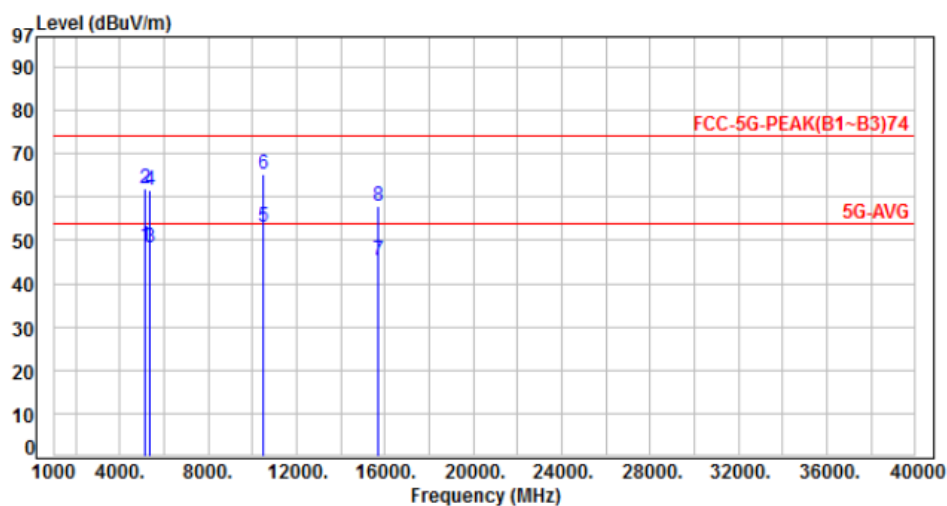




Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 5, CH46	Temperature	: 24°C
Test Date	: Aug. 08, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV)	Limit (dBUV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-12.71	61.31	48.60	54.00	-5.40	Average	206	271	P
2	5150.00	-12.71	74.63	61.92	74.00	-12.08	Peak	206	271	P
3	5350.00	-12.32	60.49	48.17	54.00	-5.83	Average	206	271	P
4	5350.00	-12.32	74.08	61.76	74.00	-12.24	Peak	206	271	P
5	10460.00	-7.42	60.44	53.02	54.00	-0.98	Average	212	340	P
6	10460.00	-7.42	72.80	65.38	74.00	-8.62	Peak	212	340	P
7	15690.00	-3.81	49.23	45.42	54.00	-8.58	Average	362	40	P
8	15690.00	-3.81	61.54	57.73	74.00	-16.27	Peak	362	40	P

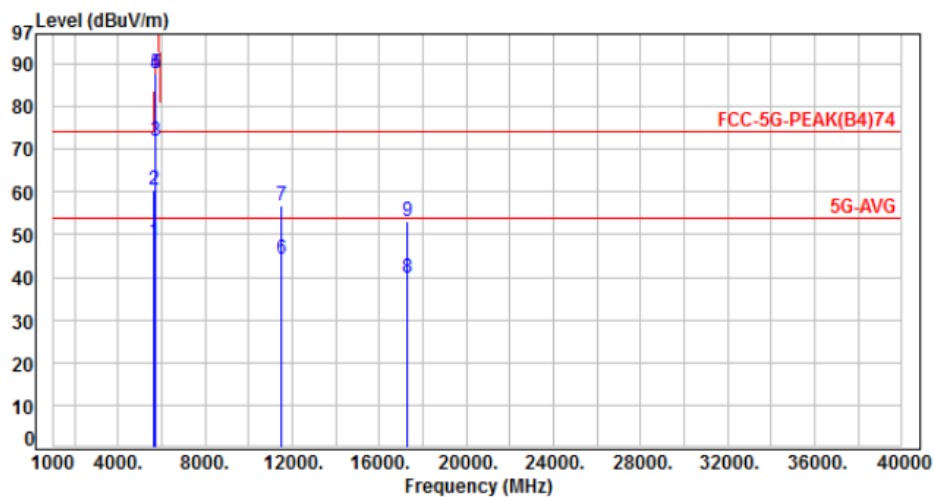
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 5, CH151	Temperature	: 24°C
Test Date	: Aug. 09, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-12.09	60.24	48.15	54.00	-5.85	Average	210	360	P
2	5650.00	-12.09	72.71	60.62	74.00	-13.38	Peak	210	360	P
3	5700.00	-12.11	84.10	71.99	105.20	-33.21	Peak	210	360	P
4	5720.00	-12.12	100.03	87.91	110.80	-22.89	Peak	210	360	P
5	5725.00	-12.12	99.79	87.67	122.20	-34.53	Peak	210	360	P
6	11510.00	-6.26	50.64	44.38	54.00	-9.62	Average	187	350	P
7	11510.00	-6.26	63.10	56.84	74.00	-17.16	Peak	187	350	P
8	17265.00	1.65	38.20	39.85	54.00	-14.15	Average	248	31	P
9	17265.00	1.65	51.61	53.26	74.00	-20.74	Peak	248	31	P

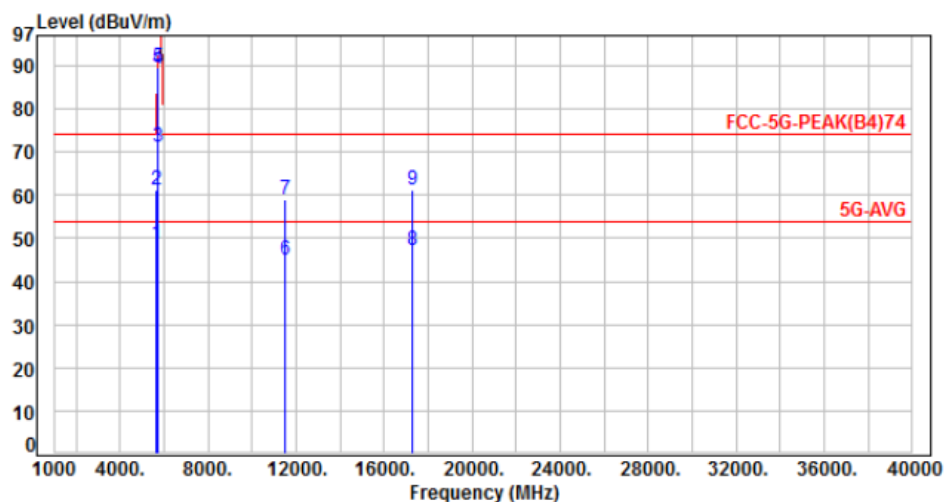
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 5, CH151	Temperature	: 24°C
Test Date	: Aug. 09, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-12.09	60.75	48.66	54.00	-5.34	Average	121	58	P
2	5650.00	-12.09	73.16	61.07	74.00	-12.93	Peak	121	58	P
3	5700.00	-12.11	83.42	71.31	105.20	-33.89	Peak	121	58	P
4	5720.00	-12.12	101.56	89.44	110.80	-21.36	Peak	121	58	P
5	5725.00	-12.12	101.74	89.62	122.20	-32.58	Peak	121	58	P
6	11510.00	-6.26	51.43	45.17	54.00	-8.83	Average	182	311	P
7	11510.00	-6.26	65.35	59.09	74.00	-14.91	Peak	182	311	P
8	17265.00	1.65	45.64	47.29	54.00	-6.71	Average	285	21	P
9	17265.00	1.65	59.44	61.09	74.00	-12.91	Peak	285	21	P

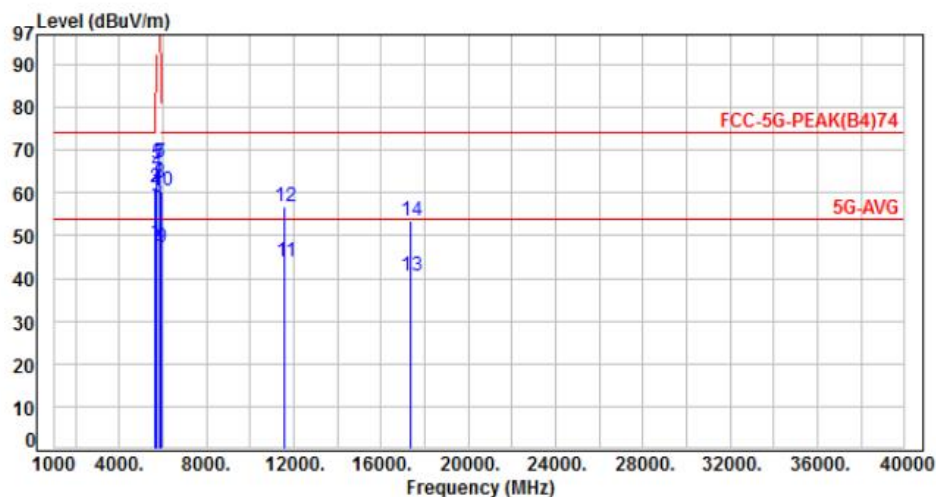
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 5, CH159	Temperature	: 24°C
Test Date	: Aug. 09, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-12.09	60.32	48.23	54.00	-5.77	Average	191	338	P
2	5650.00	-12.09	73.18	61.09	74.00	-12.91	Peak	191	338	P
3	5700.00	-12.11	71.16	59.05	105.20	-46.15	Peak	191	338	P
4	5720.00	-12.12	77.15	65.03	110.80	-45.77	Peak	191	338	P
5	5725.00	-12.12	78.80	66.68	122.20	-55.52	Peak	191	338	P
6	5850.00	-12.16	79.34	67.18	122.20	-55.02	Peak	191	338	P
7	5855.00	-12.16	79.33	67.17	110.80	-43.63	Peak	191	338	P
8	5875.00	-12.17	74.36	62.19	105.20	-43.01	Peak	191	338	P
9	5925.00	-12.18	59.29	47.11	54.00	-6.89	Average	191	338	P
10	5925.00	-12.18	72.54	60.36	74.00	-13.64	Peak	191	338	P
11	11590.00	-6.23	50.26	44.03	54.00	-9.97	Average	159	355	P
12	11590.00	-6.23	62.86	56.63	74.00	-17.37	Peak	159	355	P
13	17385.00	2.26	38.37	40.63	54.00	-13.37	Average	222	24	P
14	17385.00	2.26	51.33	53.59	74.00	-20.41	Peak	222	24	P

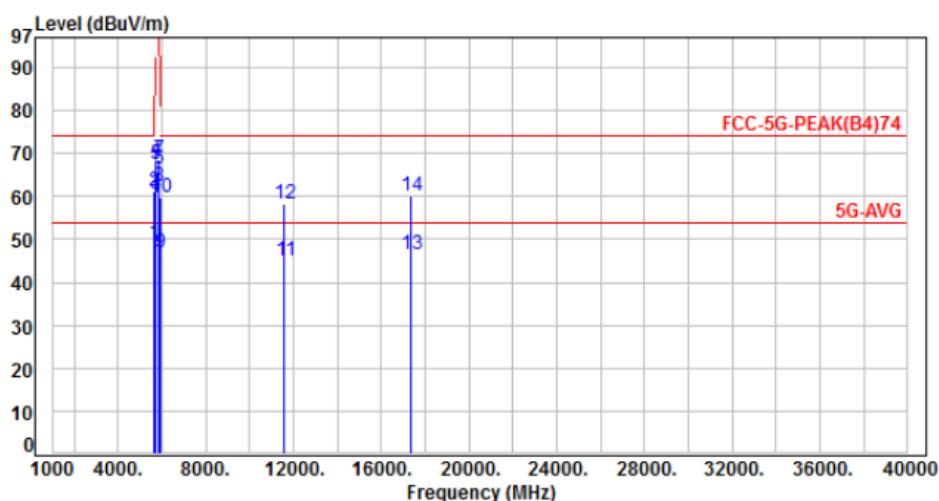
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 5, CH159	Temperature	: 24°C
Test Date	: Aug. 09, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-12.09	61.11	49.02	54.00	-4.98	Average	136	46	P
2	5650.00	-12.09	73.23	61.14	74.00	-12.86	Peak	136	46	P
3	5700.00	-12.11	72.56	60.45	105.20	-44.75	Peak	136	46	P
4	5720.00	-12.12	80.38	68.26	110.80	-42.54	Peak	136	46	P
5	5725.00	-12.12	79.45	67.33	122.20	-54.87	Peak	136	46	P
6	5850.00	-12.16	78.72	66.56	122.20	-55.64	Peak	136	46	P
7	5855.00	-12.16	80.92	68.76	110.80	-42.04	Peak	136	46	P
8	5875.00	-12.17	74.67	62.50	105.20	-42.70	Peak	136	46	P
9	5925.00	-12.18	59.16	46.98	54.00	-7.02	Average	136	46	P
10	5925.00	-12.18	71.95	59.77	74.00	-14.23	Peak	136	46	P
11	11590.00	-6.23	51.27	45.04	54.00	-8.96	Average	186	310	P
12	11590.00	-6.23	64.44	58.21	74.00	-15.79	Peak	186	310	P
13	17385.00	2.26	44.20	46.46	54.00	-7.54	Average	290	24	P
14	17385.00	2.26	57.79	60.05	74.00	-13.95	Peak	290	24	P

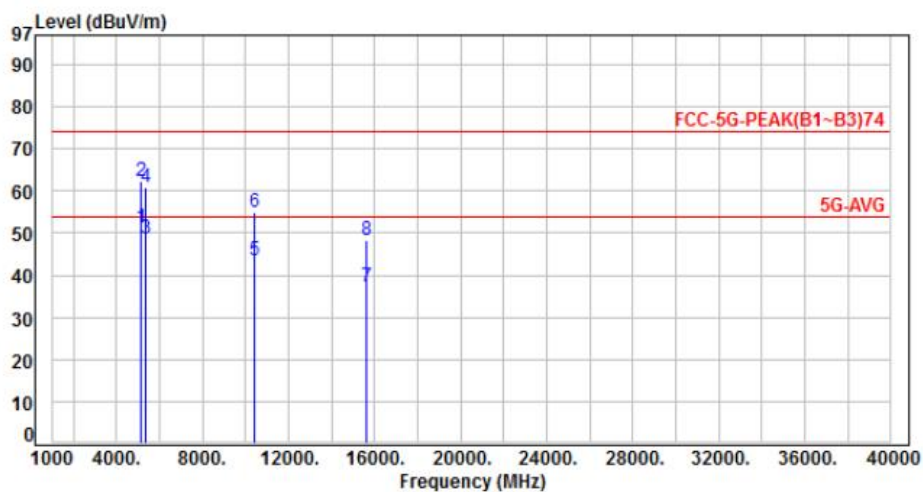
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 6, CH42	Temperature	: 24°C
Test Date	: Aug. 08, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-12.71	63.83	51.12	54.00	-2.88	Average	100	332	P
2	5150.00	-12.71	75.19	62.48	74.00	-11.52	Peak	100	332	P
3	5350.00	-12.32	61.15	48.83	54.00	-5.17	Average	100	332	P
4	5350.00	-12.32	73.17	60.85	74.00	-13.15	Peak	100	332	P
5	10420.00	-7.44	50.95	43.51	54.00	-10.49	Average	190	328	P
6	10420.00	-7.44	62.22	54.78	74.00	-19.22	Peak	190	328	P
7	15630.00	-3.80	41.15	37.35	54.00	-16.65	Average	321	334	P
8	15630.00	-3.80	52.20	48.40	74.00	-25.60	Peak	321	334	P

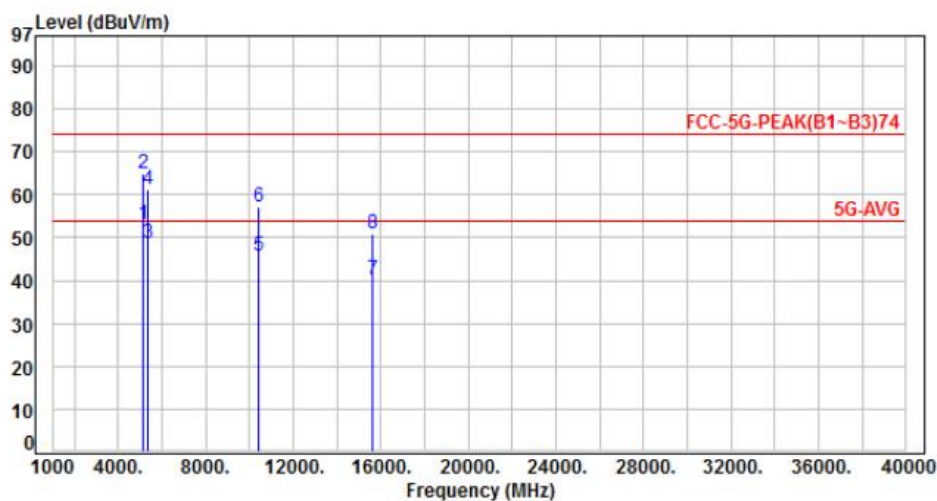
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 6, CH42	Temperature	: 24°C
Test Date	: Aug. 08, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5150.00	-12.71	65.76	53.05	54.00	-0.95	Average	200	266	P
2	5150.00	-12.71	77.79	65.08	74.00	-8.92	Peak	200	266	P
3	5350.00	-12.32	60.88	48.56	54.00	-5.44	Average	200	266	P
4	5350.00	-12.32	73.70	61.38	74.00	-12.62	Peak	200	266	P
5	10420.00	-7.44	53.23	45.79	54.00	-8.21	Average	191	348	P
6	10420.00	-7.44	64.53	57.09	74.00	-16.91	Peak	191	348	P
7	15630.00	-3.80	44.18	40.38	54.00	-13.62	Average	288	53	P
8	15630.00	-3.80	54.85	51.05	74.00	-22.95	Peak	288	53	P

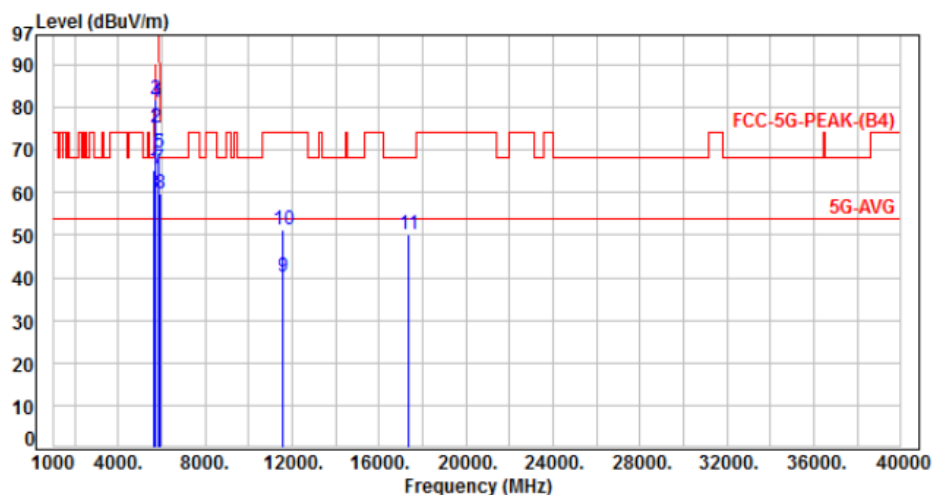
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: VERTICAL
Test Mode	: Mode 6, CH155	Temperature	: 24°C
Test Date	: Aug. 09, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-12.09	77.55	65.46	68.20	-2.74	Peak	147	357	P
2	5700.00	-12.11	87.23	75.12	105.20	-30.08	Peak	147	357	P
3	5720.00	-12.12	93.97	81.85	110.80	-28.95	Peak	147	357	P
4	5725.00	-12.12	93.25	81.13	122.20	-41.07	Peak	147	357	P
5	5850.00	-12.16	81.33	69.17	122.20	-53.03	Peak	147	357	P
6	5855.00	-12.16	81.32	69.16	110.80	-41.64	Peak	147	357	P
7	5875.00	-12.17	77.95	65.78	105.20	-39.42	Peak	147	357	P
8	5925.00	-12.18	72.03	59.85	68.20	-8.35	Peak	147	357	P
9	11550.00	-6.24	46.43	40.19	54.00	-13.81	Average	160	353	P
10	11550.00	-6.24	57.59	51.35	74.00	-22.65	Peak	160	353	P
11	17325.00	1.96	48.38	50.34	68.20	-17.86	Peak	222	26	P

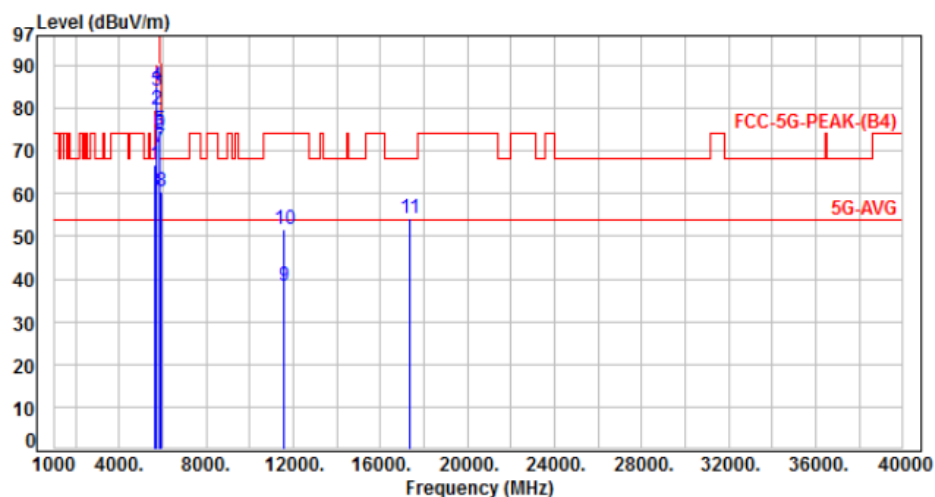
Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



Power	: AC 120V	Pol/Phase	: HORIZONTAL
Test Mode	: Mode 6, CH155	Temperature	: 24°C
Test Date	: Aug. 09, 2017	Humidity	: 68%



No.	Frequency (MHz)	Factor (dB)	Reading (dBUV)	Level (dBUV)	Limit (dBUV)	Margin (dB)	Detector	Height (cm)	Azimuth (deg)	P/F
1	5650.00	-12.09	78.68	66.59	68.20	-1.61	Peak	234	52	P
2	5700.00	-12.11	91.73	79.62	105.20	-25.58	Peak	234	52	P
3	5720.00	-12.12	96.33	84.21	110.80	-26.59	Peak	234	52	P
4	5725.00	-12.12	97.26	85.14	122.20	-37.06	Peak	234	52	P
5	5850.00	-12.16	87.02	74.86	122.20	-47.34	Peak	234	52	P
6	5855.00	-12.16	86.38	74.22	110.80	-36.58	Peak	234	52	P
7	5875.00	-12.17	82.88	70.71	105.20	-34.49	Peak	234	52	P
8	5925.00	-12.18	72.79	60.61	68.20	-7.59	Peak	234	52	P
9	11550.00	-6.24	44.58	38.34	54.00	-15.66	Average	194	333	P
10	11550.00	-6.24	57.83	51.59	74.00	-22.41	Peak	194	333	P
11	17325.00	1.96	52.28	54.24	68.20	-13.96	Peak	275	27	P

Note: Level=Reading+Factor

Margin=Level-Limit

Factor=Antenna Factor + cable loss - Amplifier Factor



6. On Time, Duty Cycle and Measurement methods

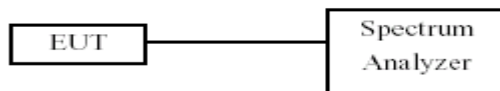
6.1. 適用標準

None; for reporting purposes only.

6.2. 測試方法

KDB 789033 Zero-Span Spectrum Analyzer Method.

6.3. 測試配置



6.4. 測試結果及數據

Temperature: 24°C

Humidity: 68%

Test Date: Aug. 16, 2017

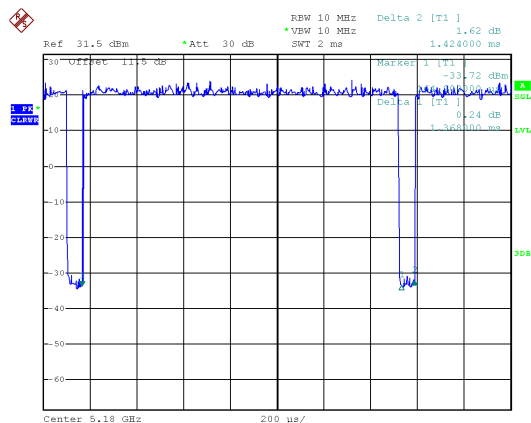
Modulation Type	On Time (ms)	Period Time (ms)	Duty Cycle (%)
802.11a	1.37	1.42	96.07%
802.11ac VHT20	1.30	1.36	95.58%
802.11ac VHT40	0.64	0.71	90.96%
802.11ac VHT80	0.32	0.38	84.82%

6.5. Measurement Methods

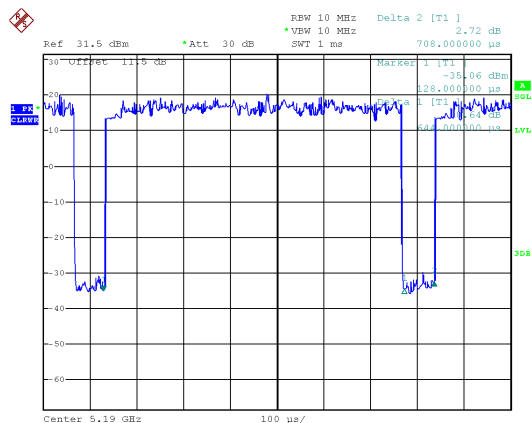
26 dB and 6dB Emission BW	KDB 789033 D02 New Rules v01r03, Section C
99% Occupied BW	KDB 789033 D02 New Rules v01r03, Section D
Conducted Output Power	KDB 789033 D02 New Rules v01r03, E.3.b (Method PM-G)
Power Spectral Density	KDB 789033 D02 New Rules v01r03, Section F
Unwanted Emission Measurement	KDB 789033 D02 New Rules v01r03, Sections G



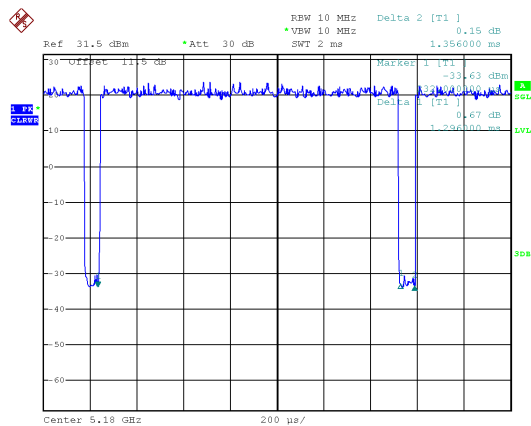
Modulation Standard: 802.11a (6Mbps)



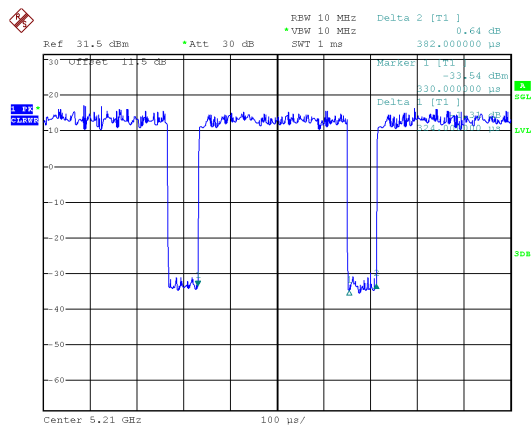
Modulation Standard: 802.11ac, VHT40 (13.5Mbps)



Modulation Standard: 802.11ac, VHT20 (6.5Mbps)



Modulation Standard: 802.11ac, VHT80 (29.3Mbps)





7. 6dB 頻寬之規定

7.1. 適用標準

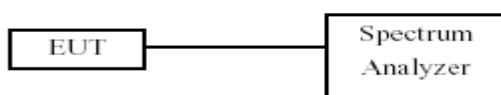
FCC §15.407

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

7.2. 測試方法

Reference to 789033 D02 General UNII Test Procedures New Rules v01: The transmitter output is connected to a spectrum analyzer with the RBW set to 100KHz, the VBW $\geq 3 \times$ RBW, peak detector and max hold.

7.3. 測試配置





7.4. 測試結果及數據

Temperature: 24°C

Humidity: 68%

Test Date: Aug. 16, 2017

In the 5.8G Band

Modulation Type	Channel	Frequency (MHz)	6dB Bandwidth (MHz)		Minimum Limit (MHz)
			ANT A	ANT B	
802.11a	149	5745	16.40	16.50	0.50
	157	5785	16.50	16.50	0.50
	165	5825	16.40	16.40	0.50
802.11ac VHT20	149	5745	17.60	17.60	0.50
	157	5785	17.70	17.60	0.50
	165	5825	17.50	17.70	0.50
802.11ac VHT40	155	5755	36.40	36.40	0.50
	159	5795	36.20	36.40	0.50
802.11ac VHT80	155	5775	76.16	76.16	0.50

Modulation Type	Channel	Frequency (MHz)	99% Bandwidth (MHz)	
			ANT A	ANT B
802.11a	149	5745	16.80	17.20
	157	5785	16.90	17.10
	165	5825	16.90	17.00
802.11ac VHT20	149	5745	18.10	18.20
	157	5785	17.90	18.20
	165	5825	17.90	18.20
802.11ac VHT40	155	5755	36.80	37.60
	159	5795	37.00	37.40
802.11ac VHT80	155	5775	75.84	76.16

備註：繪圖資料請參考下頁。

7.5. 結果判定

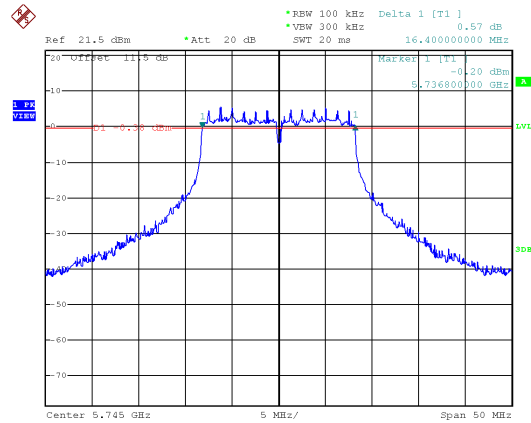
高、中、低頻段的 6dB 頻寬皆大於 500 KHz，合乎標準規定。



ANT A:

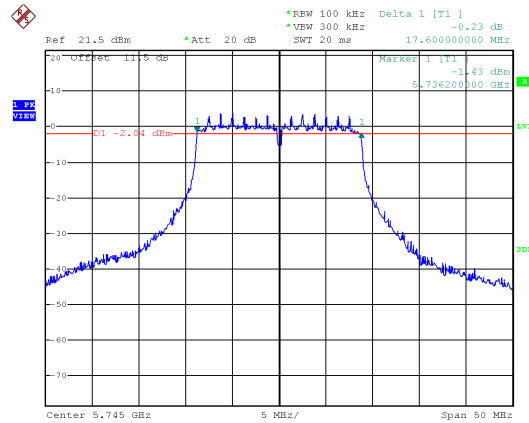
Modulation Standard: 802.11a (6Mbps)

CH149

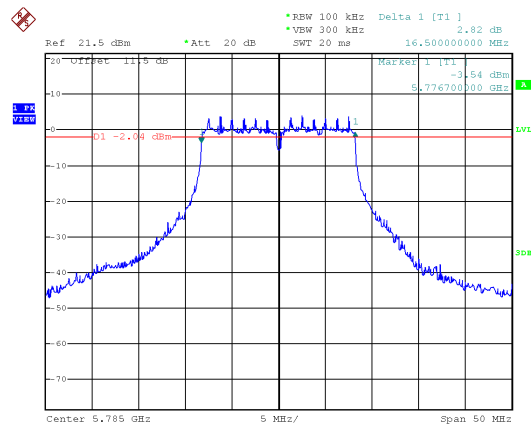


Modulation Standard: 802.11ac, VHT20 (6.5Mbps)

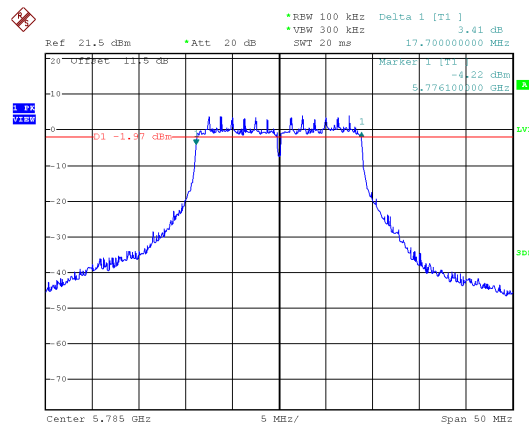
CH149



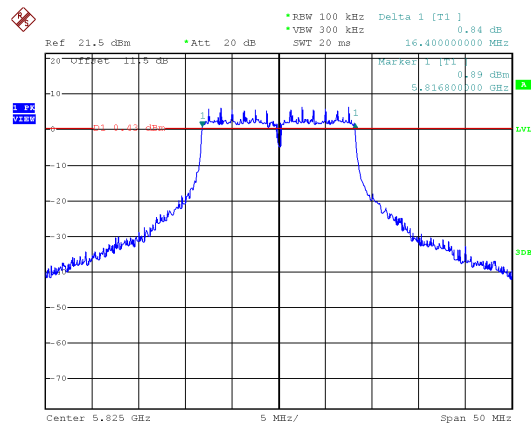
CH157



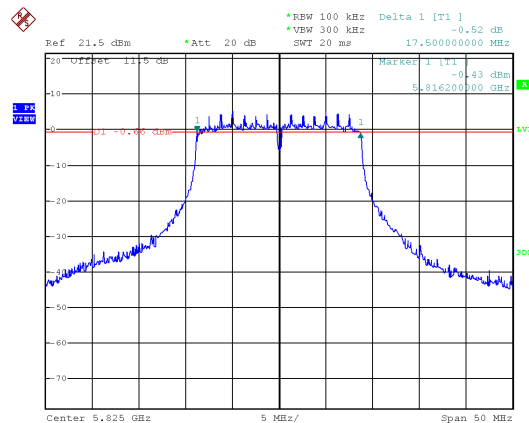
CH157



CH165



CH165

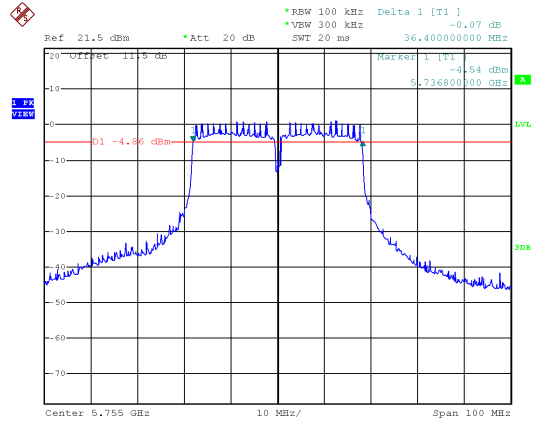




ANT A:

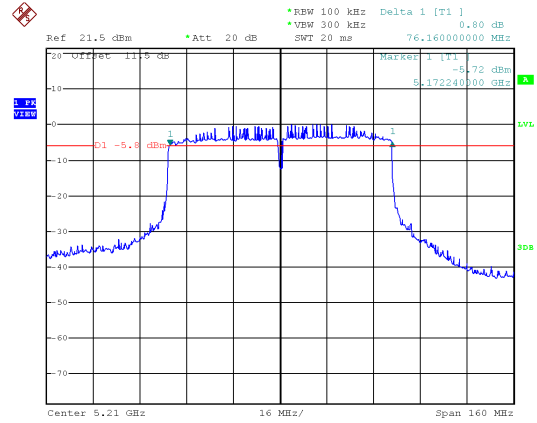
Modulation Standard: 802.11ac, VHT40 (13.5Mbps)

CH151

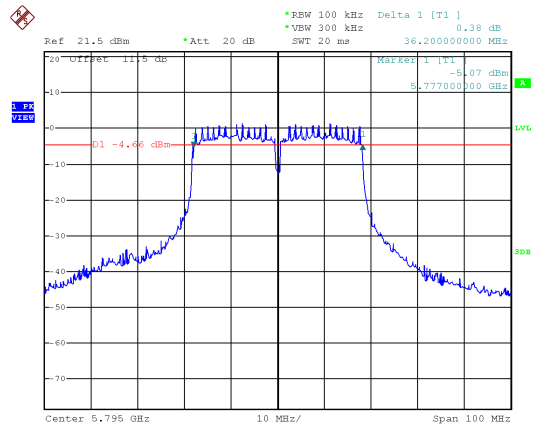


Modulation Standard: 802.11ac, VHT80 (29.3Mbps)

CH155



CH159

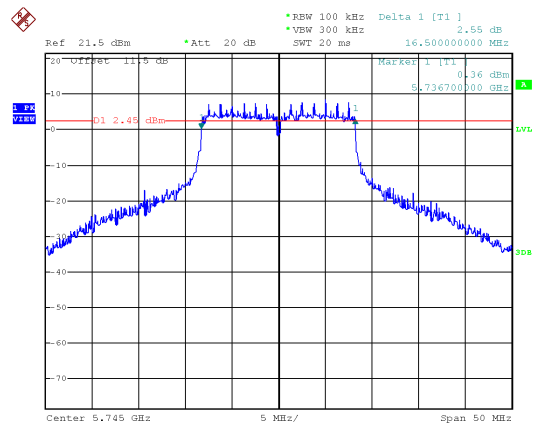




ANT B:

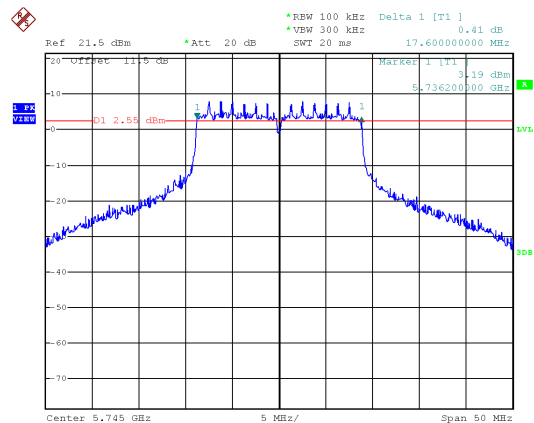
Modulation Standard: 802.11a (6Mbps)

CH149

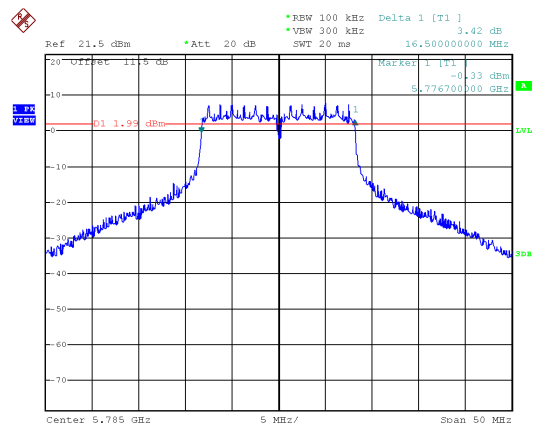


Modulation Standard: 802.11ac, VHT20 (6.5Mbps)

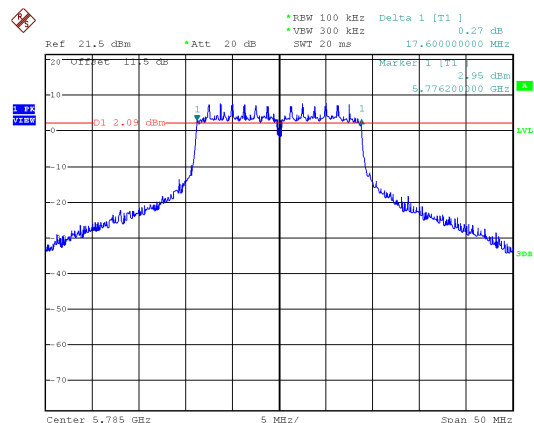
CH149



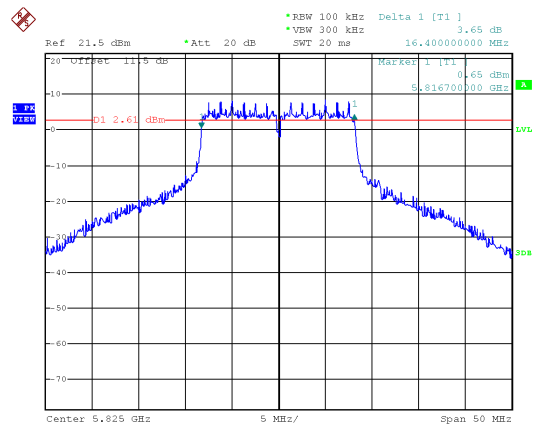
CH157



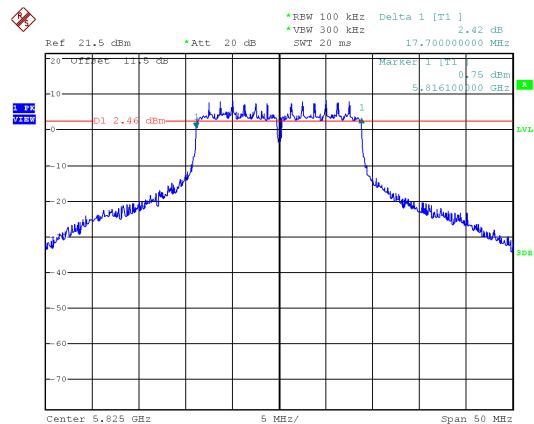
CH157



CH165



CH165

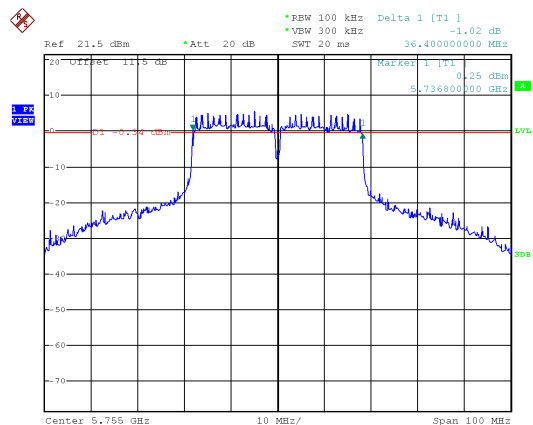




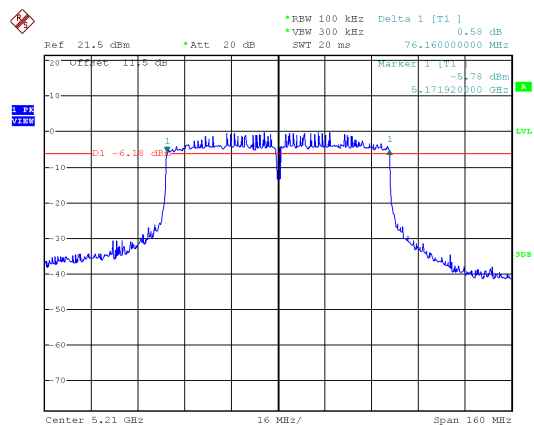
ANT B:

Modulation Standard: 802.11ac, VHT40 (13.5Mbps) Modulation Standard: 802.11ac, VHT80 (29.3Mbps)

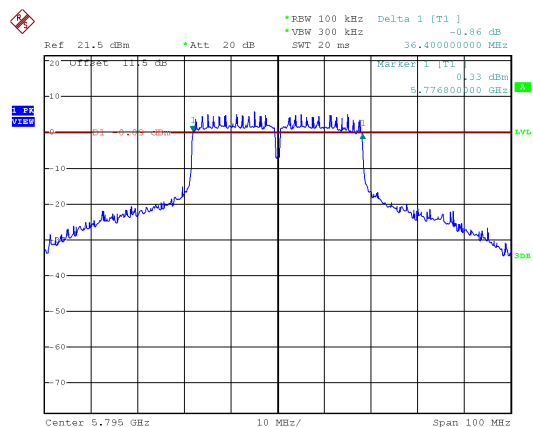
CH151



CH155



CH159



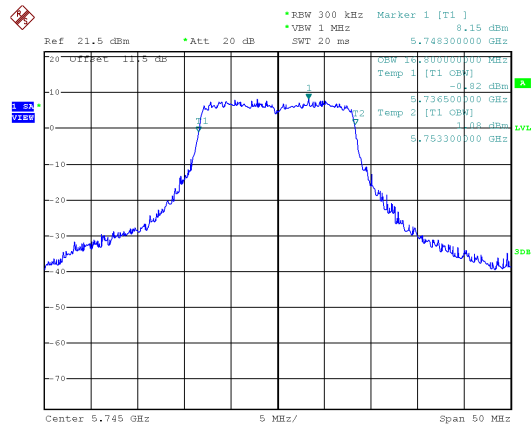


99% Bandwidth

ANT A:

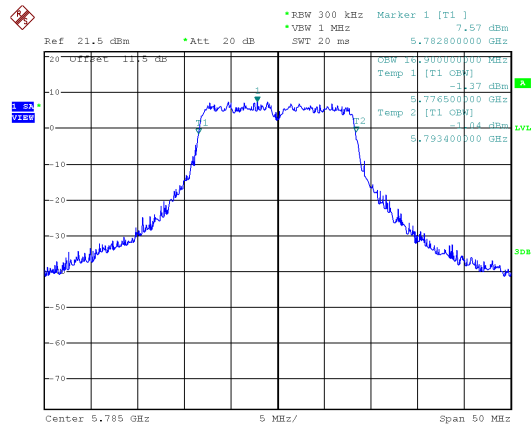
Modulation Standard: 802.11a (6Mbps)

CH149



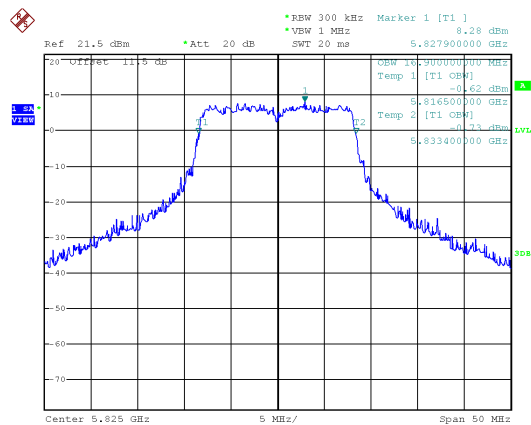
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CH157



I

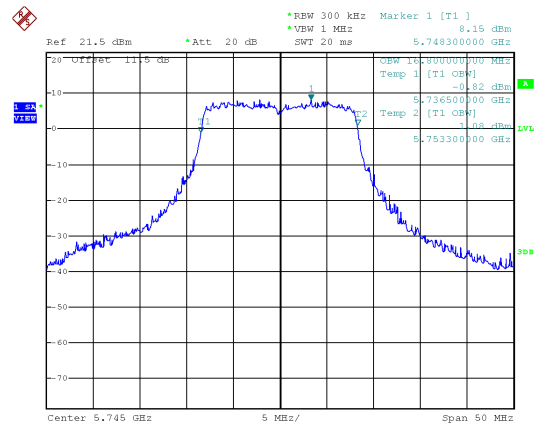
CH165



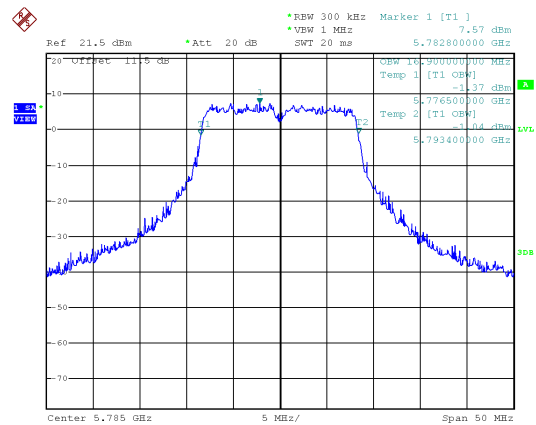
I

Modulation Standard: 802.11ac, VHT20 (6.5Mbps)

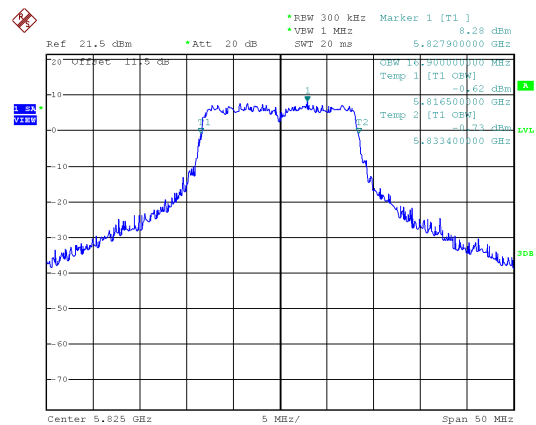
CH149



CH157



CH165

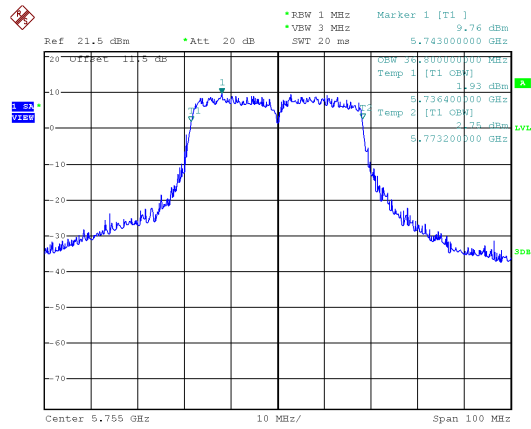




ANT A:

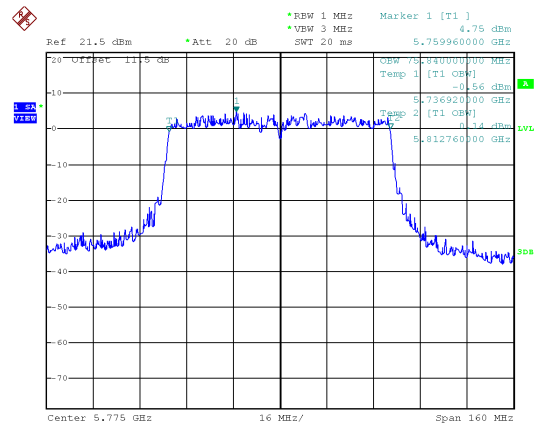
Modulation Standard: 802.11ac, VHT40 (13.5Mbps)

CH151

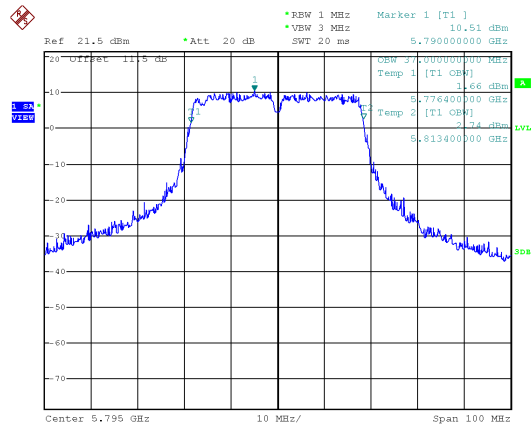


Modulation Standard: 802.11ac, VHT80 (29.3Mbps)

CH155



CH159



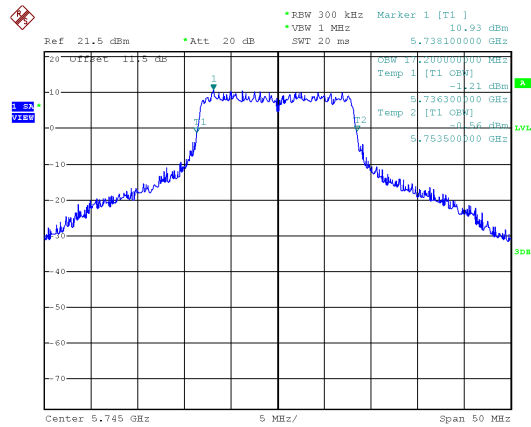


99% Bandwidth

ANT B:

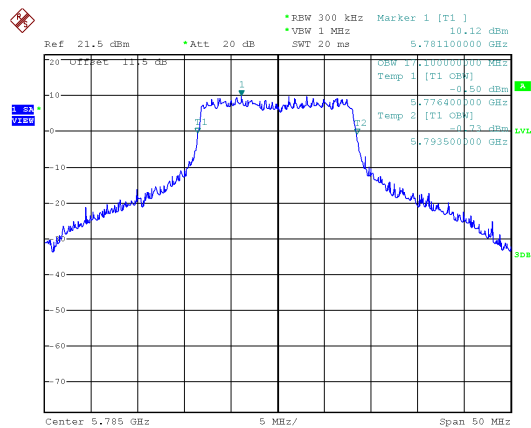
Modulation Standard: 802.11a (6Mbps)

CH149



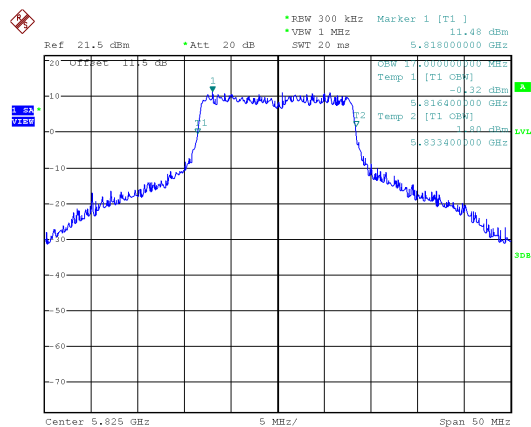
I

CH157



I

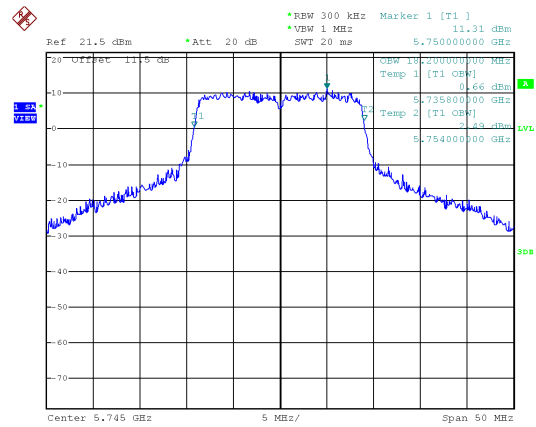
CH165



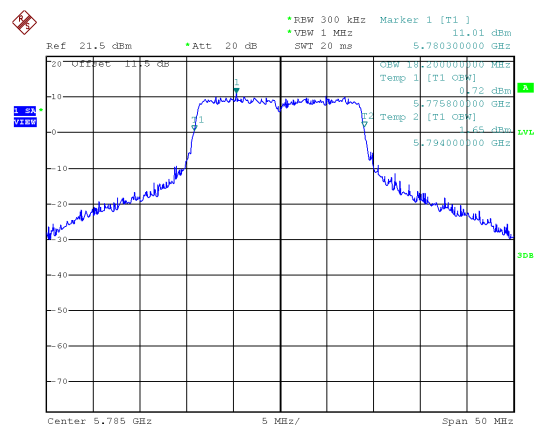
I

Modulation Standard: 802.11ac, VHT20 (6.5Mbps)

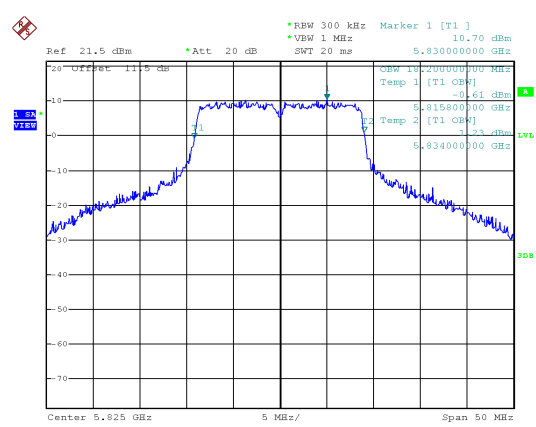
CH149



CH157



CH165

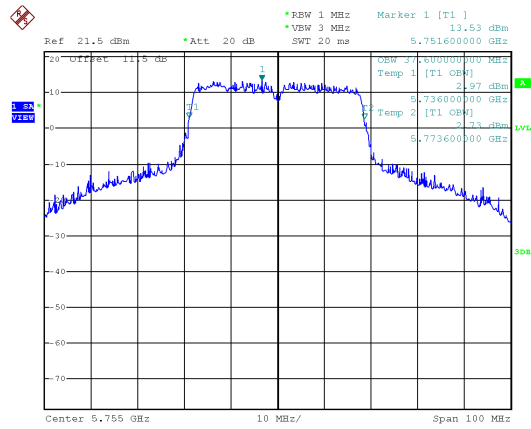




ANT B:

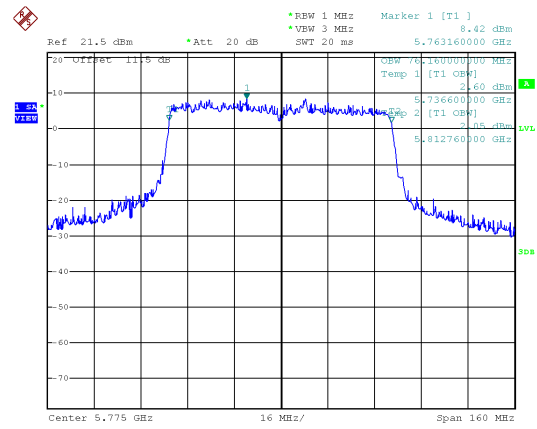
Modulation Standard: 802.11ac, VHT40 (13.5Mbps)

CH151

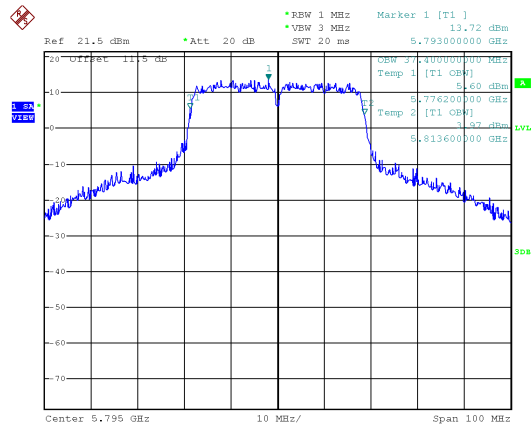


Modulation Standard: 802.11ac, VHT80 (29.3Mbps)

CH155



CH159





8. 26dB 頻寬之規定

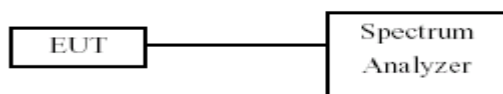
8.1. 適用標準

None; for reporting purposes only.

8.2. 測試方法

Reference to 789033 D02 General UNII Test Procedures New Rules v01: The transmitter output is connected to a spectrum analyzer with the RBW set to approximately 1% of the emission bandwidth, the VBW $\geq$ RBW, peak detector and max hold.

8.3. 測試配置





8.4. 測試結果及數據

Temperature: 24°C

Humidity: 68%

Test Date: Aug. 16, 2017

In the 5.2G Band

Modulation Type	Channel	Frequency (MHz)	26dB Bandwidth (MHz)	
			ANT A	ANT B
802.11a	36	5180	22.20	22.80
	44	5220	23.10	23.30
	48	5240	23.80	24.30
802.11ac VHT20	36	5180	24.60	24.20
	44	5220	24.40	24.00
	48	5240	24.90	23.80
802.11ac VHT40	38	5190	45.40	45.60
	46	5230	46.60	50.00
802.11ac VHT80	42	5210	88.00	88.96

Modulation Type	Channel	Frequency (MHz)	99% Bandwidth (MHz)	
			ANT A	ANT B
802.11a	36	5180	16.90	16.80
	44	5220	16.80	16.90
	48	5240	16.80	16.90
802.11ac VHT20	36	5180	18.00	18.00
	44	5220	18.00	18.10
	48	5240	17.90	18.00
802.11ac VHT40	38	5190	36.60	36.80
	46	5230	37.00	36.80
802.11ac VHT80	42	5210	76.16	76.16

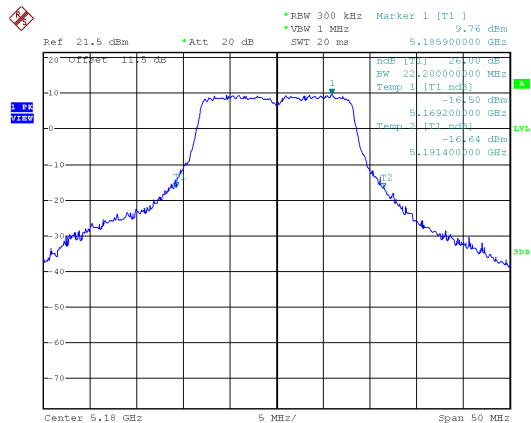
備註：繪圖資料請參考下頁。



ANT A:

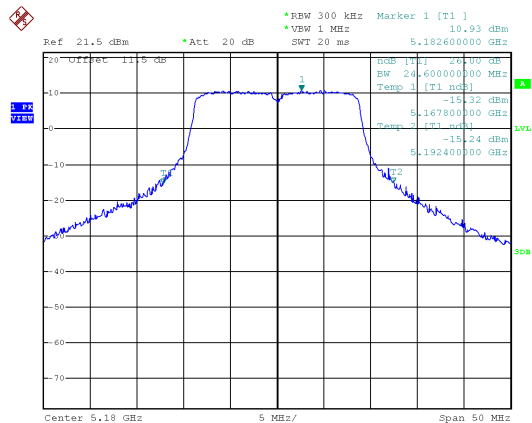
Modulation Standard: 802.11a (6Mbps)

CH36

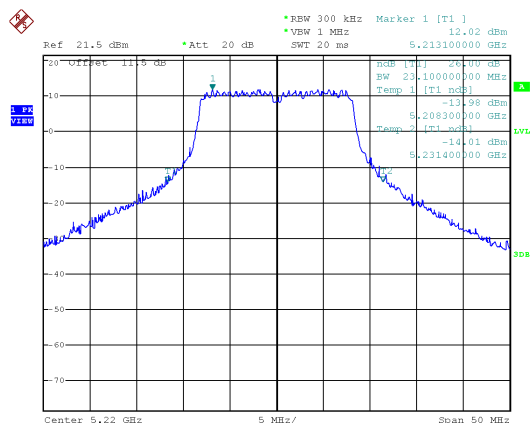


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

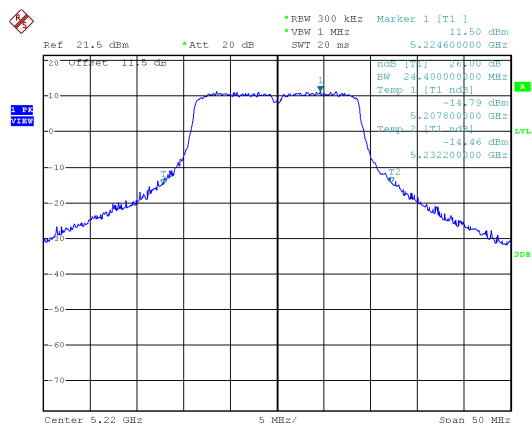
CH36



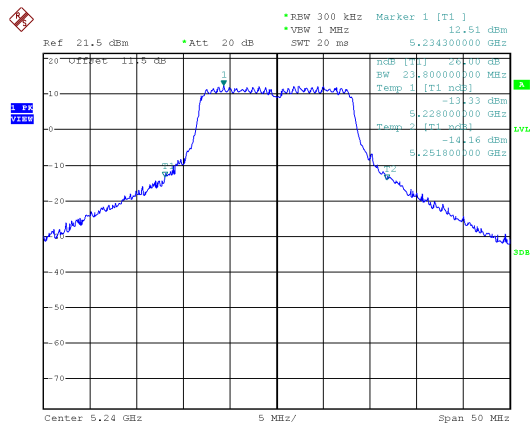
CH44



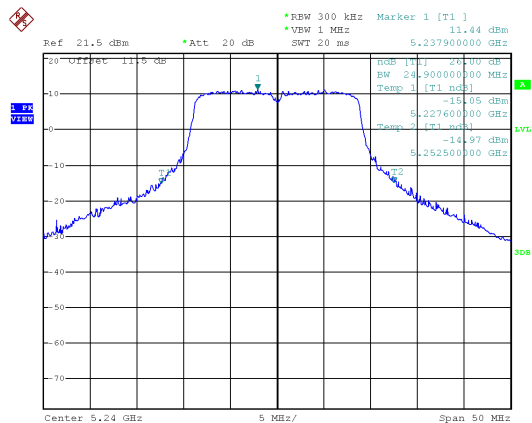
CH44



CH48



CH48

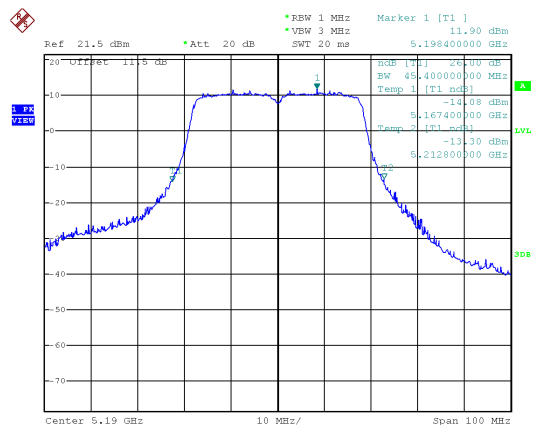




ANT A:

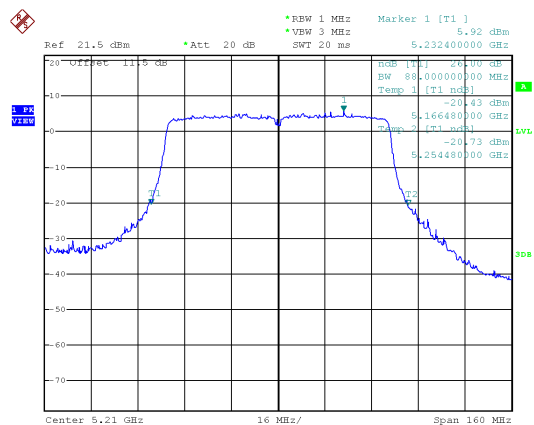
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH38

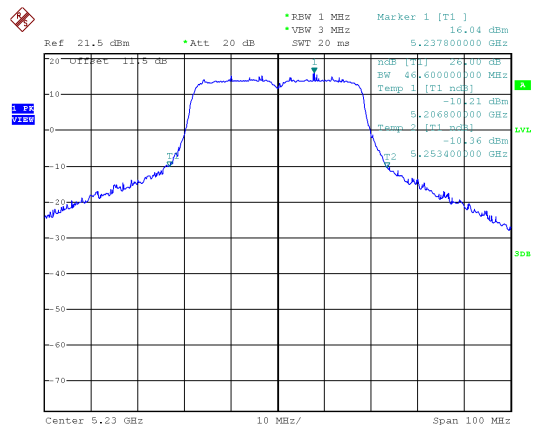


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH42



CH46

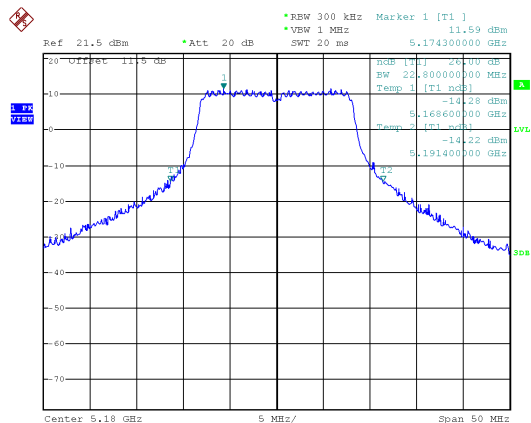




ANT B:

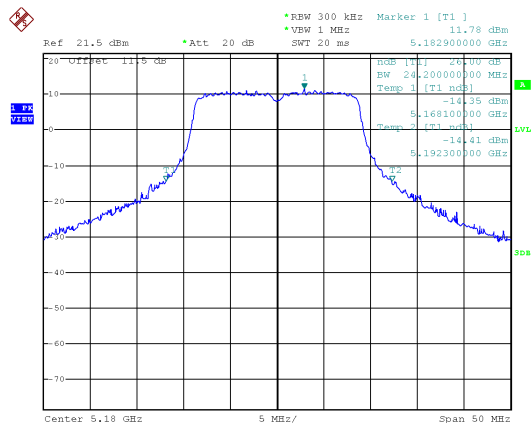
Modulation Standard: 802.11a (6Mbps)

CH36

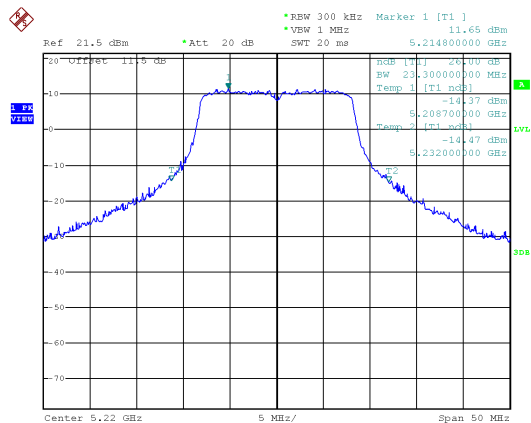


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

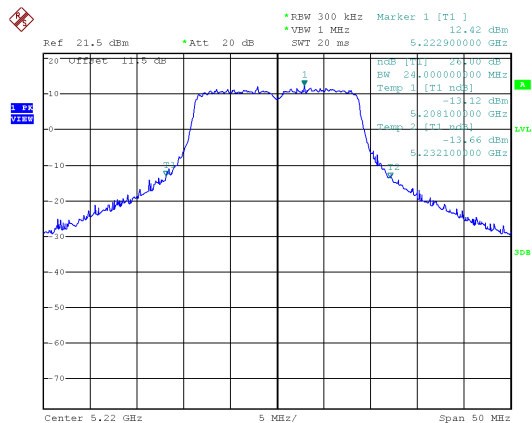
CH36



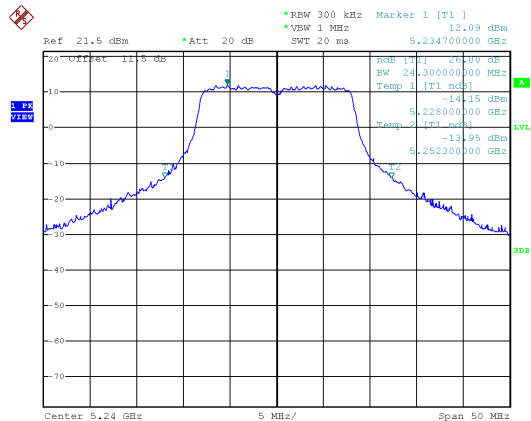
CH44



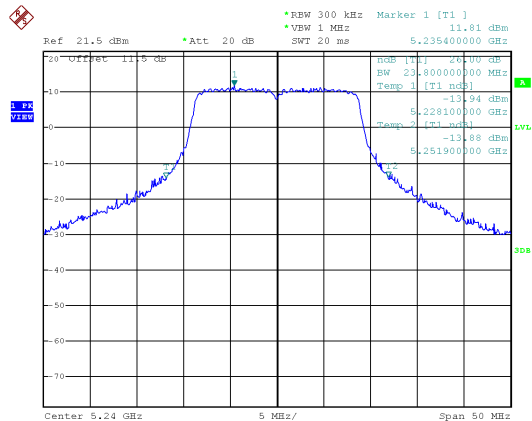
CH44



CH48



CH48

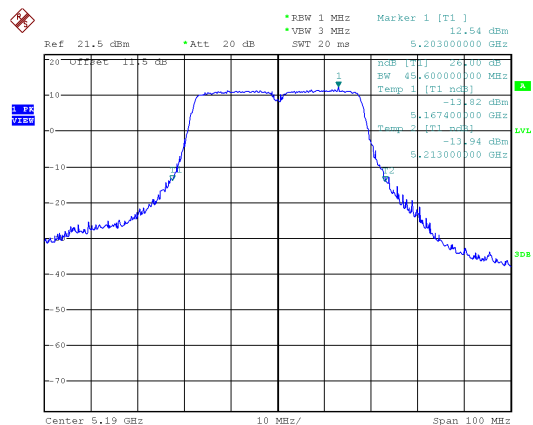




ANT B:

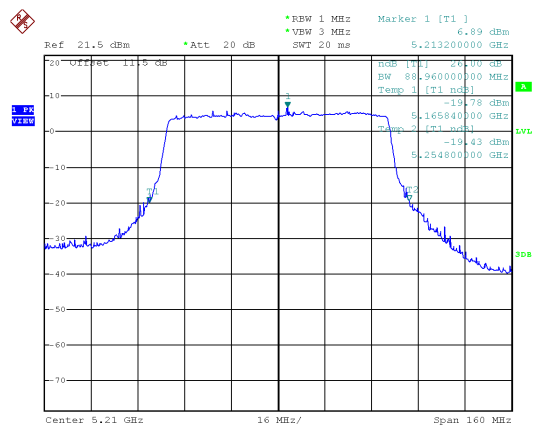
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH38

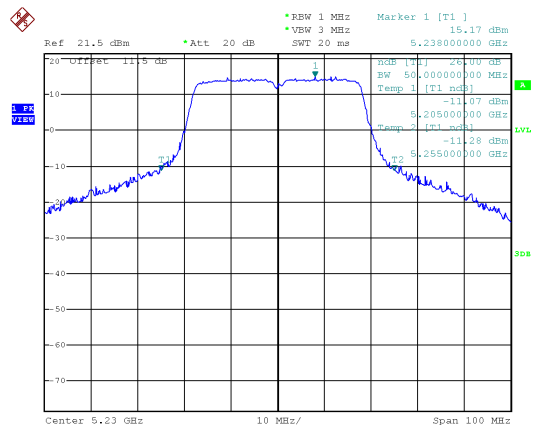


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH42



CH46



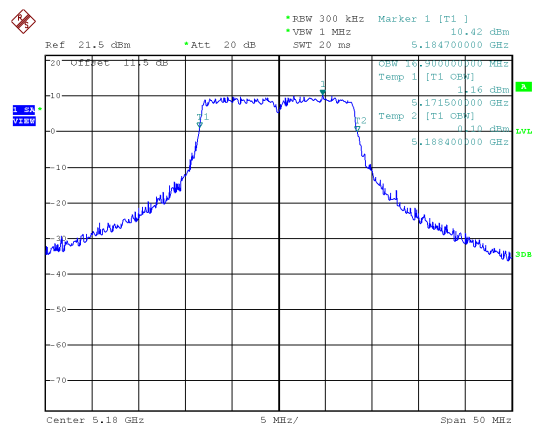


99% Bandwidth

ANT A:

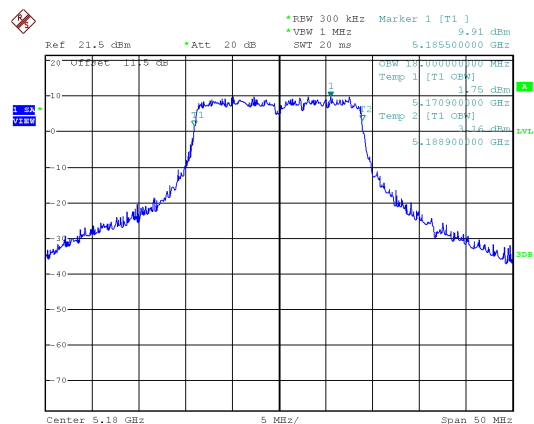
Modulation Standard: 802.11a (6Mbps)

CH36

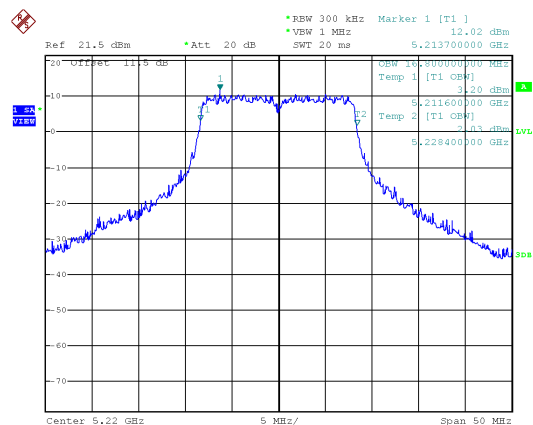


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

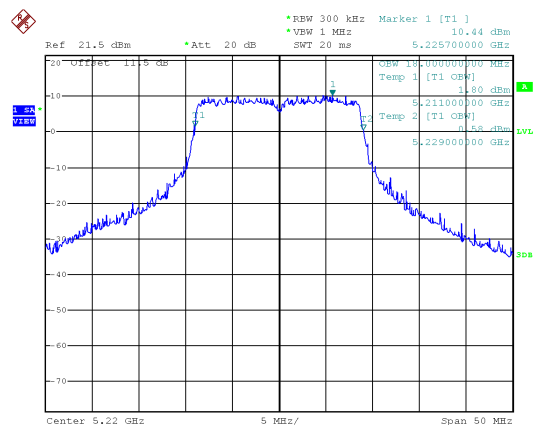
CH36



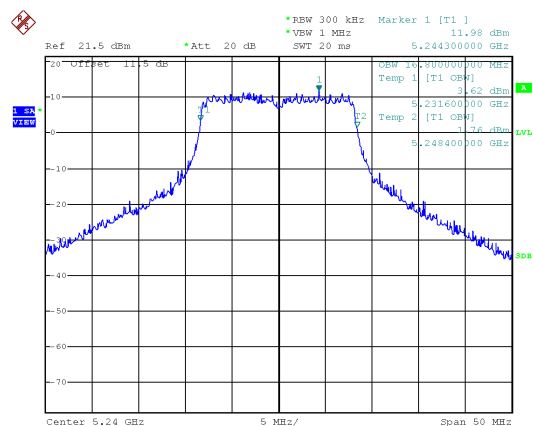
CH44



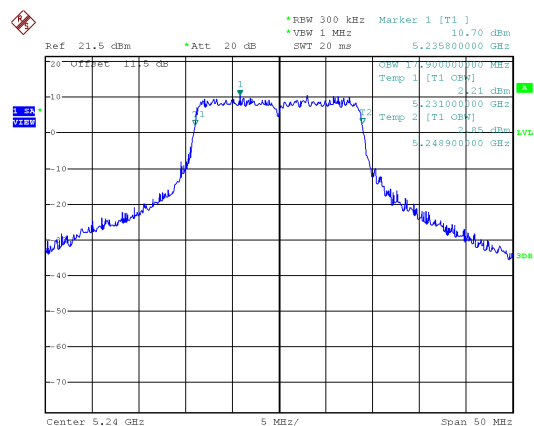
CH44



CH48



CH48

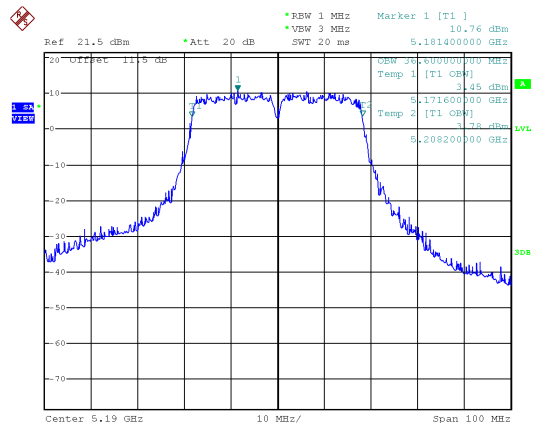




ANT A:

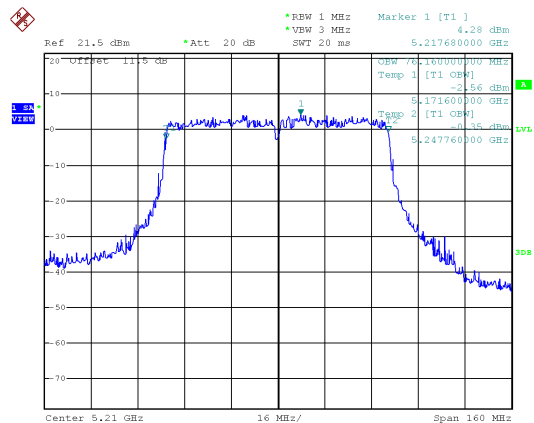
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH38

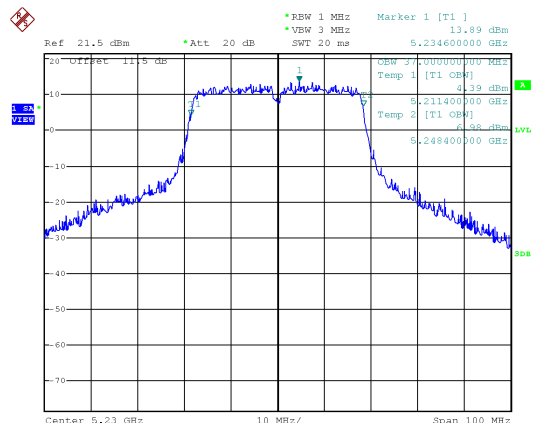


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH42



CH46



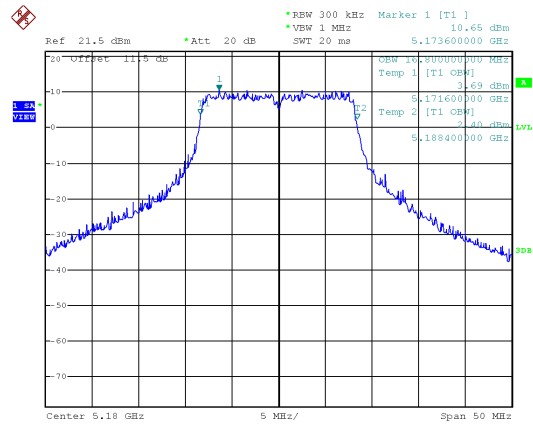


99% Bandwidth

ANT B:

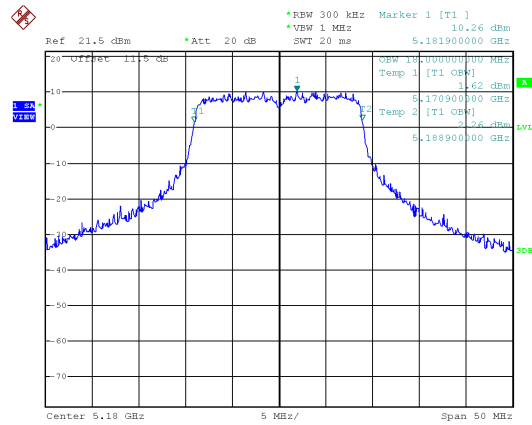
Modulation Standard: 802.11a (6Mbps)

CH36

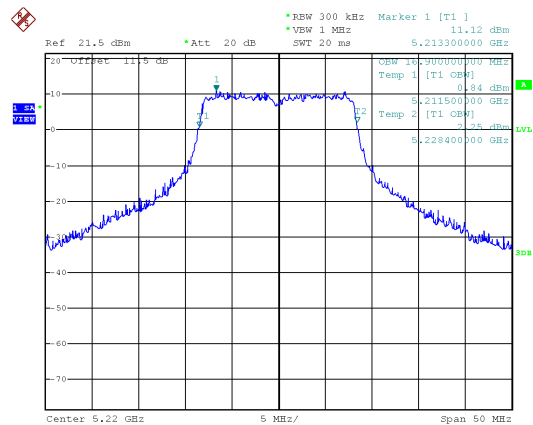


Modulation Standard: 802.11ac VHT20 (6.5Mbps)

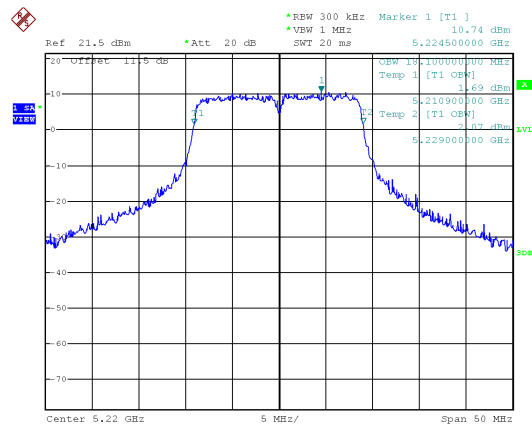
CH36



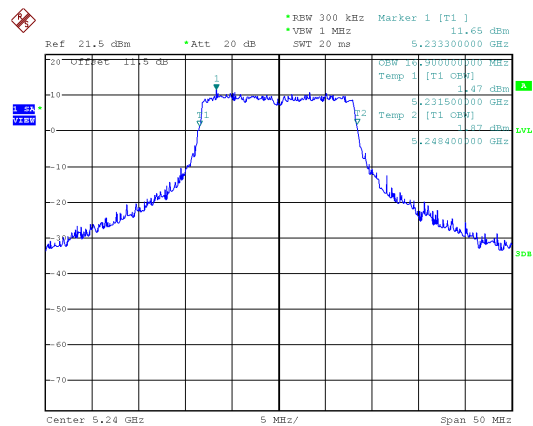
CH44



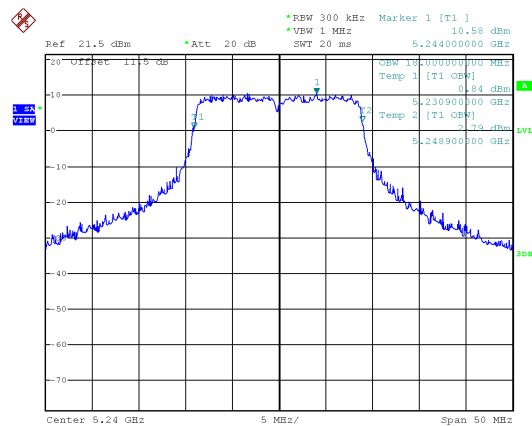
CH44



CH48



CH48

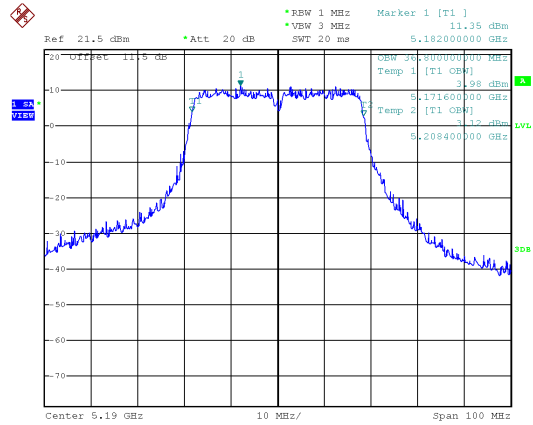




ANT B:

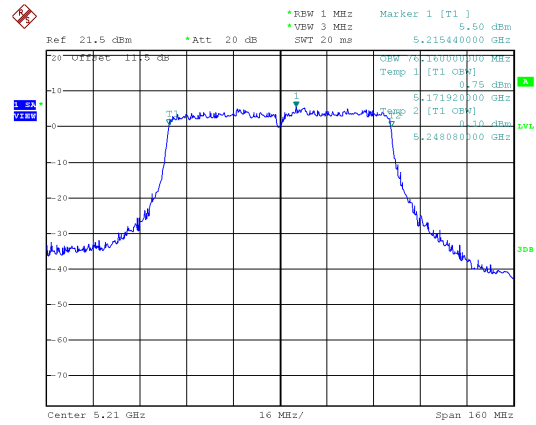
Modulation Standard: 802.11ac VHT40 (13.5Mbps)

CH38

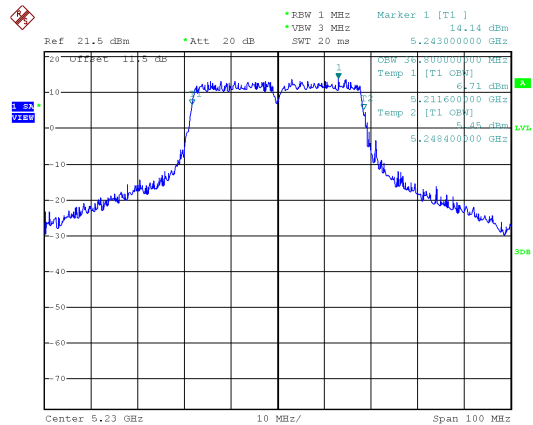


Modulation Standard: 802.11ac VHT80 (29.3Mbps)

CH42



CH46





9. 傳導輸出功率

9.1. 適用標準

依照國家通訊傳播委員會低功率射頻電機技術規範(4.7.3)節功率限制規定如下:

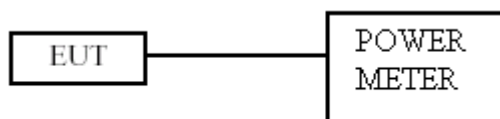
操作於 5.15G-5.25G 頻段者	
☐	供戶外操作使用：最大傳導輸出功率應小於 1W。
☒	供室內操作使用：最大傳導輸出功率應小於 1W。
☐	供固定式點對點操作使用：最大傳導輸出功率應小於 1W。
☐	供用戶端裝置(Client Device)操作使用：最大傳導輸出功率應小於 250mW。
操作於 5.25G-5.35G 與 5.470G-5.725G 頻段者	
最大傳導輸出功率應小於 250mW 或 $11\text{dBm} + 10\log B$ (B 是 26dB 發射頻寬，單位 MHz) 之較小者。	
操作於 5.725G-5.850G 頻段者	
最大傳導輸出功率應小於 1W。	

9.2. 測試方法

The transmitter output is connected to a power meter.

Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

9.3. 測試配置





9.4. 測試結果及數據

Temperature: 21°C

Humidity: 58%

Test Date: Feb. 24, 2017

In the 5.2G Band

Modulation Type	Channel	Frequency (MHz)	Avg Power Output (dBm)		Total Power (dBm)	Total Power (mW)	Power Limit (dBm)
			ANT A	ANT B	A+B	A+B	
802.11a	36	5180	19.96	19.25	22.63	183.22	30.00
	44	5220	19.05	18.92	22.00	158.34	30.00
	48	5240	19.73	19.34	22.55	179.87	30.00
802.11an HT20	36	5180	19.81	19.15	22.50	177.94	30.00
	44	5220	19.66	19.21	22.45	175.84	30.00
	48	5240	19.72	19.25	22.50	177.90	30.00
802.11an HT40	38	5190	17.05	16.21	19.66	92.48	30.00
	46	5230	19.91	19.15	22.56	180.17	30.00
802.11ac VHT20	36	5180	19.89	19.23	22.58	181.25	30.00
	44	5220	19.75	19.3	22.54	179.52	30.00
	48	5240	19.75	19.33	22.56	180.11	30.00
802.11ac VHT40	38	5190	17.13	16.36	19.77	94.89	30.00
	46	5230	19.96	19.22	22.62	182.64	30.00
802.11ac VHT80	42	5210	14.13	13.05	16.63	46.07	30.00

In the 5.8G Band

Modulation Type	Channel	Frequency (MHz)	Avg Power Output (dBm)		Total Power (dBm)	Total Power (mW)	Power Limit (dBm)
			ANT A	ANT B	A+B	A+B	
802.11a	149	5745	19.49	19.5	22.51	178.05	30.00
	157	5785	19.05	19.1	22.09	161.64	30.00
	165	5825	19.5	19.29	22.41	174.04	30.00
802.11an HT20	149	5745	19.39	19.32	22.37	172.40	30.00
	157	5785	19.01	19.02	22.03	159.42	30.00
	165	5825	19.22	19.44	22.34	171.46	30.00
802.11an HT40	151	5755	19.61	19.58	22.61	182.19	30.00
	159	5795	19.51	19.24	22.39	173.28	30.00
802.11ac VHT20	149	5745	19.44	19.45	22.46	176.01	30.00
	157	5785	19.07	19.1	22.10	162.01	30.00
	165	5825	19.3	19.5	22.41	174.24	30.00
802.11ac VHT40	151	5755	19.68	19.65	22.68	185.15	30.00
	159	5795	19.57	19.33	22.46	176.28	30.00
802.11ac VHT80	155	5775	17.55	17.08	20.33	107.94	30.00



10. 最大功率頻譜密度

10.1. 適用標準

依照國家通訊傳播委員會低功率射頻電機技術規範(4.7.3)節功率限制規定如下:

操作於 5.15G-5.25G 頻段者	
☐	供戶外操作使用：在任何 1MHz 頻帶中最大功率頻譜密度應小於或等於 17dBm。
☒	供室內操作使用：在任何 1MHz 頻帶中最大功率頻譜密度應小於或等於 17dBm。
☐	供固定式點對點操作使用：在任何 1MHz 頻帶中最大功率頻譜密度應小於或等 17dBm。
☐	供用戶端裝置(Client Device)操作使用：在任何 1MHz 頻帶中最大功率頻譜密度應小於或等於 11dBm。
操作於 5.25G-5.35G 與 5.470G-5.725G 頻段者 在任何 1MHz 頻帶中最大功率頻譜密度應小於或等於 11Bm。	
操作於 5.725G-5.850G 頻段者 在任何 500KHz 頻帶中最大功率頻譜密度應小於或等於 30Bm。	

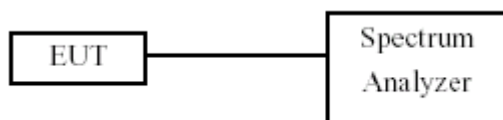


10.2.測試方法

依照KDB 789033 D02 General UNII Test Procedures New Rules測試方法如下

For 5150~5250 MHz, 5250~5350 MHz, 5470~5725 MHz	
☒	Method SA-1 1. Set RBW = 1 MHz, VBW = 3 MHz, Sweep time = auto, Detector = RMS. 2. Trace average 100 traces. 3. Use the peak marker function to determine the maximum amplitude level.
☐	Method SA-2 Alternative 1. Set RBW = 1 MHz, VBW = 3 MHz, Detector = RMS. 2. Set sweep time $\geq 10 * (\text{number of points in sweep}) * (\text{total on/off period of the transmitted signal})$. 3. Perform a single sweep. 4. Use the peak marker function to determine the maximum amplitude level. 5. Add $10 \log(1/x)$, where x is the duty cycle.
For 5725~5850 MHz	
☒	Method SA-1 1. Set RBW = 1 MHz, VBW = 3 MHz, Sweep time = auto, Detector = RMS. 2. Trace average 100 traces. 3. Use the peak marker function to determine the maximum amplitude level. 4. Add $10 \log(500\text{KHz}/1000\text{KHz})$
☐	Method SA-2 Alternative 1. Set RBW = 1 MHz, VBW = 3 MHz, Detector = RMS. 2. Set sweep time $\geq 10 * (\text{number of points in sweep}) * (\text{total on/off period of the transmitted signal})$. 3. Perform a single sweep. 4. Use the peak marker function to determine the maximum amplitude level. 5. Add $10 \log(1/x)$, where x is the duty cycle 6. Add $10 \log(500\text{KHz}/1000\text{KHz})$

10.3.測試配置





10.4. 測試結果及數據

Temperature: 21°C

Humidity: 58%

Test Date: Feb. 24, 2017

In the 5.2G Band

Modulation Type	CH	Freq. (MHz)	Meas PPSS (dBm/MHz)		Sum chain (dBm)	Duty Cycle CF(dB)	Total Corr'd PPSS (dBm/MHz)	PPSS Limit (dBm/MHz)
			ANT A	ANT B				
802.11a	36	5180	7.74	7.37	10.57	0.17	10.74	15.99
	44	5220	8.33	7.64	11.01	0.17	11.18	15.99
	48	5240	8.15	7.96	11.07	0.17	11.24	15.99
802.11ac VHT20	36	5180	7.70	7.18	10.46	0.20	10.66	15.99
	44	5220	8.00	7.63	10.83	0.20	11.03	15.99
	48	5240	8.04	7.46	10.77	0.20	10.97	15.99
802.11ac VHT40	38	5190	1.64	1.28	4.47	0.41	4.88	15.99
	46	5230	4.90	4.26	7.60	0.41	8.01	15.99
802.11ac VHT80	42	5210	-4.32	-5.35	-1.79	0.72	-1.07	15.99

In the 5.8G Band

Modulation Type	CH	Freq. (MHz)	Meas PPSS (dBm/MHz)		Sum chain (dBm)	Duty Cycle CF(dB)	10log (500KHz/RBW) CF (dB)	Total Corr'd PPSS (dBm/MHz)	PPSS Limit (dBm/MHz)
			ANT A	ANT B					
802.11a	149	5745	7.51	6.85	10.2	0.17	-3.01	7.36	28.99
	157	5785	5.45	6.43	8.98	0.17	-3.01	6.14	28.99
	165	5825	8.23	6.37	10.4	0.17	-3.01	7.57	28.99
802.11ac VHT20	149	5745	4.43	7.91	9.52	0.20	-3.01	6.71	28.99
	157	5785	4.49	7.64	9.35	0.20	-3.01	6.54	28.99
	165	5825	5.17	7.49	9.49	0.20	-3.01	6.68	28.99
802.11ac VHT40	155	5755	1.51	4.31	6.14	0.41	-3.01	3.54	28.99
	159	5795	1.15	4.78	6.34	0.41	-3.01	3.74	28.99
802.11ac VHT80	155	5775	-5.08	-1.53	0.06	0.72	-3.01	-2.23	28.99

備註：繪圖資料請參考下頁。

10.5. 結果判定

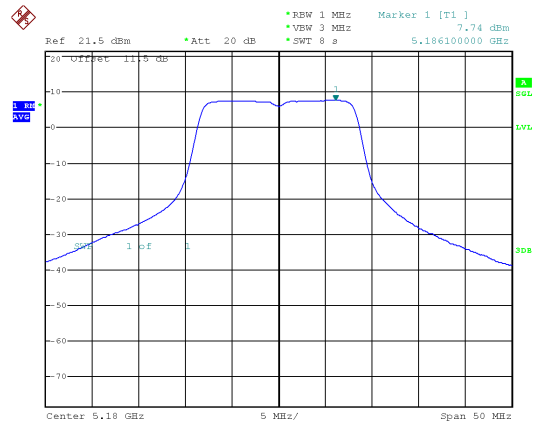
高、中、低頻段的數值皆低於限制值要求，合乎標準規定。



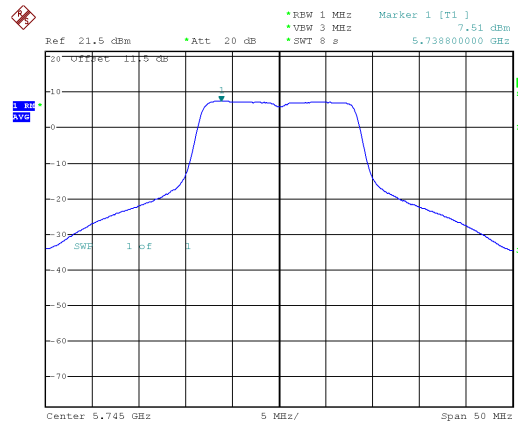
ANT A:

Modulation Standard: 802.11a

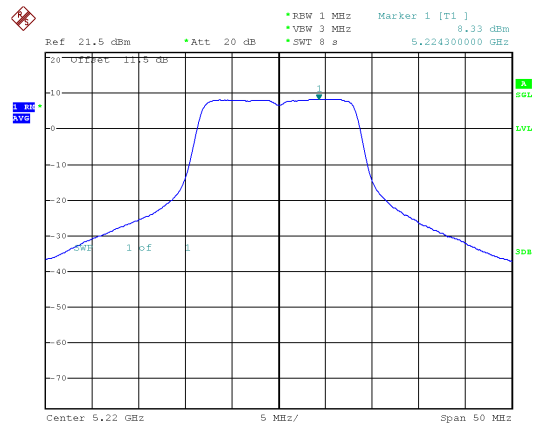
CH36



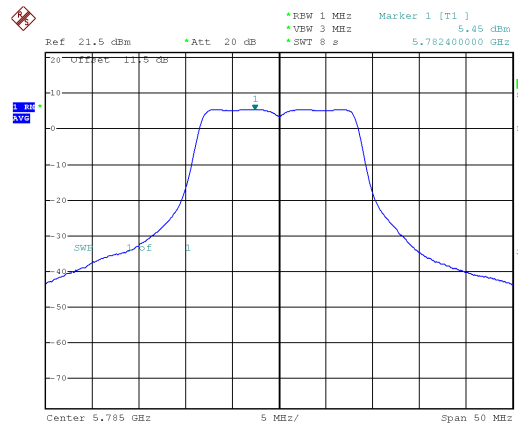
CH149



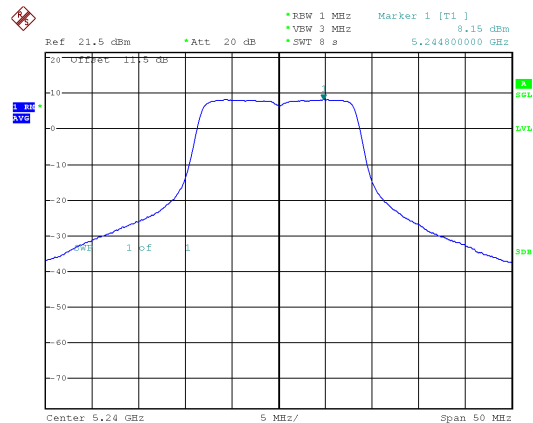
CH44



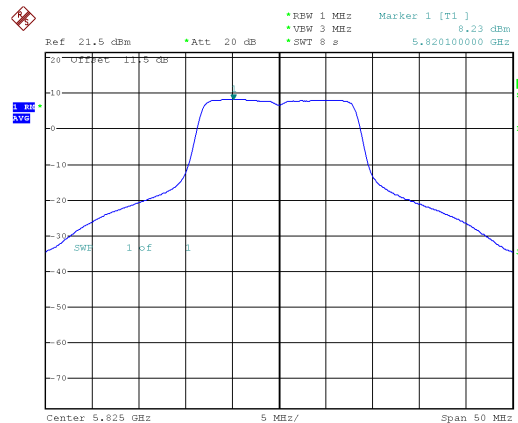
CH157



CH48



CH165

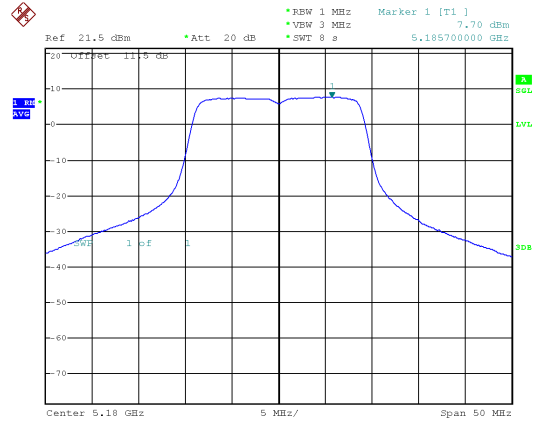




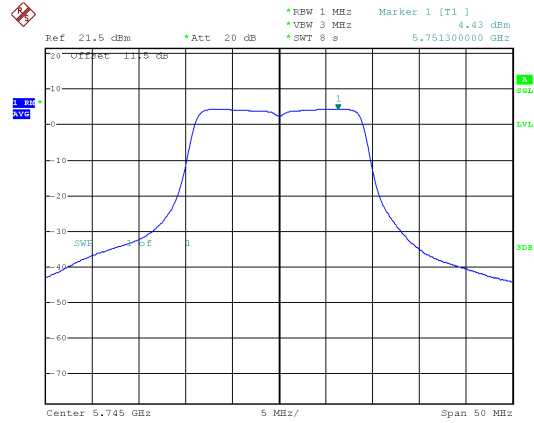
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Modulation Standard: 802.11ac VHT20

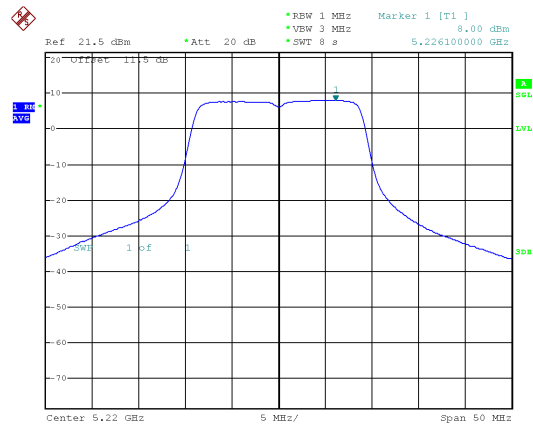
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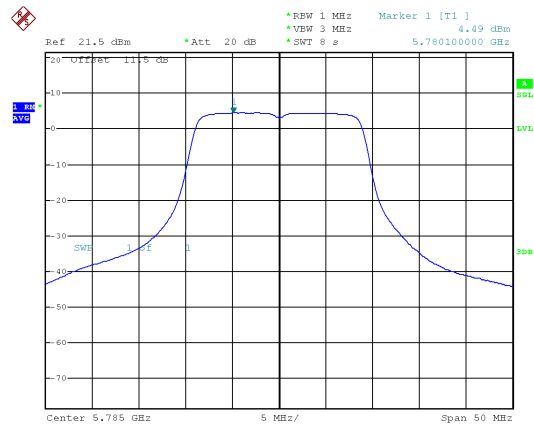
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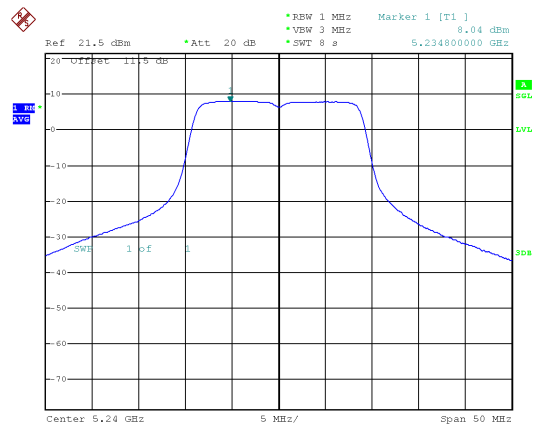
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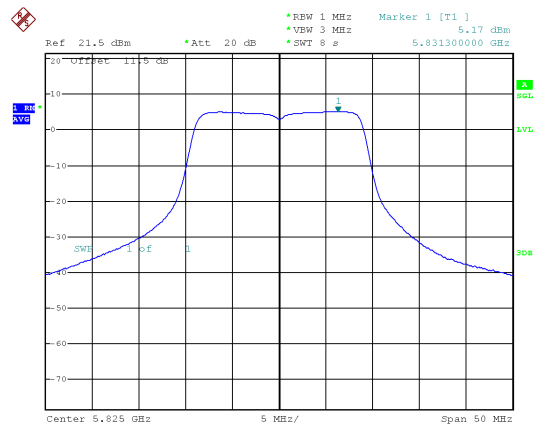
CH157



CH48



CH165

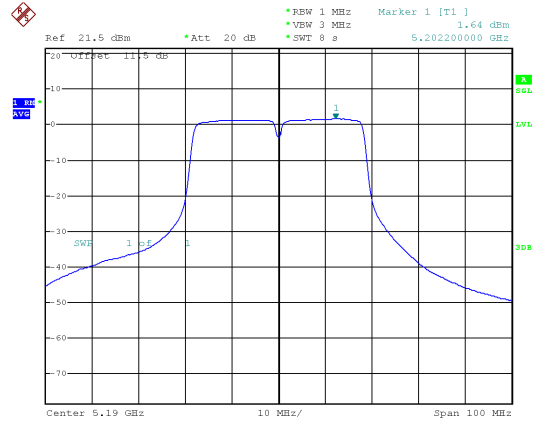




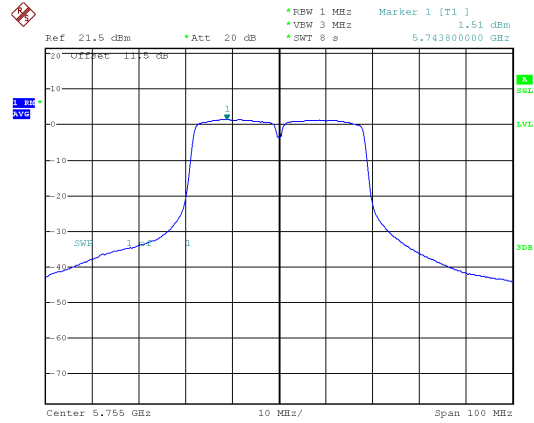
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Modulation Standard: 802.11ac VHT40

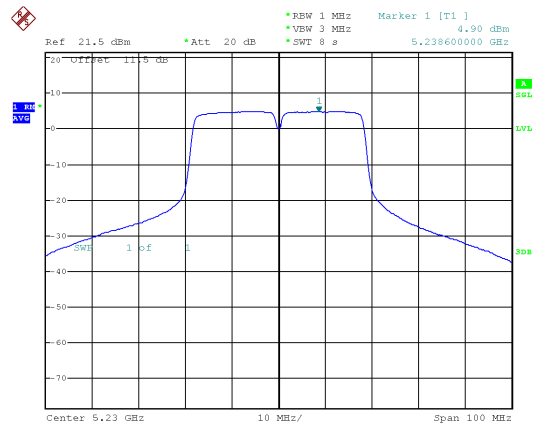
CH38



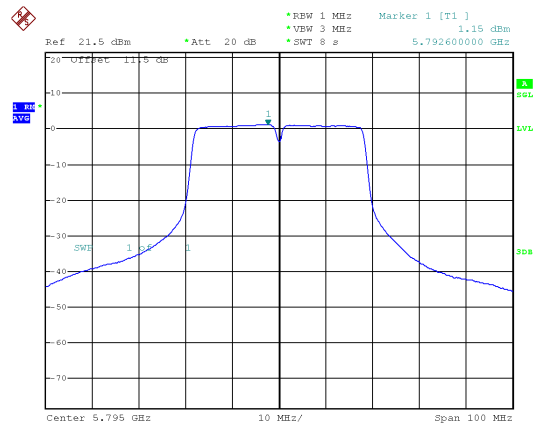
CH151



CH46



CH159

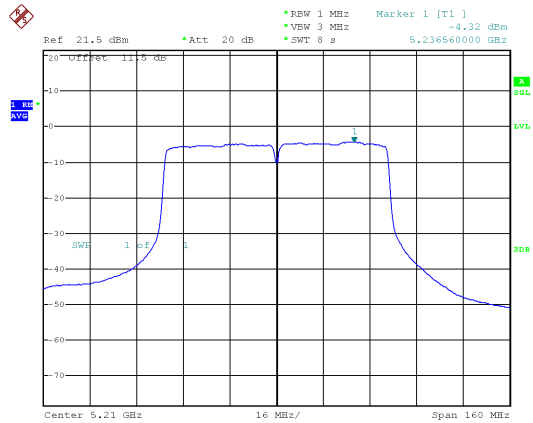




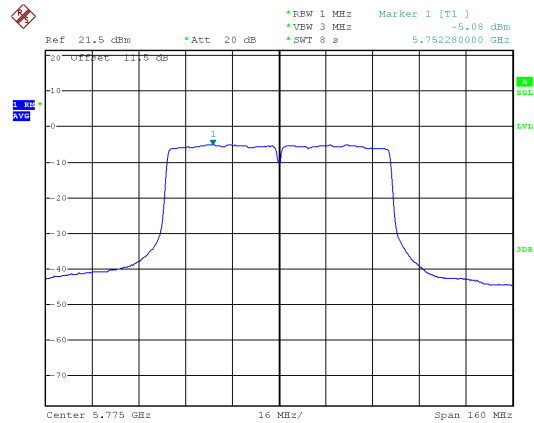
ANT A:

Modulation Standard: 802.11ac VHT80

CH42



CH155

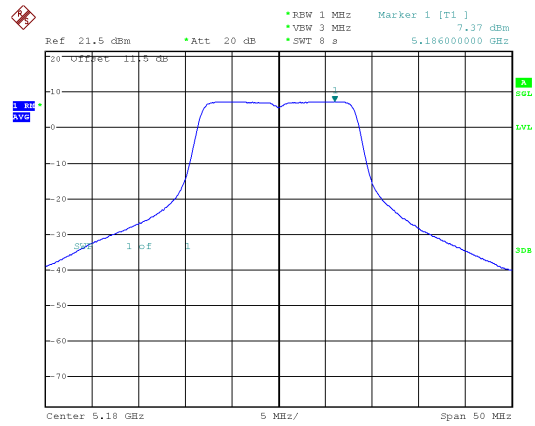




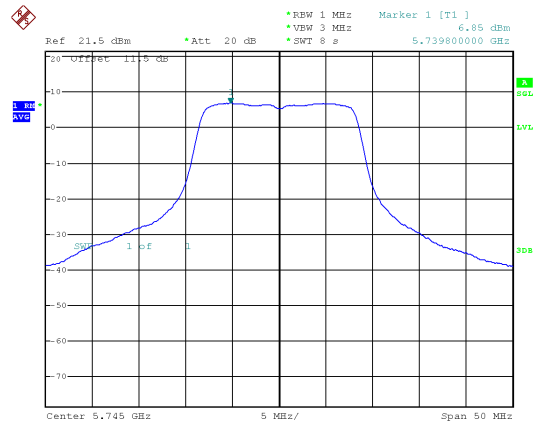
ANT B:

Modulation Standard: 802.11a

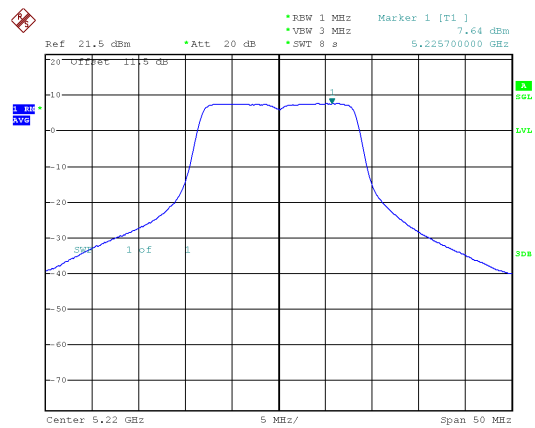
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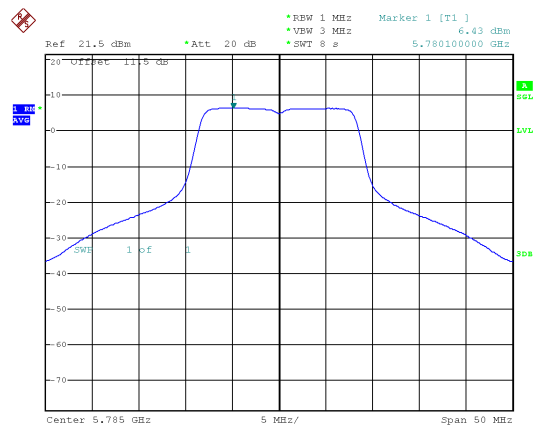
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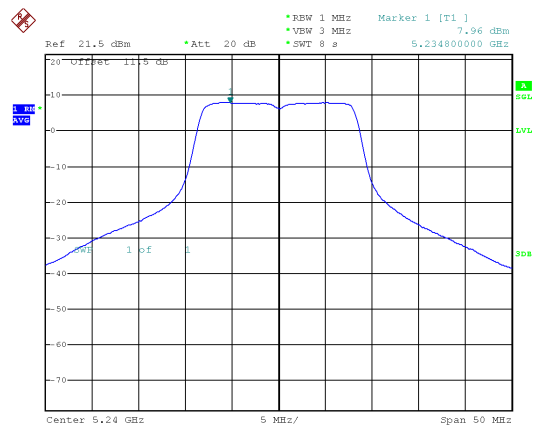
CH44



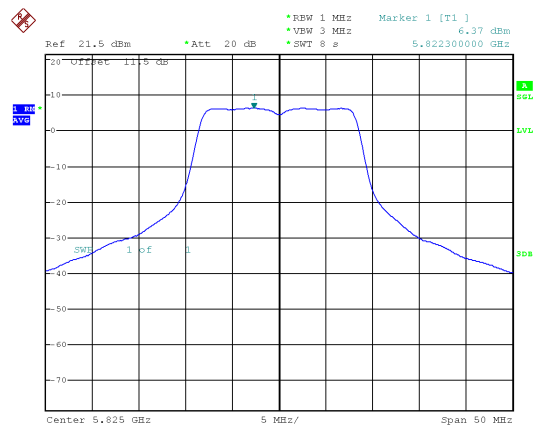
CH157



CH48



CH165

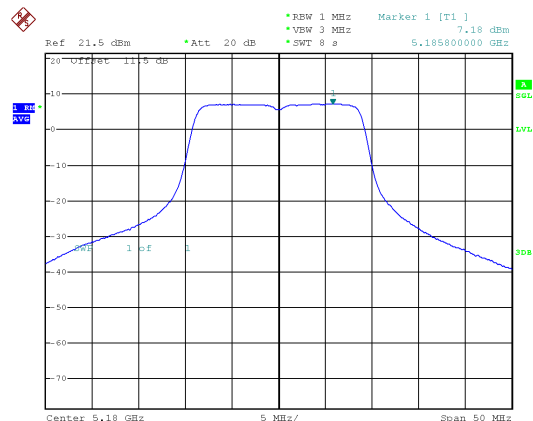




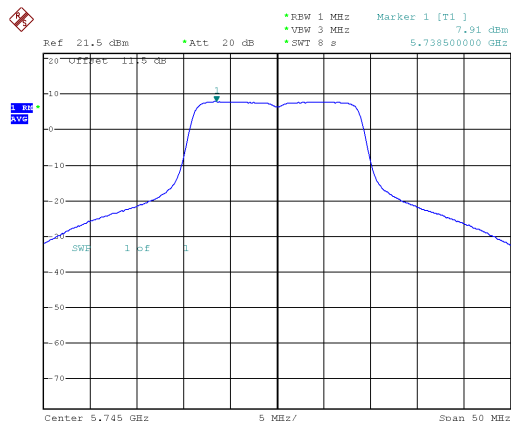
ANT B:

Modulation Standard: 802.11ac VHT20

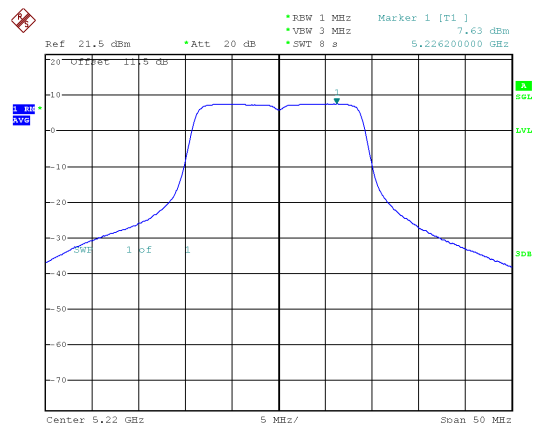
CH36



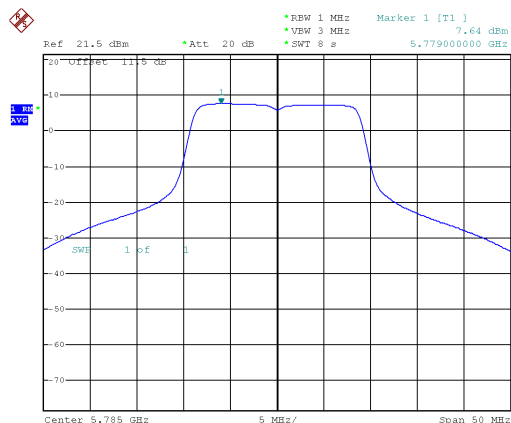
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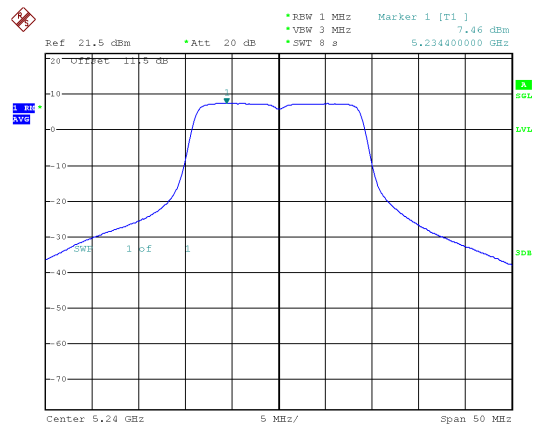
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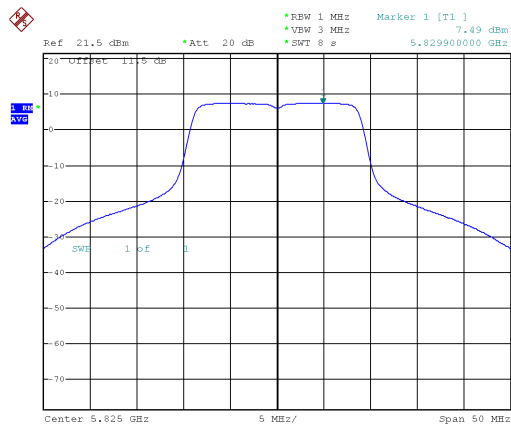
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CH48



CH165

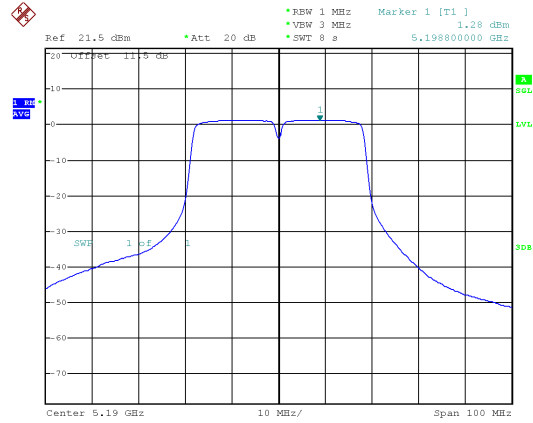




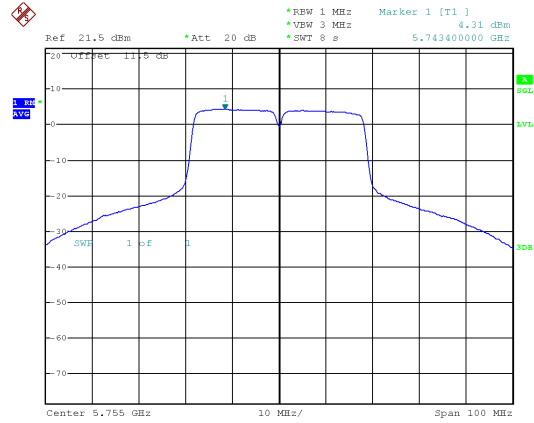
ANT B:

Modulation Standard: 802.11ac VHT40

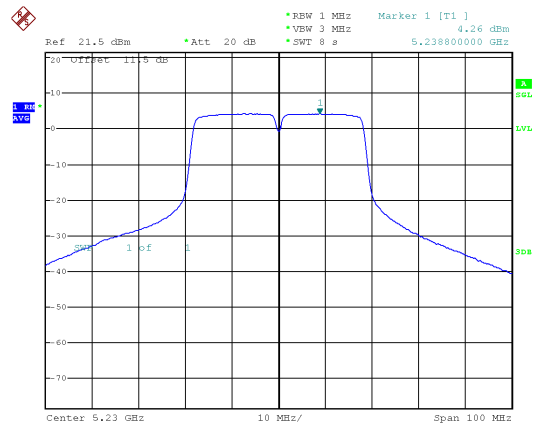
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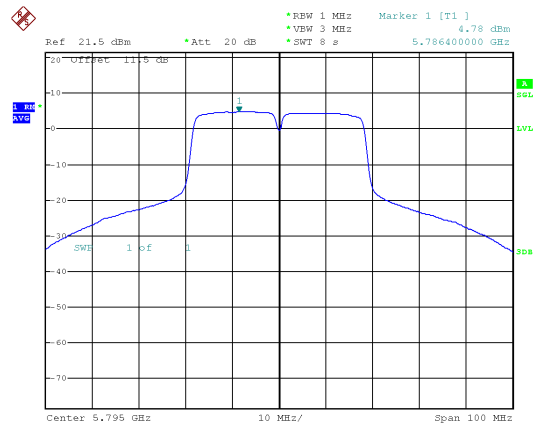
CH151



CH46



CH159

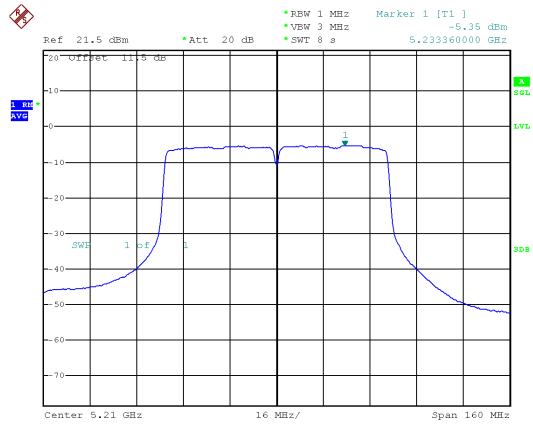




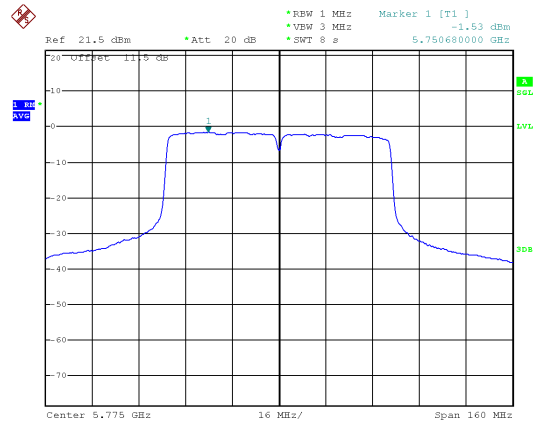
ANT B:

Modulation Standard: 802.11ac VHT80

CH42



CH155





11. 頻率容許差度

11.1. 適用標準

應維持在主波頻率之 $\pm 0.01\%$ 以內。在正常供應電壓下，溫度在攝氏 -20°C 至 50°C 間變化；及在 20°C 下，供應電壓在額定值之 $\pm 15\%$ 內變化時。以電池作業者，應以新電池測試，須符合第 5.18 節之規定。

11.2. 測試方法

將 EUT 放置在可控制溫度和濕度設備室中。

發射機輸出連接到頻譜分析儀。

打開 EUT 並將其輸出耦合到頻譜分析儀。

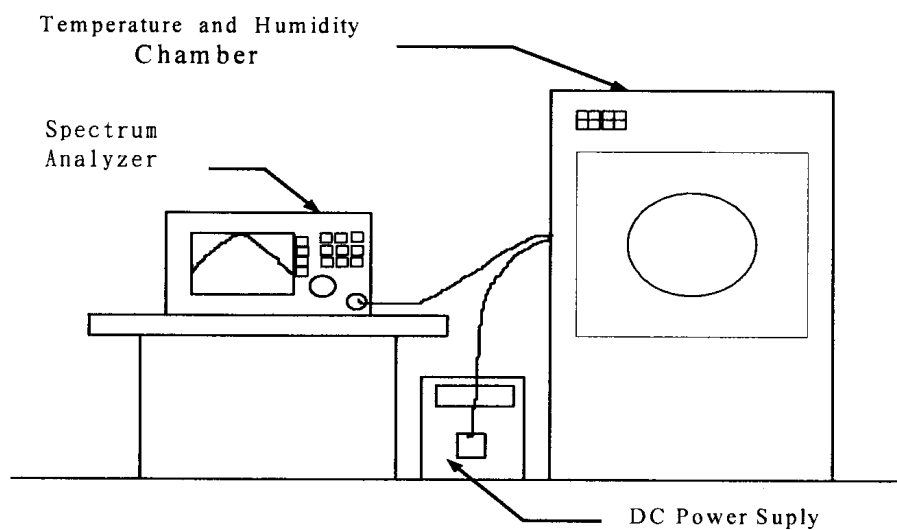
關閉 EUT 並將可控制溫度和濕度設備室設置為指定的最高溫度。

等待足夠的時間（約 30 分鐘）使可控制溫度和濕度設備室的溫度穩定，打開 EUT 並在 2 分鐘，5 分鐘和 10 分鐘後測量操作頻率。

重複步驟 2 和 3，將可控制溫度和濕度設備室設置為最低溫度。

使可控制溫度和濕度設備室在 $+20^{\circ}\text{C}$ 下穩定至少 30 分鐘。然後在 EUT 上將電源電壓從 85%調節到 115%並記錄頻率

11.3. 測試架構





11.4. 測試結果及數據

Operating frequency: 5755 MHz							
Temperature (°C)	Power supply (V)	2 minute		5 minute		10 minute	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	102	5754.9714	-0.000497	5754.9694	-0.000531	5755.0004	0.000066
	120	5755.0726	0.001262	5755.0963	0.001673	5755.0133	0.002311
	138	5755.0446	0.000776	5754.9878	-0.000212	5754.9090	-0.015804
40	102	5754.9698	-0.000524	5755.0310	0.000539	5755.0694	0.012062
	120	5755.0541	0.000940	5754.9502	-0.000865	5754.9042	-0.016646
	138	5755.0843	0.001465	5755.0129	0.000225	5754.9852	-0.002578
30	102	5754.9089	-0.001584	5755.0954	0.001658	5755.0238	0.004129
	120	5755.0043	0.000075	5755.0131	0.000227	5754.9327	-0.011698
	138	5755.0844	0.001466	5754.9142	-0.001491	5755.0863	0.014987
20	102	5755.0557	0.000968	5755.0958	0.001664	5754.9868	-0.002297
	120	5754.9857	-0.000249	5754.9123	-0.001523	5755.0586	0.010189
	138	5755.0360	0.000625	5754.9093	-0.001577	5755.0597	0.010377
10	102	5755.0435	0.000756	5754.9430	-0.000990	5755.0782	0.013589
	120	5755.0063	0.000110	5755.0287	0.000499	5755.0914	0.015885
	138	5755.0621	0.001079	5755.0435	0.000756	5755.0368	0.006393
0	102	5754.9442	-0.000970	5755.0067	0.000116	5755.0699	0.012142
	120	5755.0959	0.001666	5755.0991	0.001723	5754.9015	-0.017108
	138	5754.9686	-0.000546	5754.9298	-0.001220	5755.0871	0.015128
-10	102	5755.0807	0.001401	5755.0563	0.000978	5754.9602	-0.006923
	120	5755.0760	0.001321	5754.9668	-0.000576	5755.0902	0.015674
	138	5754.9363	-0.001108	5755.0340	0.000590	5754.9437	-0.009778
-20	102	5755.0429	0.000746	5754.9618	-0.000663	5755.0245	0.004264
	120	5755.0862	0.001498	5754.9662	-0.000587	5755.0368	0.006386
	138	5754.9390	-0.001060	5754.9051	-0.001650	5755.0795	0.013817
-30	102	5754.9045	-0.001659	5754.9599	-0.000696	5755.0327	0.005682
	120	5754.9218	-0.001359	5754.9261	-0.001285	5754.9281	-0.012488
	138	5754.9243	-0.001316	5755.0270	0.000469	5755.0139	0.002417



12. 電波暴露量之評估

12.1. 適用標準

依據國家通訊傳播委員會低功率射頻電機技術規範 5.20 節之(5.20.2)規定，若受測物於正常操作模式下，其發射機距離人體 20 公分以上者，可測試最大暴露允許值(Maximum Permissible Exposure, MPE)以證明其符電波暴露量之要求。限制值如下：

(1) 職業性/可控制之暴露

頻率範圍 (MHz)	電場強度 (V/m)	磁場強度 (A/m)	功率密度 (mW/cm ²)	平均時間 (minutes)
0.3-3.0	614	1.63	*100	6
3-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500	-----	-----	f/300	6
1,500-100,000	-----	-----	5.0	6

註 1：標記*表平面波等效功率密度。

註 2：f 表測試頻率，單位：百萬赫(MHz)。

(2) 一般人/不可控制之暴露

頻率範圍 (MHz)	電場強度 (V/m)	磁場強度 (A/m)	功率密度 (mW/cm ²)	平均時間 (minutes)
0.3-3.0	614	1.63	*100	30
3-30	1842/f	4.89/f	*180/f ²	30
30-300	27.5	0.073	1.0	30
300-1,500	-----	-----	f/1500	30
1,500-100,000	-----	-----	1.0	30

註 1：標記*表平面波等效功率密度。

註 2：f 表測試頻率，單位：百萬赫(MHz)。



12.2. 電波暴露量之評估結果及數據

Temperature: 21°C

Humidity: 58%

Test Date: Feb. 24, 2017

Modulation Mode	Frequency band (MHz)	Max. Conducted output power(dBm)	Antenna Gain(dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
802.11a (6Mbps)	5150-5250	22.63	4	20	0.0916	1
	5725-5850	22.51	4	20	0.0890	1
802.11n HT20 (6.5Mbps)	5150-5250	22.50	4	20	0.0889	1
	5725-5850	22.37	4	20	0.0862	1
802.11n HT40 (13.5Mbps)	5150-5250	22.56	4	20	0.0900	1
	5725-5850	22.61	4	20	0.0910	1
802.11n HT20 (6.5Mbps)	5150-5250	22.58	4	20	0.0906	1
	5725-5850	22.46	4	20	0.0880	1
802.11n HT40 (13.5Mbps)	5150-5250	22.62	4	20	0.0913	1
	5725-5850	22.68	4	20	0.0925	1
802.11n HT80 (29.Mbps)	5150-5250	16.63	4	20	0.0230	1
	5725-5850	20.33	4	20	0.0539	1

12.3. 結果判定

高、中、低頻段的電波暴露量皆低於限制值，合乎標準規定。



13. 限制使用之頻帶

Only spurious emissions are permitted in any of the frequency bands listed below:

頻率(兆赫)	頻率(兆赫)	頻率(兆赫)
0.090 - 0.110	240.00 - 285.00	3332.0 - 3339.0
0.490 - 0.510	322.00 - 335.40	3345.8 - 3358.0
2.172 - 2.198	399.90 - 410.00	3500.0 - 4400.0
3.013 - 3.033	485.00 - 510.00	4500.0 - 5250.0
4.115 - 4.198	608.00 - 614.00	5350.0 - 5460.0
5.670 - 5.690	703.00 - 748.00	7250.0 - 7750.0
6.200 - 6.300	758.00 - 803.00	8025.0 - 8500.0
8.230 - 8.400	825.00 - 915.00	9000.0 - 9200.0
12.265 - 12.600	930.00 - 1240.0	9300.0 - 9500.0
13.340 - 13.430	1300.0 - 1427.0	10600 - 12700
14.965 - 15.020	1435.0 - 1626.5	13250 - 13400
16.700 - 16.755	1660.0 - 1770.0	14470 - 14500
19.965 - 20.020	1805.0 - 1865.0	15350 - 16200
25.500 - 25.700	1885.0 - 1900.0	17700 - 21400
37.475 - 38.275	1905.0 - 1985.0	22010 - 23120
73.500 - 75.400	2015.0 - 2025.0	23600 - 24000
108.00 - 138.00	2125.0 - 2165.0	31200 - 31800
149.90 - 150.05	2200.0 - 2300.0	36430 - 36500
156.70 - 156.90	2310.0 - 2390.0	38600 以上
162.01 - 167.17	2483.5 - 2900.0	
167.72 - 173.20	3260.0 - 3267.0	