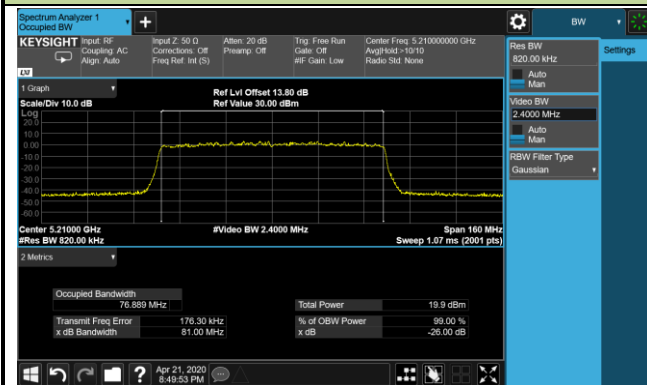
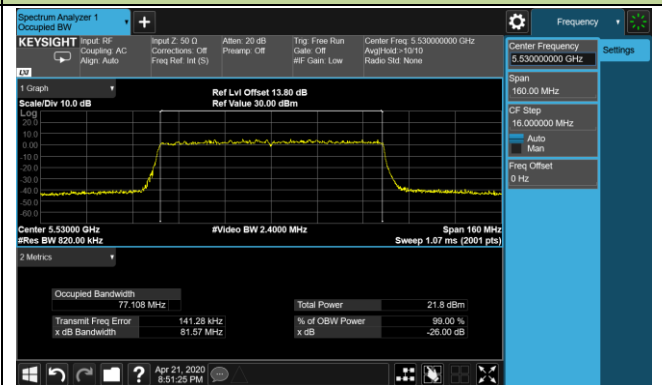


8802.11ax-HE80 26dB Bandwidth & 99% Bandwidth

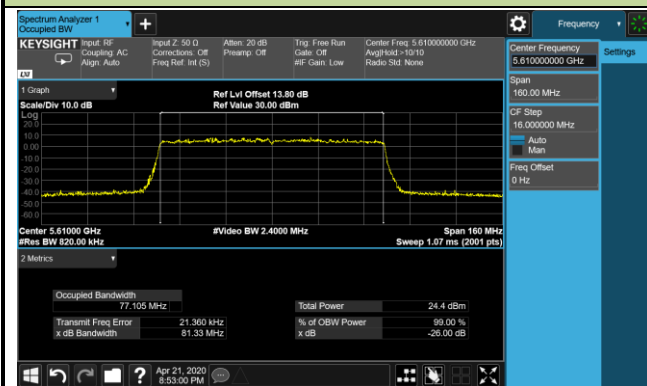
Channel 42 (5210MHz)



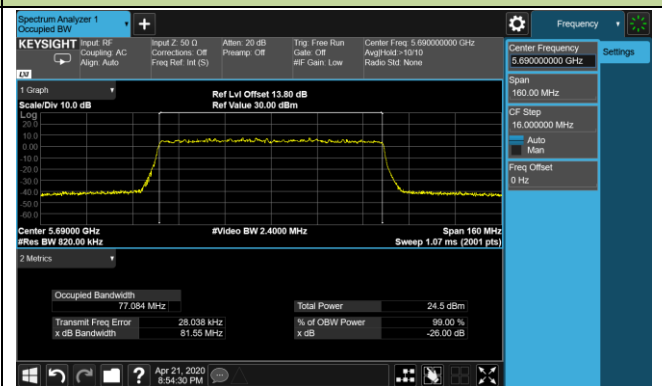
Channel 106 (5530MHz)



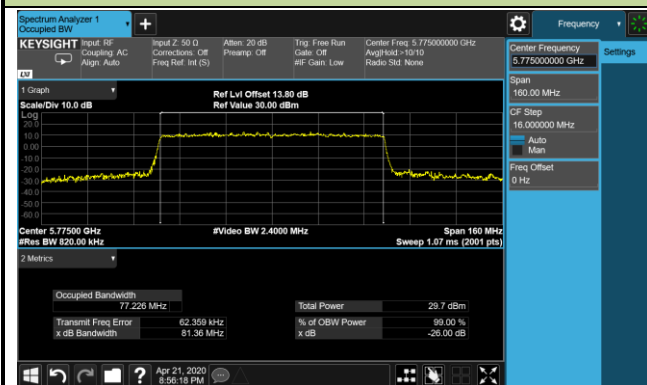
Channel 122 (5610MHz)



Channel 138 (5690MHz)

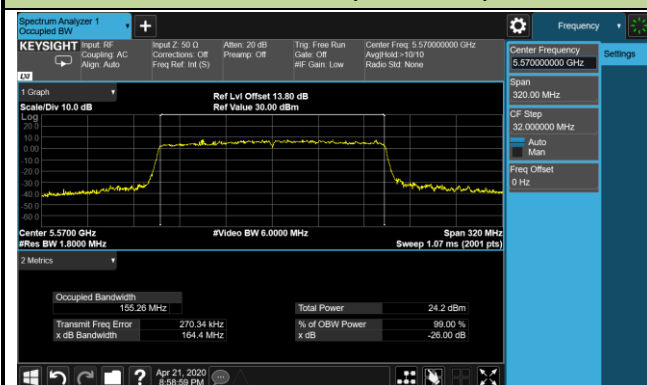


Channel 155 (5775MHz)



802.11ax-HE160 26dB Bandwidth & 99% Bandwidth

Channel 114 (5570MHz)

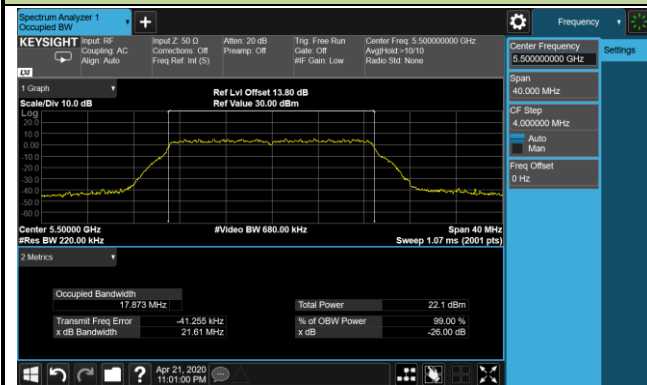


待測物名稱	AX6600 Wi-Fi 6 三頻電競路由器	溫度	24 ~ 25°C
測試工程師	Kevin Ker	濕度	48 ~ 56%
測試場地	SR1	測試日期	2020/04/21~2020/04/22
模式	U-NII-2C (N _{SS} =2)		

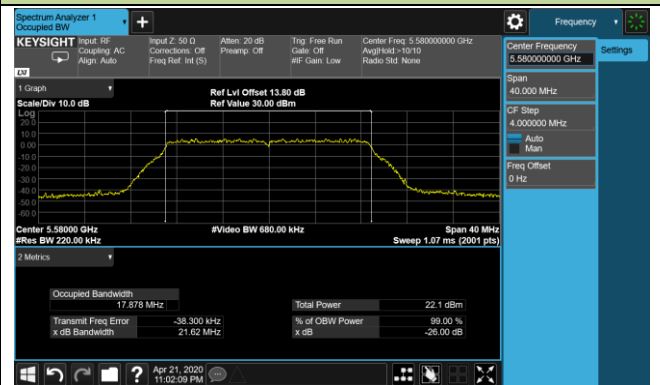
Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	26dB Bandwidth (MHz)	99% Bandwidth (MHz)
Ant 1 / Ant 0 + 1 + 2 + 3					
802.11ac-VHT20	MCS0	100	5500	21.61	17.87
802.11ac-VHT20	MCS0	116	5580	21.62	17.88
802.11ac-VHT20	MCS0	140	5700	21.57	17.86
802.11ac-VHT20	MCS0	144	5720	21.46	17.87
802.11ac-VHT40	MCS0	102	5510	39.57	36.32
802.11ac-VHT40	MCS0	110	5550	39.57	36.32
802.11ac-VHT40	MCS0	134	5670	39.60	36.35
802.11ac-VHT40	MCS0	142	5710	39.71	36.30
802.11ac-VHT80	MCS0	106	5530	81.58	75.99
802.11ac-VHT80	MCS0	122	5610	81.07	75.73
802.11ac-VHT80	MCS0	138	5690	81.48	75.85
802.11ac-VHT160	MCS0	114	5570	163.90	153.68
802.11ax-HE20	MCS0	100	5500	21.41	19.03
802.11ax-HE20	MCS0	116	5580	21.63	19.04
802.11ax-HE20	MCS0	140	5700	21.36	19.06
802.11ax-HE20	MCS0	144	5720	21.21	19.04
802.11ax-HE40	MCS0	102	5510	39.65	37.64
802.11ax-HE40	MCS0	110	5550	39.88	37.59
802.11ax-HE40	MCS0	134	5670	39.90	37.60
802.11ax-HE40	MCS0	142	5710	39.89	37.59
802.11ax-HE80	MCS0	106	5530	81.14	76.93
802.11ax-HE80	MCS0	122	5610	81.17	76.96
802.11ax-HE80	MCS0	138	5690	81.06	76.85
802.11ax-HE160	MCS0	114	5570	163.30	155.10

802.11ac-VHT20 26dB Bandwidth & 99% Bandwidth

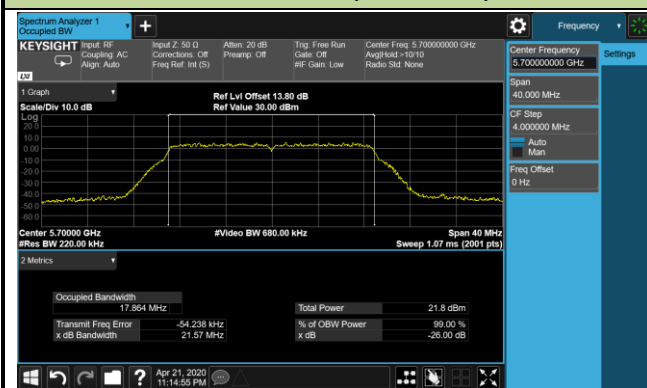
Channel 100 (5500MHz)



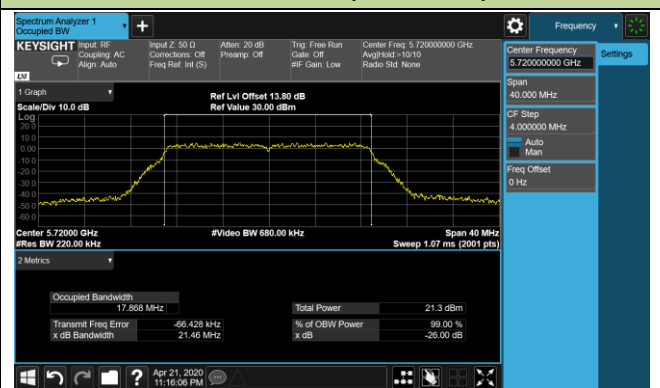
Channel 120 (5580MHz)



Channel 140 (5700MHz)

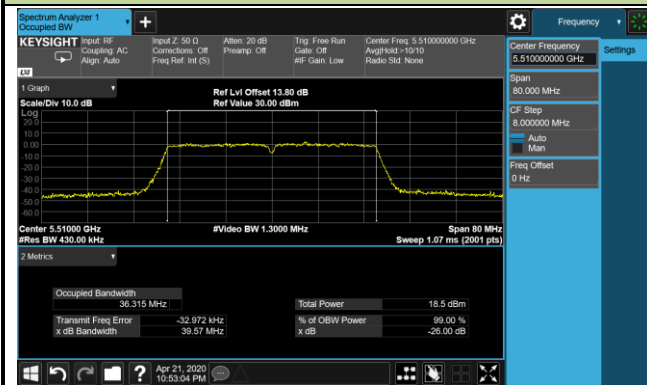


Channel 144 (5720MHz)

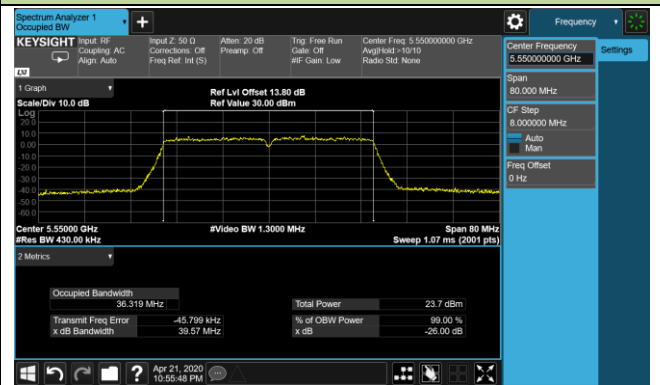


802.11ac-VHT40 26dB Bandwidth & 99% Bandwidth

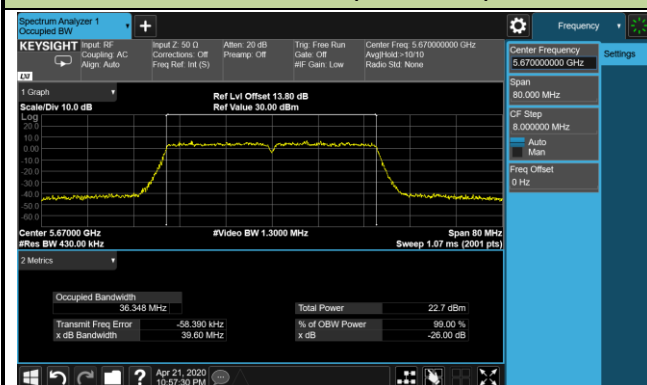
Channel 102 (5510MHz)



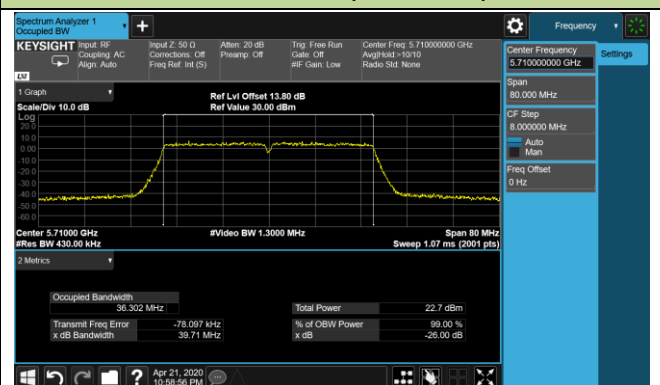
Channel 110 (5550MHz)



Channel 134 (5670MHz)

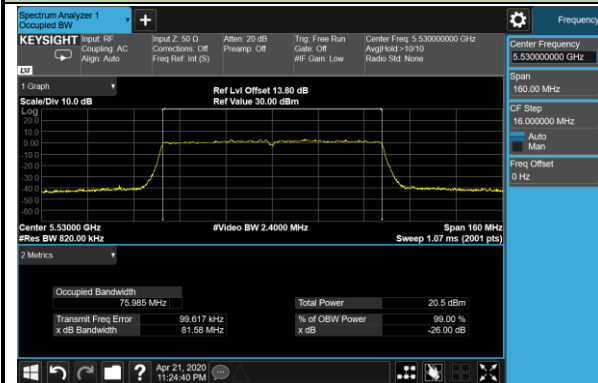


Channel 142 (5710MHz)

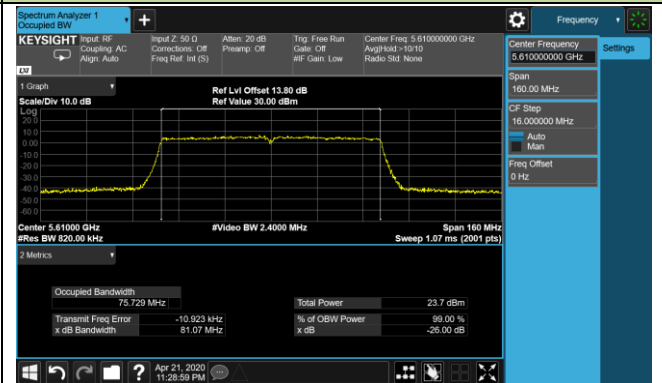


802.11ac-VHT80 26dB Bandwidth & 99% Bandwidth

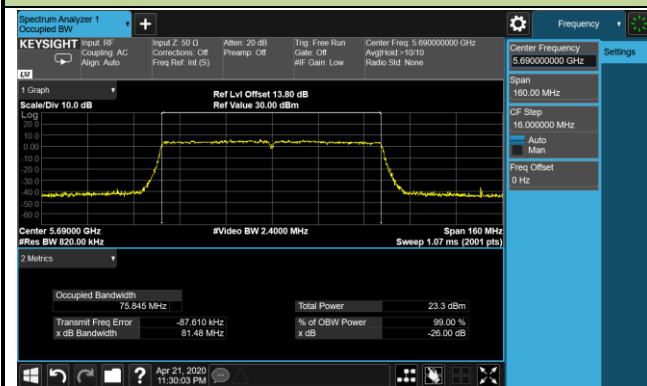
Channel 106 (5530MHz)



Channel 122 (5610MHz)

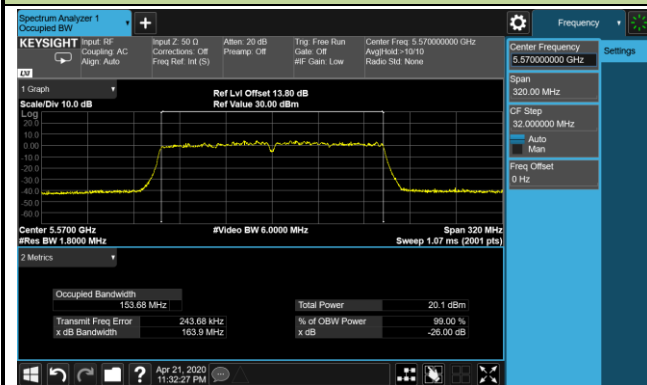


Channel 138 (5690MHz)



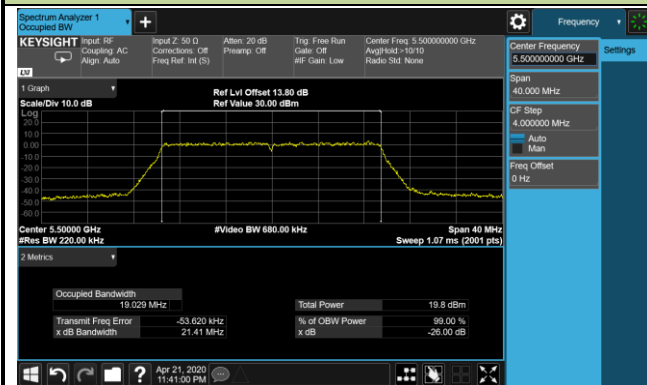
802.11ac-VHT160 26dB Bandwidth & 99% Bandwidth

Channel 114 (5570MHz)

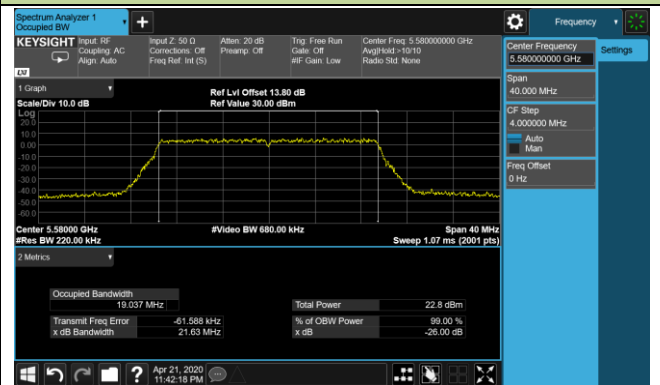


802.11ax-HE20 26dB Bandwidth & 99% Bandwidth - Ant 2 / Ant 1+ 2+3+4

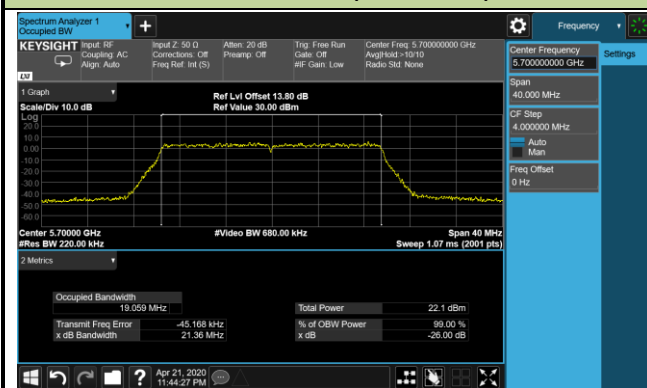
Channel 100 (5500MHz)



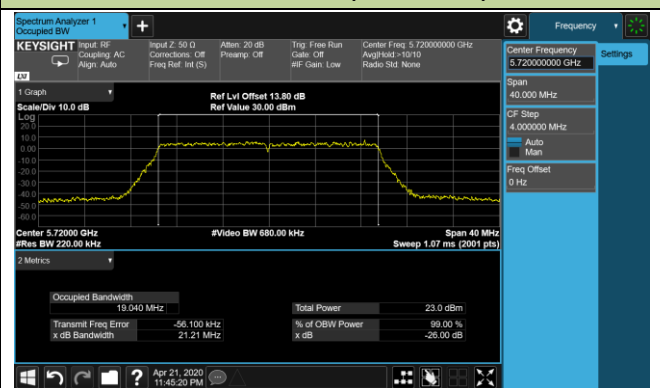
Channel 116 (5580MHz)



Channel 140 (5700MHz)

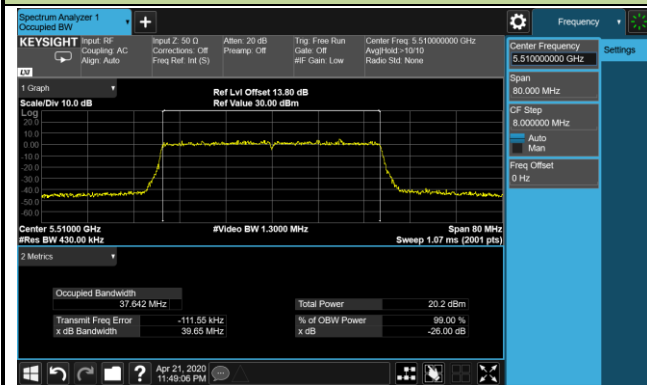


Channel 144 (5720MHz)

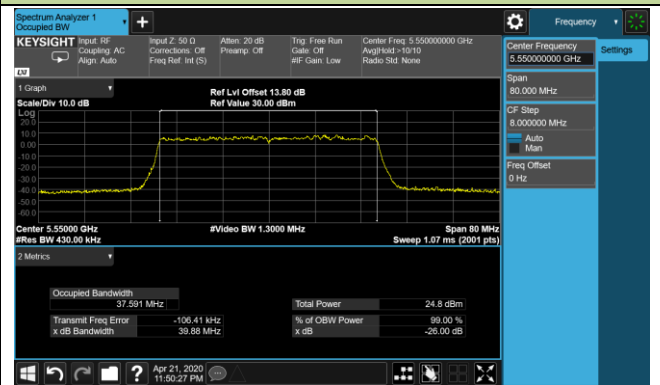


802.11ax-HE40 26dB Bandwidth & 99% Bandwidth - Ant 2 / Ant 1+ 2+3+4

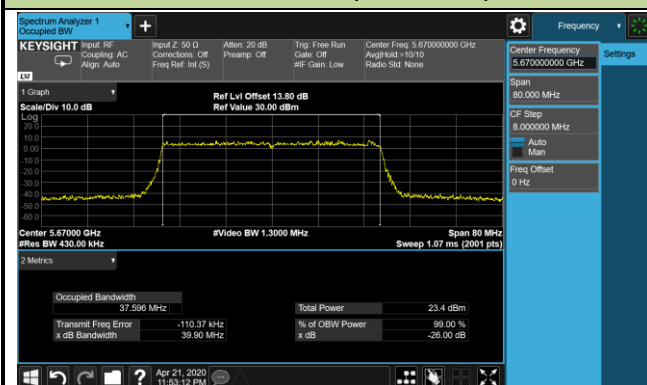
Channel 102 (5510MHz)



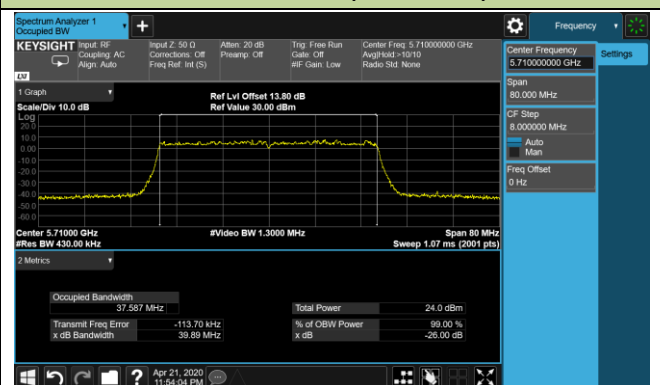
Channel 110 (5550MHz)



Channel 134 (5670MHz)



Channel 142 (5710MHz)

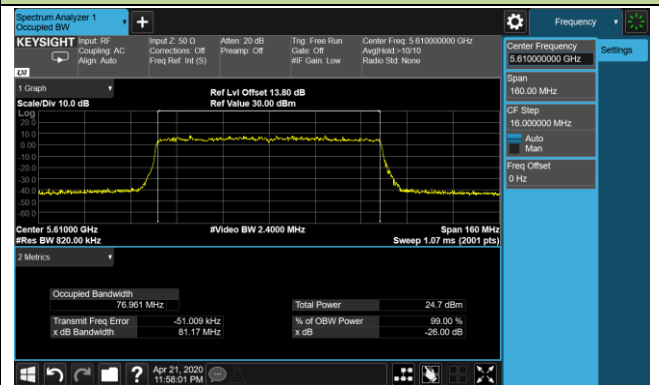


802.11ax-HE80 26dB Bandwidth & 99% Bandwidth - Ant 2 / Ant 1+ 2 +3 +4

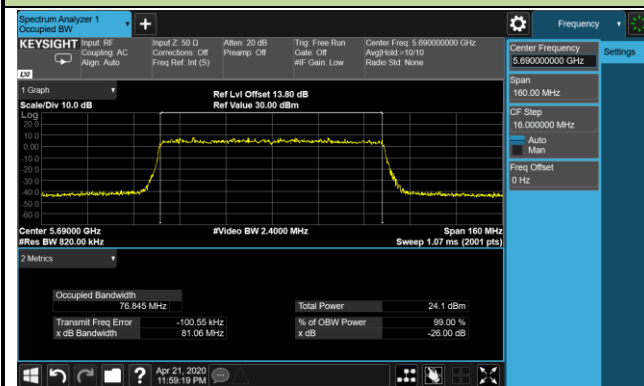
Channel 106 (5530MHz)



Channel 122 (5610MHz)

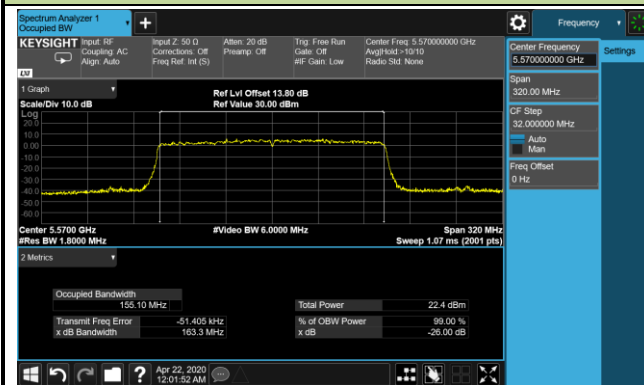


Channel 138 (5690MHz)



802.11ax-HE160 26dB Bandwidth & 99% Bandwidth - Ant 2 / Ant 1+ 2 +3 +4

Channel 114 (5570MHz)



5.5. 6dB 佔用頻寬

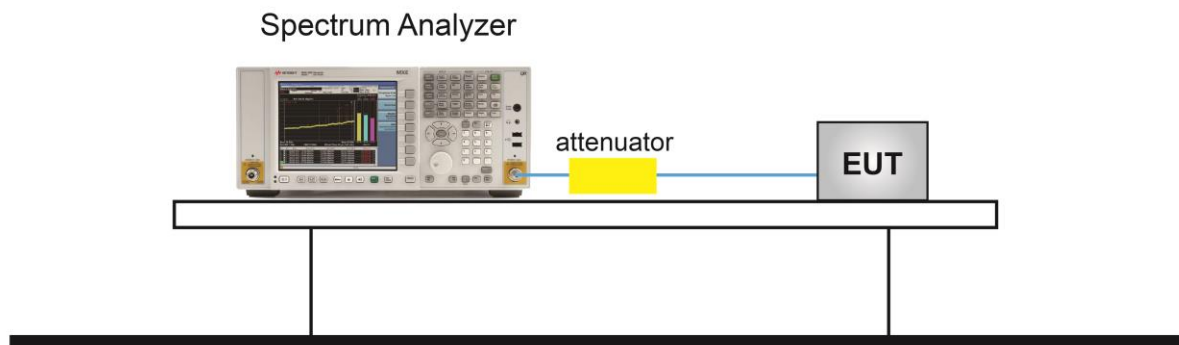
5.5.1.適用標準

在 5.725 GHz~5.850 GHz 頻段操作之設備，其 6 dB 頻寬至少應有 500 kHz。

5.5.2.量測方法

待測物之天線埠經由適當之衰減直接連至頻譜分析儀RF輸入端，峰值發射功率必須使用依據均方根等效電壓校準之儀器量測於任何連續傳輸之時段，量測結果須依儀器限制(如偵測器反應時間、相較於發射頻寬有限之解析頻寬能力，靈敏度等)調整得出正確之峰值量測或使用峰值功率表。

5.5.3.測試架構圖



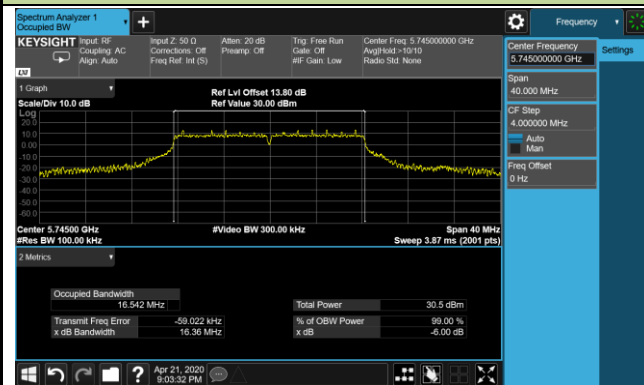
5.5.4.6dB 佔用頻寬測試結果

待測物名稱	AX6600 Wi-Fi 6 三頻電競路由器	溫度	24°C
測試工程師	Kevin Ker	濕度	56%
測試場地	SR1	測試日期	2020/04/21
模式	U-NII-3		

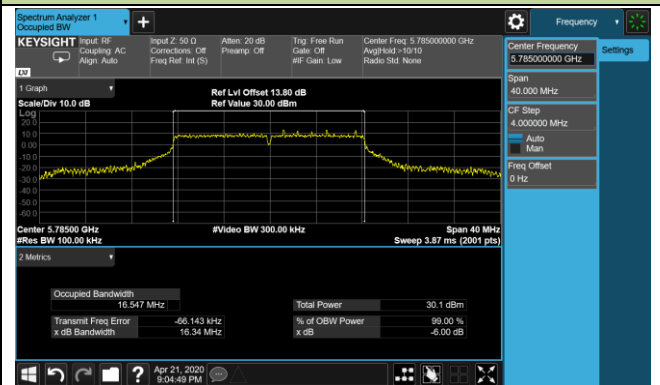
Test Mode	Data Rate/ MCS	Channel No.	Frequency (MHz)	6dB Bandwidth (MHz)	Limit (MHz)	Result
Ant 1 / Ant 0 + 1 + 2 + 3						
802.11a	6Mbps	149	5745	16.36	≥ 0.5	Pass
802.11a	6Mbps	157	5785	16.34	≥ 0.5	Pass
802.11a	6Mbps	165	5825	16.35	≥ 0.5	Pass
802.11ac-VHT20	MCS0	149	5745	17.59	≥ 0.5	Pass
802.11ac-VHT20	MCS0	157	5785	17.60	≥ 0.5	Pass
802.11ac-VHT20	MCS0	165	5825	17.60	≥ 0.5	Pass
802.11ac-VHT40	MCS0	151	5755	36.36	≥ 0.5	Pass
802.11ac-VHT40	MCS0	159	5795	36.35	≥ 0.5	Pass
802.11ac-VHT80	MCS0	155	5775	75.30	≥ 0.5	Pass
802.11ax-HE20	MCS0	149	5745	18.83	≥ 0.5	Pass
802.11ax-HE20	MCS0	157	5785	18.85	≥ 0.5	Pass
802.11ax-HE20	MCS0	165	5825	18.91	≥ 0.5	Pass
802.11ax-HE40	MCS0	151	5755	36.34	≥ 0.5	Pass
802.11ax-HE40	MCS0	159	5795	36.64	≥ 0.5	Pass
802.11ax-HE80	MCS0	155	5775	76.26	≥ 0.5	Pass

802.11a 6dB Bandwidth

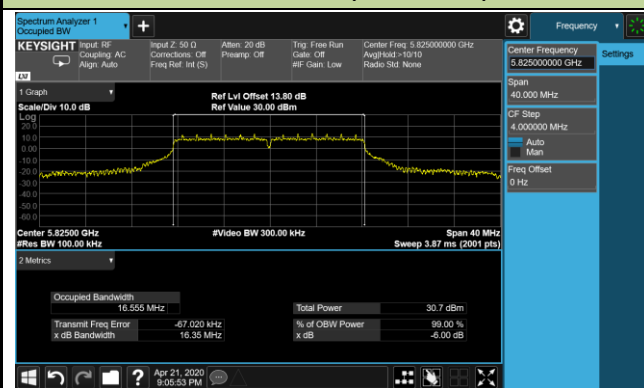
Channel 149 (5745MHz)



Channel 157 (5785MHz)

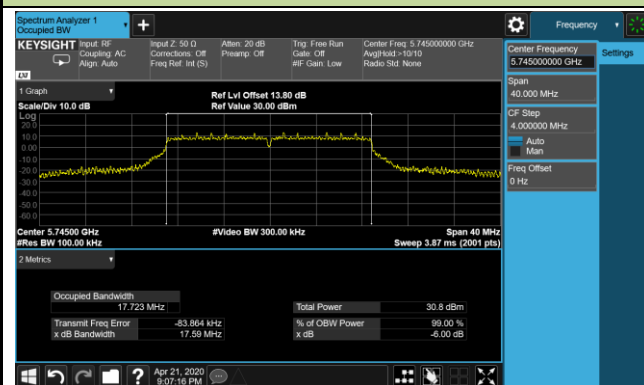


Channel 165 (5825MHz)

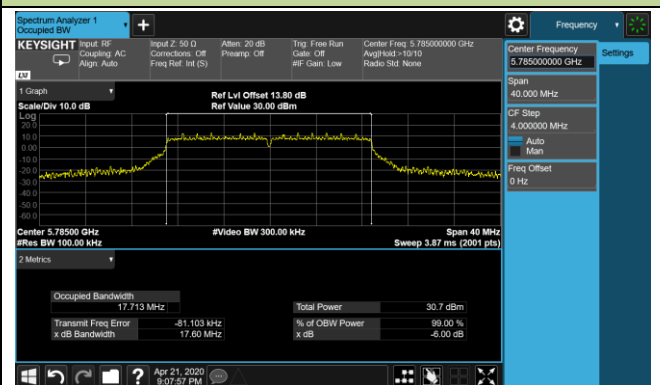


802.11ac-VHT20 6dB Bandwidth

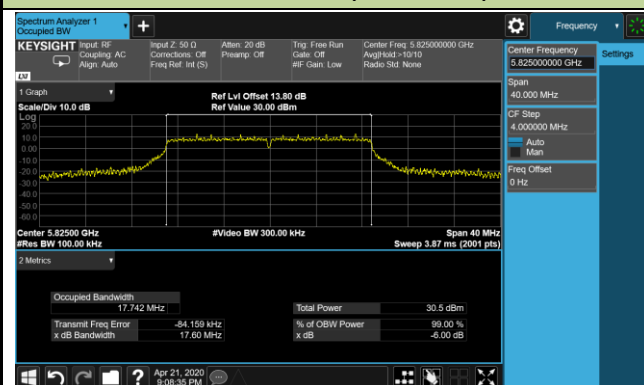
Channel 149 (5745MHz)



Channel 157 (5785MHz)

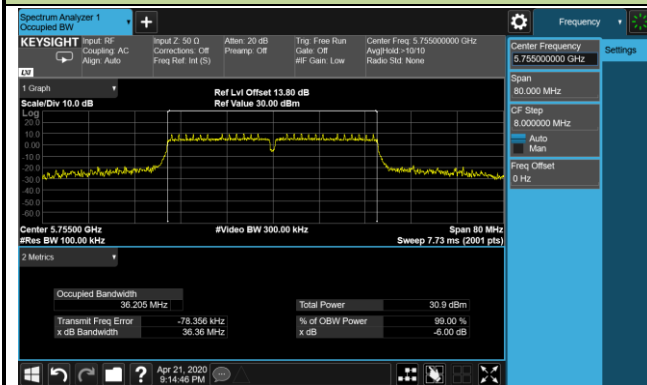


Channel 165 (5825MHz)

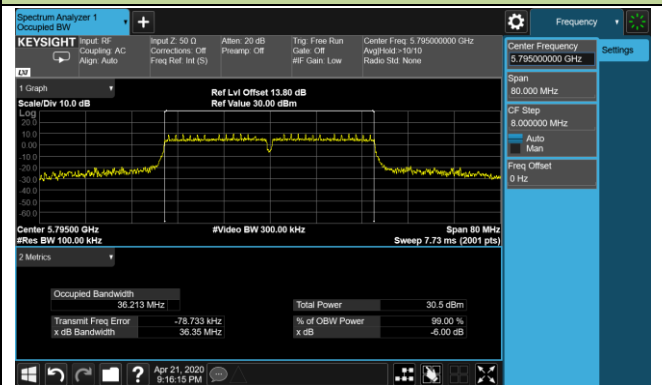


802.11ac-VHT40 6dB Bandwidth

Channel 151 (5755MHz)

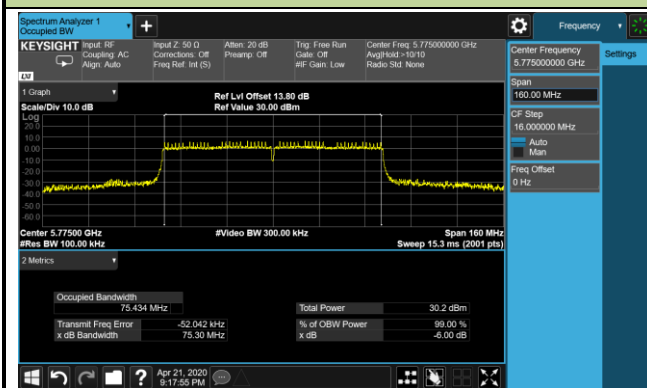


Channel 159 (5795MHz)



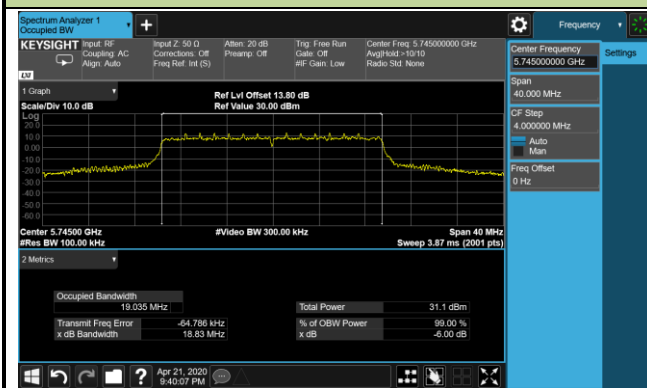
802.11ac-VHT80 6dB Bandwidth

Channel 155 (5775MHz)

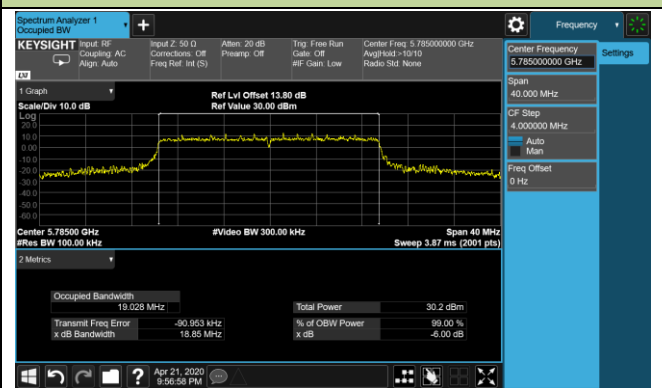


802.11ax-HE20 6dB Bandwidth

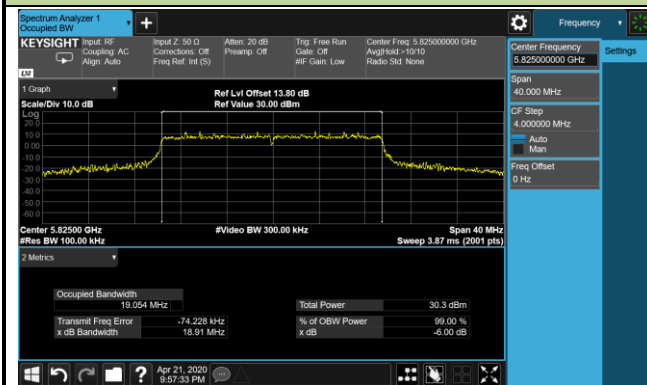
Channel 149 (5745MHz)



Channel 157 (5785MHz)

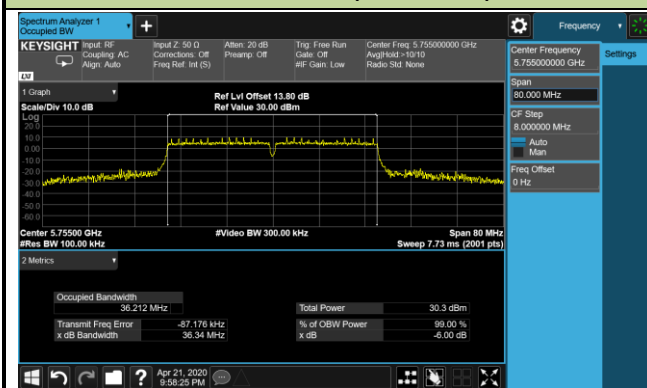


Channel 165 (5825MHz)

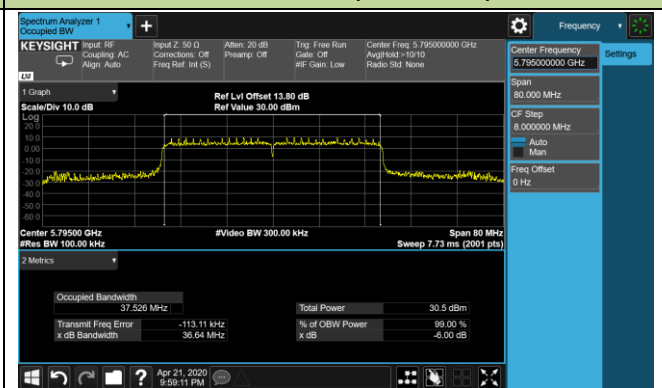


802.11ax-HE40 6dB Bandwidth

Channel 151 (5755MHz)

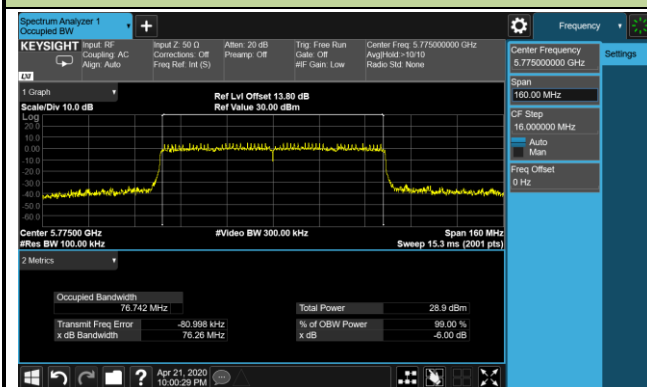


Channel 159 (5795MHz)



802.11ax-HE80 6dB Bandwidth

Channel 155 (5775MHz)



5.6. 最大功率頻譜密度

5.6.1. 適用標準

依據國家通訊傳播委員會低功率射頻器材技術規範之第5.7.2(1)(2)(3)節

使用於5.15 GHz~5.25 GHz 頻段，供室內操作使用，在任何1 MHz 頻帶中最大功率頻譜密度應小於或等於17 dBm。

使用頻率於5.25 GHz~5.35 GHz 與5.470 GHz~5.725 GHz 頻段，最大功率頻譜密度在任何1 MHz 頻帶中應小於或等於11 dBm。

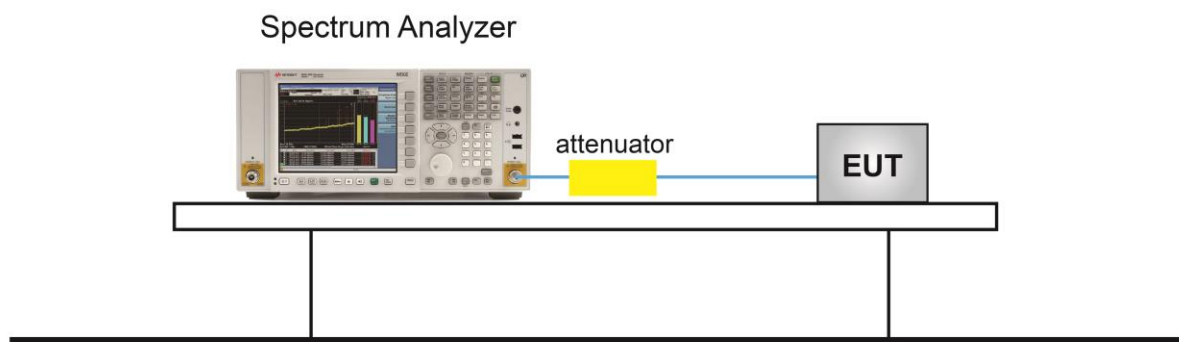
使用頻率於5.725 GHz~5.850 GHz 頻段，在任何500 kHz 頻帶中最大功率頻譜密度應小於或等於30 dBm。

使用超過6 dBi 方向增益之發射天線時，應依超過6 dBi 天線方向增益的dBi 總量，等量減少最大功率頻譜密度。

5.6.2. 量測方法

待測物之天線埠經由適當之衰減直接連至頻譜分析儀RF輸入端，量測定於1MHz/500kHz頻寬。

5.6.3. 測試架構圖



5.6.4.峰值功率頻譜密度測試結果

待測物名稱	AX6600 Wi-Fi 6 三頻電競路由器	溫度	23 ~ 25°C
測試工程師	Kevin Ker	濕度	40 ~ 56%
測試場地	SR1	測試日期	2020/04/20 ~ 2020/05/15
模式	Power Spectral Density (U-NII- 1/2C) CDD Mode (N _{SS} =1)		

Test Mode	Data Rate /MCS	Ch. No.	Freq. (MHz)	Ant 0 PSD (dBm/M Hz)	Ant 1 PSD (dBm/M Hz)	Ant 2 PSD (dBm/M Hz)	Ant 3 PSD (dBm/M Hz)	Duty Cycle (%)	Total PSD (dBm/MHz)	PSD Limit (dBm/MHz)	Result
11a	6Mbps	36	5180	11.73	11.48	--	--	93.55	14.91	≤ 17.00	Pass
11a	6Mbps	44	5220	13.33	13.47	--	--	93.55	16.70	≤ 17.00	Pass
11a	6Mbps	48	5240	13.41	13.39	--	--	93.55	16.70	≤ 17.00	Pass
11a	6Mbps	100	5500	1.90	3.13	2.71	2.64	93.55	8.93	≤ 9.35	Pass
11a	6Mbps	116	5580	2.13	3.72	3.10	2.29	93.55	9.17	≤ 9.35	Pass
11a	6Mbps	140	5700	2.06	2.69	2.72	2.10	93.55	8.71	≤ 9.35	Pass
11a	6Mbps	144	5720	2.17	2.62	2.44	2.00	93.55	8.62	≤ 9.35	Pass
11ac-VHT20	MCS0	36	5180	10.08	10.37	--	--	98.06	13.24	≤ 17.00	Pass
11ac-VHT20	MCS0	44	5220	13.10	13.25	--	--	98.06	16.19	≤ 17.00	Pass
11ac-VHT20	MCS0	48	5240	12.81	13.24	--	--	98.06	16.04	≤ 17.00	Pass
11ac-VHT20	MCS0	100	5500	2.91	3.14	3.05	2.68	98.06	8.97	≤ 9.35	Pass
11ac-VHT20	MCS0	116	5580	3.01	2.51	3.28	3.21	98.06	9.03	≤ 9.35	Pass
11ac-VHT20	MCS0	140	5700	2.63	3.34	3.27	1.75	98.06	8.81	≤ 9.35	Pass
11ac-VHT20	MCS0	144	5720	3.02	3.04	2.94	2.42	98.06	8.88	≤ 9.35	Pass
11ac-VHT40	MCS0	38	5190	2.95	3.45	--	--	95.75	6.41	≤ 17.00	Pass
11ac-VHT40	MCS0	46	5230	9.58	9.55	--	--	95.75	12.77	≤ 17.00	Pass
11ac-VHT40	MCS0	102	5510	2.92	3.23	2.76	2.36	95.75	9.04	≤ 9.35	Pass
11ac-VHT40	MCS0	110	5550	2.59	2.82	2.72	2.51	95.75	8.87	≤ 9.35	Pass
11ac-VHT40	MCS0	134	5670	2.65	3.29	3.30	2.31	95.75	9.12	≤ 9.35	Pass
11ac-VHT40	MCS0	142	5710	2.40	2.84	2.94	2.54	95.75	8.89	≤ 9.35	Pass
11ac-VHT80	MCS0	42	5210	-0.10	-0.27	--	--	90.34	3.27	≤ 17.00	Pass
11ac-VHT80	MCS0	106	5530	-0.82	-0.53	0.11	0.11	90.34	6.20	≤ 9.35	Pass
11ac-VHT80	MCS0	122	5610	-0.17	-0.05	0.21	0.18	90.34	6.51	≤ 9.35	Pass
11ac-VHT80	MCS0	138	5690	-0.35	-0.47	0.05	0.12	90.34	6.31	≤ 9.35	Pass

Test Mode	Data Rate/MCS	Ch. 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
11ac-VHT160	MCS0	114	5570	-4.67	-4.64	-5.18	-5.10	88.26	1.67	≤ 9.35	Pass
11ax-HE20	MCS0	36	5180	9.68	9.82	--	--	97.50	12.87	≤ 17.00	Pass
11ax-HE20	MCS0	44	5220	12.50	12.68	--	--	97.50	15.71	≤ 17.00	Pass
11ax-HE20	MCS0	48	5240	12.46	12.28	--	--	97.50	15.49	≤ 17.00	Pass
11ax-HE20	MCS0	100	5500	2.82	3.50	3.10	2.20	97.50	9.06	≤ 9.35	Pass
11ax-HE20	MCS0	116	5580	3.34	2.85	3.37	3.14	97.50	9.31	≤ 9.35	Pass
11ax-HE20	MCS0	140	5700	2.96	3.29	3.07	2.30	97.50	9.05	≤ 9.35	Pass
11ax-HE20	MCS0	144	5720	2.42	2.75	2.65	2.21	97.50	8.64	≤ 9.35	Pass
11ax-HE40	MCS0	38	5190	1.87	1.44	--	--	96.08	4.84	≤ 17.00	Pass
11ax-HE40	MCS0	46	5230	9.61	9.58	--	--	96.08	12.78	≤ 17.00	Pass
11ax-HE40	MCS0	102	5510	2.71	2.53	3.10	1.48	96.08	8.69	≤ 9.35	Pass
11ax-HE40	MCS0	110	5550	3.04	3.15	3.17	3.10	96.08	9.31	≤ 9.35	Pass
11ax-HE40	MCS0	134	5670	2.41	2.86	2.97	2.57	96.08	8.90	≤ 9.35	Pass
11ax-HE40	MCS0	142	5710	2.37	2.86	3.21	2.52	96.08	8.95	≤ 9.35	Pass
11ax-HE80	MCS0	42	5210	-1.27	-1.86	--	--	91.49	1.84	≤ 17.00	Pass
11ax-HE80	MCS0	106	5530	0.20	0.04	0.77	0.74	91.49	6.85	≤ 9.35	Pass
11ax-HE80	MCS0	122	5610	-0.48	-0.17	-0.20	-0.19	91.49	6.15	≤ 9.35	Pass
11ax-HE80	MCS0	122	5690	-0.28	-0.40	-0.39	-0.55	91.49	6.00	≤ 9.35	Pass
11ax-HE160	MCS0	114	5570	-3.88	-3.60	-3.20	-4.24	87.80	2.87	≤ 9.35	Pass

Note 1: When EUT duty cycle ≥ 98%,

For 5150 - 5250MHz Band, the total PSD (dBm/MHz) = $10 \cdot \log \{10^{(\text{Ant 0 PSD}/10)} + 10^{(\text{Ant 1 PSD}/10)}\}$ (dBm/MHz).

For 5470 - 5725MHz Band, the total PSD (dBm/MHz) = $10 \cdot \log \{10^{(\text{Ant 0 PSD}/10)} + 10^{(\text{Ant 1 PSD}/10)} + 10^{(\text{Ant 2 PSD}/10)} + 10^{(\text{Ant 3 PSD}/10)}\}$ (dBm/MHz).

When EUT duty cycle < 98%,

For 5150 - 5250MHz Band, the total PSD (dBm/MHz) = $10 \cdot \log \{10^{(\text{Ant 0 PSD}/10)} + 10^{(\text{Ant 1 PSD}/10)}\}$ (dBm/MHz) + $10 \cdot \log (1/\text{Duty Cycle})$.

For 5470 - 5725MHz Band, the total PSD (dBm/MHz) = $10 \cdot \log \{10^{(\text{Ant 0 PSD}/10)} + 10^{(\text{Ant 1 PSD}/10)} + 10^{(\text{Ant 2 PSD}/10)} + 10^{(\text{Ant 3 PSD}/10)}\}$ + $10 \cdot \log (1/\text{Duty Cycle})$ (dBm/MHz).

Note 2:

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

For 5470 - 5725MHz Band: PSD Limit (dBm/MHz) = 11 - (7.65 - 6) = 9.35dBm/MHz.

待測物名稱	AX6600 Wi-Fi 6 三頻電競路由器	溫度	24°C
測試工程師	Kevin Ker	濕度	58%
測試場地	SR2	測試日期	2020/04/20 ~ 2020/05/14
模式	Power Spectral Density (U-NII-3) CDD Mode (N _{ss} =1)		

Test Mode	Data Rate/ MCS	Ch. 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 (%)	Constant Factor (dB)	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Result
11a	6Mbps	149	5745	3.95	4.21	4.43	3.88	93.55	6.99	17.42	≤ 28.65	Pass
11a	6Mbps	157	5785	3.74	4.03	4.17	3.64	93.55	6.99	17.20	≤ 28.65	Pass
11a	6Mbps	165	5825	4.21	4.42	4.35	3.60	93.55	6.99	17.45	≤ 28.65	Pass
11ac-VHT20	MCS0	149	5745	3.62	3.83	3.81	3.44	98.06	6.99	16.69	≤ 28.65	Pass
11ac-VHT20	MCS0	157	5785	3.51	3.86	4.23	3.90	98.06	6.99	16.89	≤ 28.65	Pass
11ac-VHT20	MCS0	165	5825	3.94	4.26	4.57	3.79	98.06	6.99	17.16	≤ 28.65	Pass
11ac-VHT40	MCS0	151	5755	0.26	1.26	1.03	1.51	95.75	6.99	14.23	≤ 28.65	Pass
11ac-VHT40	MCS0	159	5795	0.47	0.81	1.10	0.48	95.75	6.99	13.92	≤ 28.65	Pass
11ac-VHT80	MCS0	155	5775	-3.00	-2.62	-2.60	-3.21	90.34	6.99	10.60	≤ 28.65	Pass
11ax-HE20	MCS0	149	5745	3.49	3.64	3.92	3.71	97.50	6.99	16.81	≤ 28.65	Pass
11ax-HE20	MCS0	157	5785	2.91	2.51	3.05	1.98	97.50	6.99	15.75	≤ 28.65	Pass
11ax-HE20	MCS0	165	5825	2.99	3.35	3.29	2.79	97.50	6.99	16.23	≤ 28.65	Pass
11ax-HE40	MCS0	151	5755	0.59	0.79	0.92	0.44	96.08	6.99	13.87	≤ 28.65	Pass
11ax-HE40	MCS0	159	5795	0.28	0.28	0.47	-0.06	96.08	6.99	13.43	≤ 28.65	Pass
11ax-HE80	MCS0	155	5775	-4.96	-4.34	-4.47	-4.98	91.49	6.99	8.72	≤ 28.65	Pass

Note 1: When EUT duty cycle ≥ 98%,

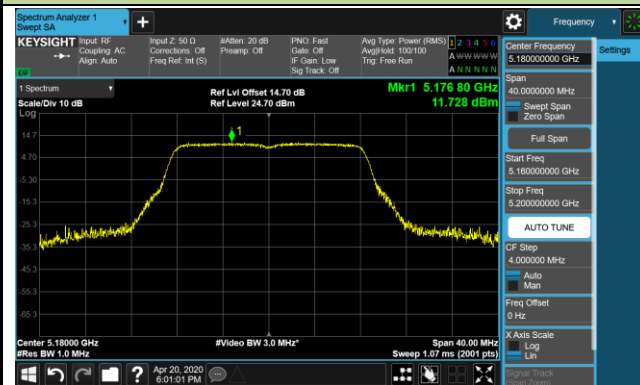
the total PSD (dBm/500kHz) = $10 \cdot \log \{10^{(\text{Ant 0 PSD}/10)} + 10^{(\text{Ant 1 PSD}/10)} + 10^{(\text{Ant 2 PSD}/10)} + 10^{(\text{Ant 3 PSD}/10)}\}$ (dBm/100kHz) + Constant Factor (dB).

When EUT duty cycle < 98%, the total PSD (dBm/500kHz) = $10 \cdot \log \{10^{(\text{Ant 0 PSD}/10)} + 10^{(\text{Ant 1 PSD}/10)} + 10^{(\text{Ant 2 PSD}/10)} + 10^{(\text{Ant 3 PSD}/10)}\}$ (dBm/100kHz) + Constant Factor (dB) + $10 \cdot \log (1/\text{Duty Cycle})$.

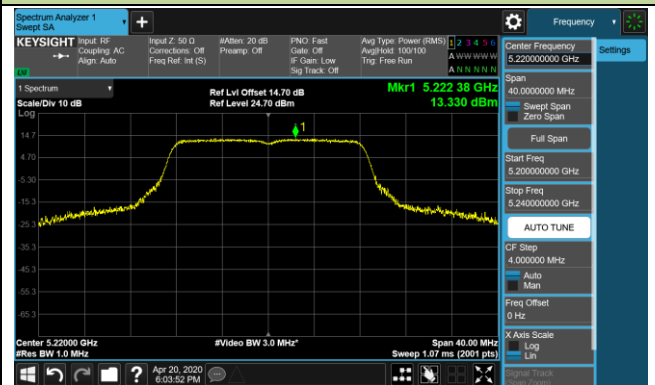
Note 2: PSD Limit (dBm/500kHz) = 30 - (7.35 - 6) = 28.65dBm/500kHz.

802.11a Power Spectral Density - Ant 0 / Ant 0 + 1

Channel 36 (5180MHz)



Channel 44 (5220MHz)

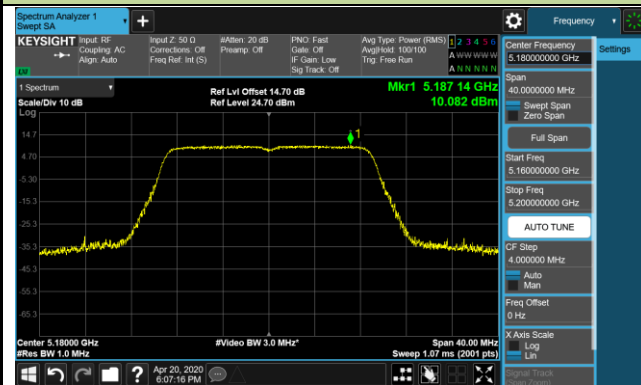


Channel 48 (5240MHz)

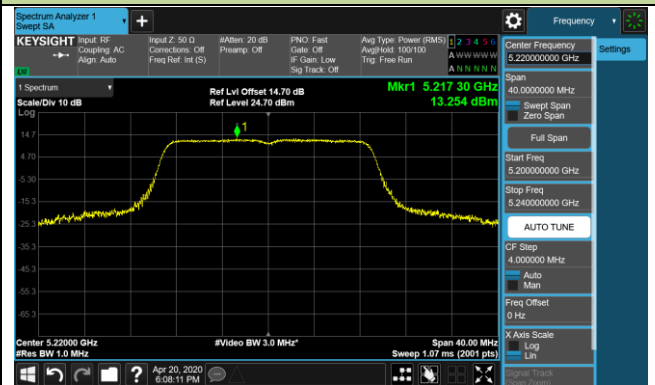


802.11ac-VHT20 Power Spectral Density - Ant 0 / Ant 0 + 1

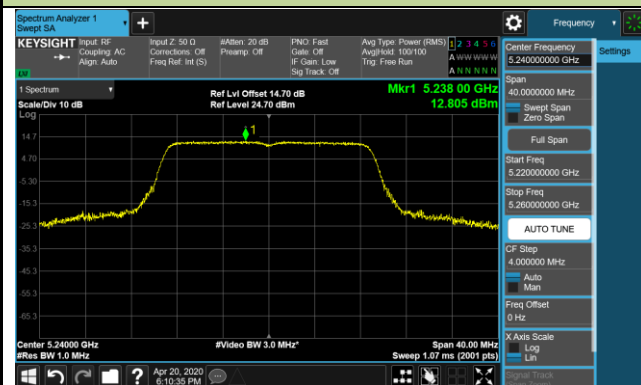
Channel 36 (5180MHz)



Channel 44 (5220MHz)

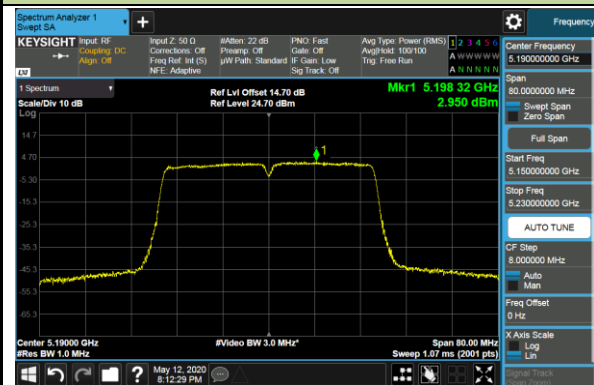


Channel 48 (5240MHz)

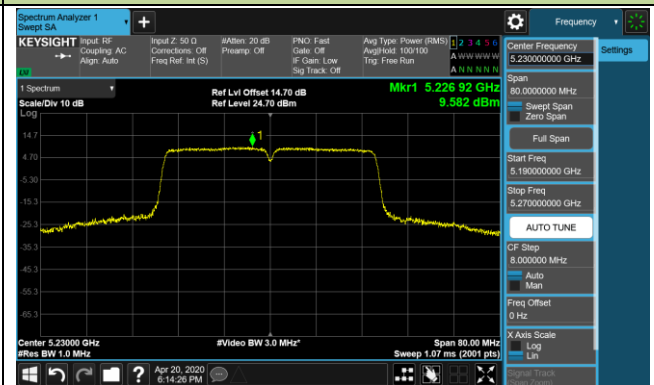


802.11ac-VHT40 Power Spectral Density - Ant 0 / Ant 0 + 1

Channel 38 (5190MHz)



Channel 46 (5230MHz)



802.11ac-VHT80 Power Spectral Density - Ant 0 / Ant 0 + 1

Channel 42 (5210MHz)

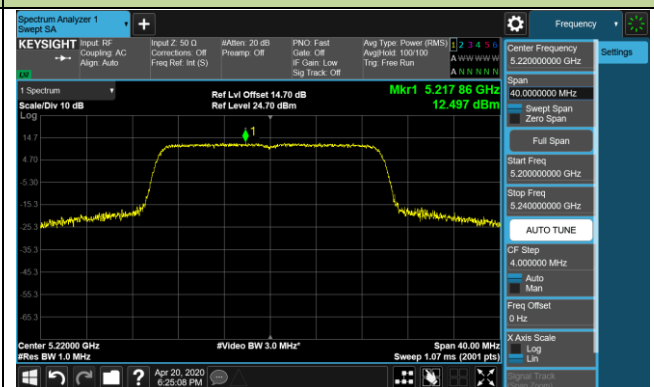


802.11ax-HE20 Power Spectral Density - Ant 0 / Ant 0 + 1

Channel 36 (5180MHz)



Channel 44 (5220MHz)

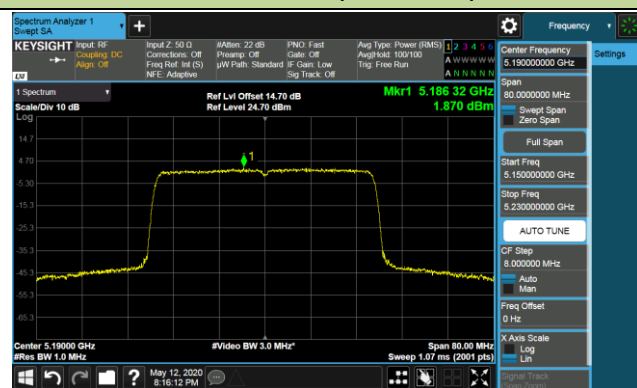


Channel 48 (5240MHz)

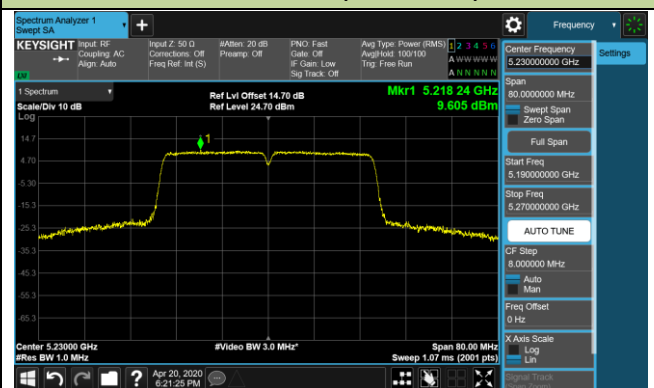


802.11ax-HE40 Power Spectral Density - Ant 0 / Ant 0 + 1

Channel 38 (5190MHz)



Channel 46 (5230MHz)



802.11ax-HE80 Power Spectral Density - Ant 0 / Ant 0 + 1

Channel 42 (5210MHz)

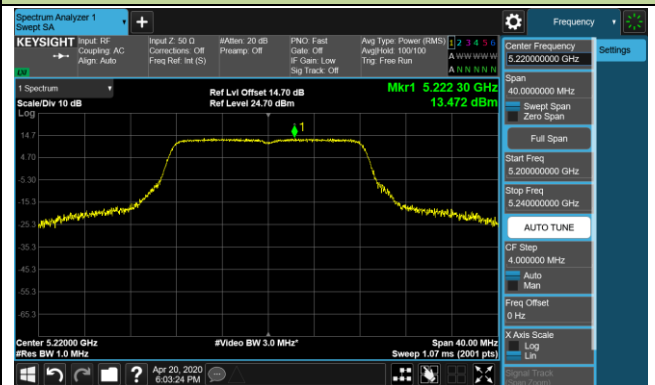


802.11a Power Spectral Density - Ant 1 / Ant 0 + 1

Channel 36 (5180MHz)



Channel 44 (5220MHz)

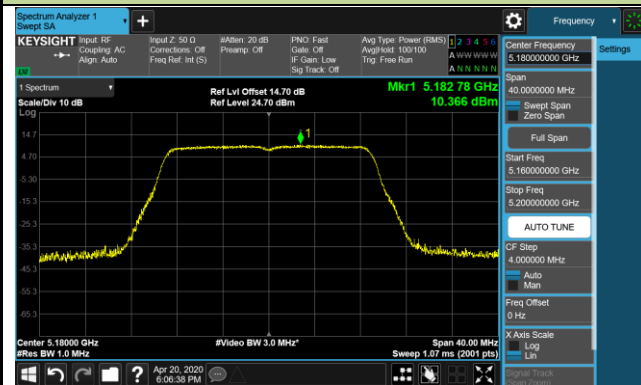


Channel 48 (5240MHz)

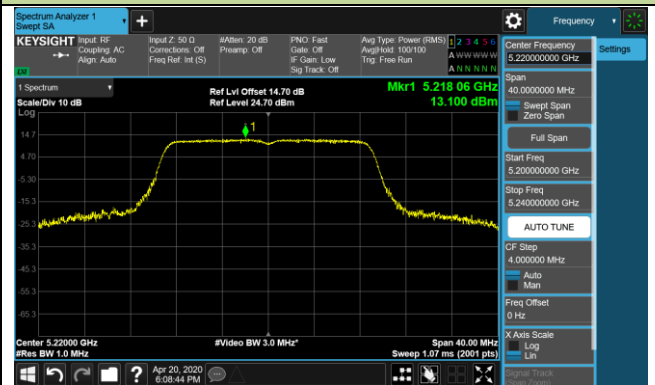


802.11ac-VHT20 Power Spectral Density - Ant 1 / Ant 0 + 1

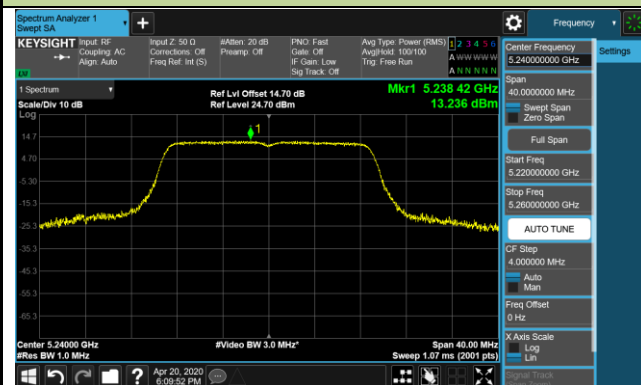
Channel 36 (5180MHz)



Channel 44 (5220MHz)



Channel 48 (5240MHz)

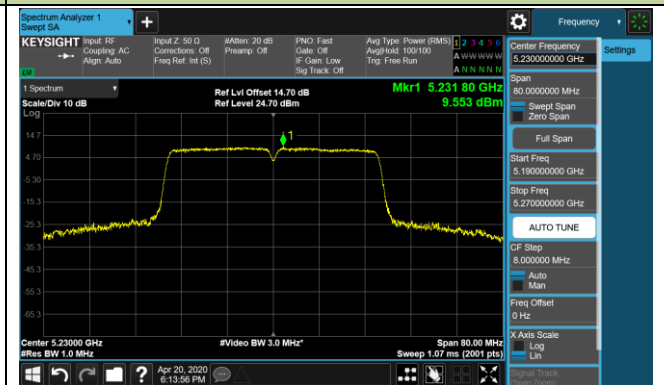


802.11ac-VHT40 Power Spectral Density - Ant 1 / Ant 0 + 1

Channel 38 (5190MHz)

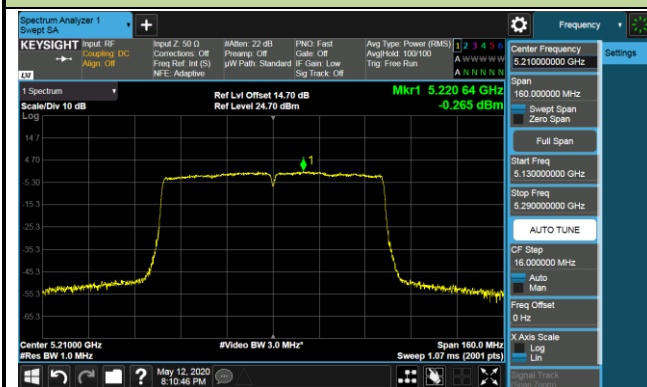


Channel 46 (5230MHz)



802.11ac-VHT80 Power Spectral Density - Ant 1 / Ant 0 + 1

Channel 42 (5210MHz)



802.11ax-HE20 Power Spectral Density - Ant 1 / Ant 0 + 1

Channel 36 (5180MHz)



Channel 44 (5220MHz)

