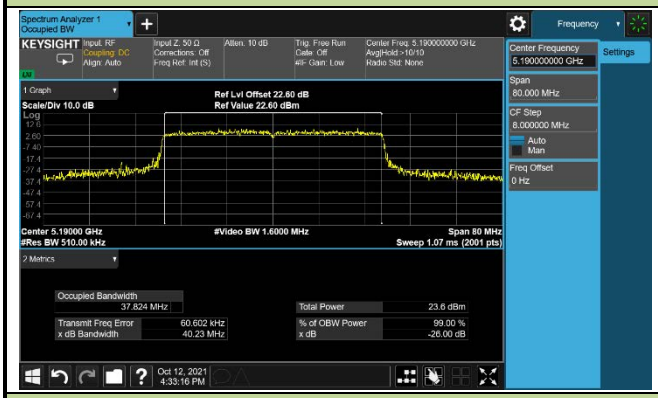
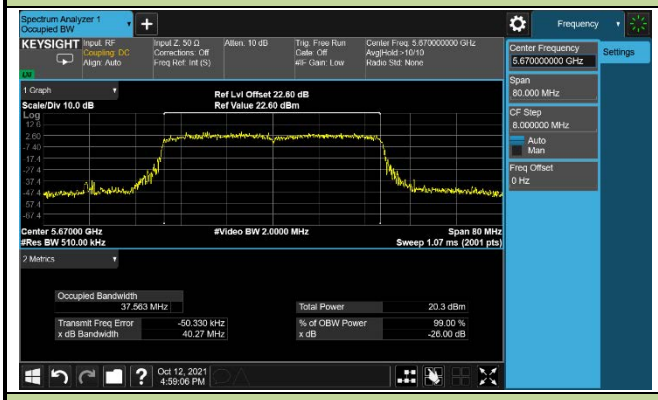
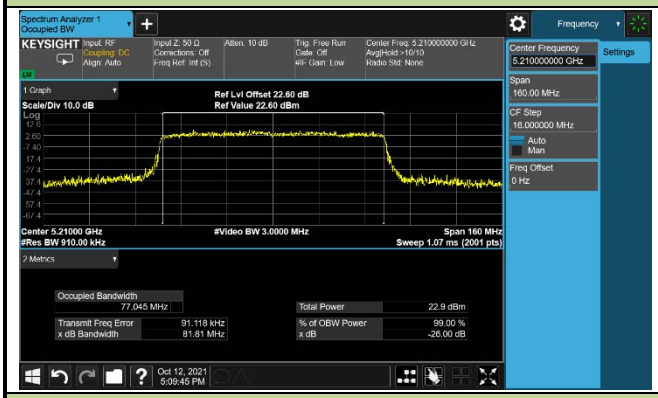
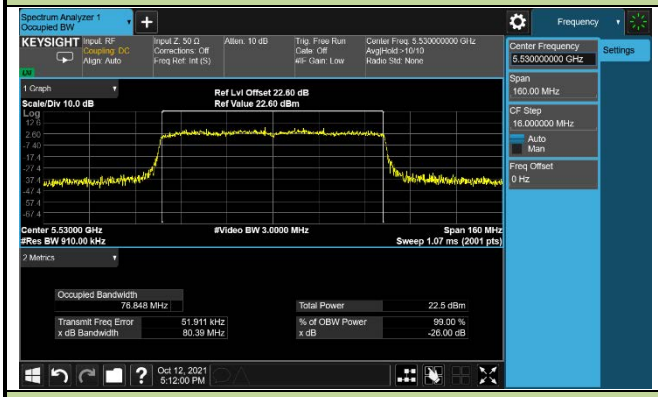
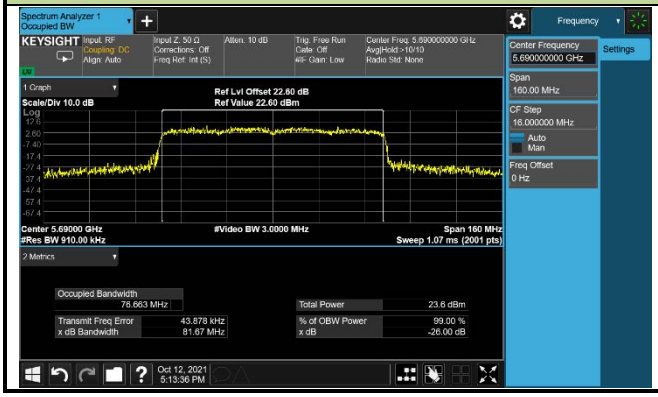
802.11ax-HE40 26dB Bandwidth & 99% Bandwidth – CDD Mode	
Channel 38 (5190MHz)	Channel 46 (5230MHz)
	
Channel 54 (5270MHz)	Channel 62 (5310MHz)
	
Channel 102 (5510MHz)	Channel 110 (5550MHz)
	

802.11ax-HE40 26dB Bandwidth & 99% Bandwidth – CDD Mode	
Channel 134 (5670MHz)	Channel 142 (5710MHz)
	
Channel 151 (5755MHz)	Channel 159 (5795MHz)
	

802.11ax-HE80 26dB Bandwidth & 99% Bandwidth – CDD Mode	
Channel 42 (5210MHz)	Channel 58 (5290MHz)
	
Channel 106 (5530MHz)	Channel 122 (5610MHz)
	
Channel 138 (5690MHz)	Channel 155 (5775MHz)
	

802.11ax-HE80+80 26dB Bandwidth & 99% Bandwidth – CDD Mode	
Channel 42+58 (5210+5290MHz)	Channel 106+122 (5530+5610MHz)
	

802.11a 26dB Bandwidth & 99% Bandwidth – Scan Mode	
Channel 36 (5180MHz)	Channel 44 (5220MHz)
	
Channel 48 (5240MHz)	Channel 149 (5745MHz)
	
Channel 157 (5785MHz)	Channel 165 (5825MHz)
	

802.11ac-VHT20 26dB Bandwidth & 99% Bandwidth – Scan Mode	
Channel 36 (5180MHz)	Channel 44 (5220MHz)
	
Channel 48 (5240MHz)	Channel 149 (5745MHz)
	
Channel 157 (5785MHz)	Channel 165 (5825MHz)
	

802.11ac-VHT40 26dB Bandwidth & 99% Bandwidth – Scan Mode	
Channel 38 (5190MHz)	Channel 46 (5230MHz)
	
Channel 151 (5755MHz)	Channel 159 (5795MHz)
	

802.11ac-VHT80 26dB Bandwidth & 99% Bandwidth – Scan Mode	
Channel 42 (5210MHz)	Channel 155 (5775MHz)
	

7.3. 6dB Bandwidth Measurement

7.3.1.Test Limit

The minimum 6dBbandwidth shall be at least 500 kHz.

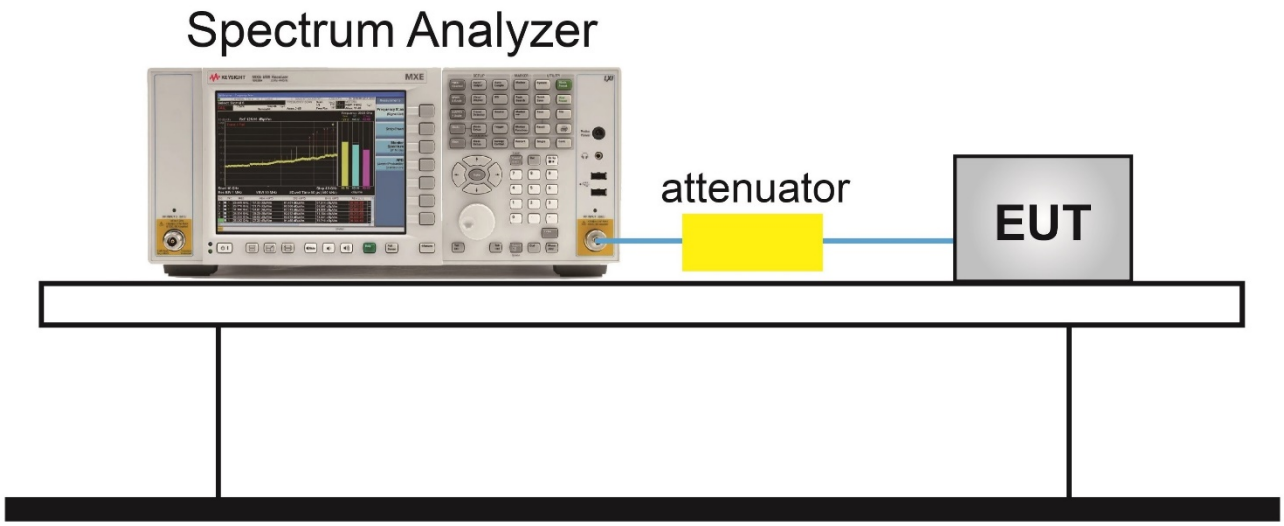
7.3.2.Test Procedure used

KDB 789033 D02v02r01- Section C.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

Product	HAN Access Point	Temperature	24~26°C
Test Engineer	Eric Lin	Relative Humidity	56~61%
Test Site	SR2	Test Date	2021/10/12~2021/10/13
Test Mode	CDD Mode	Frequency Band	U-NII-3

Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11a	6Mbps	149	5745	15.46	≥ 0.5	Pass
802.11a	6Mbps	157	5785	16.40	≥ 0.5	Pass
802.11a	6Mbps	165	5825	14.80	≥ 0.5	Pass
802.11ac-VHT20	MCS0	149	5745	16.69	≥ 0.5	Pass
802.11ac-VHT20	MCS0	157	5785	17.53	≥ 0.5	Pass
802.11ac-VHT20	MCS0	165	5825	17.66	≥ 0.5	Pass
802.11ac-VHT40	MCS0	151	5755	36.38	≥ 0.5	Pass
802.11ac-VHT40	MCS0	159	5795	36.34	≥ 0.5	Pass
802.11ac-VHT80	MCS0	155	5775	73.56	≥ 0.5	Pass
802.11ax-HE20	MCS0	149	5745	19.00	≥ 0.5	Pass
802.11ax-HE20	MCS0	157	5785	19.11	≥ 0.5	Pass
802.11ax-HE20	MCS0	165	5825	19.12	≥ 0.5	Pass
802.11ax-HE40	MCS0	151	5755	37.57	≥ 0.5	Pass
802.11ax-HE40	MCS0	159	5795	38.03	≥ 0.5	Pass
802.11ax-HE80	MCS0	155	5775	77.14	≥ 0.5	Pass

Product	HAN Access Point	Temperature	24~26°C
Test Engineer	Eric Lin	Relative Humidity	56~61%
Test Site	SR2	Test Date	2021/10/13
Test Mode	Scan Mode	Frequency Band	U-NII-3

Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11a	6Mbps	149	5745	16.36	≥ 0.5	Pass
802.11a	6Mbps	157	5785	16.33	≥ 0.5	Pass
802.11a	6Mbps	165	5825	16.40	≥ 0.5	Pass
802.11ac-VHT20	MCS0	149	5745	17.33	≥ 0.5	Pass
802.11ac-VHT20	MCS0	157	5785	17.25	≥ 0.5	Pass
802.11ac-VHT20	MCS0	165	5825	17.33	≥ 0.5	Pass
802.11ac-VHT40	MCS0	151	5755	35.04	≥ 0.5	Pass
802.11ac-VHT40	MCS0	159	5795	36.32	≥ 0.5	Pass
802.11ac-VHT80	MCS0	155	5775	75.53	≥ 0.5	Pass

802.11a 6dB Bandwidth – CDD Mode	
Channel 149 (5745MHz)	Channel 157 (5785MHz)
	
Channel 165 (5825MHz)	
	

802.11ac-VHT20 6dB Bandwidth – CDD Mode	
Channel 149 (5745MHz)	Channel 157 (5785MHz)
	
Channel 165 (5825MHz)	
	

802.11ac-VHT40 6dB Bandwidth – CDD Mode	
Channel 151 (5755MHz)	Channel 159 (5795MHz)
	

802.11ac-VHT80 6dB Bandwidth – CDD Mode	
Channel 155 (5775MHz)	
	
802.11ax-HE20 6dB Bandwidth – CDD Mode	
Channel 149 (5745MHz)	Channel 157 (5785MHz)
	
Channel 165 (5825MHz)	
	

802.11ax-HE40 6dB Bandwidth – CDD Mode	
Channel 151 (5755MHz)	Channel 159 (5795MHz)
	
802.11ax-HE80 6dB Bandwidth– CDD Mode	
Channel 155 (5775MHz)	
	

802.11a 6dB Bandwidth – Scan Mode	
Channel 149 (5745MHz)	Channel 157 (5785MHz)
	
Channel 165 (5825MHz)	
	

802.11ac-VHT20 6dB Bandwidth – Scan Mode	
Channel 149 (5745MHz)	Channel 157 (5785MHz)
	
Channel 165 (5825MHz)	
	

802.11ac-VHT40 6dB Bandwidth – Scan Mode	
Channel 151 (5755MHz)	Channel 159 (5795MHz)
	

802.11ac-VHT80 6dB Bandwidth – Scan Mode	
Channel 155 (5775MHz)	
	

7.4. Output Power Measurement

7.4.1.Test Limit

For 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.
For an indoor access point operating in the band 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 (23.98dBm) or 11dBm +10 log (26dB BW).
For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm).
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.

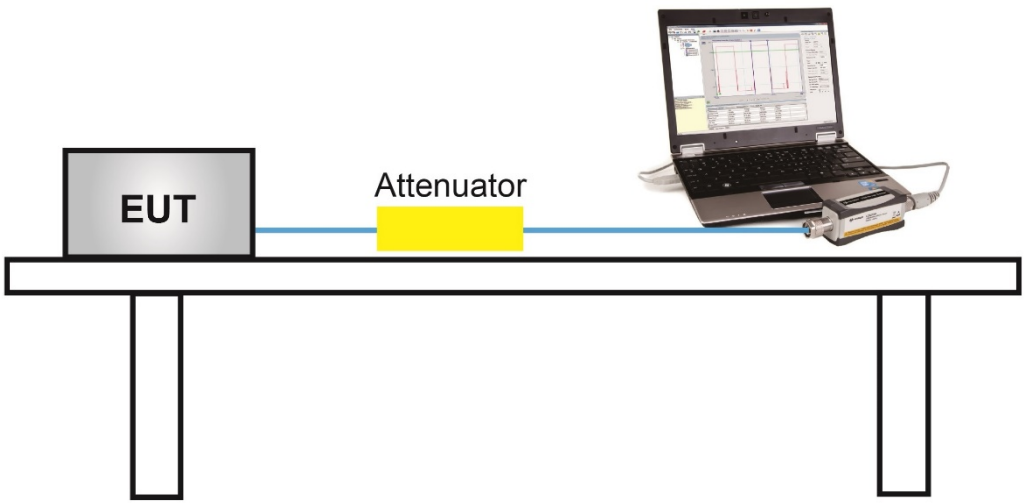
7.4.2.Test Procedure Used

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

7.4.3.Test Setting

Average power measurements were performed 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 (grey marker) for final test of each channel.

For Ant 0 port

Test Mode	Bandwidth	Channel	Frequency (MHz)	Data Rate/ MCS	Average Power (dBm)
802.11a	20	36	5180	6Mbps	16.83
				24Mbps	16.65
				54Mbps	16.51
802.11ac	20	36	5180	MCS0	16.75
				MCS4	16.62
				MCS8	16.48
802.11ac	40	38	5190	MCS0	17.21
				MCS4	17.05
				MCS9	16.88
802.11ac	80	42	5210	MCS0	15.90
				MCS4	15.77
				MCS9	15.62
802.11ax	20	36	5180	MCS0	18.21
				MCS5	18.04
				MCS11	17.92
802.11ax	40	38	5190	MCS0	17.33
				MCS5	17.20
				MCS11	17.05
802.11ax	80	42	5210	MCS0	16.11
				MCS5	16.02
				MCS11	15.91

Product	HAN Access Point	Temperature	23 ~ 25°C
Test Engineer	Eric Lin	Relative Humidity	46 ~ 56%
Test Site	SR2	Test Date	2021/09/11~2021/10/12
Test Mode	CDD Mode		

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Average Power (dBm)				Total Average Power (dBm)	Average Power Limit (dBm)	Result
				Ant 0	Ant 1	Ant 2	Ant 3			
11a	6Mbps	36	5180	16.83	17.03	16.12	16.65	22.69	≤ 30.00	Pass
11a	6Mbps	44	5220	16.63	16.90	15.97	16.27	22.48	≤ 30.00	Pass
11a	6Mbps	48	5240	16.49	16.77	16.08	16.86	22.58	≤ 30.00	Pass
11a	6Mbps	52	5260	10.98	11.33	11.26	11.14	17.20	≤ 23.98	Pass
11a	6Mbps	60	5300	10.84	11.37	11.21	11.06	17.14	≤ 23.98	Pass
11a	6Mbps	64	5320	10.67	10.56	11.01	10.75	16.77	≤ 23.98	Pass
11a	6Mbps	100	5500	11.08	11.16	10.70	10.98	17.00	≤ 23.98	Pass
11a	6Mbps	116	5580	10.92	11.09	10.78	10.54	16.86	≤ 23.98	Pass
11a	6Mbps	140	5700	10.72	10.89	10.38	10.51	16.65	≤ 23.98	Pass
11a	6Mbps	144	5720	11.05	10.67	10.57	10.18	16.65	≤ 23.98	Pass
11a	6Mbps	149	5745	19.09	19.03	18.33	18.57	24.79	≤ 30.00	Pass
11a	6Mbps	157	5785	18.67	18.90	17.98	18.23	24.48	≤ 30.00	Pass
11a	6Mbps	165	5825	18.72	18.87	18.21	18.18	24.53	≤ 30.00	Pass
11ac-VHT20	MCS0	36	5180	16.75	17.24	16.31	17.02	22.86	≤ 30.00	Pass
11ac-VHT20	MCS0	40	5220	17.25	17.63	16.53	17.15	23.18	≤ 30.00	Pass
11ac-VHT20	MCS0	48	5240	16.95	17.10	16.27	16.96	22.85	≤ 30.00	Pass
11ac-VHT20	MCS0	52	5260	10.67	11.39	11.42	10.89	17.12	≤ 23.98	Pass
11ac-VHT20	MCS0	60	5300	10.60	11.03	11.58	11.15	17.12	≤ 23.98	Pass
11ac-VHT20	MCS0	64	5320	11.10	11.69	11.58	11.49	17.49	≤ 23.98	Pass
11ac-VHT20	MCS0	100	5500	11.58	11.70	11.05	11.37	17.45	≤ 23.98	Pass
11ac-VHT20	MCS0	116	5580	11.58	11.39	11.54	10.82	17.36	≤ 23.98	Pass
11ac-VHT20	MCS0	140	5700	11.39	11.21	11.30	11.16	17.29	≤ 23.98	Pass
11ac-VHT20	MCS0	144	5720	11.34	10.98	11.07	10.89	17.09	≤ 23.98	Pass
11ac-VHT20	MCS0	149	5745	18.62	18.91	18.17	18.44	24.56	≤ 30.00	Pass
11ac-VHT20	MCS0	157	5785	18.96	18.77	18.11	18.27	24.56	≤ 30.00	Pass
11ac-VHT20	MCS0	165	5825	18.53	18.12	17.79	17.76	24.08	≤ 30.00	Pass

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Average Power (dBm)				Total Average Power (dBm)	Average Power Limit (dBm)	Result
				Ant 0	Ant 1	Ant 2	Ant 3			
11ac-VHT40	MCS0	38	5190	17.21	17.45	16.35	16.93	23.02	≤ 30.00	Pass
11ac-VHT40	MCS0	46	5230	19.81	20.23	19.11	19.74	25.76	≤ 30.00	Pass
11ac-VHT40	MCS0	54	5270	14.06	14.10	13.73	13.90	19.97	≤ 23.98	Pass
11ac-VHT40	MCS0	62	5310	13.85	13.98	13.71	14.21	19.96	≤ 23.98	Pass
11ac-VHT40	MCS0	102	5510	14.74	15.33	14.34	14.84	20.85	≤ 23.98	Pass
11ac-VHT40	MCS0	110	5550	14.71	15.36	14.30	14.86	20.84	≤ 23.98	Pass
11ac-VHT40	MCS0	134	5670	13.96	14.11	13.78	13.01	19.76	≤ 23.98	Pass
11ac-VHT40	MCS0	142	5710	13.86	13.96	13.57	13.11	19.66	≤ 23.98	Pass
11ac-VHT40	MCS0	151	5755	18.13	18.27	17.38	17.41	23.84	≤ 30.00	Pass
11ac-VHT40	MCS0	159	5795	18.14	18.36	17.31	17.78	23.94	≤ 30.00	Pass
11ac-VHT80	MCS0	42	5210	15.90	16.11	15.14	15.50	21.70	≤ 30.00	Pass
11ac-VHT80	MCS0	58	5290	16.26	16.86	16.33	16.55	22.53	≤ 23.98	Pass
11ac-VHT80	MCS0	106	5530	15.66	16.10	15.20	15.83	21.73	≤ 23.98	Pass
11ac-VHT80	MCS0	122	5610	16.51	17.14	16.58	16.41	22.69	≤ 23.98	Pass
11ac-VHT80	MCS0	138	5690	16.75	16.71	16.07	15.82	22.38	≤ 23.98	Pass
11ac-VHT80	MCS0	155	5775	17.88	17.75	17.19	17.01	23.49	≤ 30.00	Pass
11ac-VHT80+80	MCS0	42	5210	16.41	16.87	--	--	19.66	≤ 30.00	Pass
		58	5290	--	--	16.27	16.57	19.43	≤ 23.98	Pass
11ac-VHT80+80	MCS0	106	5530	16.57	17.25	--	--	22.70	≤ 23.98	Pass
		122	5610	--	--	16.18	16.63			

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Average Power (dBm)				Total Average Power (dBm)	Average Power Limit (dBm)	Result
				Ant 0	Ant 1	Ant 2	Ant 3			
11ax-HE20	MCS0	36	5180	18.21	18.73	17.64	18.24	24.24	≤ 30.00	Pass
11ax-HE20	MCS0	40	5220	22.57	22.25	21.91	22.14	28.24	≤ 30.00	Pass
11ax-HE20	MCS0	48	5240	22.38	22.32	21.89	22.35	28.26	≤ 30.00	Pass
11ax-HE20	MCS0	52	5260	11.73	11.77	12.03	11.75	17.84	≤ 23.98	Pass
11ax-HE20	MCS0	60	5300	11.08	11.14	11.88	11.41	17.41	≤ 23.98	Pass
11ax-HE20	MCS0	64	5320	11.36	11.45	11.91	11.63	17.61	≤ 23.98	Pass
11ax-HE20	MCS0	100	5500	11.85	12.03	11.38	11.53	17.73	≤ 23.98	Pass
11ax-HE20	MCS0	116	5580	11.36	11.64	11.17	11.38	17.41	≤ 23.98	Pass
11ax-HE20	MCS0	140	5700	11.18	11.07	11.08	10.81	17.06	≤ 23.98	Pass
11ax-HE20	MCS0	144	5720	11.12	10.81	10.78	10.66	16.87	≤ 23.98	Pass
11ax-HE20	MCS0	149	5745	18.67	18.42	18.08	18.32	24.40	≤ 30.00	Pass
11ax-HE20	MCS0	157	5785	18.13	18.23	17.88	18.06	24.10	≤ 30.00	Pass
11ax-HE20	MCS0	165	5825	18.27	18.41	17.72	17.80	24.08	≤ 30.00	Pass
11ax-HE40	MCS0	38	5190	17.33	17.51	16.44	17.01	23.11	≤ 30.00	Pass
11ax-HE40	MCS0	46	5230	20.04	20.31	19.65	20.14	26.06	≤ 30.00	Pass
11ax-HE40	MCS0	54	5270	13.68	13.88	13.63	13.74	19.75	≤ 23.98	Pass
11ax-HE40	MCS0	62	5310	13.52	13.79	13.72	14.04	19.79	≤ 23.98	Pass
11ax-HE40	MCS0	102	5510	13.53	14.06	13.14	13.67	19.63	≤ 23.98	Pass
11ax-HE40	MCS0	110	5550	13.47	13.97	13.11	13.74	19.60	≤ 23.98	Pass
11ax-HE40	MCS0	134	5670	14.07	13.89	14.22	13.16	19.87	≤ 23.98	Pass
11ax-HE40	MCS0	142	5710	13.88	13.82	13.18	13.04	19.52	≤ 23.98	Pass
11ax-HE40	MCS0	151	5755	18.66	18.71	18.11	18.16	24.44	≤ 30.00	Pass
11ax-HE40	MCS0	159	5795	18.66	18.55	18.11	18.17	24.40	≤ 30.00	Pass
11ax-HE80	MCS0	42	5210	16.11	16.37	15.39	15.92	21.98	≤ 30.00	Pass
11ax-HE80	MCS0	58	5290	16.56	17.11	16.59	16.84	22.80	≤ 23.98	Pass
11ax-HE80	MCS0	106	5530	15.89	16.31	15.41	16.12	21.97	≤ 23.98	Pass
11ax-HE80	MCS0	122	5610	17.25	17.92	17.36	17.28	23.48	≤ 23.98	Pass
11ax-HE80	MCS0	138	5690	17.06	17.29	16.75	16.32	22.89	≤ 23.98	Pass
11ax-HE80	MCS0	155	5775	17.99	17.91	17.32	17.02	23.60	≤ 30.00	Pass

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Average Power (dBm)				Total Average Power (dBm)	Average Power Limit (dBm)	Result
				Ant 0	Ant 1	Ant 2	Ant 3			
11ax-HE80+80	MCS0	42	5210	15.67	16.03	--	--	18.86	≤ 30.00	Pass
		58	5290	--	--	15.17	15.38	18.29	≤ 23.98	Pass
11ax-HE80+80	MCS0	106	5530	16.05	16.92	--	--	22.35	≤ 23.98	Pass
		122	5610	--	--	16.00	16.30			Pass

Note 1: The 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 5250-5350MHz & 5470-5725MHz, the conducted power limit is as below.

802.11a: 11 + 10 log10 (19.89) = 23.99 > 23.98 dBm

802.11ac-VHT20: 11 + 10 log10 (20.63) = 24.14 > 23.98 dBm

802.11ax-HE20: 11 + 10 log10 (21.24) = 24.27 > 23.98 dBm

802.11ac-VHT40/ax-HE40/ac-VHT80/ax-HE80: 11 + 10 log10 B > 23.98dBm

Note 3: For straddle channel, the conducted power limit is as below.

802.11a CH144: 11 + 10 log10 (B) = 23.77dBm, B = 18.92/2 + 5 = 14.46MHz.

802.11ac-VHT20 CH144: 11 + 10 log10 (B) = 24.18dBm, B = 20.81/2 + 5 = 15.405MHz.

802.11ax-HE20 CH144: 11 + 10 log10 (B) = 24.21dBm, B = 20.94/2 + 5 = 15.47MHz.

802.11ac-VHT40/ax-HE40/ac-VHT80/ax-HE80: 11 + 10 log10 B > 23.98dBm;

Product	HAN Access Point	Temperature	23 ~ 25°C
Test Engineer	Eric Lin	Relative Humidity	46 ~ 56%
Test Site	SR2	Test Date	2021/09/11~2021/10/12
Test Mode	Scan Mode		

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Average Power (dBm)	Average Power Limit (dBm)	Result
11a	6Mbps	36	5180	16.41	≤ 30.00	Pass
11a	6Mbps	44	5220	18.89	≤ 30.00	Pass
11a	6Mbps	48	5240	18.84	≤ 30.00	Pass
11a	6Mbps	149	5745	17.05	≤ 30.00	Pass
11a	6Mbps	157	5785	16.47	≤ 30.00	Pass
11a	6Mbps	165	5825	16.68	≤ 30.00	Pass
11ac-VHT20	MCS0	36	5180	16.40	≤ 30.00	Pass
11ac-VHT20	MCS0	40	5220	18.88	≤ 30.00	Pass
11ac-VHT20	MCS0	48	5240	18.96	≤ 30.00	Pass
11ac-VHT20	MCS0	149	5745	16.64	≤ 30.00	Pass
11ac-VHT20	MCS0	157	5785	16.06	≤ 30.00	Pass
11ac-VHT20	MCS0	165	5825	15.76	≤ 30.00	Pass
11ac-VHT40	MCS0	38	5190	10.58	≤ 30.00	Pass
11ac-VHT40	MCS0	46	5230	18.75	≤ 30.00	Pass
11ac-VHT40	MCS0	151	5755	16.61	≤ 30.00	Pass
11ac-VHT40	MCS0	159	5795	15.82	≤ 30.00	Pass
11ac-VHT80	MCS0	42	5210	9.58	≤ 30.00	Pass
11ac-VHT80	MCS0	155	5775	14.84	≤ 30.00	Pass

7.5. Power Spectral Density Measurement

7.5.1.Test Limit

For the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band.

For the band 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.

For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz 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.

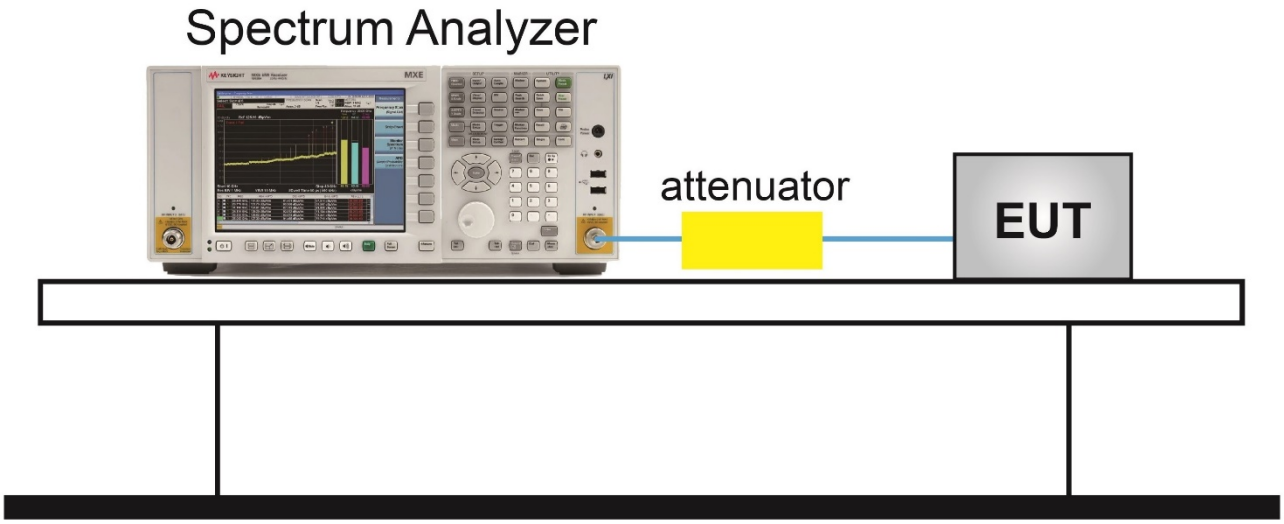
7.5.2.Test Procedure Used

KDB 789033 D02v02r01-Section F

7.5.3.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 = 510KHz
4. VBW ≥ 3RBW
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.

7.5.4.Test Setup



7.5.5.Test Result

Product	HAN Access Point	Temperature	23 ~ 25°C
Test Engineer	Eric Lin	Relative Humidity	40 ~ 56%
Test Site	SR2	Test Date	2021/09/11~2021/10/12
Test Item	Power Spectral Density (U-NII -1 / U-NII -2A / U-NII -2C)		
Test Mode	CDD Mode		

Test Mode	Data Rate /MCS	Ch. No.	Freq. (MHz)	PSD (dBm/MHz)				Duty Cycle (%)	Total PSD (dBm/ MHz)	PSD Limit (dBm/MHz)	Result
				Ant 0	Ant 1	Ant 2	Ant 3				
11a	6Mbps	36	5180	6.10	5.93	5.30	5.62	93.14	12.08	≤ 12.48	Pass
11a	6Mbps	44	5220	5.94	6.38	5.27	6.26	93.14	12.31	≤ 12.48	Pass
11a	6Mbps	48	5240	5.53	5.89	5.11	6.43	93.14	12.09	≤ 12.48	Pass
11a	6Mbps	52	5260	0.30	0.05	0.15	-0.04	93.14	6.44	≤ 6.48	Pass
11a	6Mbps	60	5300	0.14	-0.44	0.15	0.01	93.14	6.30	≤ 6.48	Pass
11a	6Mbps	64	5320	-0.38	0.05	0.41	0.16	93.14	6.40	≤ 6.48	Pass
11a	6Mbps	100	5500	-0.08	0.21	-0.30	-0.29	93.14	6.22	≤ 6.38	Pass
11a	6Mbps	116	5580	-0.31	0.26	-0.57	-0.19	93.14	6.14	≤ 6.38	Pass
11a	6Mbps	140	5700	0.24	-0.18	-0.03	-0.06	93.14	6.32	≤ 6.38	Pass
11a	6Mbps	144	5720	0.36	-0.26	-0.10	-0.15	93.14	6.30	≤ 6.38	Pass
11ac-VHT20	MCS0	36	5180	6.75	6.62	5.71	5.76	95.49	12.46	≤ 12.48	Pass
11ac-VHT20	MCS0	44	5220	5.86	6.01	5.67	6.13	95.49	12.14	≤ 12.48	Pass
11ac-VHT20	MCS0	48	5240	5.72	6.06	5.24	6.19	95.49	12.04	≤ 12.48	Pass
11ac-VHT20	MCS0	52	5260	-0.18	0.15	0.19	0.01	95.49	6.27	≤ 6.48	Pass
11ac-VHT20	MCS0	60	5300	0.13	-0.36	0.35	-0.15	95.49	6.22	≤ 6.48	Pass
11ac-VHT20	MCS0	64	5320	-0.18	-0.13	0.06	0.18	95.49	6.21	≤ 6.48	Pass
11ac-VHT20	MCS0	100	5500	0.09	0.44	-0.27	-0.13	95.49	6.26	≤ 6.38	Pass
11ac-VHT20	MCS0	116	5580	-0.05	-0.13	-0.17	-0.35	95.49	6.05	≤ 6.38	Pass
11ac-VHT20	MCS0	140	5700	0.51	0.17	-0.45	-0.22	95.49	6.24	≤ 6.38	Pass
11ac-VHT20	MCS0	144	5720	0.57	0.16	-0.55	-0.54	95.49	6.15	≤ 6.38	Pass

Test Mode	Data Rate /MCS	Ch. No.	Freq. (MHz)	PSD (dBm/MHz)				Duty Cycle (%)	Total PSD (dBm/ MHz)	PSD Limit (dBm/MHz)	Result
				Ant 0	Ant 1	Ant 2	Ant 3				
11ac-VHT40	MCS0	38	5190	3.40	3.87	2.88	3.31	94.23	9.66	≤ 12.48	Pass
11ac-VHT40	MCS0	46	5230	5.56	6.18	5.17	5.99	94.23	12.02	≤ 12.48	Pass
11ac-VHT40	MCS0	54	5270	-0.04	-0.01	-0.37	-0.05	94.23	6.16	≤ 6.48	Pass
11ac-VHT40	MCS0	62	5310	-0.51	0.04	-0.43	0.04	94.23	6.07	≤ 6.48	Pass
11ac-VHT40	MCS0	102	5510	0.36	0.28	-0.85	0.10	94.23	6.28	≤ 6.38	Pass
11ac-VHT40	MCS0	110	5550	-0.28	0.41	-0.70	0.05	94.23	6.17	≤ 6.38	Pass
11ac-VHT40	MCS0	134	5670	-0.12	0.01	0.04	-0.93	94.23	6.05	≤ 6.38	Pass
11ac-VHT40	MCS0	142	5710	0.36	0.19	-0.50	-0.57	94.23	6.17	≤ 6.38	Pass
11ac-VHT80	MCS0	42	5210	-1.60	-1.01	-1.94	-1.16	95.48	4.81	≤ 12.48	Pass
11ac-VHT80	MCS0	58	5290	-0.86	0.14	-1.22	-0.33	95.48	5.68	≤ 6.48	Pass
11ac-VHT80	MCS0	106	5530	-1.92	-2.74	-1.51	-1.81	95.48	4.25	≤ 6.38	Pass
11ac-VHT80	MCS0	122	5610	-0.63	0.56	-0.69	-0.28	95.48	5.99	≤ 6.38	Pass
11ac-VHT80	MCS0	138	5690	-0.07	0.09	-0.60	-0.58	95.48	5.94	≤ 6.38	Pass
11ac-VHT80+80	MCS0	42	5210	-0.76	-0.54	--	--	94.99	2.59	≤ 12.48	Pass
		58	5290	--	--	-1.00	-0.43	94.99	2.53	≤ 6.48	Pass
11ac-VHT80+80	MCS0	106	5530	-0.40	-0.10	--	--	94.99	5.67	≤ 6.38	Pass
		122	5610	--	--	-1.33	-0.58				
11ax-HE20	MCS0	36	5180	6.15	5.87	5.47	5.95	94.52	12.13	≤ 12.48	Pass
11ax-HE20	MCS0	44	5220	6.33	6.32	5.43	6.02	94.52	12.30	≤ 12.48	Pass
11ax-HE20	MCS0	48	5240	5.92	6.49	5.38	6.13	94.52	12.27	≤ 12.48	Pass
11ax-HE20	MCS0	52	5260	0.16	-0.35	-0.11	0.11	94.52	6.22	≤ 6.48	Pass
11ax-HE20	MCS0	60	5300	-0.31	0.09	0.51	0.11	94.52	6.37	≤ 6.48	Pass
11ax-HE20	MCS0	64	5320	0.15	-0.17	0.24	0.33	94.52	6.41	≤ 6.48	Pass
11ax-HE20	MCS0	100	5500	-0.13	0.15	-0.02	0.12	94.52	6.30	≤ 6.38	Pass
11ax-HE20	MCS0	116	5580	0.14	0.16	-0.61	-0.22	94.52	6.15	≤ 6.38	Pass
11ax-HE20	MCS0	140	5700	0.56	0.07	-0.39	-0.31	94.52	6.26	≤ 6.38	Pass
11ax-HE20	MCS0	144	5720	0.44	-0.05	-0.46	-0.30	94.52	6.19	≤ 6.38	Pass

Test Mode	Data Rate /MCS	Ch. No.	Freq. (MHz)	PSD (dBm/MHz)				Duty Cycle (%)	Total PSD (dBm/ MHz)	PSD Limit (dBm/MHz)	Result
				Ant 0	Ant 1	Ant 2	Ant 3				
11ax-HE40	MCS0	38	5190	2.86	2.82	1.91	2.75	95.51	8.82	≤ 12.48	Pass
11ax-HE40	MCS0	46	5230	5.82	6.82	5.51	5.85	95.51	12.25	≤ 12.48	Pass
11ax-HE40	MCS0	54	5270	0.21	0.44	-0.03	0.32	95.51	6.46	≤ 6.48	Pass
11ax-HE40	MCS0	62	5310	0.03	0.36	0.02	0.36	95.51	6.42	≤ 6.48	Pass
11ax-HE40	MCS0	102	5510	0.14	-0.02	-0.64	0.14	95.51	6.14	≤ 6.38	Pass
11ax-HE40	MCS0	110	5550	0.23	0.13	-0.66	-0.02	95.51	6.15	≤ 6.38	Pass
11ax-HE40	MCS0	134	5670	0.20	0.06	0.15	-0.23	95.51	6.27	≤ 6.38	Pass
11ax-HE40	MCS0	142	5710	0.17	0.09	-0.37	-0.29	95.51	6.13	≤ 6.38	Pass
11ax-HE80	MCS0	42	5210	-0.86	-0.57	-1.10	-0.87	95.25	5.39	≤ 12.48	Pass
11ax-HE80	MCS0	58	5290	-0.43	0.43	-0.04	0.42	95.25	6.34	≤ 6.48	Pass
11ax-HE80	MCS0	106	5530	-1.08	-0.34	-1.45	-0.89	95.25	5.31	≤ 6.38	Pass
11ax-HE80	MCS0	122	5610	-0.09	-0.21	-0.42	0.19	95.25	6.11	≤ 6.38	Pass
11ax-HE80	MCS0	138	5690	0.33	0.36	-0.31	-0.63	95.25	6.19	≤ 6.38	Pass
11ax-HE80+80	MCS0	42	5210	-0.97	-1.19	--	--	95.25	2.14	≤ 12.48	Pass
		58	5290	--	--	-1.82	-1.46	95.25	1.58	≤ 6.48	Pass
11ax-HE80+80	MCS0	106	5530	-0.87	-0.30	--	--	95.25	5.30	≤ 6.38	Pass
		122	5610	--	--	-1.47	-1.18				

Note 1: When EUT duty cycle ≥ 98%, the total PSD (dBm/MHz) = 10*log {$10^{(\text{Ant 0 PSD}/10)}$ + $10^{(\text{Ant 1 PSD}/10)}$ +$10^{(\text{Ant2 PSD}/10)}$ + $10^{(\text{Ant 3 PSD}/10)}$} (dBm/MHz).

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 2: For 5150 - 5250MHz Band: PSD Limit (dBm/MHz) = 17 - (10.52 - 6) = 12.48 dBm/MHz.

For 5250 - 5350MHz Band: PSD Limit (dBm/MHz) = 11 - (10.52 - 6) = 6.48 dBm/MHz.

For 5470 - 5725MHz Band: PSD Limit (dBm/MHz) = 11 - (10.62 - 6) = 6.38 dBm/MHz.

Product	HAN Access Point	Temperature	24~27°C
Test Engineer	Eric Lin	Relative Humidity	58~60%
Test Site	SR2	Test Date	2021/10/10~2021/10/12
Frequency Band	Power Spectral Density (U-NII-3)		
Test Mode	CDD Mode		

Test Mode	Data Rate/ MCS	Ch. No.	Freq. (MHz)	PSD (dBm/510kHz)				Duty Cycle (%)	Total PSD (dBm/ 510kHz)	Limit (dBm/ 500kHz)	Result
				Ant 0	Ant 1	Ant 2	Ant 3				
11a	6Mbps	149	5745	5.75	5.62	5.00	5.31	93.14	11.76	≤ 25.48	Pass
11a	6Mbps	157	5785	5.30	4.86	4.82	4.91	93.14	11.31	≤ 25.48	Pass
11a	6Mbps	165	5825	5.21	5.03	4.33	4.56	93.14	11.13	≤ 25.48	Pass
11ac-VHT20	MCS0	149	5745	5.85	5.74	5.01	5.21	95.49	11.69	≤ 25.48	Pass
11ac-VHT20	MCS0	157	5785	5.27	5.48	4.54	5.38	95.49	11.40	≤ 25.48	Pass
11ac-VHT20	MCS0	165	5825	5.17	5.32	4.31	4.63	95.49	11.10	≤ 25.48	Pass
11ac-VHT40	MCS0	151	5755	2.60	2.42	1.54	1.79	94.23	8.39	≤ 25.48	Pass
11ac-VHT40	MCS0	159	5795	2.63	2.54	1.55	1.71	94.23	8.41	≤ 25.48	Pass
11ac-VHT80	MCS0	155	5775	-1.52	-1.51	-2.19	-2.29	95.48	4.36	≤ 25.48	Pass
11ax-HE20	MCS0	149	5745	5.76	5.45	4.50	4.53	94.52	11.36	≤ 25.48	Pass
11ax-HE20	MCS0	157	5785	4.78	4.73	3.91	4.38	94.52	10.73	≤ 25.48	Pass
11ax-HE20	MCS0	165	5825	4.83	4.92	3.95	3.89	94.52	10.69	≤ 25.48	Pass
11ax-HE40	MCS0	151	5755	3.23	3.48	2.24	2.27	95.51	9.06	≤ 25.48	Pass
11ax-HE40	MCS0	159	5795	2.69	2.37	2.42	2.14	95.51	8.63	≤ 25.48	Pass
11ax-HE80	MCS0	155	5775	-1.81	-1.34	-2.47	-2.43	95.25	4.25	≤ 25.48	Pass

Note 1: When EUT duty cycle ≥ 98%, the total PSD (dBm/510kHz) = $10*\log \{10^{(\text{Ant 0 PSD}/10)} + 10^{(\text{Ant 1 PSD}/10)} + 10^{(\text{Ant 2 PSD}/10)} + 10^{(\text{Ant 3 PSD}/10)}\}$ (dBm/510kHz)

When EUT duty cycle < 98%, the total PSD (dBm/510kHz) = $10*\log \{10^{(\text{Ant 0 PSD}/10)} + 10^{(\text{Ant 1 PSD}/10)} + 10^{(\text{Ant 2 PSD}/10)} + 10^{(\text{Ant 3 PSD}/10)}\}$ (dBm/510kHz) + 10*log (1/Duty Cycle).

Note 2: PSD Limit (dBm/500kHz) = 30 - (10.52 - 6) = 25.48dBm/500kHz.

Product	HAN Access Point	Temperature	23 ~ 25°C
Test Engineer	Eric Lin	Relative Humidity	40 ~ 56%
Test Site	SR2	Test Date	2021/10/11
Test Item	Power Spectral Density (U-NII -1 / U-NII -2A / U-NII -2C)		
Test Mode	Scan Mode		

Test Mode	Data Rate /MCS	Ch. No.	Freq. (MHz)	PSD (dBm/MHz)	Duty Cycle (%)	Total PSD (dBm/ MHz)	PSD Limit (dBm/MHz)	Result
11a	6Mbps	36	5180	5.28	96.38	5.44	≤ 17.0	Pass
11a	6Mbps	44	5220	8.11	96.38	8.27	≤ 17.0	Pass
11a	6Mbps	48	5240	8.13	96.38	8.29	≤ 17.0	Pass
11ac-VHT20	MCS0	36	5180	5.27	95.80	5.45	≤ 17.0	Pass
11ac-VHT20	MCS0	44	5220	7.76	95.80	7.95	≤ 17.0	Pass
11ac-VHT20	MCS0	48	5240	7.97	95.80	8.15	≤ 17.0	Pass
11ac-VHT40	MCS0	38	5190	-3.36	95.75	-3.17	≤ 17.0	Pass
11ac-VHT40	MCS0	46	5230	5.33	95.75	5.52	≤ 17.0	Pass
11ac-VHT80	MCS0	42	5210	-7.71	86.48	-7.08	≤ 17.0	Pass

Note 1: When EUT duty cycle < 98%, the total PSD (dBm/MHz) = PSD (dBm/MHz) + 10*log (1/Duty Cycle).

Product	HAN Access Point	Temperature	24~27°C
Test Engineer	Eric Lin	Relative Humidity	58~60%
Test Site	SR2	Test Date	2021/10/11~2021/10/12
Frequency Band	Power Spectral Density (U-NII-3)		
Test Mode	Scan Mode		

Test Mode	Data Rate/ MCS	Ch. No.	Freq. (MHz)	PSD (dBm/510kHz)	Duty Cycle (%)	Total PSD (dBm/ 510kHz)	Limit (dBm/ 500kHz)	Result
11a	6Mbps	149	5745	3.32	96.38	3.48	≤ 30.0	Pass
11a	6Mbps	157	5785	3.00	96.38	3.16	≤ 30.0	Pass
11a	6Mbps	165	5825	3.09	96.38	3.25	≤ 30.0	Pass
11ac-VHT20	MCS0	149	5745	3.04	95.80	3.23	≤ 30.0	Pass
11ac-VHT20	MCS0	157	5785	2.47	95.80	2.66	≤ 30.0	Pass
11ac-VHT20	MCS0	165	5825	1.93	95.80	2.11	≤ 30.0	Pass
11ac-VHT40	MCS0	151	5755	0.04	95.75	0.22	≤ 30.0	Pass
11ac-VHT40	MCS0	159	5795	-0.62	95.75	-0.43	≤ 30.0	Pass
11ac-VHT80	MCS0	155	5775	-5.20	86.48	-4.57	≤ 30.0	Pass

Note 1: When EUT duty cycle < 98%, the total PSD (dBm/510kHz) = PSD (dBm/510kHz) + 10*log (1/Duty Cycle).

802.11a Power Spectral Density –CDD Mode Ant 0	
Channel 36 (5180MHz)	Channel 44 (5220MHz)
	
Channel 48 (5240MHz)	Channel 52 (5260MHz)
	
Channel 60 (5300MHz)	Channel 64 (5320MHz)
	

802.11a Power Spectral Density –CDD Mode Ant 0	
Channel 100 (5500MHz)	Channel 116 (5580MHz)
	
Channel 140 (5700MHz)	Channel 144 (5720MHz)
	
Channel 149 (5745MHz)	Channel 157 (5785MHz)
	

802.11a Power Spectral Density –CDD Mode Ant 0	
Channel 165 (5825MHz)	
	

802.11ac-VHT20 Power Spectral Density –CDD Mode Ant 0	
Channel 36 (5180MHz)	Channel 44 (5220MHz)
	
Channel 48 (5240MHz)	Channel 52 (5260MHz)
	
Channel 60 (5300MHz)	Channel 64 (5320MHz)