47	23.41	≤ 24.00	Pass
11ac-VHT20	MCS0	144	5720	15.78	15.39	15.77	15.48	23.66	≤ 24.00	Pass
11ac-VHT40	MCS0	54	5270	15.72	15.48	15.36	15.52	23.43	≤ 24.00	Pass
11ac-VHT40	MCS0	62	5310	15.82	15.54	15.64	15.50	23.54	≤ 24.00	Pass
11ac-VHT40	MCS0	102	5510	15.71	15.38	15.75	15.50	23.64	≤ 24.00	Pass
11ac-VHT40	MCS0	110	5550	15.77	15.69	15.79	15.37	23.71	≤ 24.00	Pass
11ac-VHT40	MCS0	118	5590	15.20	15.40	15.67	15.39	23.47	≤ 24.00	Pass
11ac-VHT40	MCS0	134	5670	15.45	15.44	15.27	15.30	23.42	≤ 24.00	Pass
11ac-VHT40	MCS0	142	5710	15.76	15.46	15.79	15.40	23.66	≤ 24.00	Pass
11ac-VHT80	MCS0	58	5290	15.25	15.65	15.82	15.77	23.54	≤ 24.00	Pass
11ac-VHT80	MCS0	106	5530	15.35	15.74	15.30	15.41	23.50	≤ 24.00	Pass
11ac-VHT80	MCS0	122	5610	15.60	15.41	15.71	15.73	23.66	≤ 24.00	Pass
11ac-VHT80	MCS0	138	5690	15.58	15.33	15.22	15.40	23.44	≤ 24.00	Pass
11ac-VHT80+80 (Contiguous mode)	MCS0	58	5290	--	--	12.76	12.44	17.50	≤ 24.00	Pass
11ac-VHT80+80 (Contiguous mode)	MCS0	106	5530	15.57	15.60	--	--	23.67	≤ 22.54	Pass
	MCS0	122	5610	--	--	15.61	15.68			
11ax-HE20	MCS0	52	5260	15.43	15.63	15.62	15.32	23.41	≤ 24.00	Pass
11ax-HE20	MCS0	60	5300	15.43	15.65	15.60	15.77	23.52	≤ 24.00	Pass
11ax-HE20	MCS0	64	5320	15.56	15.22	15.51	15.32	23.32	≤ 24.00	Pass
11ax-HE20	MCS0	100	5500	15.59	15.67	15.75	15.38	23.65	≤ 24.00	Pass
11ax-HE20	MCS0	116	5580	15.34	15.32	15.26	15.37	23.37	≤ 24.00	Pass
11ax-HE20	MCS0	120	5600	15.72	15.39	15.36	15.69	23.59	≤ 24.00	Pass
11ax-HE20	MCS0	140	5700	15.35	15.48	15.27	15.60	23.48	≤ 24.00	Pass
11ax-HE20	MCS0	144	5720	15.49	15.81	15.70	15.40	23.65	≤ 24.00	Pass

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 TPC Power (dBm)	Ant 1 TPC Power (dBm)	Ant 2 TPC Power (dBm)	Ant 3 TPC Power (dBm)	EIRP TPC Power (dBm)	TPC Limit (dBm)	Result
Non Beam-Forming Mode										
11ax-HE40	MCS0	54	5270	15.35	15.52	15.25	15.57	23.34	≤ 24.00	Pass
11ax-HE40	MCS0	62	5310	15.81	15.53	15.57	15.29	23.46	≤ 24.00	Pass
11ax-HE40	MCS0	102	5510	15.33	15.65	15.25	15.21	23.41	≤ 24.00	Pass
11ax-HE40	MCS0	110	5550	15.55	15.23	15.82	15.38	23.55	≤ 24.00	Pass
11ax-HE40	MCS0	118	5590	15.69	15.25	15.75	15.58	23.62	≤ 24.00	Pass
11ax-HE40	MCS0	134	5670	15.60	15.80	15.50	15.45	23.64	≤ 24.00	Pass
11ax-HE40	MCS0	142	5710	15.35	15.54	15.61	15.63	23.58	≤ 24.00	Pass
11ax-HE80	MCS0	58	5290	15.58	15.69	15.76	15.58	23.56	≤ 24.00	Pass
11ax-HE80	MCS0	106	5530	15.74	15.63	15.52	15.46	23.64	≤ 24.00	Pass
11ax-HE80	MCS0	122	5610	15.25	15.26	15.73	15.47	23.48	≤ 24.00	Pass
11ax-HE80	MCS0	138	5690	15.24	15.60	15.64	15.42	23.53	≤ 24.00	Pass
11ax-HE80+80 (Contiguous mode)	MCS0	58	5290	--	--	12.54	12.78	17.56	≤ 24.00	Pass
11ax-HE80+80 (Contiguous mode)	MCS0	106	5530	15.22	15.76	--	--	23.59	≤ 22.54	Pass
	MCS0	122	5610	--	--	15.72	15.45			

Note 1: The EIRP TPC Power (dBm) = $10*\log\{10^{(\text{Ant 0 TPC Power }/10)} + 10^{(\text{Ant 1 TPC Power }/10)} + 10^{(\text{Ant 2 TPC Power }/10)} + 10^{(\text{Ant 3 TPC Power }/10)}\}$ + Direcional Gain (dBi).

Note 2: For 802.11ac-VHT80+80/ax-HE80+80 Contiguous Mode

5290MHz fall within UNII-2A: Total Average Power (dBm) = $10*\log\{10^{(\text{Ant 2 Average Power }/10)} + 10^{(\text{Ant 3 Average Power }/10)}\}$.

5530MHz & 5610MHz Fall within UNII-2C: Total Average Power (dBm) = $10*\log\{10^{(\text{Ant 0 Average Power }/10)} + 10^{(\text{Ant 1 Average Power }/10)} + 10^{(\text{Ant 2 Average Power }/10)} + 10^{(\text{Ant 3 Average Power }/10)}\}$.

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 TPC Power (dBm)	Ant 1 TPC Power (dBm)	Ant 2 TPC Power (dBm)	Ant 3 TPC Power (dBm)	EIRP TPC Power (dBm)	TPC Limit (dBm)	Result
Beam-Forming Mode										
11ac-VHT20	MCS0	52	5260	10.42	10.50	10.19	10.39	23.30	≤ 24.00	Pass
11ac-VHT20	MCS0	60	5300	10.55	10.48	10.22	10.14	23.27	≤ 24.00	Pass
11ac-VHT20	MCS0	64	5320	10.12	10.19	10.32	10.42	23.18	≤ 24.00	Pass
11ac-VHT20	MCS0	100	5500	10.15	10.02	10.13	9.72	23.47	≤ 24.00	Pass
11ac-VHT20	MCS0	116	5580	9.95	9.64	9.54	9.89	23.22	≤ 24.00	Pass
11ac-VHT20	MCS0	120	5600	10.12	9.90	10.28	9.80	23.49	≤ 24.00	Pass
11ac-VHT20	MCS0	140	5700	9.71	9.82	9.73	9.92	23.26	≤ 24.00	Pass
11ac-VHT20	MCS0	144	5720	10.21	9.80	10.10	9.87	23.46	≤ 24.00	Pass
11ac-VHT40	MCS0	54	5270	10.57	10.39	10.24	10.40	23.32	≤ 24.00	Pass
11ac-VHT40	MCS0	62	5310	10.80	10.44	10.56	10.28	23.44	≤ 24.00	Pass
11ac-VHT40	MCS0	102	5510	10.02	9.76	10.16	9.99	23.45	≤ 24.00	Pass
11ac-VHT40	MCS0	110	5550	10.12	9.97	10.25	9.84	23.51	≤ 24.00	Pass
11ac-VHT40	MCS0	118	5590	9.64	9.87	10.09	9.74	23.30	≤ 24.00	Pass
11ac-VHT40	MCS0	134	5670	9.81	9.80	9.71	9.61	23.19	≤ 24.00	Pass
11ac-VHT40	MCS0	142	5710	10.23	9.83	10.13	9.79	23.46	≤ 24.00	Pass
11ac-VHT80	MCS0	58	5290	10.23	10.52	10.77	10.55	23.44	≤ 24.00	Pass
11ac-VHT80	MCS0	106	5530	9.70	10.14	9.61	9.79	23.28	≤ 24.00	Pass
11ac-VHT80	MCS0	122	5610	9.87	9.87	10.07	10.00	23.41	≤ 24.00	Pass
11ac-VHT80	MCS0	138	5690	10.03	9.82	9.64	9.80	23.29	≤ 24.00	Pass
11ac-VHT80+80 (Contiguous mode)	MCS0	58	5290	--	--	7.10	6.77	16.85	≤ 24.00	Pass
11ac-VHT80+80 (Contiguous mode)	MCS0	106	5530	9.87	10.07	--	--	23.47	≤ 22.54	Pass
	MCS0	122	5610	--	--	9.98	10.10			
11ax-HE20	MCS0	52	5260	10.21	10.45	10.53	10.26	23.29	≤ 24.00	Pass
11ax-HE20	MCS0	60	5300	10.32	10.54	10.39	10.69	23.41	≤ 24.00	Pass
11ax-HE20	MCS0	64	5320	10.49	10.14	10.50	10.17	23.25	≤ 24.00	Pass
11ax-HE20	MCS0	100	5500	10.00	9.97	10.11	9.71	23.41	≤ 24.00	Pass
11ax-HE20	MCS0	116	5580	9.70	9.69	9.59	9.8	23.16	≤ 24.00	Pass
11ax-HE20	MCS0	120	5600	10.22	9.74	9.72	10.02	23.39	≤ 24.00	Pass
11ax-HE20	MCS0	140	5700	9.66	9.76	9.66	10.01	23.24	≤ 24.00	Pass
11ax-HE20	MCS0	144	5720	9.83	10.29	10.02	9.78	23.45	≤ 24.00	Pass

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 TPC Power (dBm)	Ant 1 TPC Power (dBm)	Ant 2 TPC Power (dBm)	Ant 3 TPC Power (dBm)	EIRP TPC Power (dBm)	TPC Limit (dBm)	Result
Beam-Forming Mode										
11ax-HE40	MCS0	54	5270	10.16	10.31	10.10	10.50	23.19	≤ 24.00	Pass
11ax-HE40	MCS0	62	5310	10.60	10.37	10.42	10.13	23.30	≤ 24.00	Pass
11ax-HE40	MCS0	102	5510	9.67	10.08	9.63	9.65	23.22	≤ 24.00	Pass
11ax-HE40	MCS0	110	5550	10.04	9.56	10.16	9.79	23.35	≤ 24.00	Pass
11ax-HE40	MCS0	118	5590	10.13	9.68	10.05	10.08	23.45	≤ 24.00	Pass
11ax-HE40	MCS0	134	5670	10.06	10.25	9.86	9.92	23.49	≤ 24.00	Pass
11ax-HE40	MCS0	142	5710	9.63	9.84	10.01	9.94	23.32	≤ 24.00	Pass
11ax-HE80	MCS0	58	5290	10.46	10.53	10.55	10.35	23.39	≤ 24.00	Pass
11ax-HE80	MCS0	106	5530	10.16	9.92	9.89	9.81	23.41	≤ 24.00	Pass
11ax-HE80	MCS0	122	5610	9.74	9.75	10.05	9.91	23.32	≤ 24.00	Pass
11ax-HE80	MCS0	138	5690	9.54	9.98	9.92	9.87	23.29	≤ 24.00	Pass
11ax-HE80+80 (Contiguous mode)	MCS0	58	5290	--	--	6.86	7.13	16.91	≤ 24.00	Pass
11ax-HE80+80 (Contiguous mode)	MCS0	106	5530	9.56	10.15	--	--	23.38	≤ 22.54	Pass
	MCS0	122	5610	--	--	10.06	9.90			

Note 1: The EIRP TPC Power (dBm) = $10*\log\{10^{(\text{Ant 0 TPC Power }/10)} + 10^{(\text{Ant 1 TPC Power }/10)} + 10^{(\text{Ant 2 TPC Power }/10)} + 10^{(\text{Ant 3 TPC Power }/10)}\}$ + Direcional Gain (dBi).

Note 2: For 802.11ac-VHT80+80/ax-HE80+80 Contiguous Mode

5290MHz fall within UNII-2A: Total Average Power (dBm) = $10*\log\{10^{(\text{Ant 2 Average Power }/10)} + 10^{(\text{Ant 3 Average Power }/10)}\}$.

5530MHz & 5610MHz Fall within UNII-2C: Total Average Power (dBm) = $10*\log\{10^{(\text{Ant 0 Average Power }/10)} + 10^{(\text{Ant 1 Average Power }/10)} + 10^{(\text{Ant 2 Average Power }/10)} + 10^{(\text{Ant 3 Average Power }/10)}\}$.

7.6. Power Spectral Density Measurement

7.6.1.Test Limit

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.

If transmitting antennas of directional gain greater than 6dBi are used, the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

7.6.2.Test Procedure Used

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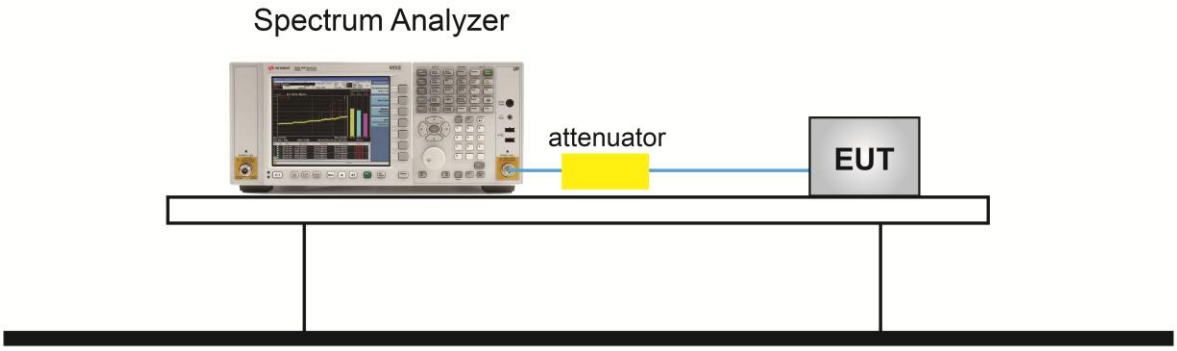
7.6.3.Test Setting

1. Analyzer was set to the center frequency of the UNII channel under investigation
2. Span was set to encompass the entire 26dB EBW of the signal.
3. RBW = 1MHz, if measurement bandwidth of Maximum PSD is specified in 500 kHz, RBW = 100 kHz
4. VBW = 3MHz
5. Number of sweep points ≥ 2 × (span / RBW)
6. Detector = power averaging (Average)
7. Sweep time = auto
8. Trigger = free run
9. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
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). For example, add 10*log(1/0.25) = 6 dB if the duty cycle is 25 percent.
11. When the measurement bandwidth of Maximum PSD is specified in 500 kHz, add a constant factor 10*log(500kHz/100kHz) = 6.99 dB to the measured result.

7.6.4.Test Setup



7.6.5.Test Result

Product	GigaSpire	Temperature	22 ~ 25°C
Test Engineer	David Lv	Relative Humidity	46 ~ 59%
Test Site	TR3	Test Date	2019/12/03 ~ 2020/01/06
Test Item	Power Spectral Dencity (Bands UNII-1 & UNII-2A & UNII-2C)		

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 PSD (dBm/ MHz)	Ant 1 PSD (dBm/ MHz)	Ant 2 PSD (dBm/ MHz)	Ant 3 PSD (dBm/ MHz)	Duty Cycle (%)	Total PSD (dBm/ MHz)	PSD Limit (dBm/ MHz)	Result
Non Beam-Forming mode											
11a	6Mbps	52	5260	4.26	4.02	4.16	4.42	94.03	10.51	≤ 11.00	Pass
11a	6Mbps	60	5300	4.31	4.19	4.76	4.75	94.03	10.80	≤ 11.00	Pass
11a	6Mbps	64	5320	4.02	3.99	4.78	4.66	94.03	10.67	≤ 11.00	Pass
11a	6Mbps	100	5500	4.59	3.98	4.43	4.63	94.03	10.70	≤ 11.00	Pass
11a	6Mbps	120	5600	4.42	4.57	4.58	4.78	94.03	10.88	≤ 11.00	Pass
11a	6Mbps	140	5700	4.35	4.71	4.67	4.70	94.03	10.90	≤ 11.00	Pass
11a	6Mbps	144	5720	3.96	4.36	4.42	4.37	94.03	10.57	≤ 11.00	Pass
11n-HT20	MCS0	52	5260	4.41	3.83	4.42	4.48	93.78	10.59	≤ 11.00	Pass
11n-HT20	MCS0	60	5300	4.38	4.16	4.67	4.56	93.78	10.75	≤ 11.00	Pass
11n-HT20	MCS0	64	5320	3.98	3.95	4.58	4.56	93.78	10.58	≤ 11.00	Pass
11n-HT20	MCS0	100	5500	4.40	4.08	4.28	4.28	93.78	10.56	≤ 11.00	Pass
11n-HT20	MCS0	120	5600	4.48	4.29	4.55	4.71	93.78	10.81	≤ 11.00	Pass
11n-HT20	MCS0	140	5700	3.86	4.38	4.40	4.57	93.78	10.61	≤ 11.00	Pass
11n-HT20	MCS0	144	5720	3.84	4.11	4.61	4.55	93.78	10.59	≤ 11.00	Pass
11n-HT40	MCS0	54	5270	4.30	4.12	4.60	4.51	90.18	10.86	≤ 11.00	Pass
11n-HT40	MCS0	62	5310	3.80	3.91	4.23	3.94	90.18	10.44	≤ 11.00	Pass
11n-HT40	MCS0	102	5510	3.10	4.19	4.26	4.19	90.18	10.43	≤ 11.00	Pass
11n-HT40	MCS0	118	5590	3.64	3.38	3.23	3.79	90.18	9.98	≤ 11.00	Pass
11n-HT40	MCS0	134	5670	3.20	3.58	3.37	3.88	90.18	9.98	≤ 11.00	Pass
11n-HT40	MCS0	142	5710	3.64	4.09	3.94	4.30	90.18	10.47	≤ 11.00	Pass

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 PSD (dBm/ MHz)	Ant 1 PSD (dBm/ MHz)	Ant 2 PSD (dBm/ MHz)	Ant 3 PSD (dBm/ MHz)	Duty Cycle (%)	Total PSD (dBm/ MHz)	PSD Limit (dBm/ MHz)	Result
Non Beam-Forming mode											
11ac-VHT20	MCS0	52	5260	4.01	3.78	4.06	4.36	90.50	10.51	≤ 11.00	Pass
11ac-VHT20	MCS0	60	5300	4.38	3.93	4.67	4.60	90.50	10.86	≤ 11.00	Pass
11ac-VHT20	MCS0	64	5320	3.37	3.60	4.01	4.30	90.50	10.29	≤ 11.00	Pass
11ac-VHT20	MCS0	100	5500	4.15	3.56	3.76	4.00	90.50	10.33	≤ 11.00	Pass
11ac-VHT20	MCS0	120	5600	3.78	3.87	4.07	4.30	90.50	10.46	≤ 11.00	Pass
11ac-VHT20	MCS0	140	5700	3.89	4.26	4.31	4.71	90.50	10.76	≤ 11.00	Pass
11ac-VHT20	MCS0	144	5720	3.61	3.85	4.42	4.22	90.50	10.49	≤ 11.00	Pass
11ac-VHT40	MCS0	54	5270	4.02	3.76	4.29	4.23	90.00	10.56	≤ 11.00	Pass
11ac-VHT40	MCS0	62	5310	3.71	3.99	4.32	4.34	90.00	10.58	≤ 11.00	Pass
11ac-VHT40	MCS0	102	5510	4.15	3.45	4.11	4.12	90.00	10.45	≤ 11.00	Pass
11ac-VHT40	MCS0	118	5590	4.23	4.38	4.21	4.70	90.00	10.86	≤ 11.00	Pass
11ac-VHT40	MCS0	134	5670	3.39	3.58	3.62	3.59	90.00	10.02	≤ 11.00	Pass
11ac-VHT40	MCS0	142	5710	3.33	3.52	3.27	4.03	90.00	10.03	≤ 11.00	Pass
11ac-VHT80	MCS0	58	5290	0.78	0.57	1.26	0.94	90.50	7.35	≤ 11.00	Pass
11ac-VHT80	MCS0	106	5530	1.50	1.03	0.84	1.26	90.50	7.62	≤ 11.00	Pass
11ac-VHT80	MCS0	122	5610	1.69	1.56	1.72	1.75	90.50	8.13	≤ 11.00	Pass
11ac-VHT80	MCS0	138	5690	1.51	1.75	1.85	2.38	90.50	8.34	≤ 11.00	Pass
11ac-VHT80+80	MCS0	42	5210	-3.11	-3.35	--	--	90.50	0.22	≤ 17.00	Pass
Contiguous Mode	MCS0	58	5290	--	--	-0.83	-2.83	90.50	1.73	≤ 11.00	Pass
11ac-VHT80+80	MCS0	106	5530	-3.49	-3.19	--	--	90.50	0.11	≤ 11.00	Pass
Contiguous Mode	MCS0	122	5610	--	--	1.00	-2.64	90.50	2.99	≤ 11.00	Pass

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 PSD (dBm/ MHz)	Ant 1 PSD (dBm/ MHz)	Ant 2 PSD (dBm/ MHz)	Ant 3 PSD (dBm/ MHz)	Duty Cycle (%)	Total PSD (dBm/ MHz)	PSD Limit (dBm/ MHz)	Result
Non Beam-Forming mode											
11ax-HE20	MCS0	52	5260	4.12	3.88	4.23	4.32	95.03	10.38	≤ 11.00	Pass
11ax-HE20	MCS0	60	5300	4.05	3.90	4.11	4.17	95.03	10.30	≤ 11.00	Pass
11ax-HE20	MCS0	64	5320	4.11	3.90	4.45	4.25	95.03	10.42	≤ 11.00	Pass
11ax-HE20	MCS0	100	5500	4.28	4.27	4.28	4.38	95.03	10.54	≤ 11.00	Pass
11ax-HE20	MCS0	120	5600	4.10	4.25	3.88	4.66	95.03	10.47	≤ 11.00	Pass
11ax-HE20	MCS0	140	5700	4.34	4.51	4.75	4.72	95.03	10.83	≤ 11.00	Pass
11ax-HE20	MCS0	144	5720	3.97	4.41	4.23	4.55	95.03	10.54	≤ 11.00	Pass
11ax-HE40	MCS0	54	5270	4.22	4.43	4.53	4.33	94.28	10.66	≤ 11.00	Pass
11ax-HE40	MCS0	62	5310	3.94	4.12	4.45	4.30	94.28	10.48	≤ 11.00	Pass
11ax-HE40	MCS0	102	5510	4.27	4.11	4.44	4.34	94.28	10.57	≤ 11.00	Pass
11ax-HE40	MCS0	118	5590	3.22	3.64	3.40	4.04	94.28	9.86	≤ 11.00	Pass
11ax-HE40	MCS0	134	5670	3.53	3.61	3.70	4.05	94.28	10.00	≤ 11.00	Pass
11ax-HE40	MCS0	142	5710	3.32	3.72	3.68	4.30	94.28	10.05	≤ 11.00	Pass
11ax-HE80	MCS0	58	5290	1.28	1.07	1.65	1.76	95.61	7.66	≤ 11.00	Pass
11ax-HE80	MCS0	106	5530	1.32	1.15	1.31	1.29	95.61	7.48	≤ 11.00	Pass
11ax-HE80	MCS0	122	5610	1.39	2.08	1.80	1.96	95.61	8.03	≤ 11.00	Pass
11ax-HE80	MCS0	138	5690	1.16	1.76	1.56	2.00	95.61	7.85	≤ 11.00	Pass
11ax-HE80+80	MCS0	42	5210	-2.61	-3.42	--	--	95.61	0.21	≤ 17.00	Pass
Contiguous Mode	MCS0	58	5290	--	--	0.14	-2.07	95.61	2.38	≤ 11.00	Pass
11ax-HE80+80	MCS0	106	5530	-2.89	-3.25	--	--	95.61	0.14	≤ 11.00	Pass
Contiguous Mode	MCS0	122	5610	--	--	1.86	-1.34	95.61	3.75	≤ 11.00	Pass

Note 1: When EUT duty cycle ≥ 98%, the total PSD (dBm/MHz) = 10*log {$10^{(\text{Ant 0 PSD}/10)}$ + $10^{(\text{Ant 1 PSD}/10)}$ + $10^{(\text{Ant 2 PSD}/10)}$ + $10^{(\text{Ant 3 PSD}/10)}$} (dBm/MHz).

Note 2: When EUT duty cycle < 98%, the total PSD (dBm/MHz) = 10*log {$10^{(\text{Ant 0 PSD}/10)}$ + $10^{(\text{Ant 1 PSD}/10)}$ + $10^{(\text{Ant 2 PSD}/10)}$ + $10^{(\text{Ant 3 PSD}/10)}$} (dBm/MHz) + 10*log (1/Duty Cycle).

Note 3: For 802.11ac-VHT80+80/ax-HE80+80 Contiguous Mode

5210MHz Fall within UNII-1: Total Average Power (dBm) = 10*log {$10^{(\text{Ant 0 PSD}/10)}$ + $10^{(\text{Ant 1 PSD}/10)}$}.

5290MHz Fall within UNII-2A: Total Average Power (dBm) = 10*log {$10^{(\text{Ant 2 PSD}/10)}$ + $10^{(\text{Ant 3 PSD}/10)}$}.

5530MHz & 5610MHz Fall within UNII-2C: Total Average Power (dBm) = 10*log {$10^{(\text{Ant 0 PSD}/10)}$ + $10^{(\text{Ant 1 PSD}/10)}$ + $10^{(\text{Ant 2 PSD}/10)}$ + $10^{(\text{Ant 3 PSD}/10)}$}.

Note 4: PSD Limit Calculation as below:

For 5150-5250MHz: 17dBm/MHz.

For 5250-5350MHz & 5470-5725MHz

802.11a/n-HT20/n-HT40/ac-VHT20/ac-VHT40/ac-VHT80/802.11ac-VHT80+80/ax-HE20/ax-HE40 /ax-HE80/802.11ax-HE80+80:

Limit = 11.00 dBm/MHz.

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 PSD (dBm/ MHz)	Ant 1 PSD (dBm/ MHz)	Ant 2 PSD (dBm/ MHz)	Ant 3 PSD (dBm/ MHz)	Duty Cycle (%)	Total PSD (dBm/ MHz)	PSD Limit (dBm/ MHz)	Result
Beam-Forming mode											
11ac-VHT20	MCS0	52	5260	3.29	3.60	3.10	3.48	90.50	9.83	≤ 10.10	Pass
11ac-VHT20	MCS0	60	5300	3.70	3.47	3.37	3.68	90.50	10.01	≤ 10.10	Pass
11ac-VHT20	MCS0	64	5320	3.37	3.66	3.85	3.24	90.50	9.99	≤ 10.10	Pass
11ac-VHT20	MCS0	100	5500	2.69	3.05	2.56	3.04	90.50	9.29	≤ 9.56	Pass
11ac-VHT20	MCS0	120	5600	3.11	3.08	2.81	2.95	90.50	9.44	≤ 9.56	Pass
11ac-VHT20	MCS0	140	5700	2.90	2.55	2.50	2.85	90.50	9.16	≤ 9.56	Pass
11ac-VHT20	MCS0	144	5720	3.03	2.77	2.75	2.96	90.50	9.33	≤ 9.56	Pass
11ac-VHT40	MCS0	54	5270	2.56	1.96	0.25	2.30	90.00	8.33	≤ 10.10	Pass
11ac-VHT40	MCS0	62	5310	3.01	3.06	2.71	2.73	90.00	9.36	≤ 10.10	Pass
11ac-VHT40	MCS0	102	5510	0.10	1.45	1.50	1.41	90.00	7.63	≤ 9.56	Pass
11ac-VHT40	MCS0	118	5590	2.51	2.72	2.05	2.46	90.00	8.92	≤ 9.56	Pass
11ac-VHT40	MCS0	134	5670	2.51	3.13	1.76	3.35	90.00	9.21	≤ 9.56	Pass
11ac-VHT40	MCS0	142	5710	2.90	3.65	2.38	2.99	90.00	9.48	≤ 9.56	Pass
11ac-VHT80	MCS0	58	5290	-0.64	-0.76	-2.50	-0.70	90.50	5.37	≤ 10.10	Pass
11ac-VHT80	MCS0	106	5530	-0.62	-1.09	-1.18	-1.00	90.50	5.49	≤ 9.56	Pass
11ac-VHT80	MCS0	122	5610	-0.57	-0.18	-1.35	-0.64	90.50	5.79	≤ 9.56	Pass
11ac-VHT80	MCS0	138	5690	-1.36	-0.38	-1.21	-0.62	90.50	5.58	≤ 9.56	Pass
11ac-VHT80+80	MCS0	42	5210	-5.19	-5.66	--	--	90.50	-1.97	≤ 16.10	Pass
Contiguous Mode	MCS0	58	5290	--	--	-3.95	-2.64	90.50	0.20	≤ 10.10	Pass
11ac-VHT80+80	MCS0	106	5530	-4.86	-5.36	--	--	90.50	-1.66	≤ 9.56	Pass
Contiguous Mode	MCS0	122	5610	--	--	-3.82	-1.25	90.50	1.10	≤ 9.56	Pass

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 PSD (dBm/ MHz)	Ant 1 PSD (dBm/ MHz)	Ant 2 PSD (dBm/ MHz)	Ant 3 PSD (dBm/ MHz)	Duty Cycle (%)	Total PSD (dBm/ MHz)	PSD Limit (dBm/ MHz)	Result
Beam-Forming mode											
11ax-HE20	MCS0	52	5260	3.55	3.80	3.21	3.74	95.03	9.82	≤ 10.10	Pass
11ax-HE20	MCS0	60	5300	3.38	3.38	2.55	3.86	95.03	9.56	≤ 10.10	Pass
11ax-HE20	MCS0	64	5320	3.10	3.64	3.61	3.63	95.03	9.74	≤ 10.10	Pass
11ax-HE20	MCS0	100	5500	2.68	3.35	3.58	2.85	95.03	9.37	≤ 9.56	Pass
11ax-HE20	MCS0	120	5600	3.02	2.69	2.82	2.77	95.03	9.07	≤ 9.56	Pass
11ax-HE20	MCS0	140	5700	3.08	2.66	2.88	2.70	95.03	9.08	≤ 9.56	Pass
11ax-HE20	MCS0	144	5720	3.31	3.01	3.08	3.15	95.03	9.38	≤ 9.56	Pass
11ax-HE40	MCS0	54	5270	1.82	2.08	0.25	2.04	94.28	7.89	≤ 10.10	Pass
11ax-HE40	MCS0	62	5310	1.87	1.94	1.51	1.82	94.28	8.06	≤ 10.10	Pass
11ax-HE40	MCS0	102	5510	1.34	1.52	0.35	1.10	94.28	7.38	≤ 9.56	Pass
11ax-HE40	MCS0	118	5590	2.00	2.64	1.60	2.25	94.28	8.42	≤ 9.56	Pass
11ax-HE40	MCS0	134	5670	1.91	2.93	0.47	2.45	94.28	8.31	≤ 9.56	Pass
11ax-HE40	MCS0	142	5710	2.26	3.04	1.66	3.12	94.28	8.84	≤ 9.56	Pass
11ax-HE80	MCS0	58	5290	-0.70	-0.41	-1.59	-0.55	95.61	5.43	≤ 10.10	Pass
11ax-HE80	MCS0	106	5530	-1.88	-1.61	-2.50	-1.89	95.61	4.26	≤ 9.56	Pass
11ax-HE80	MCS0	122	5610	-0.15	0.35	-0.69	0.11	95.61	6.14	≤ 9.56	Pass
11ax-HE80	MCS0	138	5690	-0.45	0.51	-1.64	-0.15	95.61	5.85	≤ 9.56	Pass
11ax-HE80+80	MCS0	42	5210	-3.31	-3.59	--	--	95.61	-0.24	≤ 16.10	Pass
Contiguous Mode	MCS0	58	5290	--	--	-2.04	-1.04	95.61	1.69	≤ 10.10	Pass
11ax-HE80+80	MCS0	106	5530	-2.67	-3.42	--	--	95.61	0.18	≤ 9.56	Pass
Contiguous Mode	MCS0	122	5610	--	--	-2.07	-0.69	95.61	1.88	≤ 9.56	Pass

Note 1: When EUT duty cycle ≥ 98%, the total PSD (dBm/MHz) = 10*log {$10^{(\text{Ant 0 PSD}/10)}$ + $10^{(\text{Ant 1 PSD}/10)}$ + $10^{(\text{Ant 2 PSD}/10)}$ + $10^{(\text{Ant 3 PSD}/10)}$} (dBm/MHz).

Note 2: When EUT duty cycle < 98%, the total PSD (dBm/MHz) = 10*log {$10^{(\text{Ant 0 PSD}/10)}$ + $10^{(\text{Ant 1 PSD}/10)}$ + $10^{(\text{Ant 2 PSD}/10)}$ + $10^{(\text{Ant 3 PSD}/10)}$} (dBm/MHz) + 10*log (1/Duty Cycle).

Note 3: For 802.11ac-VHT80+80/ax-HE80+80 Contiguous Mode

5210MHz Fall within UNII-1: Total Average Power (dBm) = 10*log {$10^{(\text{Ant 0 PSD}/10)}$ + $10^{(\text{Ant 1 PSD}/10)}$}.

5290MHz Fall within UNII-2A: Total Average Power (dBm) = 10*log {$10^{(\text{Ant 2 PSD}/10)}$ + $10^{(\text{Ant 3 PSD}/10)}$}.

5530MHz & 5610MHz Fall within UNII-2C: Total Average Power (dBm) = 10*log {$10^{(\text{Ant 0 PSD}/10)}$ + $10^{(\text{Ant 1 PSD}/10)}$ + $10^{(\text{Ant 2 PSD}/10)}$ + $10^{(\text{Ant 3 PSD}/10)}$}.

Note 4: PSD Limit Calculation as below:

For 5150-5250MHz:

Limit = 17.00 - (6.90 -6.00) = 16.10dBm/MHz.

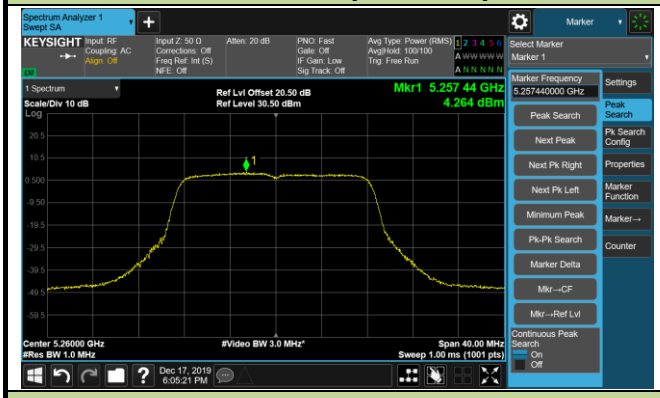
For 5250-5350MHz & 5470-5725MHz

802.11a/n-HT20/n-HT40/ac-VHT20/ac-VHT40/ac-VHT80/802.11ac-VHT80+80/ax-HE20/ax-HE40 /ax-HE80/802.11ax-HE80+80:

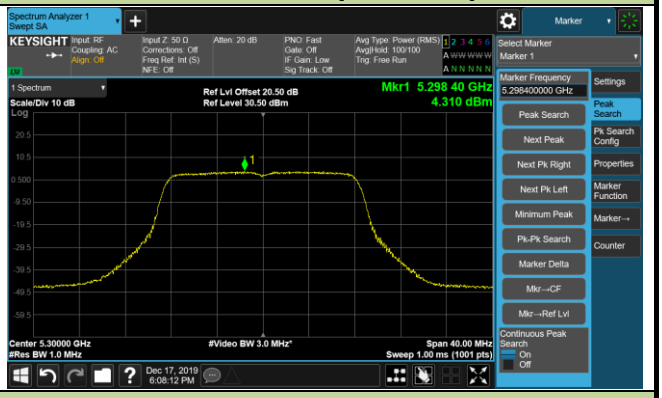
Limit = 11 - (7.44 -6.00) = 9.56dBm/MHz.

802.11a Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3 (Non Beam-Forming Mode)

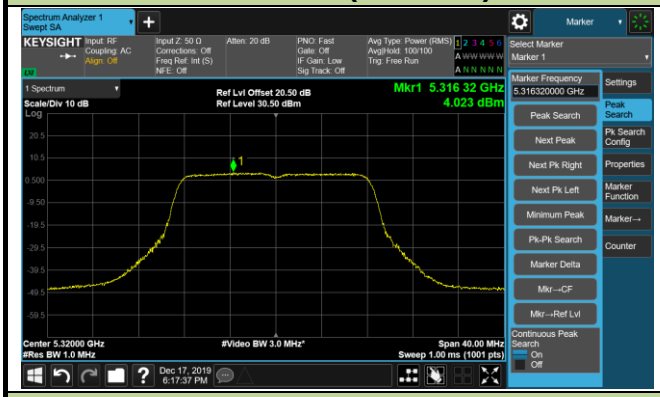
Channel 52 (5260MHz)



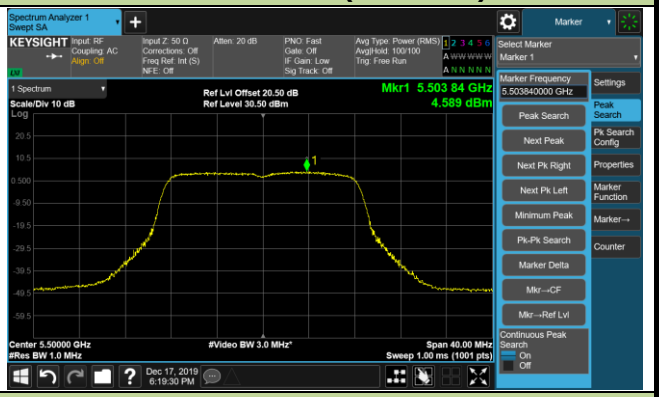
Channel 60 (5300MHz)



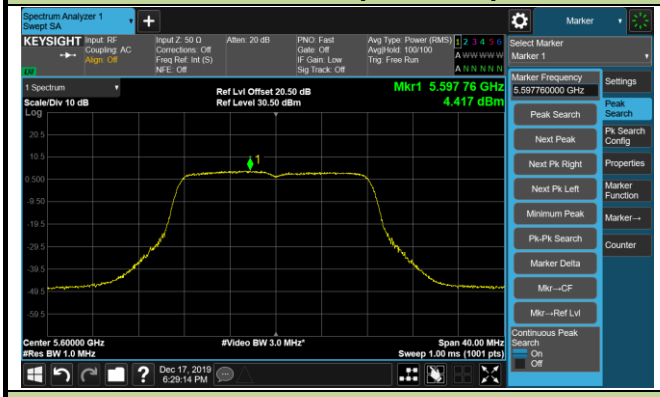
Channel 64 (5320MHz)



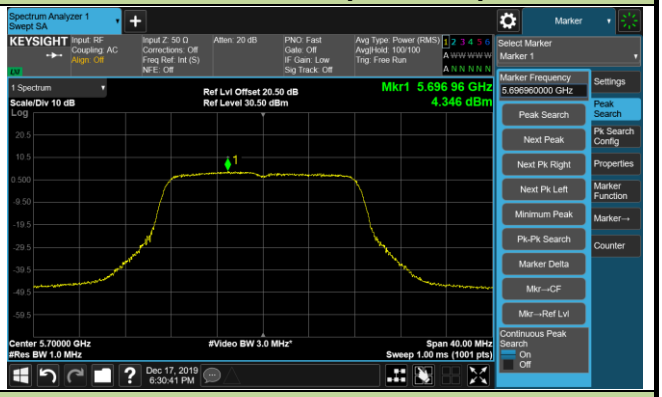
Channel 100 (5500MHz)



Channel 120 (5600MHz)

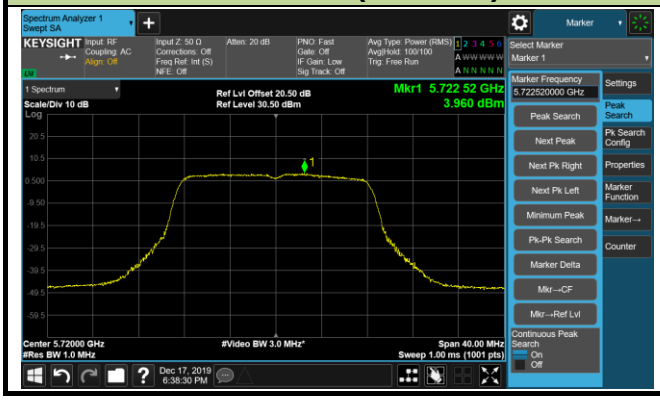


Channel 140 (5700MHz)



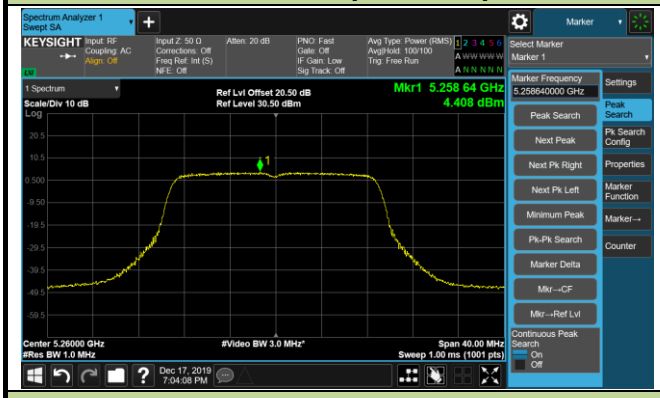
802.11a Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3 (Non Beam-Forming Mode)

Channel 144 (5720MHz)

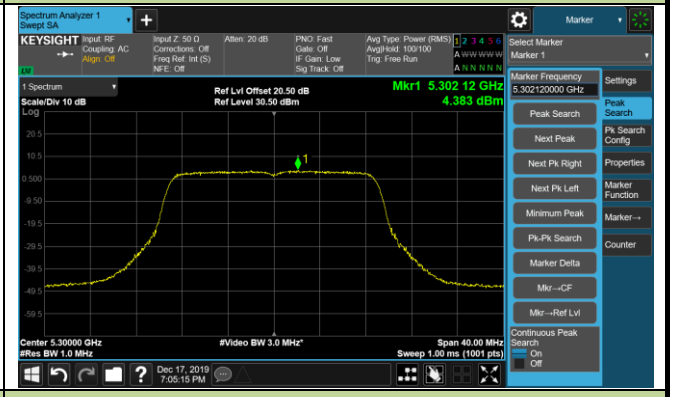


802.11n-HT20 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3 (Non Beam-Forming Mode)

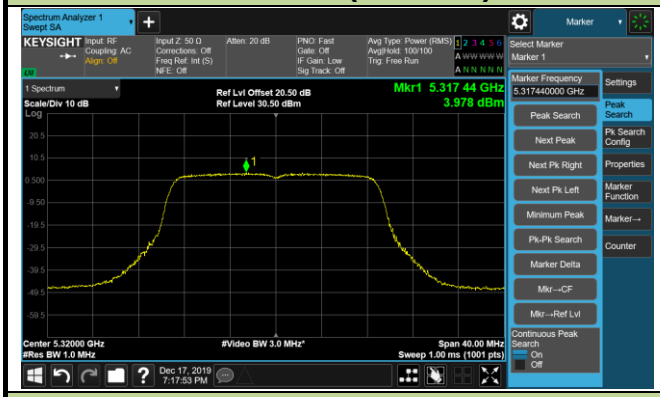
Channel 52 (5260MHz)



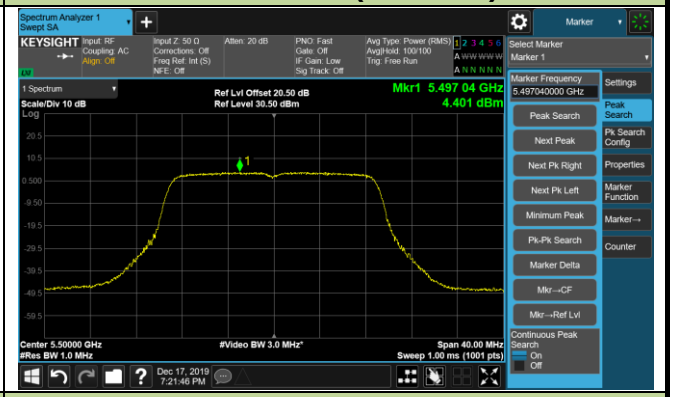
Channel 60 (5300MHz)



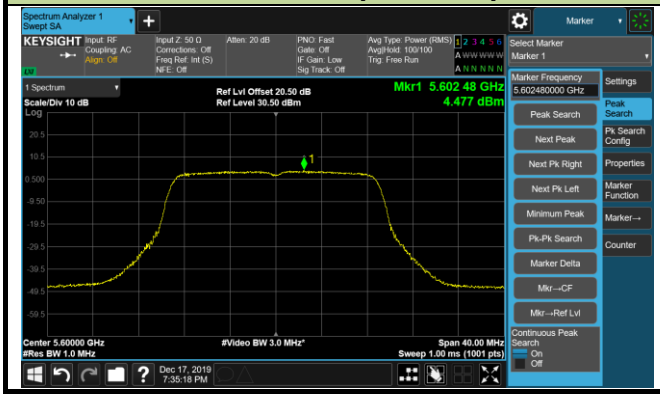
Channel 64 (5320MHz)



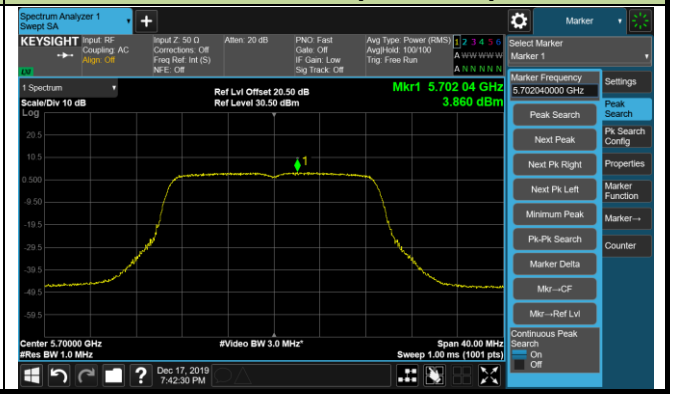
Channel 100 (5500MHz)

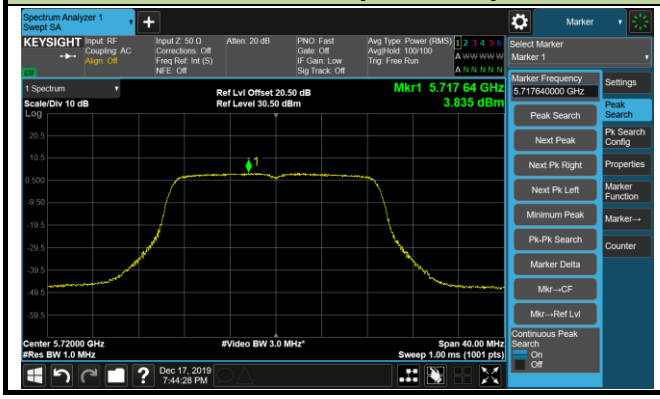


Channel 120 (5600MHz)



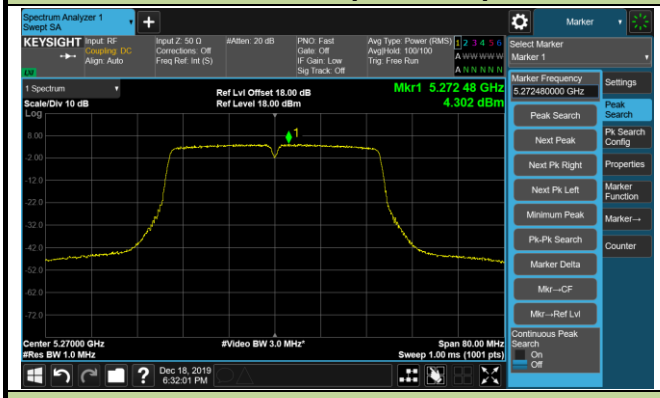
Channel 140 (5700MHz)



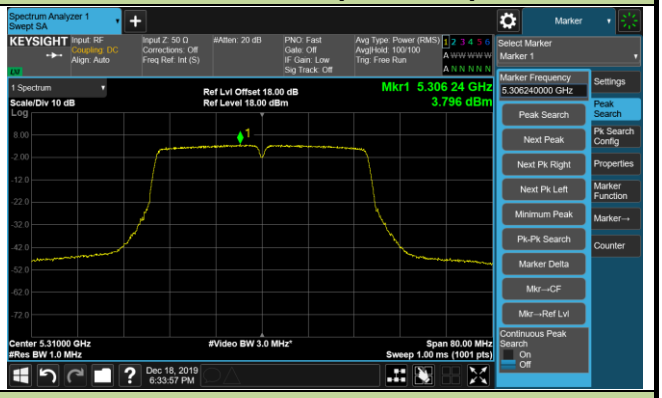
802.11n-HT20 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3 (Non Beam-Forming Mode)	
Channel 144 (5720MHz)	
	

802.11n-HT40 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3 (Non Beam-Forming Mode)

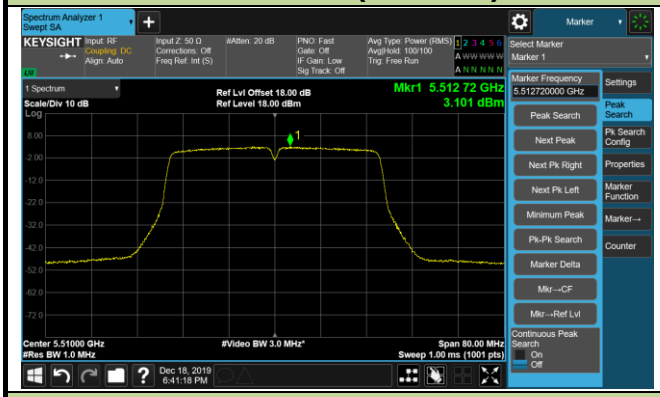
Channel 54 (5270MHz)



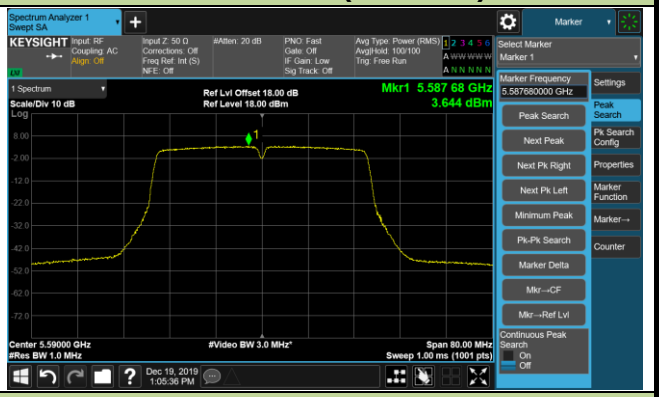
Channel 62 (5310MHz)



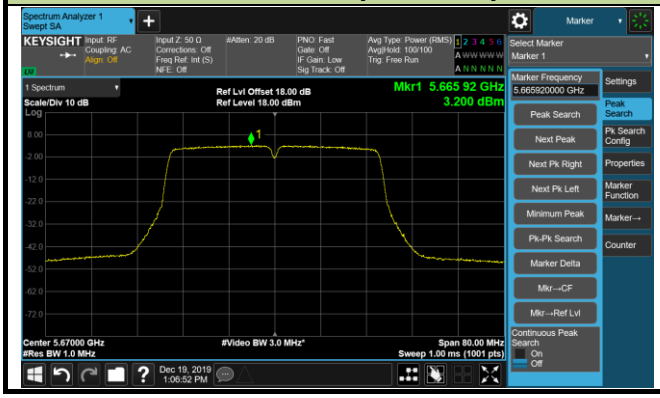
Channel 102 (5510MHz)



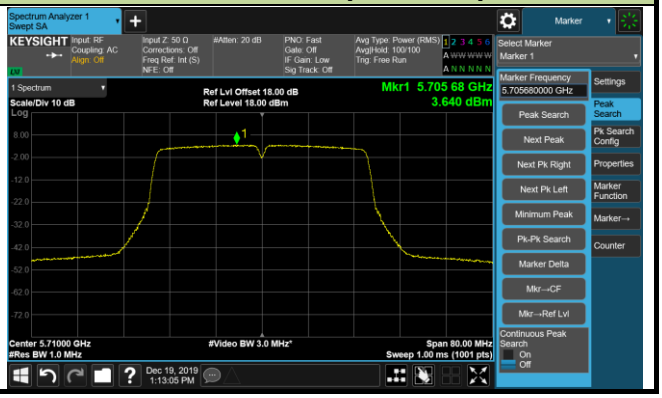
Channel 118 (5590MHz)



Channel 134 (5670MHz)

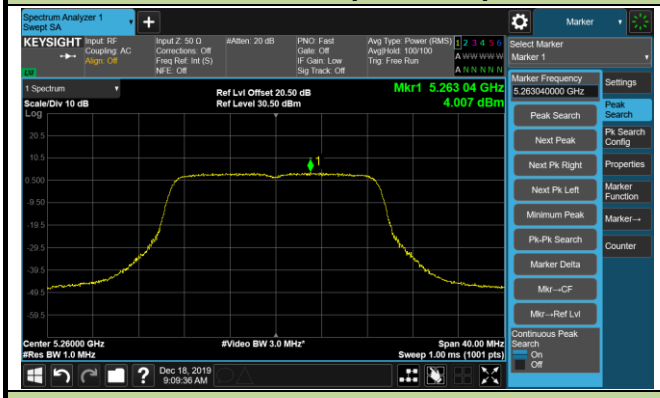


Channel 142 (5710MHz)

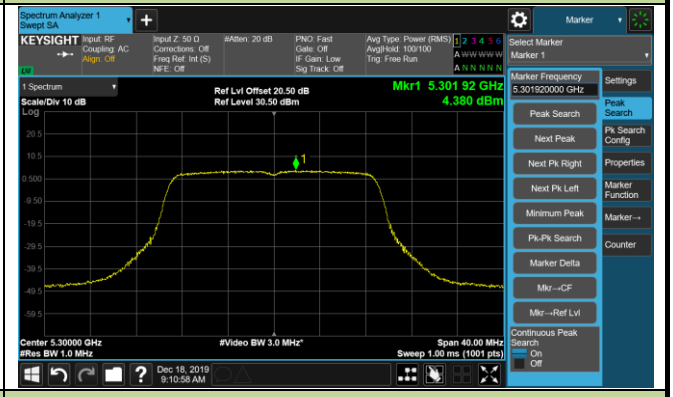


802.11ac-VHT20 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3 (Non Beam-Forming Mode)

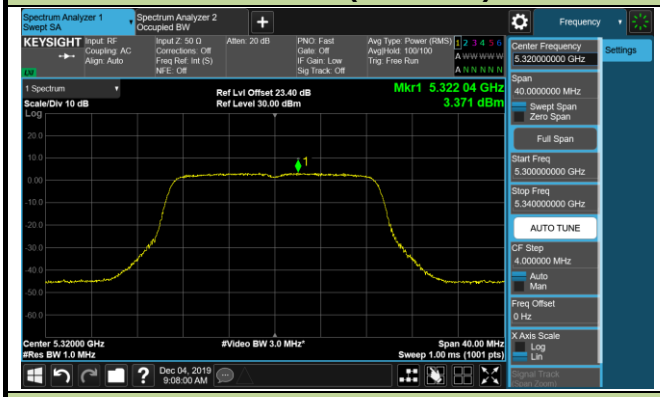
Channel 52 (5260MHz)



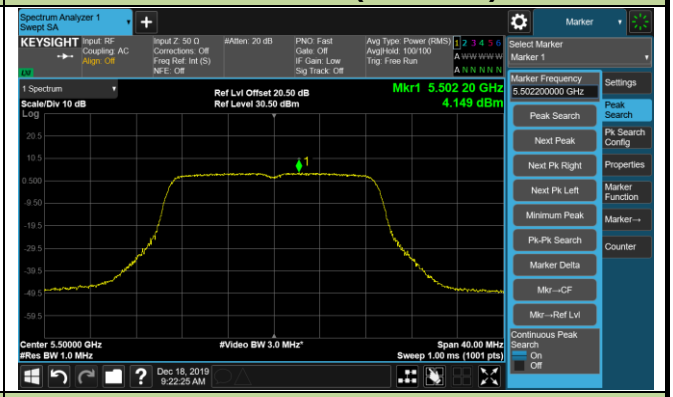
Channel 60 (5300MHz)



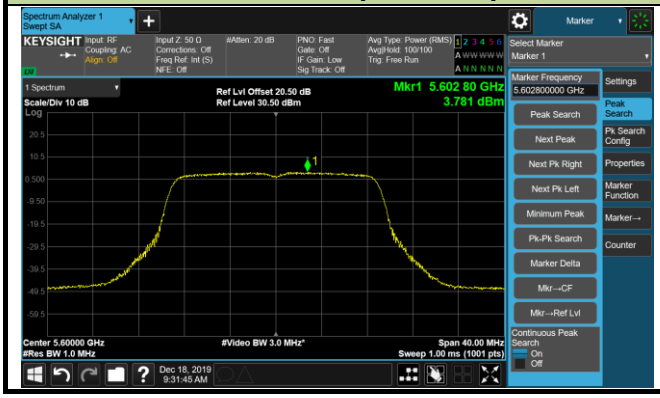
Channel 64 (5320MHz)



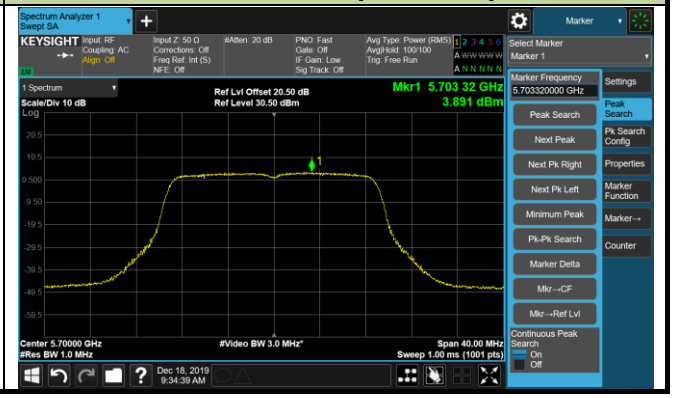
Channel 100 (5500MHz)

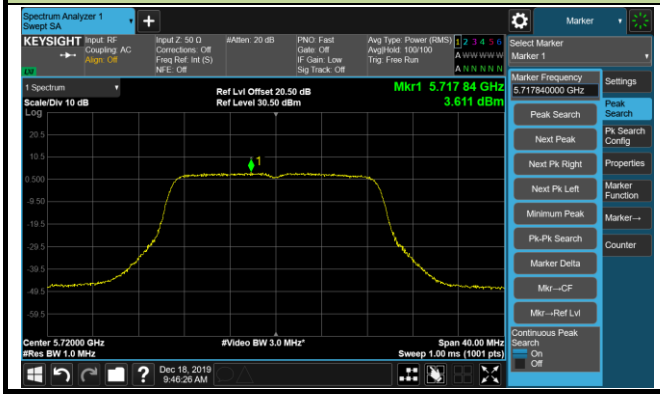


Channel 120 (5600MHz)



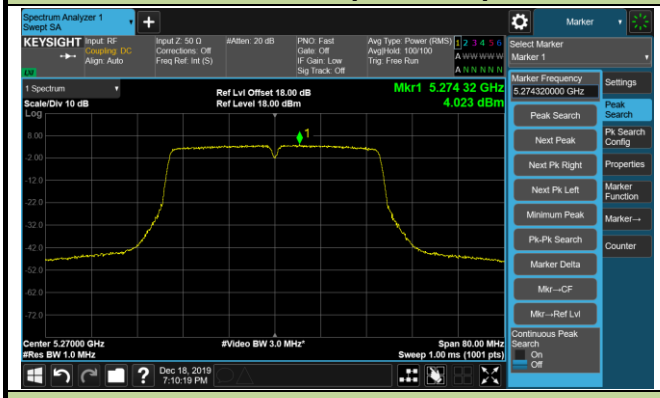
Channel 140 (5700MHz)



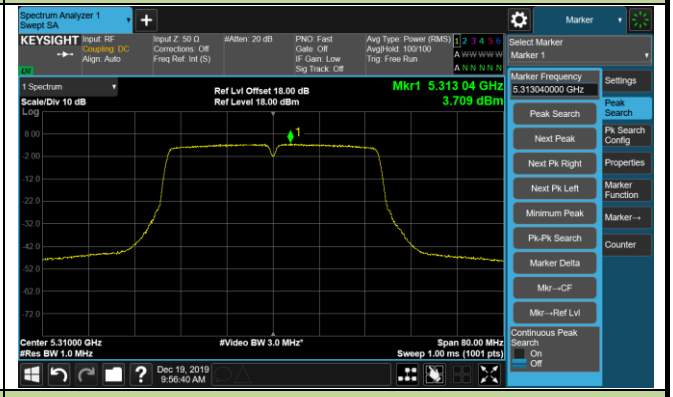
802.11ac-VHT20 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3 (Non Beam-Forming Mode)	
Channel 144 (5720MHz)	
	

802.11ac-VHT40 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3 (Non Beam-Forming Mode)

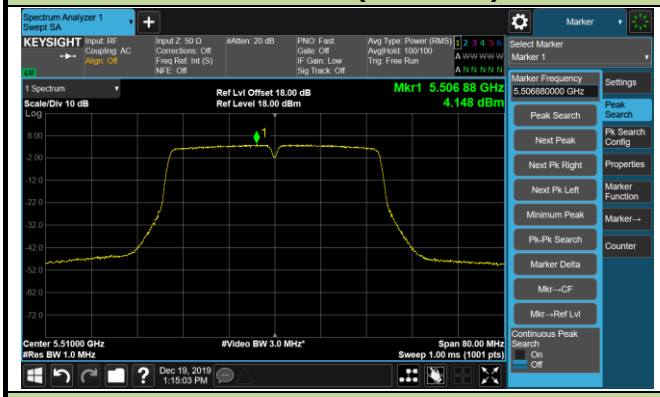
Channel 54 (5270MHz)



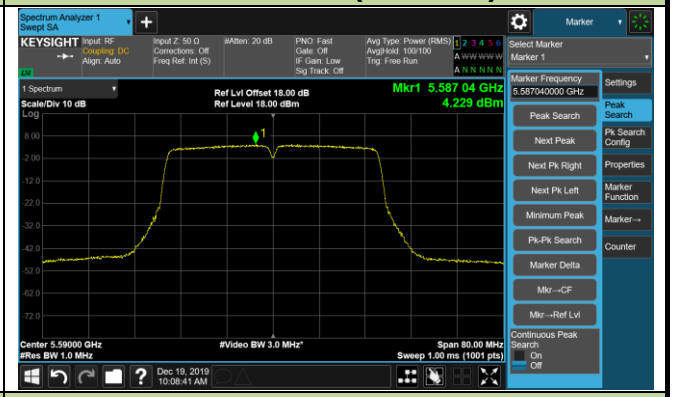
Channel 62 (5310MHz)



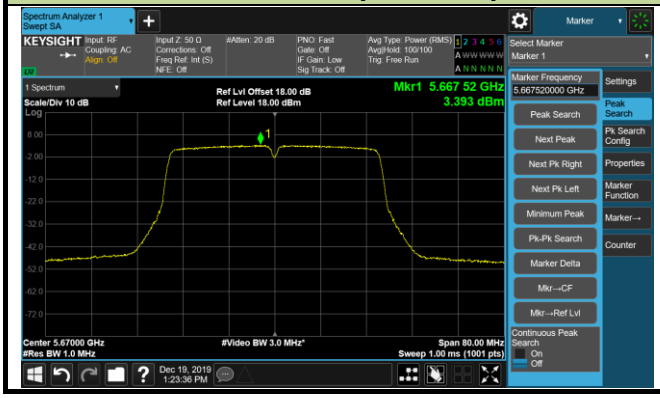
Channel 102 (5510MHz)



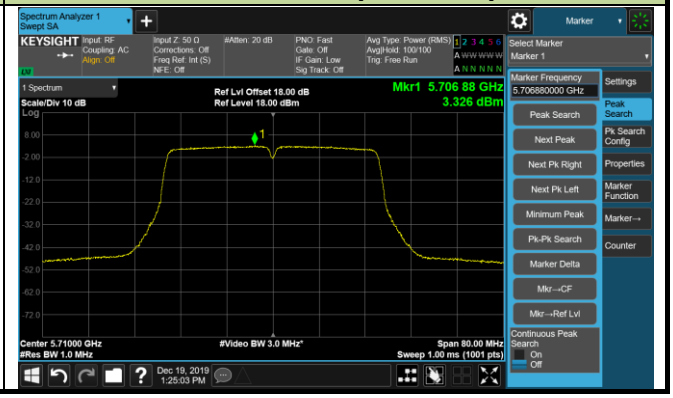
Channel 118 (5590MHz)

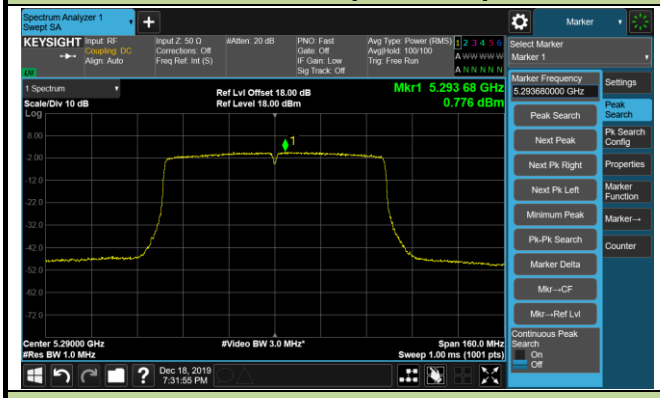
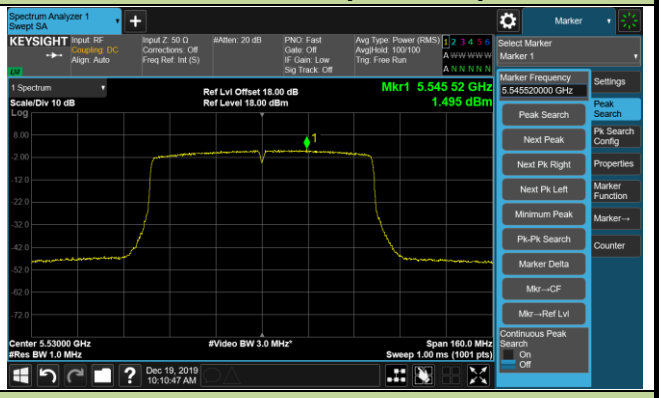
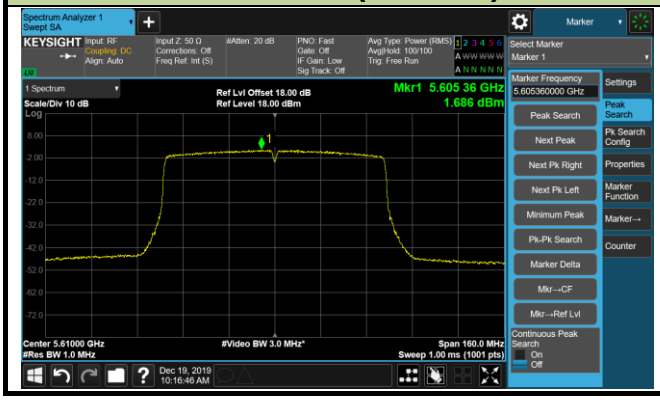
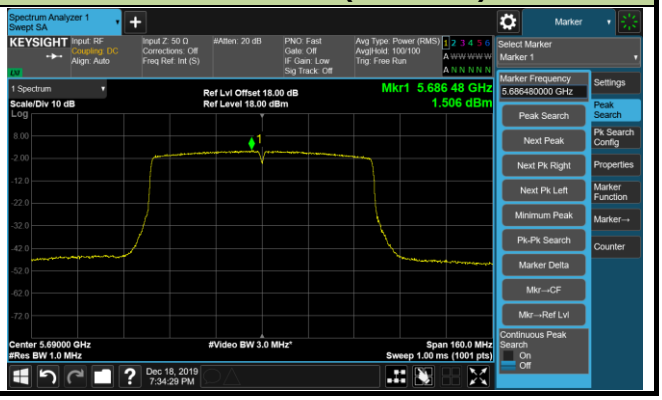


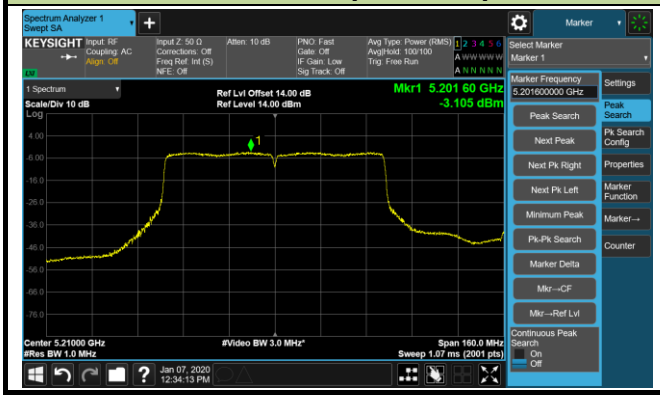
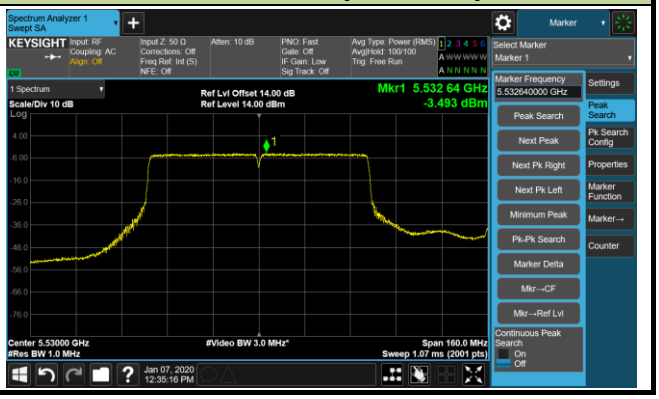
Channel 134 (5670MHz)



Channel 142 (5710MHz)

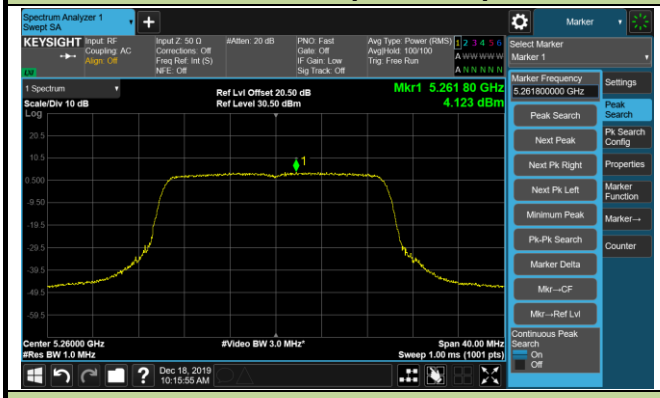


802.11ac-VHT80 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3 (Non Beam-Forming Mode)	
Channel 58 (5290MHz)	Channel 106 (5530MHz)
	
Channel 122 (5610MHz)	Channel 138 (5690MHz)
	

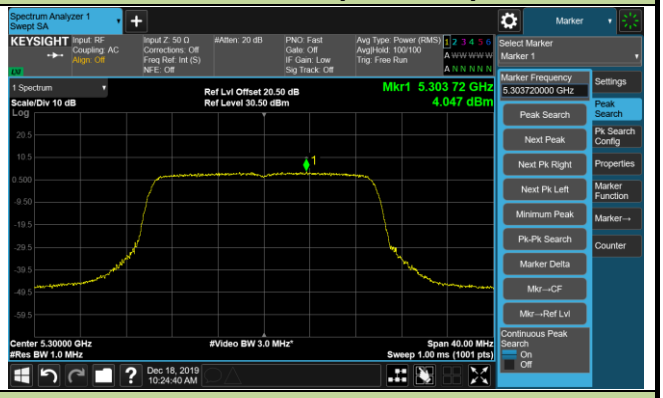
802.11ac-VHT80+80 Contiguous Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3 (Non Beam-Forming Mode)	
Channel 42 (5210MHz)	**Channel 106 (5530MHz)**
	

802.11ax-HE20 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3 (Non Beam-Forming Mode)

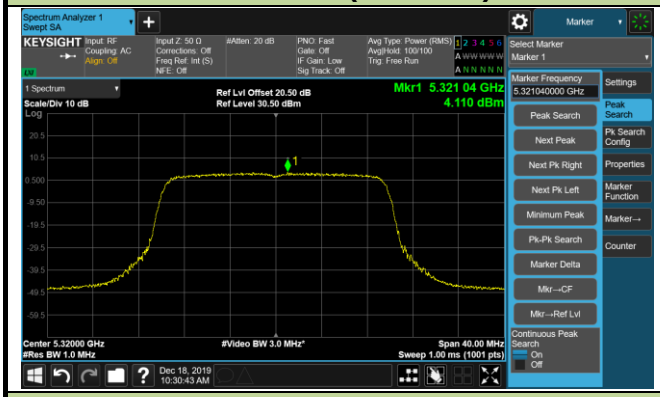
Channel 52 (5260MHz)



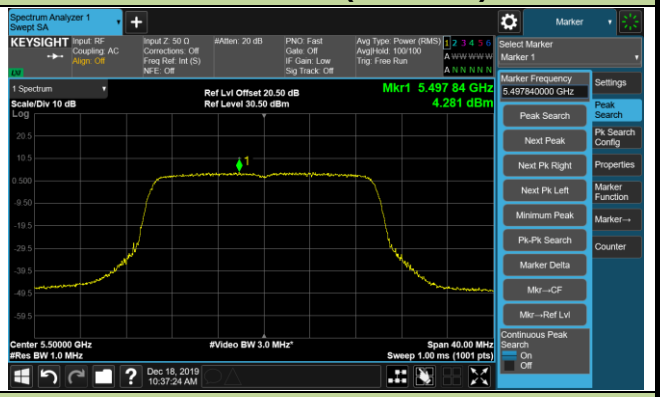
Channel 60 (5300MHz)



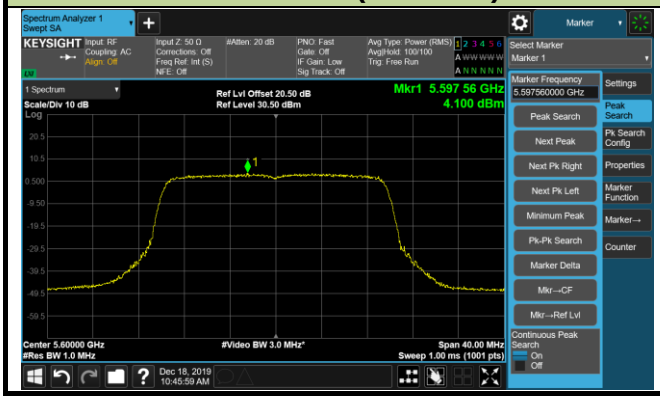
Channel 64 (5320MHz)



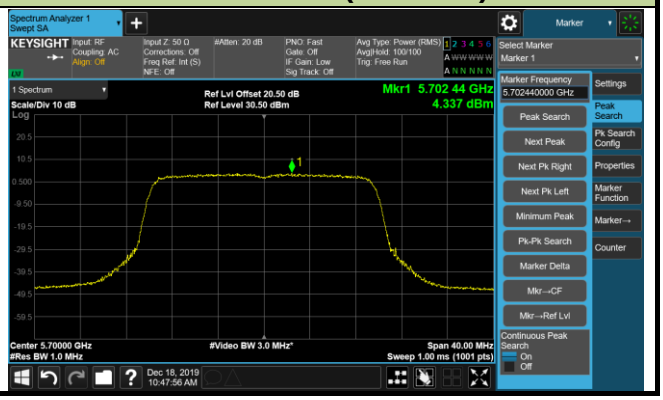
Channel 100 (5500MHz)

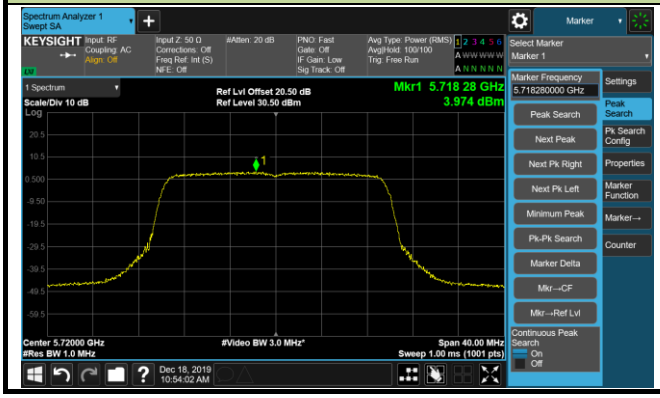


Channel 120 (5600MHz)



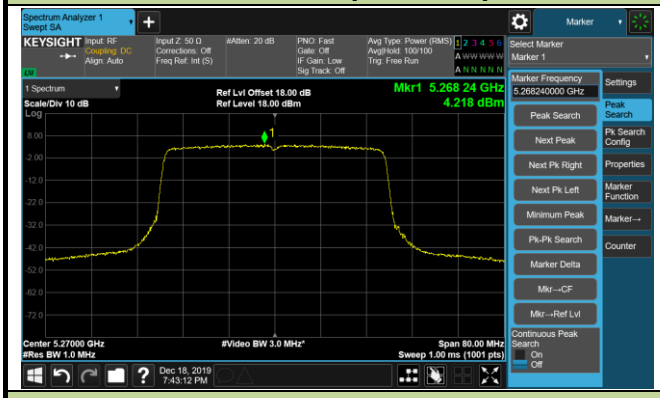
Channel 140 (5700MHz)



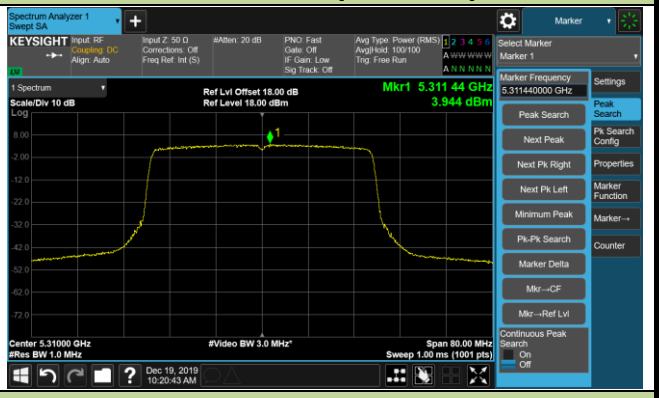
802.11ax-HE20 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3 (Non Beam-Forming Mode)	
Channel 144 (5720MHz)	
	

802.11ax-HE40 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3 (Non Beam-Forming Mode)

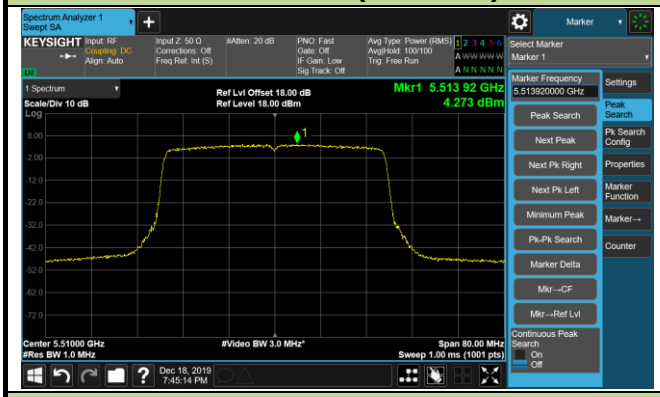
Channel 54 (5270MHz)



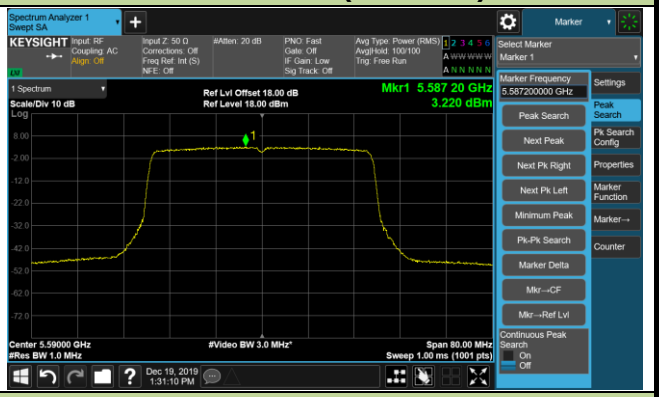
Channel 62 (5310MHz)



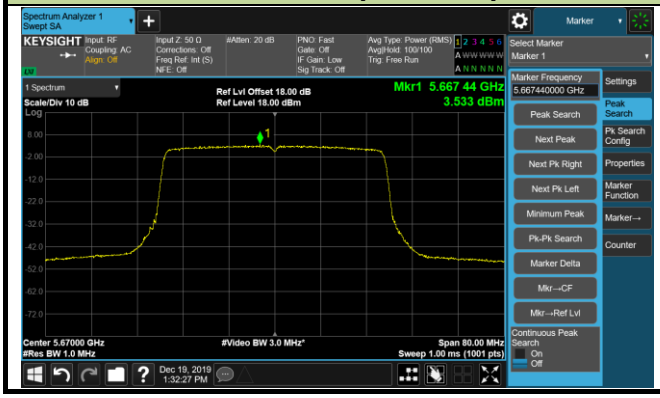
Channel 102 (5510MHz)



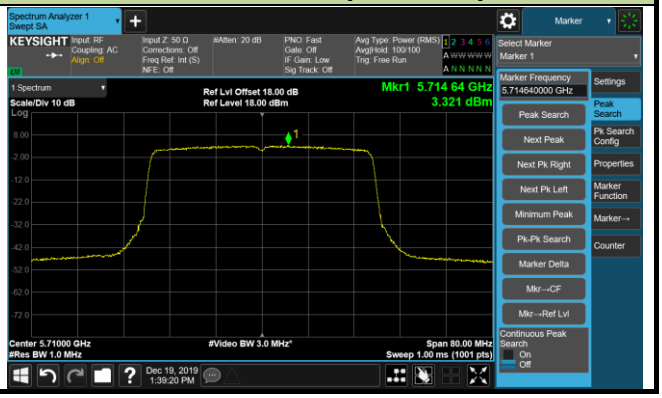
Channel 118 (5590MHz)

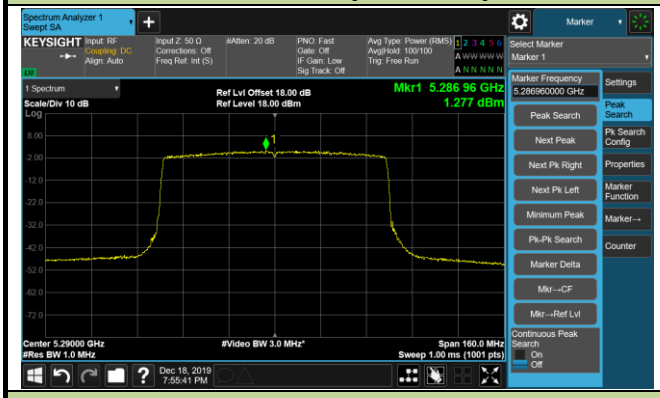
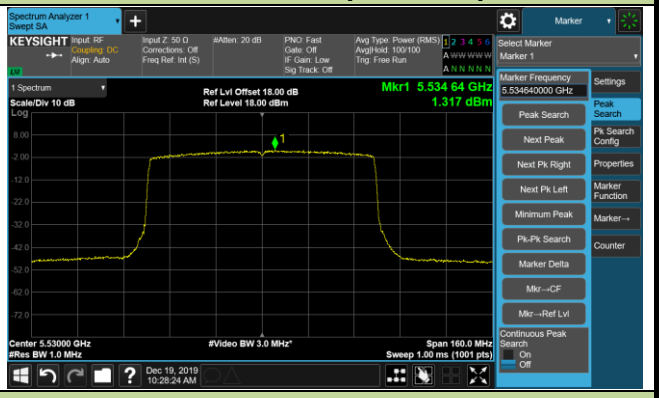
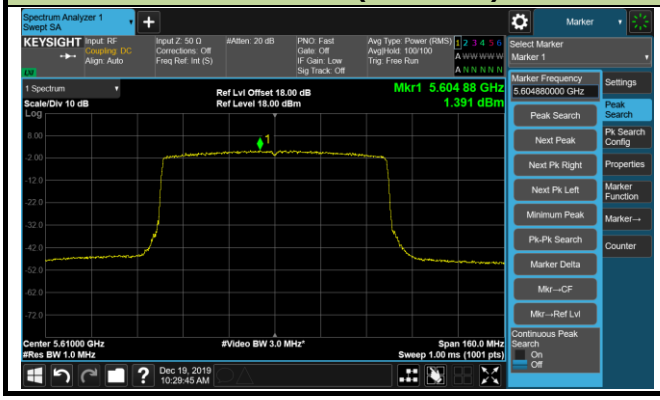
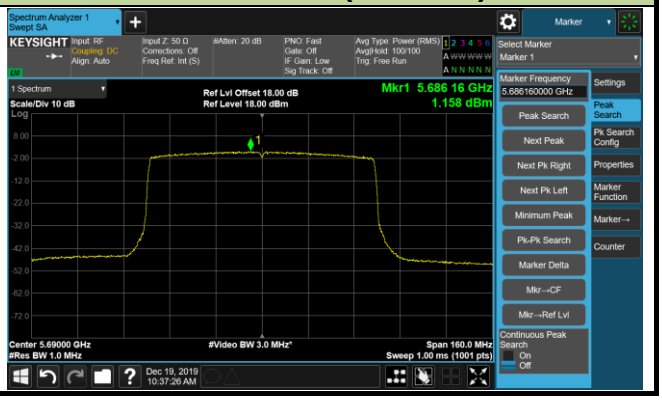


Channel 134 (5670MHz)



Channel 142 (5710MHz)



802.11ax-HE80 Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3 (Non Beam-Forming Mode)	
Channel 58 (5290MHz)	Channel 106 (5530MHz)
	
Channel 122 (5610MHz)	Channel 138 (5690MHz)
	

802.11ax-HE80+80 Contiguous Power Spectral Density - Ant 0 / Ant 0 + 1 + 2 + 3 (Non Beam-Forming Mode)	
Channel 42 (5210MHz)	**Channel 106 (5530MHz)**