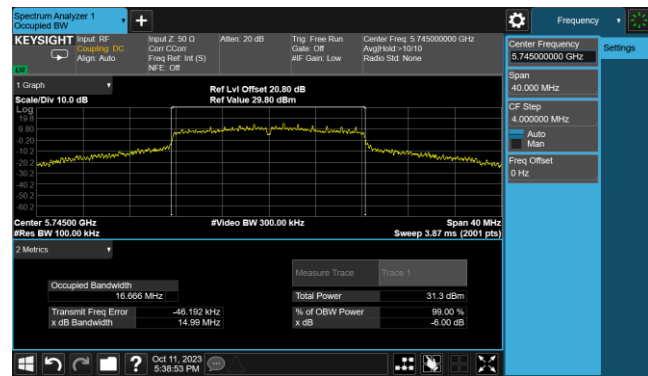
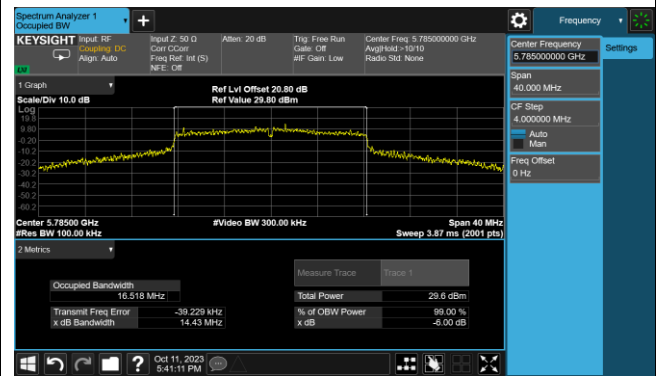


802.11a 6dB Bandwidth

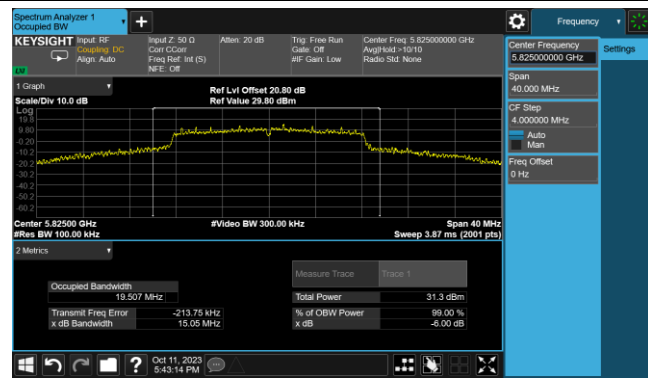
Channel 149 (5745MHz)



Channel 157 (5785MHz)

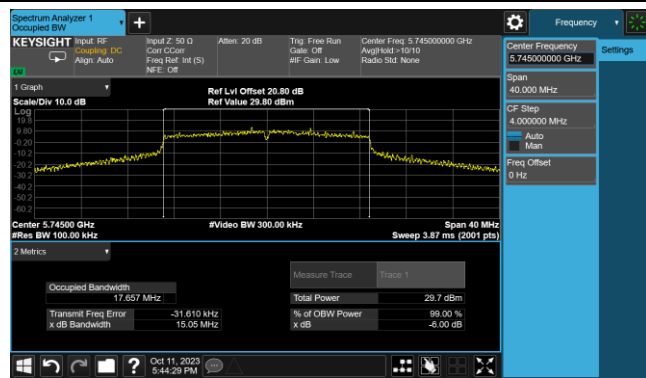


Channel 165 (5825MHz)

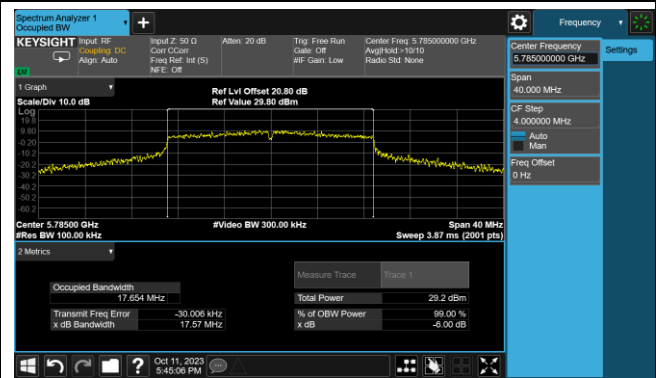


## 802.11ac-VHT20 6dB Bandwidth

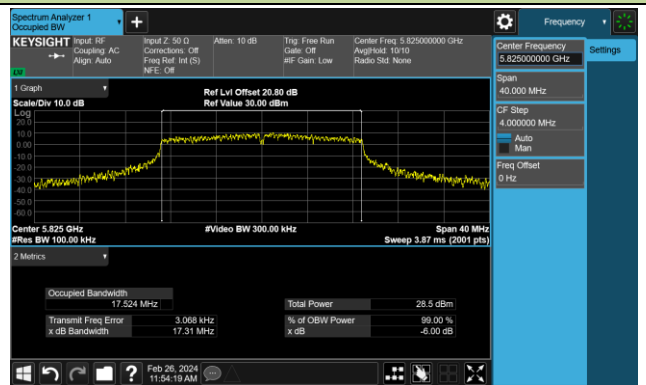
## Channel 149 (5745MHz)



## Channel 157 (5785MHz)

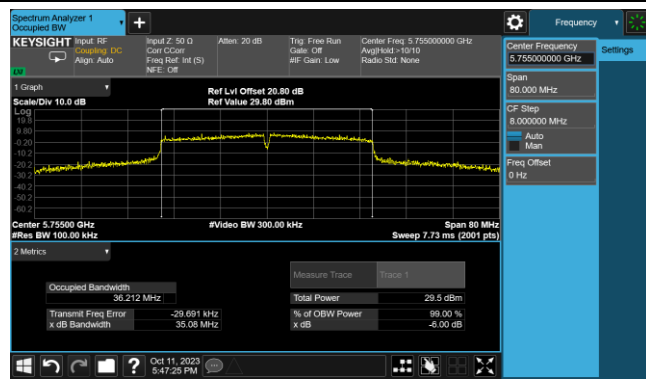


## Channel 165 (5825MHz)

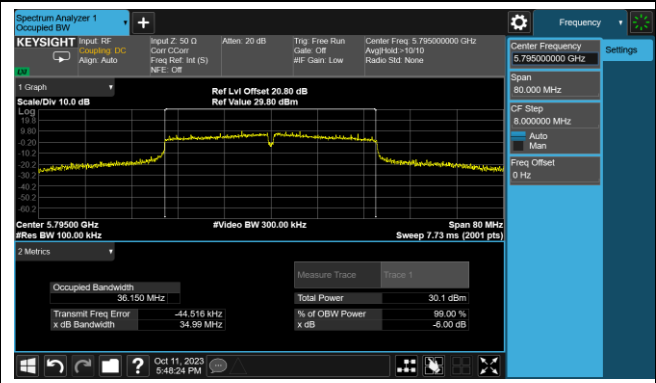


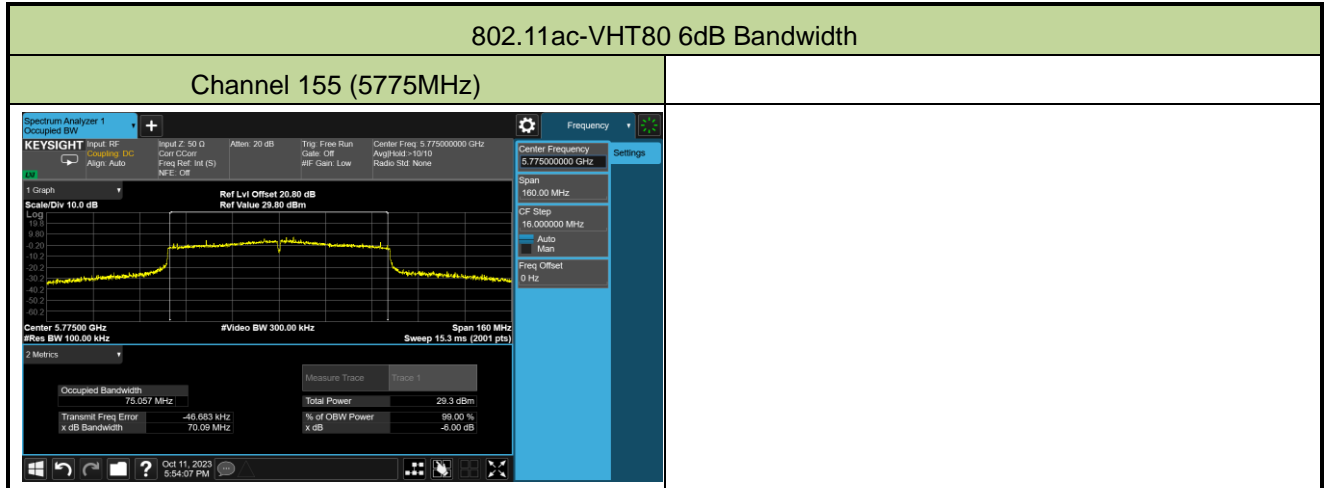
## 802.11ac-VHT40 6dB Bandwidth

## Channel 151 (5755MHz)



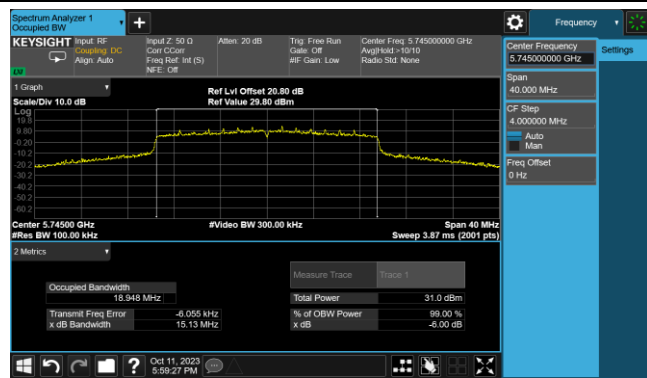
## Channel 159 (5795MHz)



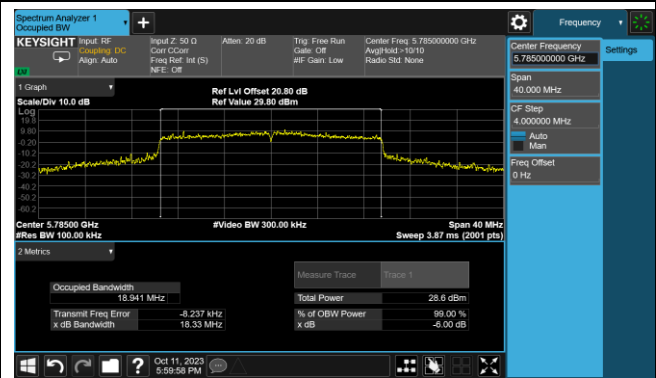


802.11ax-HE20 6dB Bandwidth

Channel 149 (5745MHz)



Channel 157 (5785MHz)

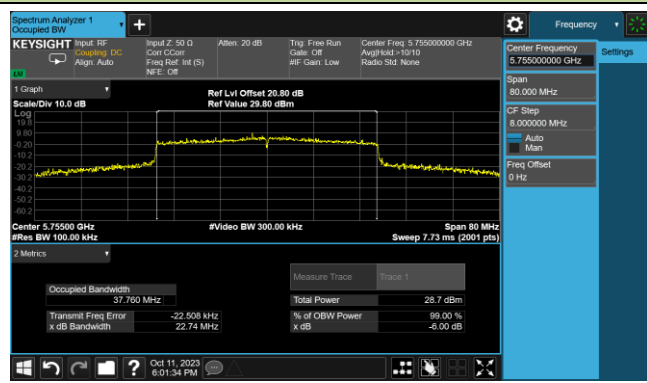


Channel 165 (5825MHz)

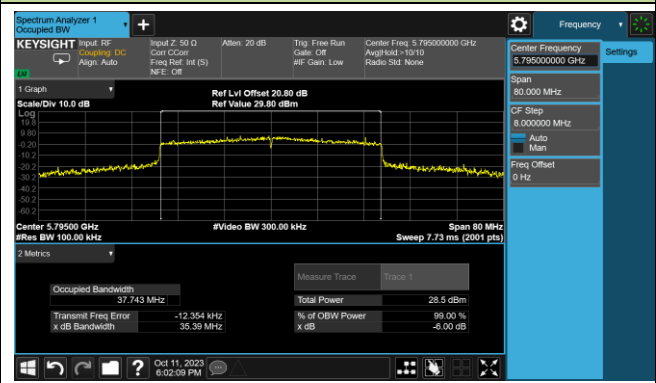


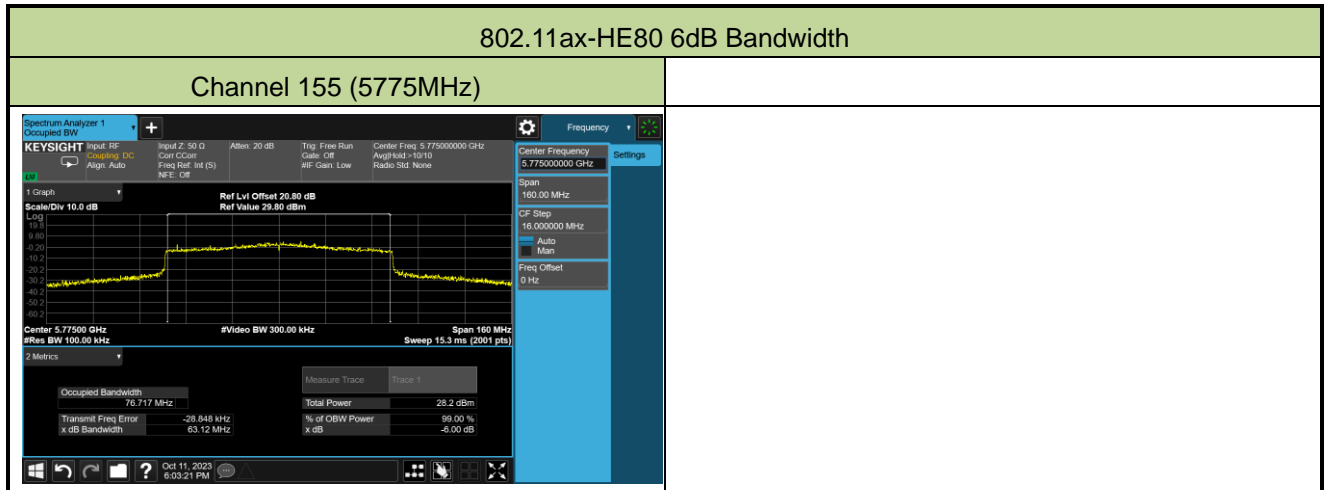
802.11ac-VHT40 6dB Bandwidth

Channel 151 (5755MHz)



Channel 159 (5795MHz)





**A.4 Output Power Test Result**

Test Site	SIP-TR1	Test Engineer	Ryan Wang
Test Date	2023-09-20~2024-02-26		
Test Configuration	L23UGSR-5HaxD2HaxD-US + Omni antenna (UNII-Band 1)		

Test Mode	Data Rate/MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Total Average Power (dBm)	Average Power Limit (dBm)	30 Degree EIRP (dBm)	EIRP Limit (dBm)	Result
11a	6Mbps	36	5180	10.45	10.42	13.45	≤ 28.90	20.55	≤ 21.00	Pass
11a	6Mbps	44	5220	10.71	10.46	13.60	≤ 28.90	20.70	≤ 21.00	Pass
11a	6Mbps	48	5240	10.68	10.39	13.55	≤ 28.90	20.65	≤ 21.00	Pass
11ac-VHT20	MCS0	36	5180	9.98	10.12	13.06	≤ 28.90	20.16	≤ 21.00	Pass
11ac-VHT20	MCS0	44	5220	10.28	10.15	13.23	≤ 28.90	20.33	≤ 21.00	Pass
11ac-VHT20	MCS0	48	5240	10.25	9.98	13.13	≤ 28.90	20.23	≤ 21.00	Pass
11ac-VHT40	MCS0	38	5190	10.44	10.69	13.58	≤ 28.90	20.68	≤ 21.00	Pass
11ac-VHT40	MCS0	46	5230	10.66	10.34	13.51	≤ 28.90	20.61	≤ 21.00	Pass
11ac-VHT80	MCS0	42	5210	10.31	10.82	13.58	≤ 28.90	20.68	≤ 21.00	Pass
11ac-VHT160 Straddle 5.15-5.25GHz	MCS0	50	5250	10.78	10.40	13.60	≤ 28.90	20.70	≤ 21.00	Pass
11ax-HE20	MCS0	36	5180	10.25	10.36	13.32	≤ 28.90	20.42	≤ 21.00	Pass
11ax-HE20	MCS0	44	5220	10.56	10.43	13.51	≤ 28.90	20.61	≤ 21.00	Pass
11ax-HE20	MCS0	48	5240	10.59	10.21	13.41	≤ 28.90	20.51	≤ 21.00	Pass
11ax-HE40	MCS0	38	5190	10.21	10.48	13.36	≤ 28.90	20.46	≤ 21.00	Pass
11ax-HE40	MCS0	46	5230	10.41	10.11	13.27	≤ 28.90	20.37	≤ 21.00	Pass
11ax-HE80	MCS0	42	5210	10.19	10.77	13.50	≤ 28.90	20.60	≤ 21.00	Pass
11ax-HE160 Straddle 5.15-5.25GHz	MCS0	50	5250	10.81	10.50	13.67	≤ 28.90	20.77	≤ 21.00	Pass

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

Note 2: 30 Degree EIRP (dBm) = Total Average Power (dBm) + 30° Ant Gain(dBi).

Test Site	SIP-TR1	Test Engineer	Ryan Wang
Test Date	2023-09-20~2024-02-26		
Test Configuration	L23UGSR-5HaxD2HaxD-US + Omni antenna (UNII-2a & UNII-2c & UNII-3)		

Test Mode	Data Rate MCS	Channel No.	Freq. (MHz)	Average Power (dBm)		Total Average Power (dBm)	Power Limit (dBm)
				Ant 0	Ant 1		
11a	6Mbps	52	5260	13.07	13.04	16.07	≤ 22.58
11a	6Mbps	60	5300	12.67	13.02	15.86	≤ 22.58
11a	6Mbps	64	5320	14.03	13.47	16.77	≤ 22.58
11a	6Mbps	100	5500	13.18	12.83	16.02	≤ 22.58
11a	6Mbps	116	5580	12.92	13.26	16.10	≤ 22.58
11a	6Mbps	140	5700	12.36	13.54	16.00	≤ 22.58
11a	6Mbps	144	5720	12.96	13.82	16.42	≤ 21.47
11a	6Mbps	149	5745	21.65	21.35	24.51	≤ 28.90
11a	6Mbps	157	5785	21.82	21.96	24.90	≤ 28.90
11a	6Mbps	165	5825	24.69	24.35	27.53	≤ 28.90
11ac-VHT20	MCS0	52	5260	14.06	14.11	17.10	≤ 22.88
11ac-VHT20	MCS0	60	5300	13.99	13.92	16.97	≤ 22.88
11ac-VHT20	MCS0	64	5320	14.04	13.69	16.88	≤ 22.88
11ac-VHT20	MCS0	100	5500	14.67	14.02	17.37	≤ 22.88
11ac-VHT20	MCS0	116	5580	13.93	14.42	17.19	≤ 22.88
11ac-VHT20	MCS0	140	5700	13.48	14.52	17.04	≤ 22.88
11ac-VHT20	MCS0	144	5720	13.17	13.98	16.60	≤ 21.67
11ac-VHT20	MCS0	149	5745	21.32	21.03	24.19	≤ 28.90
11ac-VHT20	MCS0	157	5785	21.73	21.12	24.45	≤ 28.90
11ac-VHT20	MCS0	165	5825	24.69	24.70	27.71	≤ 28.90

Test Mode	Data Rate MCS	Channel No.	Freq. (MHz)	Average Power (dBm)		Total Average Power (dBm)	Power Limit (dBm)
				Ant 0	Ant 1		
				11ac-VHT40	MCS0		
11ac-VHT40	MCS0	62	5310	15.73	16.05	18.90	≤ 22.88
11ac-VHT40	MCS0	102	5510	16.26	16.11	19.20	≤ 22.88
11ac-VHT40	MCS0	110	5550	15.75	15.34	18.56	≤ 22.88
11ac-VHT40	MCS0	134	5670	14.64	14.17	17.42	≤ 22.88
11ac-VHT40	MCS0	142	5710	15.73	16.89	19.36	≤ 22.88
11ac-VHT40	MCS0	151	5755	23.02	22.30	25.69	≤ 28.90
11ac-VHT40	MCS0	159	5795	24.79	23.76	27.32	≤ 28.90
11ac-VHT80	MCS0	58	5290	18.34	18.72	21.54	≤ 22.88
11ac-VHT80	MCS0	106	5530	18.97	18.92	21.96	≤ 22.88
11ac-VHT80	MCS0	122	5610	17.25	18.13	20.72	≤ 22.88
11ac-VHT80	MCS0	138	5690	18.23	19.94	22.18	≤ 22.88
11ac-VHT80	MCS0	155	5775	22.09	21.51	24.82	≤ 28.90
11ac-VHT160	MCS0	50	5250	13.72	13.26	16.51	--
11ac-VHT160 Straddle 5.25-5.35GHz	MCS0	50	5250	10.64	10.10	13.39	≤ 22.88
11ac-VHT160	MCS0	114	5570	17.28	16.81	20.06	≤ 22.88
11ax-HE20	MCS0	52	5260	14.53	14.48	17.52	≤ 22.88
11ax-HE20	MCS0	60	5300	14.31	14.50	17.42	≤ 22.88
11ax-HE20	MCS0	64	5320	14.62	14.08	17.37	≤ 22.88
11ax-HE20	MCS0	100	5500	13.74	13.24	16.51	≤ 22.88
11ax-HE20	MCS0	116	5580	14.22	14.74	17.50	≤ 22.88
11ax-HE20	MCS0	140	5700	13.75	14.93	17.39	≤ 22.88
11ax-HE20	MCS0	144	5720	13.55	14.04	16.81	≤ 21.76
11ax-HE20	MCS0	149	5745	22.13	22.43	25.29	≤ 28.90
11ax-HE20	MCS0	157	5785	24.42	23.66	27.07	≤ 28.90
11ax-HE20	MCS0	165	5825	23.89	24.43	27.18	≤ 28.90



Test Mode	Data Rate MCS	Channel No.	Freq. (MHz)	Average Power (dBm)		Total Average Power (dBm)	Power Limit (dBm)
				Ant 0	Ant 1		
				11ax-HE40	MCS0	54	5270
11ax-HE40	MCS0	62	5310	16.42	16.35	19.40	≤ 22.88
11ax-HE40	MCS0	102	5510	16.83	16.64	19.75	≤ 22.88
11ax-HE40	MCS0	110	5550	16.65	16.02	19.36	≤ 22.88
11ax-HE40	MCS0	134	5670	15.31	17.13	19.32	≤ 22.88
11ax-HE40	MCS0	142	5710	15.43	16.65	19.09	≤ 22.88
11ax-HE40	MCS0	151	5755	21.92	21.72	24.83	≤ 28.90
11ax-HE40	MCS0	159	5795	24.42	23.46	26.98	≤ 28.90
11ax-HE80	MCS0	58	5290	19.48	19.38	22.44	≤ 22.88
11ax-HE80	MCS0	106	5530	18.95	17.56	21.32	≤ 22.88
11ax-HE80	MCS0	122	5610	18.21	19.62	21.98	≤ 22.88
11ax-HE80	MCS0	138	5690	18.32	19.57	22.00	≤ 22.88
11ax-HE80	MCS0	155	5775	22.03	22.74	25.41	≤ 28.90
11ax-HE160	MCS0	50	5250	13.69	13.34	16.53	--
11ax-HE160 Straddle 5.25-5.35GHz	MCS0	50	5250	10.55	10.16	13.37	≤ 22.88
11ax-HE160	MCS0	114	5570	15.47	14.98	18.24	≤ 22.88

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

Note 2: For 5250-5350MHz & 5470-5725MHz, the conducted power limit is as below.

802.11a:  $11 + 10 \log_{10} (18.55) - (\text{Ant Gain} - 6) = 22.58 < 22.88$  dBm.

802.11ac-VHT20:  $11 + 10 \log_{10} (19.95) - (\text{Ant Gain} - 6) = 22.90 > 22.88$  dBm.

802.11ax-HE20:  $11 + 10 \log_{10} (20.24) - (\text{Ant Gain} - 6) = 22.96 > 22.88$  dBm.

802.11ac-VHT40/ax-HE40/ac-VHT80/ax-HE80:  $11 + 10 \log_{10} B - (\text{Ant Gain} - 6) > 22.88$ dBm.

Note 3: For Band-Crossing channel, Average Power Limit =  $(23.98\text{dBm or } 11 + 10 \cdot \log_{10} \text{EBW}_{2c}) - (\text{Ant Gain} - 6)$  which is less.

Test Site	SIP-TR1	Test Engineer	Ryan Wang
Test Date	2023-09-20~2024-02-26		
Test Configuration	L23UGSR-5HaxD2HaxD-US + Sector Antenna (UNII-Band 1)		

Test Mode	Data Rate/MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Total Average Power (dBm)	Average Power Limit (dBm)	30 Degree EIRP (dBm)	EIRP Limit (dBm)	Result
11a	6Mbps	36	5180	-1.56	-1.89	1.29	≤ 17.00	20.29	≤ 21.00	Pass
11a	6Mbps	44	5220	-1.33	-1.48	1.61	≤ 17.00	20.61	≤ 21.00	Pass
11a	6Mbps	48	5240	-1.49	-1.81	1.36	≤ 17.00	20.36	≤ 21.00	Pass
11ac-VHT20	MCS0	36	5180	-1.75	-1.82	1.23	≤ 17.00	20.23	≤ 21.00	Pass
11ac-VHT20	MCS0	44	5220	-1.54	-2.17	1.17	≤ 17.00	20.17	≤ 21.00	Pass
11ac-VHT20	MCS0	48	5240	-1.52	-2.07	1.22	≤ 17.00	20.22	≤ 21.00	Pass
11ac-VHT40	MCS0	38	5190	-1.03	-1.34	1.83	≤ 17.00	20.83	≤ 21.00	Pass
11ac-VHT40	MCS0	46	5230	-1.77	-2.05	1.10	≤ 17.00	20.10	≤ 21.00	Pass
11ac-VHT80	MCS0	42	5210	-1.41	-1.81	1.40	≤ 17.00	20.40	≤ 21.00	Pass
11ac-VHT160 Straddle 5.15-5.25GHz	MCS0	50	5250	-1.58	-1.82	1.31	≤ 17.00	20.31	≤ 21.00	Pass
11ax-HE20	MCS0	36	5180	-1.97	-1.94	1.06	≤ 17.00	20.06	≤ 21.00	Pass
11ax-HE20	MCS0	44	5220	-1.73	-1.69	1.30	≤ 17.00	20.30	≤ 21.00	Pass
11ax-HE20	MCS0	48	5240	-1.67	-1.99	1.18	≤ 17.00	20.18	≤ 21.00	Pass
11ax-HE40	MCS0	38	5190	-1.13	-1.20	1.85	≤ 17.00	20.85	≤ 21.00	Pass
11ax-HE40	MCS0	46	5230	-1.67	-1.75	1.30	≤ 17.00	20.30	≤ 21.00	Pass
11ax-HE80	MCS0	42	5210	-1.53	-1.86	1.32	≤ 17.00	20.32	≤ 21.00	Pass
11ax-HE160 Straddle 5.15-5.25GHz	MCS0	50	5250	-1.20	-1.37	1.73	≤ 17.00	20.73	≤ 21.00	Pass

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

Note 2: 30 Degree EIRP (dBm) = Total Average Power (dBm) + 30° Ant Gain(dBi).

Test Site	SIP-TR1	Test Engineer	Ryan Wang
Test Date	2023-09-20~2024-02-26		
Test Configuration	L23UGSR-5HaxD2HaxD-US + Sector Antenna (UNII-2a & UNII-2c & UNII-3)		

Test Mode	Data Rate MCS	Channel No.	Freq. (MHz)	Average Power (dBm)		Total Average Power (dBm)	Power Limit (dBm)
				Ant 0	Ant 1		
11a	6Mbps	52	5260	2.47	2.05	5.28	≤ 10.68
11a	6Mbps	60	5300	2.42	2.04	5.24	≤ 10.68
11a	6Mbps	64	5320	2.24	1.76	5.02	≤ 10.68
11a	6Mbps	100	5500	2.34	1.82	5.10	≤ 10.68
11a	6Mbps	116	5580	1.73	2.26	5.01	≤ 10.68
11a	6Mbps	140	5700	0.88	1.08	3.99	≤ 10.68
11a	6Mbps	144	5720	1.84	1.67	4.77	≤ 9.57
11a	6Mbps	149	5745	13.32	13.60	16.47	≤ 17.00
11a	6Mbps	157	5785	13.61	13.95	16.79	≤ 17.00
11a	6Mbps	165	5825	12.61	13.53	16.10	≤ 17.00
11ac-VHT20	MCS0	52	5260	2.41	2.17	5.30	≤ 10.98
11ac-VHT20	MCS0	60	5300	2.42	2.18	5.31	≤ 10.98
11ac-VHT20	MCS0	64	5320	2.25	1.98	5.13	≤ 10.98
11ac-VHT20	MCS0	100	5500	1.13	0.97	4.06	≤ 10.98
11ac-VHT20	MCS0	116	5580	1.78	2.03	4.92	≤ 10.98
11ac-VHT20	MCS0	140	5700	1.76	1.67	4.73	≤ 10.98
11ac-VHT20	MCS0	144	5720	1.87	1.06	4.49	≤ 9.77
11ac-VHT20	MCS0	149	5745	13.85	13.52	16.70	≤ 17.00
11ac-VHT20	MCS0	157	5785	13.65	13.27	16.47	≤ 17.00
11ac-VHT20	MCS0	165	5825	13.17	14.13	16.69	≤ 17.00

Test Mode	Data Rate MCS	Channel No.	Freq. (MHz)	Average Power (dBm)		Total Average Power (dBm)	Power Limit (dBm)
				Ant 0	Ant 1		
				11ac-VHT40	MCS0	54	5270
11ac-VHT40	MCS0	62	5310	4.06	3.37	6.74	≤ 10.98
11ac-VHT40	MCS0	102	5510	4.68	4.77	7.74	≤ 10.98
11ac-VHT40	MCS0	110	5550	4.46	3.76	7.13	≤ 10.98
11ac-VHT40	MCS0	134	5670	4.29	5.58	7.99	≤ 10.98
11ac-VHT40	MCS0	142	5710	2.65	2.53	5.60	≤ 10.98
11ac-VHT40	MCS0	151	5755	13.65	13.54	16.61	≤ 17.00
11ac-VHT40	MCS0	159	5795	13.49	14.07	16.80	≤ 17.00
11ac-VHT80	MCS0	58	5290	7.32	6.45	9.92	≤ 10.98
11ac-VHT80	MCS0	106	5530	7.61	6.74	10.21	≤ 10.98
11ac-VHT80	MCS0	122	5610	6.88	7.74	10.34	≤ 10.98
11ac-VHT80	MCS0	138	5690	6.36	7.26	9.84	≤ 10.98
11ac-VHT80	MCS0	155	5775	13.57	12.61	16.13	≤ 17.00
11ac-VHT160	MCS0	50	5250	1.18	0.97	4.08	--
11ac-VHT160 Straddle 5.25-5.35GHz	MCS0	50	5250	-2.10	-2.28	0.82	≤ 10.98
11ac-VHT160	MCS0	114	5570	7.03	6.59	9.83	≤ 10.98
11ax-HE20	MCS0	52	5260	2.33	1.98	5.17	≤ 10.98
11ax-HE20	MCS0	60	5300	1.15	0.75	3.96	≤ 10.98
11ax-HE20	MCS0	64	5320	2.26	1.83	5.06	≤ 10.98
11ax-HE20	MCS0	100	5500	2.32	1.83	5.09	≤ 10.98
11ax-HE20	MCS0	116	5580	1.77	2.11	4.95	≤ 10.98
11ax-HE20	MCS0	140	5700	1.21	1.16	4.20	≤ 10.98
11ax-HE20	MCS0	144	5720	1.89	1.41	4.67	≤ 9.86
11ax-HE20	MCS0	149	5745	13.75	13.56	16.67	≤ 17.00
11ax-HE20	MCS0	157	5785	13.84	13.52	16.69	≤ 17.00
11ax-HE20	MCS0	165	5825	13.42	13.24	16.34	≤ 17.00

Test Mode	Data Rate MCS	Channel No.	Freq. (MHz)	Average Power (dBm)		Total Average Power (dBm)	Power Limit (dBm)
				Ant 0	Ant 1		
11ax-HE40	MCS0	54	5270	3.94	3.73	6.85	≤ 10.98
11ax-HE40	MCS0	62	5310	5.04	4.61	7.84	≤ 10.98
11ax-HE40	MCS0	102	5510	4.59	4.14	7.38	≤ 10.98
11ax-HE40	MCS0	110	5550	3.96	3.43	6.71	≤ 10.98
11ax-HE40	MCS0	134	5670	4.12	4.17	7.16	≤ 10.98
11ax-HE40	MCS0	142	5710	2.88	2.45	5.68	≤ 10.98
11ax-HE40	MCS0	151	5755	13.35	13.08	16.23	≤ 17.00
11ax-HE40	MCS0	159	5795	13.76	13.24	16.52	≤ 17.00
11ax-HE80	MCS0	58	5290	7.38	6.67	10.05	≤ 10.98
11ax-HE80	MCS0	106	5530	7.57	4.81	9.42	≤ 10.98
11ax-HE80	MCS0	122	5610	6.82	6.11	9.49	≤ 10.98
11ax-HE80	MCS0	138	5690	5.49	7.03	9.34	≤ 10.98
11ax-HE80	MCS0	155	5775	13.37	13.38	16.39	≤ 17.00
11ax-HE160	MCS0	50	5250	1.72	1.41	4.58	--
11ax-HE160 Straddle 5.25-5.35GHz	MCS0	50	5250	-1.39	-1.84	1.40	≤ 10.98
11ax-HE160	MCS0	114	5570	7.79	7.32	10.57	≤ 10.98

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

Note 2: For 5250-5350MHz & 5470-5725MHz, the conducted power limit is as below.

802.11a:  $11 + 10 \log_{10} (18.55) - (\text{Ant Gain} - 6) = 10.68 < 10.98$  dBm.

802.11ac-VHT20:  $11 + 10 \log_{10} (19.95) - (\text{Ant Gain} - 6) = 11.00 > 10.98$  dBm.

802.11ax-HE20:  $11 + 10 \log_{10} (20.24) - (\text{Ant Gain} - 6) = 11.06 > 10.98$  dBm.

802.11ac-VHT40/ax-HE40/ac-VHT80/ax-HE80:  $11 + 10 \log_{10} B - (\text{Ant Gain} - 6) > 10.98$ dBm.

Note 3: For Band-Crossing channel, Average Power Limit =  $(23.98\text{dBm or } 11 + 10 \cdot \log_{10} \text{EBW}_{2c}) - (\text{Ant Gain} - 6)$  which is less.

Test Site	SIP-TR1	Test Engineer	Ryan Wang
Test Date	2023-09-20~2024-02-26		
Test Configuration	L23UGSR-5HaxD2HaxD-NM-US + Omni antenna (UNII-Band 1)		

Test Mode	Data Rate/MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Total Average Power (dBm)	Average Power Limit (dBm)	30 Degree EIRP (dBm)	EIRP Limit (dBm)	Result
11a	6Mbps	36	5180	10.43	10.22	13.34	≤ 28.90	20.44	≤ 21.00	Pass
11a	6Mbps	44	5220	10.46	10.14	13.31	≤ 28.90	20.41	≤ 21.00	Pass
11a	6Mbps	48	5240	10.52	10.21	13.38	≤ 28.90	20.48	≤ 21.00	Pass
11ac-VHT20	MCS0	36	5180	10.48	10.62	13.56	≤ 28.90	20.66	≤ 21.00	Pass
11ac-VHT20	MCS0	44	5220	10.63	10.73	13.69	≤ 28.90	20.79	≤ 21.00	Pass
11ac-VHT20	MCS0	48	5240	10.68	10.69	13.70	≤ 28.90	20.80	≤ 21.00	Pass
11ac-VHT40	MCS0	38	5190	9.78	9.62	12.71	≤ 28.90	19.81	≤ 21.00	Pass
11ac-VHT40	MCS0	46	5230	9.71	9.61	12.67	≤ 28.90	19.77	≤ 21.00	Pass
11ac-VHT80	MCS0	42	5210	10.56	10.28	13.43	≤ 28.90	20.53	≤ 21.00	Pass
11ac-VHT160 Straddle 5.15-5.25GHz	MCS0	50	5250	7.49	7.81	10.66	≤ 28.90	17.76	≤ 21.00	Pass
11ax-HE20	MCS0	36	5180	10.32	10.21	13.28	≤ 28.90	20.38	≤ 21.00	Pass
11ax-HE20	MCS0	44	5220	10.34	10.03	13.20	≤ 28.90	20.30	≤ 21.00	Pass
11ax-HE20	MCS0	48	5240	10.39	10.18	13.30	≤ 28.90	20.40	≤ 21.00	Pass
11ax-HE40	MCS0	38	5190	9.44	9.34	12.40	≤ 28.90	19.50	≤ 21.00	Pass
11ax-HE40	MCS0	46	5230	9.36	9.27	12.33	≤ 28.90	19.43	≤ 21.00	Pass
11ax-HE80	MCS0	42	5210	10.43	10.21	13.33	≤ 28.90	20.43	≤ 21.00	Pass
11ax-HE160 Straddle 5.15-5.25GHz	MCS0	50	5250	10.44	10.38	13.42	≤ 28.90	20.52	≤ 21.00	Pass

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

Note 2: 30 Degree EIRP (dBm) = Total Average Power (dBm) + 30° Ant Gain(dBi).

Test Site	SIP-TR1	Test Engineer	Ryan Wang
Test Date	2023-09-20~2024-02-26		
Test Configuration	L23UGSR-5HaxD2HaxD-NM-US + Omni antenna (UNII-2a & UNII-2c & UNII-3)		

Test Mode	Data Rate MCS	Channel No.	Freq. (MHz)	Average Power (dBm)		Total Average Power (dBm)	Power Limit (dBm)
				Ant 0	Ant 1		
11a	6Mbps	52	5260	12.74	12.62	15.69	≤ 22.58
11a	6Mbps	60	5300	12.62	12.61	15.63	≤ 22.58
11a	6Mbps	64	5320	13.96	13.45	16.72	≤ 22.58
11a	6Mbps	100	5500	12.53	12.75	15.65	≤ 22.58
11a	6Mbps	116	5580	12.47	12.64	15.57	≤ 22.58
11a	6Mbps	140	5700	12.66	13.18	15.94	≤ 22.58
11a	6Mbps	144	5720	13.09	13.26	16.19	≤ 21.47
11a	6Mbps	149	5745	20.95	21.89	24.46	≤ 28.90
11a	6Mbps	157	5785	21.15	21.55	24.36	≤ 28.90
11a	6Mbps	165	5825	24.35	24.49	27.43	≤ 28.90
11ac-VHT20	MCS0	52	5260	13.32	13.38	16.36	≤ 22.88
11ac-VHT20	MCS0	60	5300	13.17	13.27	16.23	≤ 22.88
11ac-VHT20	MCS0	64	5320	13.65	13.09	16.39	≤ 22.88
11ac-VHT20	MCS0	100	5500	14.15	14.43	17.30	≤ 22.88
11ac-VHT20	MCS0	116	5580	13.97	14.26	17.13	≤ 22.88
11ac-VHT20	MCS0	140	5700	13.55	13.75	16.66	≤ 22.88
11ac-VHT20	MCS0	144	5720	12.76	12.96	15.87	≤ 21.67
11ac-VHT20	MCS0	149	5745	20.12	20.81	23.49	≤ 28.90
11ac-VHT20	MCS0	157	5785	20.85	20.91	23.89	≤ 28.90
11ac-VHT20	MCS0	165	5825	22.82	22.97	25.91	≤ 28.90

Test Mode	Data Rate MCS	Channel No.	Freq. (MHz)	Average Power (dBm)		Total Average Power (dBm)	Power Limit (dBm)
				Ant 0	Ant 1		
				11ac-VHT40	MCS0	54	5270
11ac-VHT40	MCS0	62	5310	14.91	14.94	17.94	≤ 22.88
11ac-VHT40	MCS0	102	5510	15.63	15.23	18.44	≤ 22.88
11ac-VHT40	MCS0	110	5550	15.25	15.31	18.29	≤ 22.88
11ac-VHT40	MCS0	134	5670	14.16	14.11	17.15	≤ 22.88
11ac-VHT40	MCS0	142	5710	15.32	15.55	18.45	≤ 22.88
11ac-VHT40	MCS0	151	5755	22.52	22.56	25.55	≤ 28.90
11ac-VHT40	MCS0	159	5795	23.67	23.99	26.84	≤ 28.90
11ac-VHT80	MCS0	58	5290	14.26	14.34	17.31	≤ 22.88
11ac-VHT80	MCS0	106	5530	14.31	14.14	17.24	≤ 22.88
11ac-VHT80	MCS0	122	5610	17.42	17.28	20.36	≤ 22.88
11ac-VHT80	MCS0	138	5690	18.53	18.95	21.76	≤ 22.88
11ac-VHT80	MCS0	155	5775	21.13	21.86	24.52	≤ 28.90
11ac-VHT160	MCS0	50	5250	10.69	10.89	13.80	--
11ac-VHT160 Straddle 5.25-5.35GHz	MCS0	50	5250	8.23	8.51	11.38	≤ 22.88
11ac-VHT160	MCS0	114	5570	14.65	14.59	17.63	≤ 22.88
11ax-HE20	MCS0	52	5260	13.64	13.71	16.69	≤ 22.88
11ax-HE20	MCS0	60	5300	13.52	13.47	16.51	≤ 22.88
11ax-HE20	MCS0	64	5320	13.92	13.45	16.70	≤ 22.88
11ax-HE20	MCS0	100	5500	12.45	12.77	15.62	≤ 22.88
11ax-HE20	MCS0	116	5580	14.18	14.57	17.39	≤ 22.88
11ax-HE20	MCS0	140	5700	13.75	14.06	16.92	≤ 22.88
11ax-HE20	MCS0	144	5720	13.07	13.26	16.18	≤ 21.76
11ax-HE20	MCS0	149	5745	21.42	21.95	24.70	≤ 28.90
11ax-HE20	MCS0	157	5785	23.98	23.93	26.97	≤ 28.90
11ax-HE20	MCS0	165	5825	23.67	23.63	26.66	≤ 28.90



Test Mode	Data Rate MCS	Channel No.	Freq. (MHz)	Average Power (dBm)		Total Average Power (dBm)	Power Limit (dBm)
				Ant 0	Ant 1		
11ax-HE40	MCS0	54	5270	15.73	16.01	18.88	≤ 22.88
11ax-HE40	MCS0	62	5310	15.13	15.16	18.16	≤ 22.88
11ax-HE40	MCS0	102	5510	15.28	15.58	18.44	≤ 22.88
11ax-HE40	MCS0	110	5550	15.93	15.97	18.96	≤ 22.88
11ax-HE40	MCS0	134	5670	15.85	15.89	18.88	≤ 22.88
11ax-HE40	MCS0	142	5710	15.08	15.23	18.17	≤ 22.88
11ax-HE40	MCS0	151	5755	21.59	21.71	24.66	≤ 28.90
11ax-HE40	MCS0	159	5795	23.61	23.91	26.77	≤ 28.90
11ax-HE80	MCS0	58	5290	14.97	15.26	18.13	≤ 22.88
11ax-HE80	MCS0	106	5530	17.65	17.81	20.74	≤ 22.88
11ax-HE80	MCS0	122	5610	18.26	18.15	21.22	≤ 22.88
11ax-HE80	MCS0	138	5690	17.95	17.86	20.92	≤ 22.88
11ax-HE80	MCS0	155	5775	22.13	22.58	25.37	≤ 28.90
11ax-HE160	MCS0	50	5250	13.68	13.81	16.76	--
11ax-HE160 Straddle 5.25-5.35GHz	MCS0	50	5250	10.89	11.18	14.05	≤ 22.88
11ax-HE160	MCS0	114	5570	14.78	14.89	17.85	≤ 22.88

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

Note 2: For 5250-5350MHz & 5470-5725MHz, the conducted power limit is as below.

802.11a:  $11 + 10 \log_{10} (18.55) - (\text{Ant Gain} - 6) = 22.58 < 22.88$  dBm.

802.11ac-VHT20:  $11 + 10 \log_{10} (19.95) - (\text{Ant Gain} - 6) = 22.90 > 22.88$  dBm.

802.11ax-HE20:  $11 + 10 \log_{10} (20.24) - (\text{Ant Gain} - 6) = 22.96 > 22.88$  dBm.

802.11ac-VHT40/ax-HE40/ac-VHT80/ax-HE80:  $11 + 10 \log_{10} B - (\text{Ant Gain} - 6) > 22.88$ dBm.

Note 3: For Band-Crossing channel, Average Power Limit =  $(23.98\text{dBm or } 11 + 10 \cdot \log_{10} \text{EBW}_{2c}) - (\text{Ant Gain} - 6)$  which is less.

Test Site	SIP-TR1	Test Engineer	Ryan Wang
Test Date	2023-09-20~2024-02-26		
Test Configuration	L23UGSR-5HaxD2HaxD-NM-US + Sector Antenna (UNII-Band 1)		

Test Mode	Data Rate/MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Total Average Power (dBm)	Average Power Limit (dBm)	30 Degree EIRP (dBm)	EIRP Limit (dBm)	Result
11a	6Mbps	36	5180	-1.71	-1.89	1.21	≤ 17.00	20.21	≤ 21.00	Pass
11a	6Mbps	44	5220	-1.72	-1.76	1.27	≤ 17.00	20.27	≤ 21.00	Pass
11a	6Mbps	48	5240	-1.71	-1.69	1.31	≤ 17.00	20.31	≤ 21.00	Pass
11ac-VHT20	MCS0	36	5180	-1.82	-1.95	1.13	≤ 17.00	20.13	≤ 21.00	Pass
11ac-VHT20	MCS0	44	5220	-1.94	-1.87	1.11	≤ 17.00	20.11	≤ 21.00	Pass
11ac-VHT20	MCS0	48	5240	-1.79	-1.85	1.19	≤ 17.00	20.19	≤ 21.00	Pass
11ac-VHT40	MCS0	38	5190	-1.87	-2.08	1.04	≤ 17.00	20.04	≤ 21.00	Pass
11ac-VHT40	MCS0	46	5230	-1.98	-1.94	1.05	≤ 17.00	20.05	≤ 21.00	Pass
11ac-VHT80	MCS0	42	5210	-1.69	-1.77	1.28	≤ 17.00	20.28	≤ 21.00	Pass
11ac-VHT160 Straddle 5.15-5.25GHz	MCS0	50	5250	-1.71	-1.77	1.27	≤ 17.00	20.27	≤ 21.00	Pass
11ax-HE20	MCS0	36	5180	-1.88	-2.12	1.01	≤ 17.00	20.01	≤ 21.00	Pass
11ax-HE20	MCS0	44	5220	-1.94	-1.97	1.06	≤ 17.00	20.06	≤ 21.00	Pass
11ax-HE20	MCS0	48	5240	-1.83	-1.91	1.14	≤ 17.00	20.14	≤ 21.00	Pass
11ax-HE40	MCS0	38	5190	-1.93	-2.09	1.00	≤ 17.00	20.00	≤ 21.00	Pass
11ax-HE40	MCS0	46	5230	-1.94	-1.97	1.06	≤ 17.00	20.06	≤ 21.00	Pass
11ax-HE80	MCS0	42	5210	-1.66	-1.79	1.29	≤ 17.00	20.29	≤ 21.00	Pass
11ax-HE160 Straddle 5.15-5.25GHz	MCS0	50	5250	-1.35	-1.56	1.56	≤ 17.00	20.56	≤ 21.00	Pass

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

Note 2: 30 Degree EIRP (dBm) = Total Average Power (dBm) + 30° Ant Gain(dBi).

Test Site	SIP-TR1	Test Engineer	Ryan Wang
Test Date	2023-09-20~2024-02-26		
Test Configuration	L23UGSR-5HaxD2HaxD-NM-US + Sector Antenna (UNII-2a & UNII-2c & UNII-3)		

Test Mode	Data Rate MCS	Channel No.	Freq. (MHz)	Average Power (dBm)		Total Average Power (dBm)	Power Limit (dBm)
				Ant 0	Ant 1		
11a	6Mbps	52	5260	1.74	1.78	4.77	≤ 10.68
11a	6Mbps	60	5300	1.48	1.51	4.51	≤ 10.68
11a	6Mbps	64	5320	1.47	1.58	4.54	≤ 10.68
11a	6Mbps	100	5500	1.49	1.46	4.49	≤ 10.68
11a	6Mbps	116	5580	1.32	1.86	4.61	≤ 10.68
11a	6Mbps	140	5700	0.27	0.56	3.43	≤ 10.68
11a	6Mbps	144	5720	1.49	1.48	4.50	≤ 9.57
11a	6Mbps	149	5745	12.82	13.34	16.10	≤ 17.00
11a	6Mbps	157	5785	13.37	13.45	16.42	≤ 17.00
11a	6Mbps	165	5825	12.97	12.67	15.83	≤ 17.00
11ac-VHT20	MCS0	52	5260	1.69	1.71	4.71	≤ 10.98
11ac-VHT20	MCS0	60	5300	1.44	1.41	4.44	≤ 10.98
11ac-VHT20	MCS0	64	5320	1.26	1.51	4.40	≤ 10.98
11ac-VHT20	MCS0	100	5500	0.57	0.97	3.78	≤ 10.98
11ac-VHT20	MCS0	116	5580	1.15	1.61	4.40	≤ 10.98
11ac-VHT20	MCS0	140	5700	0.96	1.22	4.10	≤ 10.98
11ac-VHT20	MCS0	144	5720	1.21	1.28	4.26	≤ 9.77
11ac-VHT20	MCS0	149	5745	13.46	13.74	16.61	≤ 17.00
11ac-VHT20	MCS0	157	5785	12.84	12.95	15.91	≤ 17.00
11ac-VHT20	MCS0	165	5825	13.39	13.23	16.32	≤ 17.00

Test Mode	Data Rate MCS	Channel No.	Freq. (MHz)	Average Power (dBm)		Total Average Power (dBm)	Power Limit (dBm)
				Ant 0	Ant 1		
				11ac-VHT40	MCS0		
11ac-VHT40	MCS0	62	5310	3.36	3.41	6.40	≤ 10.98
11ac-VHT40	MCS0	102	5510	3.96	4.22	7.10	≤ 10.98
11ac-VHT40	MCS0	110	5550	3.76	4.06	6.92	≤ 10.98
11ac-VHT40	MCS0	134	5670	4.58	4.97	7.79	≤ 10.98
11ac-VHT40	MCS0	142	5710	1.93	2.03	4.99	≤ 10.98
11ac-VHT40	MCS0	151	5755	13.42	13.51	16.48	≤ 17.00
11ac-VHT40	MCS0	159	5795	13.42	13.89	16.67	≤ 17.00
11ac-VHT80	MCS0	58	5290	6.18	6.73	9.47	≤ 10.98
11ac-VHT80	MCS0	106	5530	6.68	6.85	9.78	≤ 10.98
11ac-VHT80	MCS0	122	5610	7.08	7.14	10.12	≤ 10.98
11ac-VHT80	MCS0	138	5690	6.72	6.68	9.71	≤ 10.98
11ac-VHT80	MCS0	155	5775	12.12	12.28	15.21	≤ 17.00
11ac-VHT160	MCS0	50	5250	1.80	1.75	4.79	--
11ac-VHT160 Straddle 5.25-5.35GHz	MCS0	50	5250	-0.76	-0.80	2.23	≤ 10.98
11ac-VHT160	MCS0	114	5570	6.12	6.48	9.31	≤ 10.98
11ax-HE20	MCS0	52	5260	1.58	1.64	4.62	≤ 10.98
11ax-HE20	MCS0	60	5300	0.41	0.36	3.40	≤ 10.98
11ax-HE20	MCS0	64	5320	1.46	1.57	4.53	≤ 10.98
11ax-HE20	MCS0	100	5500	1.44	1.24	4.35	≤ 10.98
11ax-HE20	MCS0	116	5580	1.21	1.65	4.45	≤ 10.98
11ax-HE20	MCS0	140	5700	-0.03	0.41	3.21	≤ 10.98
11ax-HE20	MCS0	144	5720	1.41	1.36	4.40	≤ 9.86
11ax-HE20	MCS0	149	5745	13.75	13.23	16.51	≤ 17.00
11ax-HE20	MCS0	157	5785	13.21	13.54	16.39	≤ 17.00
11ax-HE20	MCS0	165	5825	13.23	13.24	16.25	≤ 17.00

Test Mode	Data Rate MCS	Channel No.	Freq. (MHz)	Average Power (dBm)		Total Average Power (dBm)	Power Limit (dBm)
				Ant 0	Ant 1		
11ax-HE40	MCS0	54	5270	3.41	3.38	6.41	≤ 10.98
11ax-HE40	MCS0	62	5310	4.18	4.27	7.24	≤ 10.98
11ax-HE40	MCS0	102	5510	4.08	4.03	7.07	≤ 10.98
11ax-HE40	MCS0	110	5550	2.89	3.08	6.00	≤ 10.98
11ax-HE40	MCS0	134	5670	3.84	4.06	6.96	≤ 10.98
11ax-HE40	MCS0	142	5710	1.92	2.06	5.00	≤ 10.98
11ax-HE40	MCS0	151	5755	12.14	12.44	15.30	≤ 17.00
11ax-HE40	MCS0	159	5795	12.34	12.72	15.54	≤ 17.00
11ax-HE80	MCS0	58	5290	6.25	6.61	9.44	≤ 10.98
11ax-HE80	MCS0	106	5530	5.61	5.99	8.81	≤ 10.98
11ax-HE80	MCS0	122	5610	6.06	6.19	9.14	≤ 10.98
11ax-HE80	MCS0	138	5690	5.71	5.67	8.70	≤ 10.98
11ax-HE80	MCS0	155	5775	13.12	13.34	16.24	≤ 17.00
11ax-HE160	MCS0	50	5250	2.02	1.79	4.92	--
11ax-HE160 Straddle 5.25-5.35GHz	MCS0	50	5250	-0.65	-0.91	2.23	≤ 10.98
11ax-HE160	MCS0	114	5570	7.16	7.53	10.36	≤ 10.98

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

Note 2: For 5250-5350MHz & 5470-5725MHz, the conducted power limit is as below.

802.11a:  $11 + 10 \log_{10} (18.55) - (\text{Ant Gain} - 6) = 10.68 < 10.98$  dBm.

802.11ac-VHT20:  $11 + 10 \log_{10} (19.95) - (\text{Ant Gain} - 6) = 11.00 > 10.98$  dBm.

802.11ax-HE20:  $11 + 10 \log_{10} (20.24) - (\text{Ant Gain} - 6) = 11.06 > 10.98$  dBm.

802.11ac-VHT40/ax-HE40/ac-VHT80/ax-HE80:  $11 + 10 \log_{10} B - (\text{Ant Gain} - 6) > 10.98$ dBm.

Note 3: For Band-Crossing channel, Average Power Limit =  $(23.98\text{dBm or } 11 + 10 \cdot \log_{10} \text{EBW}_{2c}) - (\text{Ant Gain} - 6)$  which is less.

Test Site	WZ-SR5	Test Engineer	Luis Yang
Test Date	2023-09-20~2024-02-26		
Test Configuration	L22UGS-5HaxD2HaxD-15S-US + Internal Antenna (UNII-Band 1)		

Test Mode	Data Rate/MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Total Average Power (dBm)	Average Power Limit (dBm)	30 Degree EIRP (dBm)	EIRP Limit (dBm)	Result
11a	6Mbps	36	5180	3.26	3.16	6.22	≤ 22.00	20.22	≤ 21.00	Pass
11a	6Mbps	44	5220	3.12	3.05	6.10	≤ 22.00	20.10	≤ 21.00	Pass
11a	6Mbps	48	5240	2.80	2.88	5.85	≤ 22.00	19.85	≤ 21.00	Pass
11ac-VHT20	MCS0	36	5180	3.37	3.12	6.26	≤ 22.00	20.26	≤ 21.00	Pass
11ac-VHT20	MCS0	44	5220	3.04	2.89	5.98	≤ 22.00	19.98	≤ 21.00	Pass
11ac-VHT20	MCS0	48	5240	3.96	3.77	6.88	≤ 22.00	20.88	≤ 21.00	Pass
11ac-VHT40	MCS0	38	5190	3.88	3.74	6.82	≤ 22.00	20.82	≤ 21.00	Pass
11ac-VHT40	MCS0	46	5230	3.65	3.49	6.58	≤ 22.00	20.58	≤ 21.00	Pass
11ac-VHT80	MCS0	42	5210	3.13	2.85	6.00	≤ 22.00	20.00	≤ 21.00	Pass
11ac-VHT160 Straddle 5.15-5.25GHz	MCS0	50	5250	3.80	3.52	6.67	≤ 22.00	20.67	≤ 21.00	Pass
11ax-HE20	MCS0	36	5180	3.40	3.27	6.35	≤ 22.00	20.35	≤ 21.00	Pass
11ax-HE20	MCS0	44	5220	3.36	3.11	6.25	≤ 22.00	20.25	≤ 21.00	Pass
11ax-HE20	MCS0	48	5240	3.10	2.84	5.98	≤ 22.00	19.98	≤ 21.00	Pass
11ax-HE40	MCS0	38	5190	3.91	3.63	6.78	≤ 22.00	20.78	≤ 21.00	Pass
11ax-HE40	MCS0	46	5230	3.68	3.62	6.66	≤ 22.00	20.66	≤ 21.00	Pass
11ax-HE80	MCS0	42	5210	3.30	3.02	6.17	≤ 22.00	20.17	≤ 21.00	Pass
11ax-HE160 Straddle 5.15-5.25GHz	MCS0	50	5250	3.77	3.71	6.75	≤ 22.00	20.75	≤ 21.00	Pass

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

Note 2: 30 Degree EIRP (dBm) = Total Average Power (dBm) + 30° Ant Gain(dBi).

Test Site	SIP-TR1	Test Engineer	Ryan Wang
Test Date	2023-09-20~2024-02-26		
Test Configuration	L22UGS-5HaxD2HaxD-15S-US + Internal Antenna (UNII-2a & UNII-2c & UNII-3)		

Test Mode	Data Rate MCS	Channel No.	Freq. (MHz)	Average Power (dBm)		Total Average Power (dBm)	Power Limit (dBm)
				Ant 0	Ant 1		
11a	6Mbps	52	5260	6.18	6.62	9.42	≤ 15.68
11a	6Mbps	60	5300	7.17	7.40	10.30	≤ 15.68
11a	6Mbps	64	5320	5.72	6.38	9.07	≤ 15.68
11a	6Mbps	100	5500	7.16	7.36	10.27	≤ 15.68
11a	6Mbps	116	5580	7.36	6.79	10.09	≤ 15.68
11a	6Mbps	140	5700	7.17	7.47	10.33	≤ 15.68
11a	6Mbps	144	5720	6.87	7.53	10.22	≤ 14.57
11a	6Mbps	149	5745	17.98	18.32	21.16	≤ 22.00
11a	6Mbps	157	5785	17.86	18.39	21.14	≤ 22.00
11a	6Mbps	165	5825	17.98	18.70	21.37	≤ 22.00
11ac-VHT20	MCS0	52	5260	6.92	7.17	10.06	≤ 15.98
11ac-VHT20	MCS0	60	5300	6.81	7.06	9.95	≤ 15.98
11ac-VHT20	MCS0	64	5320	6.50	7.17	9.86	≤ 15.98
11ac-VHT20	MCS0	100	5500	6.74	7.04	9.90	≤ 15.98
11ac-VHT20	MCS0	116	5580	7.09	6.29	9.72	≤ 15.98
11ac-VHT20	MCS0	140	5700	6.69	7.11	9.92	≤ 15.98
11ac-VHT20	MCS0	144	5720	6.62	7.03	9.84	≤ 14.77
11ac-VHT20	MCS0	149	5745	17.86	18.14	21.01	≤ 22.00
11ac-VHT20	MCS0	157	5785	17.73	18.19	20.98	≤ 22.00
11ac-VHT20	MCS0	165	5825	17.79	18.49	21.16	≤ 22.00

Test Mode	Data Rate MCS	Channel No.	Freq. (MHz)	Average Power (dBm)		Total Average Power (dBm)	Power Limit (dBm)
				Ant 0	Ant 1		
11ac-VHT40	MCS0	54	5270	9.34	10.21	12.81	≤ 15.98
11ac-VHT40	MCS0	62	5310	9.30	9.89	12.62	≤ 15.98
11ac-VHT40	MCS0	102	5510	9.34	9.71	12.54	≤ 15.98
11ac-VHT40	MCS0	110	5550	9.63	9.32	12.49	≤ 15.98
11ac-VHT40	MCS0	134	5670	9.57	9.91	12.75	≤ 15.98
11ac-VHT40	MCS0	142	5710	9.10	9.51	12.32	≤ 15.98
11ac-VHT40	MCS0	151	5755	18.09	18.32	21.22	≤ 22.00
11ac-VHT40	MCS0	159	5795	17.93	18.51	21.24	≤ 22.00
11ac-VHT80	MCS0	58	5290	12.12	12.74	15.45	≤ 15.98
11ac-VHT80	MCS0	106	5530	12.10	12.56	15.35	≤ 15.98
11ac-VHT80	MCS0	122	5610	12.55	12.06	15.32	≤ 15.98
11ac-VHT80	MCS0	138	5690	12.27	12.18	15.24	≤ 15.98
11ac-VHT80	MCS0	155	5775	17.75	18.10	20.94	≤ 22.00
11ac-VHT160	MCS0	50	5250	6.81	6.45	9.64	--
11ac-VHT160 Straddle 5.25-5.35GHz	MCS0	50	5250	3.79	3.35	6.59	≤ 15.98
11ac-VHT160	MCS0	114	5570	12.55	12.42	15.50	≤ 15.98
11ax-HE20	MCS0	52	5260	7.04	7.50	10.29	≤ 15.98
11ax-HE20	MCS0	60	5300	6.98	7.24	10.12	≤ 15.98
11ax-HE20	MCS0	64	5320	6.89	7.42	10.17	≤ 15.98
11ax-HE20	MCS0	100	5500	6.98	7.22	10.11	≤ 15.98
11ax-HE20	MCS0	116	5580	7.20	6.55	9.90	≤ 15.98
11ax-HE20	MCS0	140	5700	6.85	7.21	10.04	≤ 15.98
11ax-HE20	MCS0	144	5720	6.64	7.09	9.88	≤ 14.86
11ax-HE20	MCS0	149	5745	18.06	18.34	21.21	≤ 22.00
11ax-HE20	MCS0	157	5785	17.93	18.35	21.16	≤ 22.00
11ax-HE20	MCS0	165	5825	17.95	18.78	21.40	≤ 22.00



Test Mode	Data Rate MCS	Channel No.	Freq. (MHz)	Average Power (dBm)		Total Average Power (dBm)	Power Limit (dBm)
				Ant 0	Ant 1		
11ax-HE40	MCS0	54	5270	9.03	9.95	12.52	≤ 15.98
11ax-HE40	MCS0	62	5310	8.84	9.34	12.11	≤ 15.98
11ax-HE40	MCS0	102	5510	10.09	10.67	13.40	≤ 15.98
11ax-HE40	MCS0	110	5550	9.92	10.09	13.02	≤ 15.98
11ax-HE40	MCS0	134	5670	10.00	10.48	13.26	≤ 15.98
11ax-HE40	MCS0	142	5710	9.14	9.50	12.33	≤ 15.98
11ax-HE40	MCS0	151	5755	17.88	18.10	21.00	≤ 22.00
11ax-HE40	MCS0	159	5795	17.72	18.27	21.01	≤ 22.00
11ax-HE80	MCS0	58	5290	11.80	12.53	15.19	≤ 15.98
11ax-HE80	MCS0	106	5530	12.05	12.54	15.31	≤ 15.98
11ax-HE80	MCS0	122	5610	12.40	12.07	15.25	≤ 15.98
11ax-HE80	MCS0	138	5690	12.21	12.22	15.23	≤ 15.98
11ax-HE80	MCS0	155	5775	17.66	18.02	20.85	≤ 22.00
11ax-HE160	MCS0	50	5250	6.83	6.76	9.81	--
11ax-HE160 Straddle 5.25-5.35GHz	MCS0	50	5250	3.87	3.79	6.84	≤ 15.98
11ax-HE160	MCS0	114	5570	12.59	12.52	15.57	≤ 15.98

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

Note 2: For 5250-5350MHz & 5470-5725MHz, the conducted power limit is as below.

802.11a:  $11 + 10 \log_{10} (18.55) - (\text{Ant Gain} - 6) = 15.68 < 15.98$  dBm.

802.11ac-VHT20:  $11 + 10 \log_{10} (19.95) - (\text{Ant Gain} - 6) = 16.00 > 15.98$  dBm.

802.11ax-HE20:  $11 + 10 \log_{10} (20.24) - (\text{Ant Gain} - 6) = 16.06 > 15.98$  dBm.

802.11ac-VHT40/ax-HE40/ac-VHT80/ax-HE80:  $11 + 10 \log_{10} B - (\text{Ant Gain} - 6) > 15.98$ dBm.

Note 3: For Band-Crossing channel, Average Power Limit =  $(23.98\text{dBm or } 11 + 10 \cdot \log_{10} \text{EBW}_{2c}) - (\text{Ant Gain} - 6)$  which is less.

**A.5 Power Spectral Density Test Result**

Test Site	SIP-TR1	Test Engineer	Ryan Wang
Test Date	2023-09-20 ~ 2024-02-26		
Test Configuration	L23UGSR-5HaxD2HaxD-US + Omni antenna		
Test Item	Power Spectral Density (UNII-Band 1 & UNII-2a & UNII-2c)		

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	AVPSD		Duty Cycle (%)	Total PSD (dBm/ MHz)	PSD Limit (dBm/MHz)
				Ant 0	Ant 1			
11a	6Mbps	36	5180	0.03	-0.03	98.80	3.01	≤ 12.89
11a	6Mbps	44	5220	0.17	0.00	98.80	3.10	≤ 12.89
11a	6Mbps	48	5240	0.21	0.05	98.80	3.14	≤ 12.89
11a	6Mbps	52	5260	2.96	3.01	98.80	6.00	≤ 6.89
11a	6Mbps	60	5300	2.58	2.89	98.80	5.75	≤ 6.89
11a	6Mbps	64	5320	3.61	3.43	98.80	6.53	≤ 6.89
11a	6Mbps	100	5500	3.11	3.10	98.80	6.11	≤ 6.89
11a	6Mbps	116	5580	2.63	3.52	98.80	6.11	≤ 6.89
11a	6Mbps	140	5700	2.32	3.57	98.80	6.00	≤ 6.89
11a	6Mbps	144	5720	3.16	3.93	98.80	6.57	≤ 6.89
11ac-VHT20	MCS0	36	5180	-0.81	-0.62	99.62	2.30	≤ 12.89
11ac-VHT20	MCS0	44	5220	-0.52	-0.57	99.62	2.46	≤ 12.89
11ac-VHT20	MCS0	48	5240	-0.48	-0.49	99.62	2.52	≤ 12.89
11ac-VHT20	MCS0	52	5260	3.45	3.53	99.62	6.50	≤ 6.89
11ac-VHT20	MCS0	60	5300	3.17	3.45	99.62	6.32	≤ 6.89
11ac-VHT20	MCS0	64	5320	2.99	2.82	99.62	5.91	≤ 6.89
11ac-VHT20	MCS0	100	5500	3.48	3.51	99.62	6.51	≤ 6.89
11ac-VHT20	MCS0	116	5580	3.06	3.80	99.62	6.45	≤ 6.89
11ac-VHT20	MCS0	140	5700	2.98	4.09	99.62	6.58	≤ 6.89
11ac-VHT20	MCS0	144	5720	2.54	3.47	99.62	6.04	≤ 6.89
11ac-VHT40	MCS0	38	5190	-2.76	-2.53	98.97	0.37	≤ 12.89
11ac-VHT40	MCS0	46	5230	-2.52	-2.76	98.97	0.37	≤ 12.89
11ac-VHT40	MCS0	54	5270	3.33	3.62	98.97	6.49	≤ 6.89
11ac-VHT40	MCS0	62	5310	2.65	3.00	98.97	5.84	≤ 6.89
11ac-VHT40	MCS0	102	5510	3.39	3.29	98.97	6.35	≤ 6.89
11ac-VHT40	MCS0	110	5550	3.02	2.85	98.97	5.95	≤ 6.89
11ac-VHT40	MCS0	134	5670	1.90	4.06	98.97	6.12	≤ 6.89
11ac-VHT40	MCS0	142	5710	2.77	3.87	98.97	6.37	≤ 6.89

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	AVPSD	(dBm/ MHz)	Duty Cycle (%)	Total PSD (dBm/ MHz)	PSD Limit
				Ant 0	Ant 1			(dBm/MHz)
11ac-VHT80	MCS0	42	5210	-5.54	-5.06	99.06	-2.28	≤ 12.89
11ac-VHT80	MCS0	58	5290	2.73	3.09	99.06	5.92	≤ 6.89
11ac-VHT80	MCS0	106	5530	3.74	3.49	99.06	6.63	≤ 6.89
11ac-VHT80	MCS0	122	5610	2.21	3.60	99.06	5.97	≤ 6.89
11ac-VHT80	MCS0	138	5690	2.70	4.22	99.06	6.53	≤ 6.89
11ac-VHT160	MCS0	50	5250	-3.68	-4.28	99.47	-0.96	≤ 6.89
11ac-VHT160	MCS0	114	5570	-1.63	-1.47	99.47	1.46	≤ 6.89
11ax-HE20	MCS0	36	5180	-0.75	-0.55	99.62	2.36	≤ 12.89
11ax-HE20	MCS0	44	5220	-0.47	-0.59	99.62	2.48	≤ 12.89
11ax-HE20	MCS0	48	5240	-0.46	-0.61	99.62	2.48	≤ 12.89
11ax-HE20	MCS0	52	5260	3.90	3.29	99.62	6.61	≤ 6.89
11ax-HE20	MCS0	60	5300	3.09	3.17	99.62	6.14	≤ 6.89
11ax-HE20	MCS0	64	5320	3.60	3.12	99.62	6.38	≤ 6.89
11ax-HE20	MCS0	100	5500	2.99	2.98	99.62	5.99	≤ 6.89
11ax-HE20	MCS0	116	5580	3.60	3.68	99.62	6.65	≤ 6.89
11ax-HE20	MCS0	140	5700	2.95	3.10	99.62	6.04	≤ 6.89
11ax-HE20	MCS0	144	5720	2.74	3.50	99.62	6.15	≤ 6.89
11ax-HE40	MCS0	38	5190	-3.12	-2.93	98.94	-0.01	≤ 12.89
11ax-HE40	MCS0	46	5230	-3.00	-3.14	98.94	-0.06	≤ 12.89
11ax-HE40	MCS0	54	5270	3.42	3.64	98.94	6.54	≤ 6.89
11ax-HE40	MCS0	62	5310	2.98	3.12	98.94	6.06	≤ 6.89
11ax-HE40	MCS0	102	5510	3.23	2.51	98.94	5.90	≤ 6.89
11ax-HE40	MCS0	110	5550	3.42	2.62	98.94	6.05	≤ 6.89
11ax-HE40	MCS0	134	5670	1.86	3.69	98.94	5.88	≤ 6.89
11ax-HE40	MCS0	142	5710	2.21	3.50	98.94	5.91	≤ 6.89
11ax-HE80	MCS0	42	5210	-5.70	-5.09	99.20	-2.37	≤ 12.89
11ax-HE80	MCS0	58	5290	3.55	3.88	99.20	6.73	≤ 6.89
11ax-HE80	MCS0	106	5530	3.13	2.60	99.20	5.88	≤ 6.89
11ax-HE80	MCS0	122	5610	2.59	3.36	99.20	6.00	≤ 6.89
11ax-HE80	MCS0	138	5690	2.55	4.25	99.20	6.49	≤ 6.89
11ax-HE160	MCS0	50	5250	-3.84	-4.22	99.19	-1.01	≤ 6.89
11ax-HE160	MCS0	114	5570	-3.43	-3.25	99.19	-0.33	≤ 6.89

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

Note 2:

For 5125 - 5250MHz Band: PSD Limit (dBm/MHz) =  $17 - (10.11 - 6) = 12.89\text{dBm/MHz}$

For 5250 - 5350MHz Band: Average Power Limit (dBm) =  $11 - (10.11 - 6) = 6.89\text{dBm/MHz}$ .

For 5470 - 5725MHz Band: Average Power Limit (dBm) =  $11 - (10.11 - 6) = 6.89\text{dBm/MHz}$ .

Test Site	WZ-SR5	Test Engineer	Luis Yang
Test Date	2023-12-29		
Test Configuration	L23UGSR-5HaxD2HaxD-US + Omni antenna		
Test Item	Power Spectral Density (UNII-Band 3)		

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	AVPSD	(dBm/ 510KHz)	Duty Cycle (%)	Total PSD (dBm/ 510KHz)	PSD Limit (dBm/ 500KHz)
				Ant 0	Ant 1			
11a	6Mbps	149	5745	9.41	8.61	98.80	12.04	≤ 25.89
11a	6Mbps	157	5785	9.41	9.26	98.80	12.35	≤ 25.89
11a	6Mbps	165	5825	12.06	11.75	98.80	14.91	≤ 25.89
11ac-VHT20	MCS0	149	5745	8.25	8.43	99.62	11.35	≤ 25.89
11ac-VHT20	MCS0	157	5785	8.93	8.15	99.62	11.57	≤ 25.89
11ac-VHT20	MCS0	165	5825	11.55	11.91	99.62	14.74	≤ 25.89
11ac-VHT40	MCS0	151	5755	7.50	6.49	98.97	10.04	≤ 25.89
11ac-VHT40	MCS0	159	5795	9.08	8.41	98.97	11.77	≤ 25.89
11ac-VHT80	MCS0	155	5775	4.69	3.45	99.06	7.13	≤ 25.89
11ax-HE20	MCS0	149	5745	9.22	9.23	99.62	12.23	≤ 25.89
11ax-HE20	MCS0	157	5785	11.44	10.46	99.62	13.99	≤ 25.89
11ax-HE20	MCS0	165	5825	10.93	11.22	99.62	14.09	≤ 25.89
11ax-HE40	MCS0	151	5755	6.73	6.07	98.94	9.42	≤ 25.89
11ax-HE40	MCS0	159	5795	8.55	7.92	98.94	11.26	≤ 25.89
11ax-HE80	MCS0	155	5775	3.73	3.25	99.20	6.51	≤ 25.89

Note 1:

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

When EUT duty cycle ≥ 98%, the total PSD (dBm/510kHz) =  $10 \cdot \log \{10^{(\text{Ant 0 AVGPSD}/10)} + 10^{(\text{Ant 1 AVGPSD}/10)}\}$ .

Note 2: PSD Limit (dBm/500KHz) =  $30 - (10.11 - 6) = 25.89$  dBm/500KHz.

## 802.11a Power Spectral Density- Ant 0

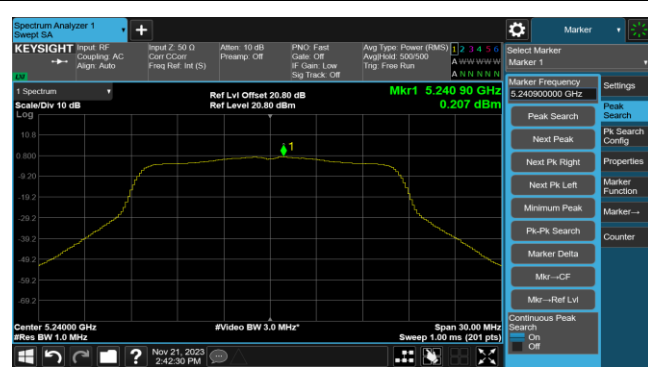
Channel 36 (5180MHz)



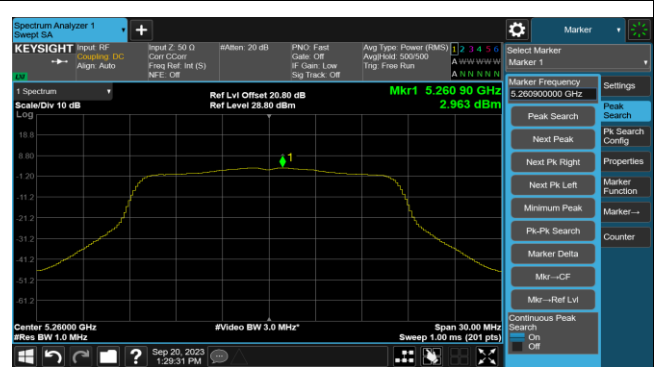
Channel 44 (5220MHz)



Channel 48 (5240MHz)



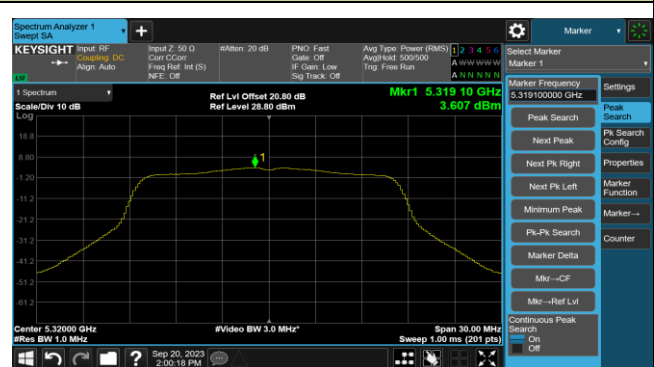
Channel 52 (5260MHz)



Channel 60 (5300MHz)



Channel 64 (5320MHz)



Channel 100 (5500MHz)

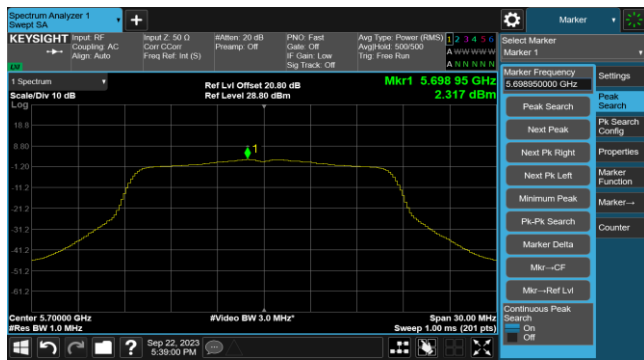


Channel 116 (5580MHz)



802.11a Power Spectral Density- Ant 0

Channel 140 (5700MHz)



Channel 144(5720MHz)



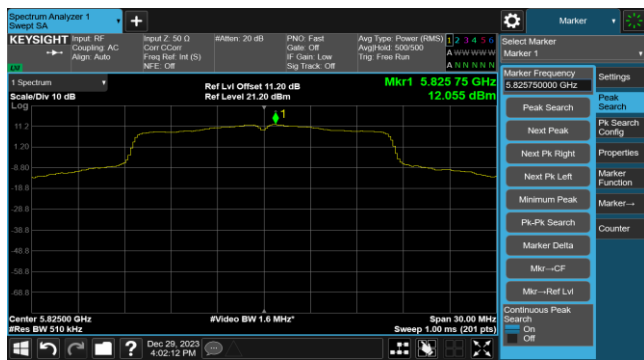
Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)



## 802.11ac-VHT20 Power Spectral Density- Ant 0

Channel 36 (5180MHz)



Channel 44 (5220MHz)



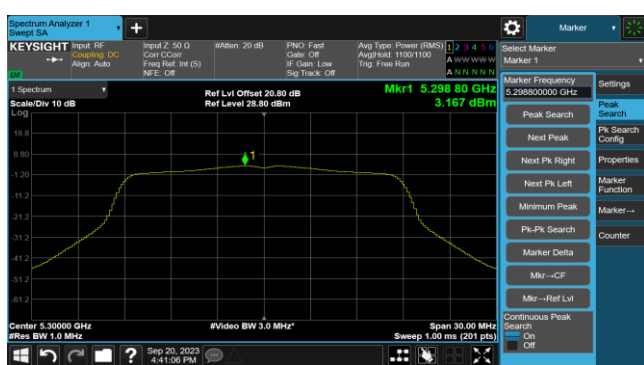
Channel 48 (5240MHz)



Channel 52 (5260MHz)



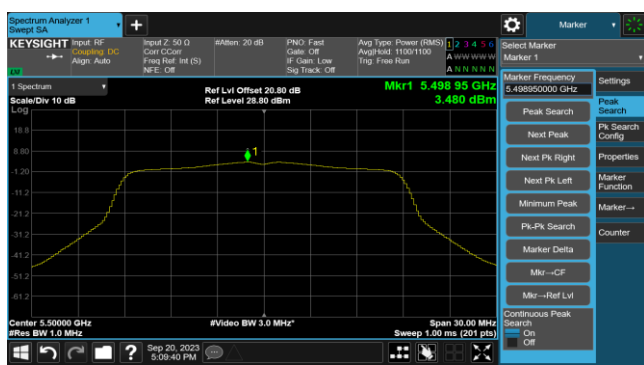
Channel 60 (5300MHz)



Channel 64 (5320MHz)



Channel 100 (5500MHz)



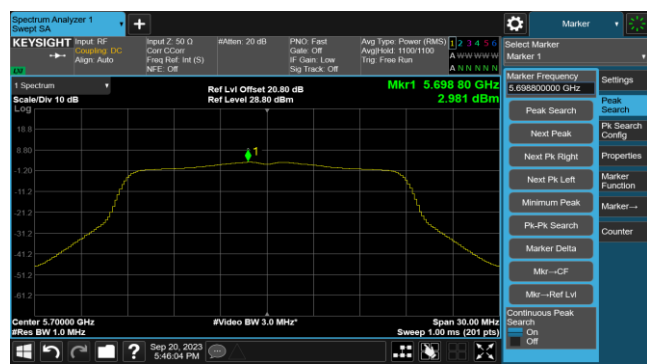
Channel 116 (5580MHz)



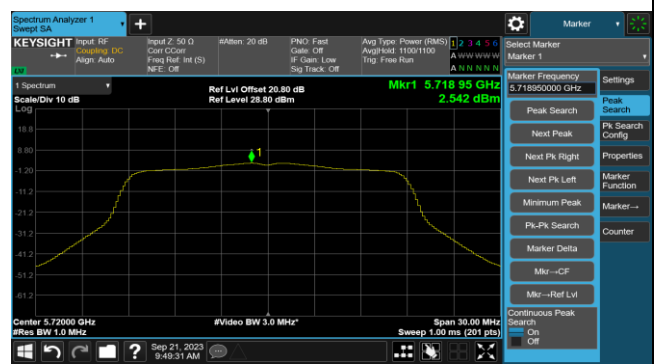


802.11ac-VHT20 Power Spectral Density- Ant 0

Channel 140 (5700MHz)



Channel 144(5720MHz)



Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)

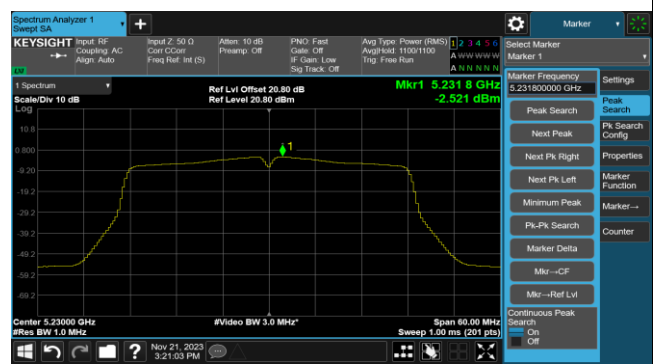


802.11ac-VHT40 Power Spectral Density- Ant 0

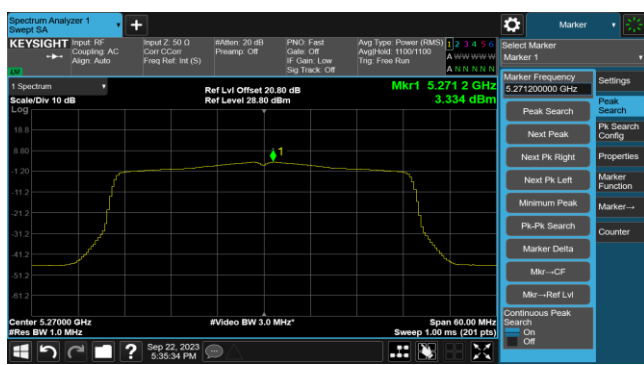
Channel 38 (5190MHz)



Channel 46 (5230MHz)



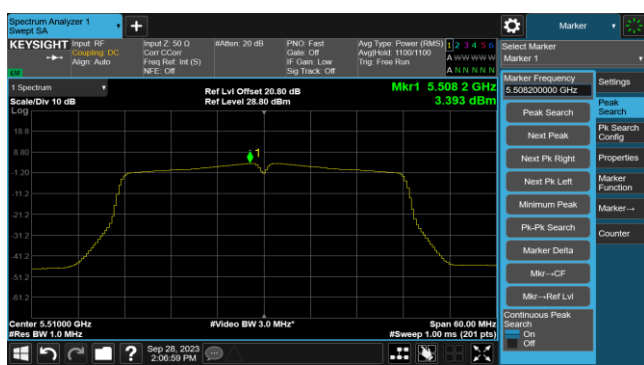
Channel 54 (5270MHz)



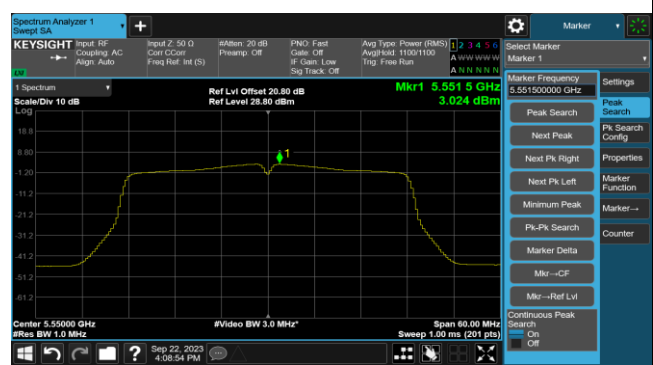
Channel 62 (5310MHz)



Channel 102 (5510MHz)



Channel 110 (5550MHz)



Channel 134 (5670MHz)



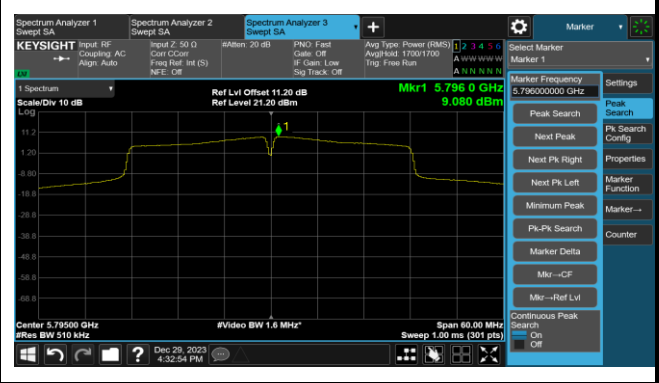
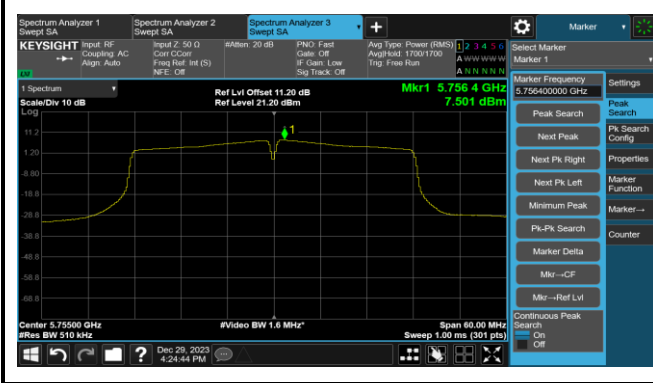
Channel 142(5710MHz)



802.11ac-VHT40 Power Spectral Density- Ant 0

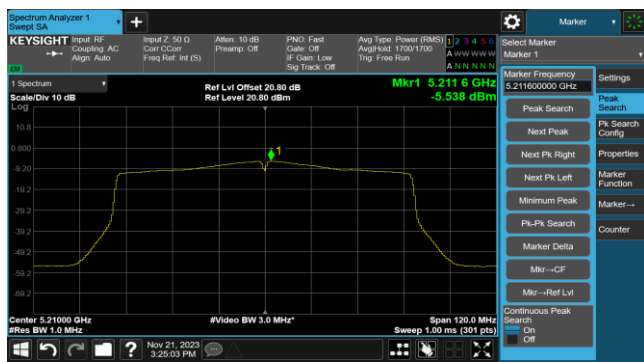
Channel 151 (5755MHz)

Channel 159 (5795MHz)

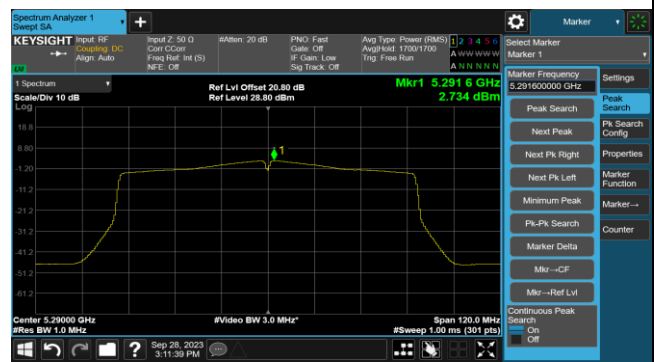


## 802.11ac-VHT80 Power Spectral Density- Ant 0

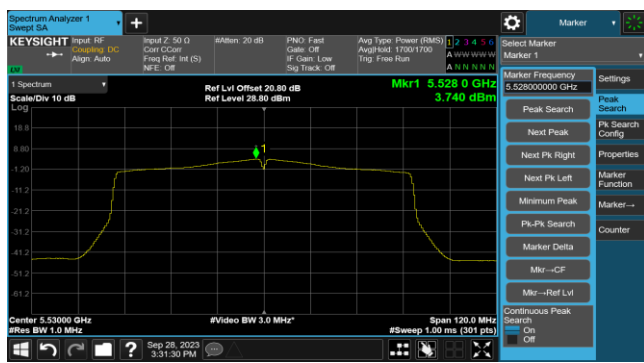
Channel 42 (5210MHz)



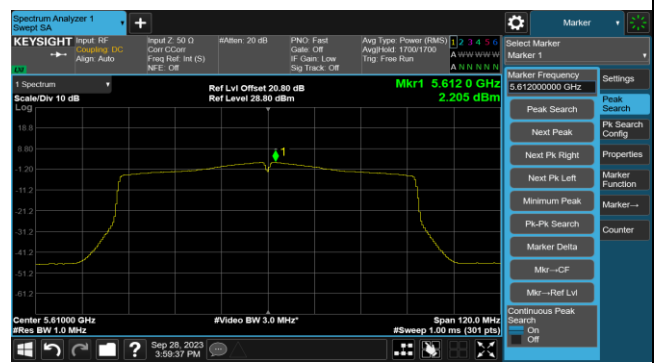
Channel 58 (5290MHz)



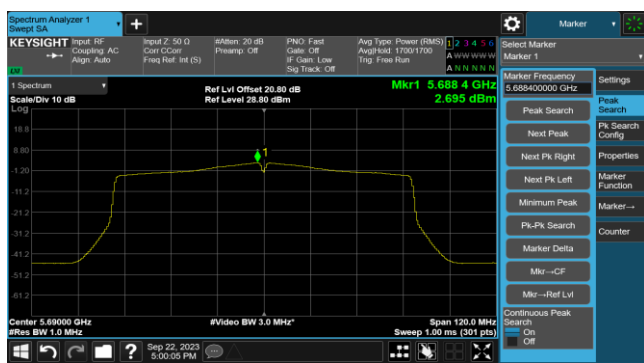
Channel 106 (5530MHz)



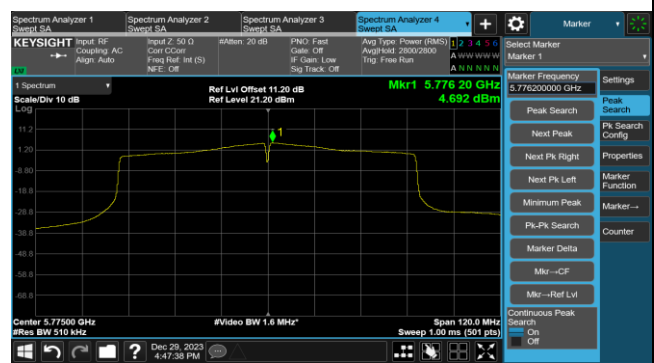
Channel 122 (5610MHz)



Channel 138 (5690MHz)

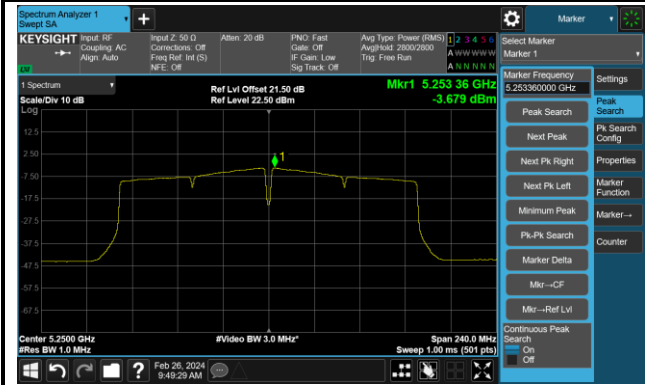


Channel 155 (5775MHz)

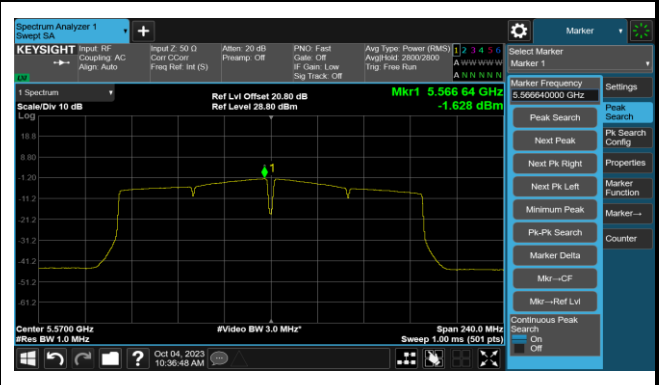


802.11ac-VHT160 Power Spectral Density- Ant 0

Channel 50 (5250MHz)



Channel 114 (5570MHz)

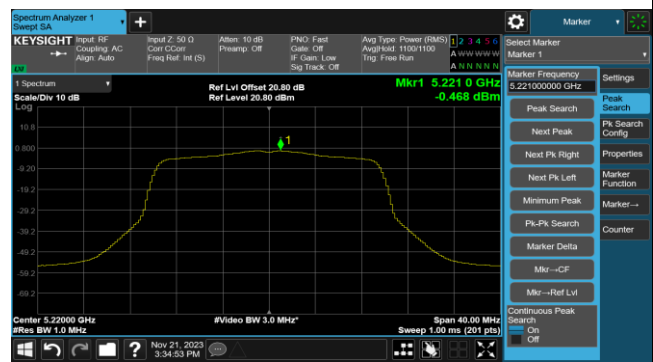


## 802.11ax-HE20 Power Spectral Density- Ant 0

Channel 36 (5180MHz)



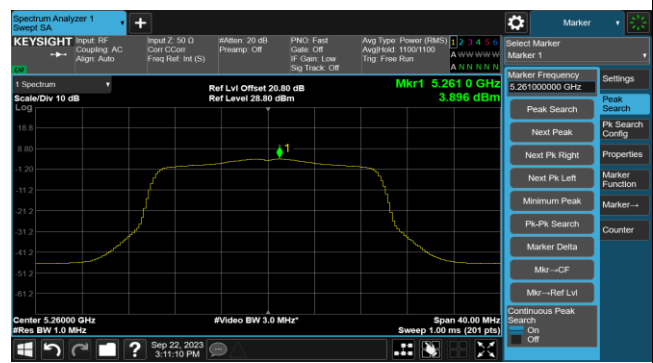
Channel 44 (5220MHz)



Channel 48 (5240MHz)



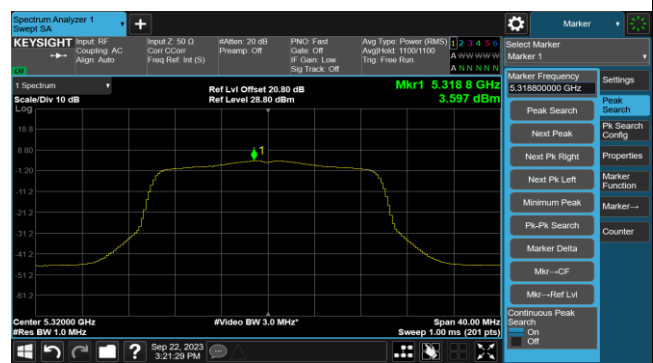
Channel 52 (5260MHz)



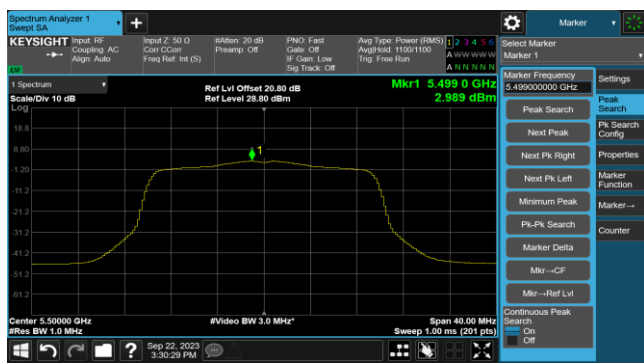
Channel 60 (5300MHz)



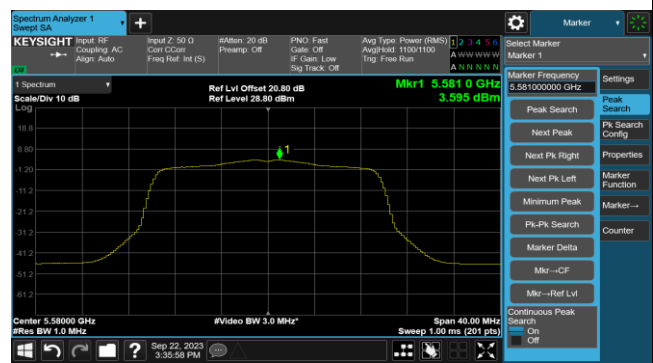
Channel 64 (5320MHz)



Channel 100 (5500MHz)



Channel 116 (5580MHz)

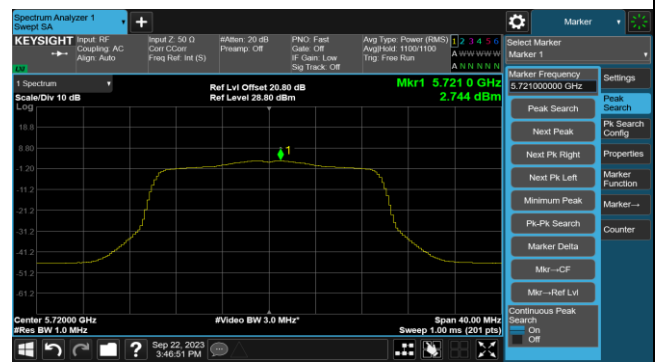


## 802.11ax-HE20 Power Spectral Density- Ant 0

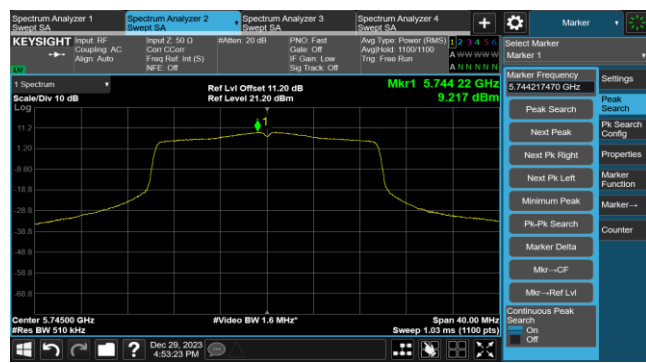
Channel 140 (5700MHz)



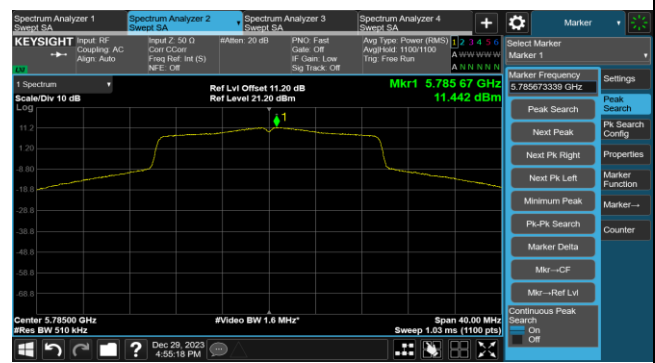
Channel 144(5720MHz)



Channel 149 (5745MHz)



Channel 157 (5785MHz)



Channel 165 (5825MHz)

