

NCC

低功率射頻電機型式試驗報告

產品名稱: AX3000 Gigabit Wi-Fi 6 路由器
型號: Archer AX50
廠牌: tp-link
申請者: 聯洲國際有限公司
申請者地址: 新北市板橋區中山路一段 156 號 13 樓
測試標準: LP0002 (107 年版)
參考法規: ANSI C63.10-2013
測試結果: 符合
測試日期: 2019.04.25 ~ 2019.12.20
發行日期: 2019.12.20

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本測試報告僅對實驗室所受測之樣品負責

本測試報告非經本公司同意不可局部複製使用

修訂紀錄

報告編號	版本	描述	發行日期
1912TW0111-T1	1.0	Original Report	2019-12-20

備註：本報告是基於 MRT 原始報告 1905TW0114-T1 增加 Beam-Forming 功能及測試數據，
Beam-forming 功能通過軟件開通，不改變硬件，不影響原 CDD 模式測試結果。

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1. 一般資訊

申請者	聯洲國際有限公司
申請者地址	新北市板橋區中山路一段 156 號 13 樓
製造商	普聯技術有限公司
製造商地址	深圳市南山區深南路科技園工業廠房 24 棟南段 1 層、3-5 層、28 棟北段 1-4 層
實驗室	台灣曼瑞檢測科技有限公司
實驗室地址	33377 台灣桃園市龜山區復興二路 38 號
實驗室資訊	1. MRT facility is a FCC registered (Reg. No. 291082) test facility with the site description report on file and is designated by the FCC as an Accredited Test Firm. 2. MRT facility is an IC registered (MRT Reg. No. 21723) test laboratory with the site description on file at Industry Canada. 3. MRT Lab is accredited to ISO 17025 by the Taiwan Accreditation Foundation (TAF Cert. No. 3261) in EMC, Telecommunications and Radio testing for FCC, Industry Taiwan, EU and TELEC Rules.
實驗室測試環境條件	溫度 (°C) : 20-35 / 濕度 (%RH) : 30-65

2. 產品資訊

2.1. 待測物裝置資料

產品名稱	AX3000 Gigabit Wi-Fi 6 路由器
產品型號	Archer AX50
待測物額定電壓	AC adapter input
無線規格	802.11b/g/n/ax
頻率範圍	802.11b/g/n-HT20 /ax-HE20: 2412 ~ 2462MHz 802.11n-HT40 /ax-HE40: 2422 ~ 2452MHz
通道數量	802.11b/g/n-HT20 /ax-HE20: 11 802.11n-HT40 /ax-HE40: 7
調變模式	DSSS for IEEE 802.11 b, OFDM for IEEE 802.11g/n, OFDMA for IEEE 802.11ax
傳輸速率	802.11b: 1/2/5.5/11Mbps 802.11g: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 300Mbps 802.11ax: up to 574Mbps
頻道控制	Auto
附件	
電源供應器	MODEL: GQ24-120200-AU INPUT: 100 - 240V ~ 50/60Hz 1.0A Max. OUTPUT: DC 12.0V 2.0A

2.2. 通道清單

802.11b/g/n-HT20/ax-HE20

Channel	Frequency	Channel	Frequency	Channel	Frequency
01	2412 MHz	02	2417 MHz	03	2422 MHz
04	2427 MHz	05	2432 MHz	06	2437 MHz
07	2442 MHz	08	2447 MHz	09	2452 MHz
10	2457 MHz	11	2462 MHz	--	--

802.11n-HT40/ax-HE40

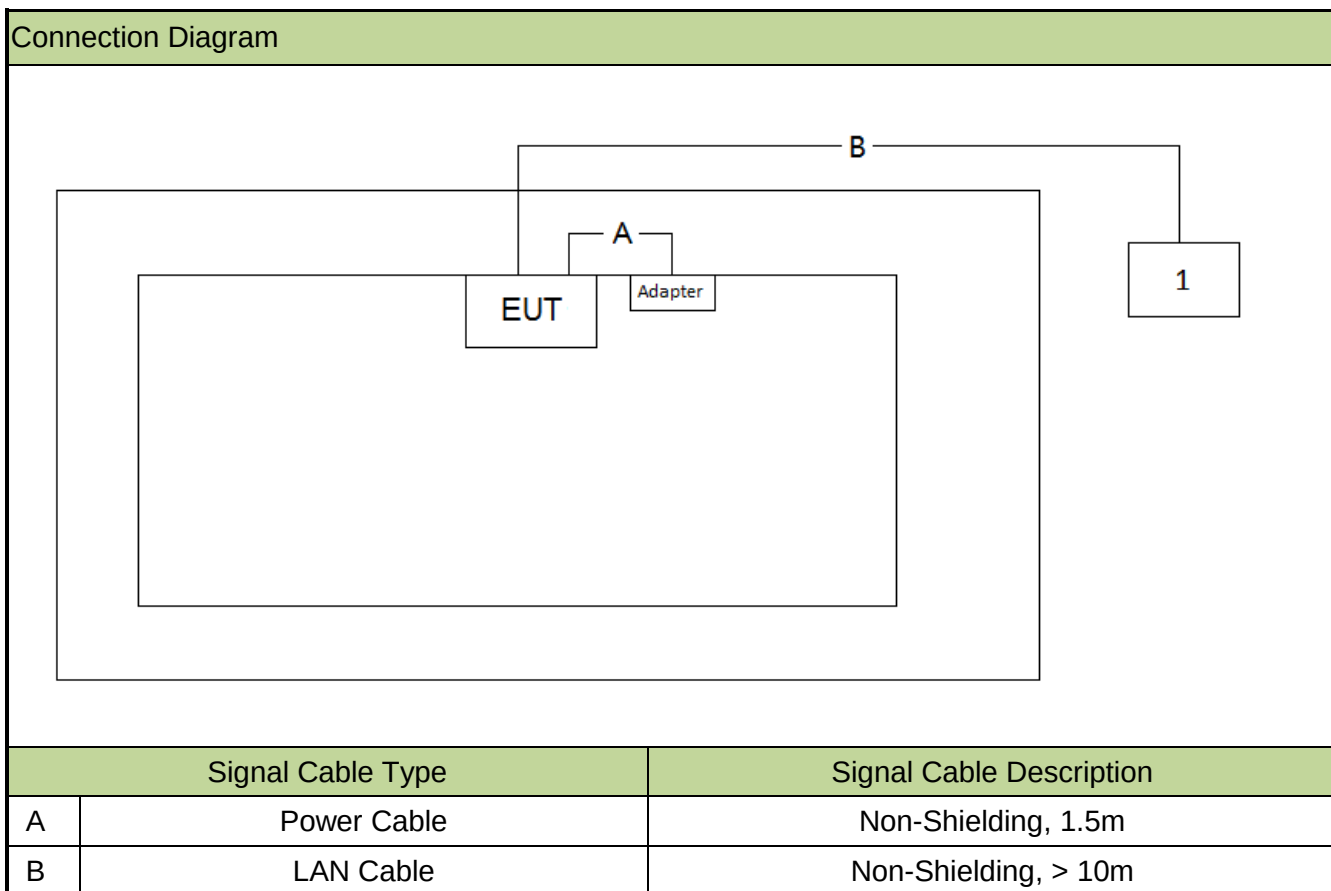
Channel	Frequency	Channel	Frequency	Channel	Frequency
03	2422 MHz	04	2427 MHz	05	2432 MHz
06	2437 MHz	07	2442 MHz	08	2447 MHz
09	2452 MHz	--	--	--	--

2.3. 測試模式

Mode 1: 發射器 802.11ax-HE20 (MCS0) (Beam-Forming mode)

Mode 2: 發射器 802.11ax-HE40 (MCS0) (Beam-Forming mode)

2. 4. 測試系統組合圖



2. 5. 測試周邊

Item	周邊	Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook	Lenovo	E430c	N/A	Non-Shielded, 1.8m

2. 6. 待測裝置測試時之典型操作程式

1.	Setup the EUT and simulators as shown on 2.4
2.	Turn on the power of all equipment.
3.	Execute "DUT_GUI.exe" program.
4.	Configure the test channel and the data rate.
5.	Start test.

3. 量測不確定度

電源傳導量測-電源線 (Conducted Emission- Power Line)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 2.53dB
電源傳導量測-通訊埠 (Conducted Emission- Impedance Stabilization Network Measurement)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 3.96dB
輻射干擾量測 (Radiated Spurious Emission)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 3.92dB (Below 30M)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 4.25dB (30M~1G)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 4.40dB (1G~18G)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 4.45dB (18G~40G)
頻率誤差量測 (Frequency Error)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 78.4\text{Hz}$
傳導功率量測 (Conducted Power)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 0.84\text{dB}$
傳導干擾量測 (Conducted Spurious Emission)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 2.65\text{ dB}$
佔用頻寬量測 (Occupied Bandwidth)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): 3.3%
溫度 / 濕度 (Temp. / Humidity)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 0.82^\circ\text{C} / \pm 3\%$
直流電源 (DC Voltage)
Measuring Uncertainty for a Level of Confidence of 95% ($U=2U_c(y)$): $\pm 0.3\%$

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

4. 測試設備明細

Conducted Emissions

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Two-Line V-Network	R&S	ENV216	MRTTWA00019	1 year	2020/03/25
Two-Line V-Network	R&S	ENV216	MRTTWA00020	1 year	2020/04/25
8-Wire ISN (T8)	R&S	ENY81	MRTTWA00018	1 year	2020/04/23
EMI Test Receiver	R&S	ESR3	MRTTWA00045	1 year	2020/03/25
溫度/Humidity Meter	TFA	35.1078.10.IT	MRTTWA00033	1 year	2020/05/20

Radiated Emissions

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
Active Loop Antenna	SCHWARZBECK	FMZB 1519B	MRTTWA00002	1 year	2020/04/29
Broadband TRILOG Antenna	SCHWARZBECK	VULB 9162	MRTTWA00001	1 year	2020/05/22
Broadband Hornantenna	SCHWARZBECK	BBHA 9120D	MRTTWA00003	1 year	2020/04/22
Breitband Hornantenna	SCHWARZBECK	BBHA 9170	MRTTWA00004	1 year	2020/04/23
Broadband Preamplifier	SCHWARZBECK	BBV 9718	MRTTWA00005	1 year	2020/04/24
Broadband Amplifier	SCHWARZBECK	BBV 9721	MRTTWA00006	1 year	2020/04/24
EMI Test Receiver	R&S	ESR3	MRTTWA00009	1 year	2020/03/25
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2020/07/30
Antenna Cable	HUBERSUHNER	SF106	MRTTWE00010	1 year	2020/06/18
溫度/Humidity Meter	TFA	35.1078.10.IT	MRTTWA00032	1 year	2020/05/20

Conducted Test Equipment

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EXA Signal Analyzer	KEYSIGHT	N9010A	MRTTWA00012	1 year	2020/07/30
EXA Signal Analyzer	KEYSIGHT	N9010B	MRTSUE06457	1 year	2020/07/19
X-Series USB Peak and Average Power Sensor	KEYSIGHT	U2021XA	MRTTWA00014	1 year	2020/04/22
溫度/Humidity Meter	TFA	35.1078.10.IT	MRTTWA00032	1 year	2020/05/20

Software	Version	Function
e3	9.160520a	EMI Test Software
EMI	Quietek	V3

5. 測試結果

產品名稱 AX3000 Gigabit Wi-Fi 6 路由器
型號 Archer AX50

章節	量測項目	限制值	測試結果	測試數據
3.10.1.2	峰值傳導輸出功率	$\leq 30.00\text{dBm}$	符合	第 5.1 章節
3.10.1.3	天線之要求	低功率射頻電機技術規範 3.10.1.3 節	符合	第 5.2 章節
2.7	輻射電場強度	低功率射頻電機技術規範 2.8 節	符合	第 5.3 章節
2.7	頻帶邊緣	$\leq 74\text{dBuV/m(Peak)}$ $\leq 54\text{dBuV/m(Average)}$	符合	第 5.4 章節

備註：由於 Beam-Forming 模式的功率設定值比 CDD 模式小，所以 Beam-Forming 模式下的傳導功率，輻射電場強度以及頻帶邊緣，並驗證了 CDD 模式下的傳導功率。

5.1. 峰值傳導輸出功率

5.1.1. 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之第 3.10.1.2(1)(C)節，操作於 2400-2483.5 MHz 之數位調變的發射器材：1 瓦(W)(含)以下。

依據國家通訊傳播委員會低功率射頻電機技術規範之第 3.10.1.3 節，天線增益限制如下：

(1) 操作於 2400 MHz～2483.5 MHz 頻段：

(A) 進行固定式點對點操作時，其發射天線之方向性增益超過6 dBi，每超過3 dBi，最大傳導輸出功率限制值應降低1 dB。

(B) 除第(A)節外，如其發射天線之方向性增益超過6dBi，應依所超過之dB數等量降低最大傳導輸出功率。

(C) 天線以多向波束發射方式(含同時發射或循序發射)將訊號導向多個接收機或接收機群組時，應符合下列規定：

(a) 非同時發射多向波束者，所有載波或頻道傳輸至所有天線陣列或陣列群之總和傳導輸出功率應符合 3.10.1.2 之功率限制值。如天線/天線陣列群之方向性增益超過 6 dBi，每超過 3 dBi，總和傳導輸出功率限制值應降低 1 dB。方向性增益值應計算如下：

(i) 方向性增益值= $10\log(\text{天線陣列之單元數目}) + \text{各單元中最高之方向性增益值}$ 。

(ii) 天線陣列間之遮蔽效應或波束干涉損失能充分佐證時，方向性增益得低於(i)計算數值。

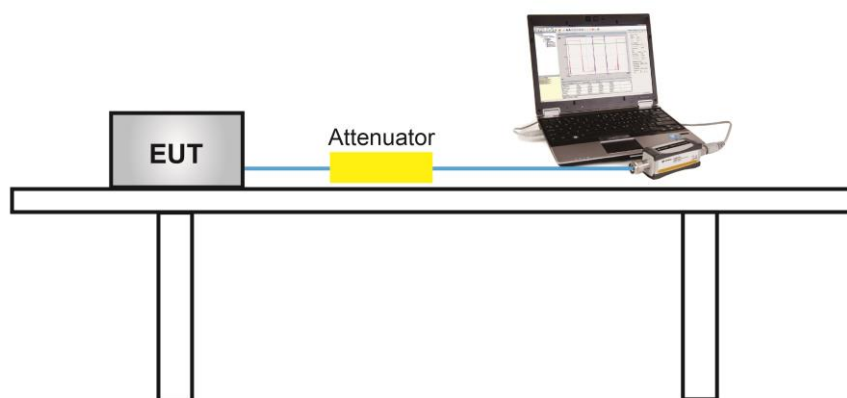
同時發射多向波束於相同或不同頻道者，其每一波束功率應符合(a)之功率限制值。如發射波束有重疊現象，功率應降低，以確保總和傳導輸出功率符合(a)之限制值。同時發射的所有波束總和傳導輸出功率不大於(a) 總和傳導輸出功率限制值加 8 dB。方向性增益值計算同(a)。

(c) 發射機之天線具備單向波束功能者，應符合(1)(A)及(3)後段之規定。

5.1.2. 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，設定頻譜分析儀之解析度頻寬大於 6dB 發射頻寬或使用峰值功率表。

5.1.3. 測試架構圖



5.1.4. 峰值傳導輸出功率測試結果

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

Pre-Test RF Output Power at various data rates for Ant 0.

Ant 0 / Ant 0+1 - 802.11ax-HE20 - Channel 06 (2437MHz)												
Date Rate	MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9	MCS 10	MCS 11
Power (dBm)	21.95	21.88	21.80	21.74	21.72	21.68	21.61	21.55	21.50	21.43	21.35	21.29

Ant 0 / Ant 0+1 - 802.11ax-HE40 - Channel 06 (2437MHz)												
Date Rate	MCS 0	MCS 1	MCS 2	MCS 3	MCS 4	MCS 5	MCS 6	MCS 7	MCS 8	MCS 9	MCS 10	MCS 11
Power (dBm)	18.87	18.85	18.80	18.76	18.67	18.62	18.54	18.47	18.33	18.32	18.26	18.21

Note: All modes of operation and data rates were investigated, so all RF test requirements shall be executed at low data rates.

待測物名稱	AX3000 Gigabit Wi-Fi 6 路由器	溫度	22 ~ 25°C
測試工程師	Kevin Ker	濕度	46 ~ 56%
測試場地	SR1	測試日期	2019/12/18
測試項目	Output Power		

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Total Average Power (dBm)	Limit (dBm)	Result
Beam-Forming Mode								
802.11ax-HE20	MCS0	01	2412	9.01	8.76	11.90	≤ 30.00	Pass
802.11ax-HE20	MCS0	02	2417	18.06	17.94	21.01	≤ 30.00	Pass
802.11ax-HE20	MCS0	03	2422	20.27	18.41	22.45	≤ 30.00	Pass
802.11ax-HE20	MCS0	06	2437	21.95	22.56	25.28	≤ 30.00	Pass
802.11ax-HE20	MCS0	09	2452	22.52	21.58	25.09	≤ 30.00	Pass
802.11ax-HE20	MCS0	10	2457	21.06	21.09	24.09	≤ 30.00	Pass
802.11ax-HE20	MCS0	11	2462	10.65	11.00	13.84	≤ 30.00	Pass
802.11ax-HE40	MCS0	03	2422	16.09	15.65	18.89	≤ 30.00	Pass
802.11ax-HE40	MCS0	04	2427	16.10	15.78	18.95	≤ 30.00	Pass
802.11ax-HE40	MCS0	06	2437	18.87	18.46	21.68	≤ 30.00	Pass
802.11ax-HE40	MCS0	08	2447	18.02	15.73	20.03	≤ 30.00	Pass
802.11ax-HE40	MCS0	09	2452	17.59	16.27	19.99	≤ 30.00	Pass

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

待測物名稱	AX3000 Gigabit Wi-Fi 6 路由器	溫度	22 ~ 25°C
測試工程師	Kevin Ker	濕度	46 ~ 56%
測試場地	SR1	測試日期	2019/12/18
測試項目	Output Power		

Verify CDD Mode Conducted Power

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Total Average Power (dBm)	Limit (dBm)	Result
802.11b	1Mbps	01	2412	25.32	--	25.32	≤ 30.00	Pass
802.11b	1Mbps	06	2437	25.00	--	25.00	≤ 30.00	Pass
802.11b	1Mbps	11	2462	25.82	--	25.82	≤ 30.00	Pass
802.11g	6Mbps	01	2412	20.11	20.44	23.29	≤ 30.00	Pass
802.11g	6Mbps	02	2417	21.38	21.53	24.47	≤ 30.00	Pass
802.11g	6Mbps	03	2422	23.88	22.45	26.23	≤ 30.00	Pass
802.11g	6Mbps	06	2437	25.42	25.16	28.30	≤ 30.00	Pass
802.11g	6Mbps	09	2452	23.89	23.55	26.73	≤ 30.00	Pass
802.11g	6Mbps	10	2457	22.07	21.88	24.99	≤ 30.00	Pass
802.11g	6Mbps	11	2462	20.27	20.34	23.32	≤ 30.00	Pass
802.11n-HT20	MCS0	01	2412	20.04	21.05	23.58	≤ 30.00	Pass
802.11n-HT20	MCS0	02	2417	21.39	21.32	24.37	≤ 30.00	Pass
802.11n-HT20	MCS0	03	2422	22.76	21.72	25.28	≤ 30.00	Pass
802.11n-HT20	MCS0	06	2437	25.79	24.72	28.30	≤ 30.00	Pass
802.11n-HT20	MCS0	09	2452	24.60	24.30	27.46	≤ 30.00	Pass
802.11n-HT20	MCS0	10	2457	22.61	22.51	25.57	≤ 30.00	Pass
802.11n-HT20	MCS0	11	2462	19.92	19.89	22.92	≤ 30.00	Pass
802.11n-HT40	MCS0	03	2422	16.95	17.90	20.46	≤ 30.00	Pass
802.11n-HT40	MCS0	04	2427	19.80	19.30	22.57	≤ 30.00	Pass
802.11n-HT40	MCS0	06	2437	18.95	20.51	22.81	≤ 30.00	Pass
802.11n-HT40	MCS0	08	2447	21.05	20.69	23.88	≤ 30.00	Pass
802.11n-HT40	MCS0	09	2452	18.71	17.77	21.28	≤ 30.00	Pass

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 Average Power (dBm)	Ant 1 Average Power (dBm)	Total Average Power (dBm)	Limit (dBm)	Result
802.11ax-HE20	MCS0	01	2412	17.09	16.85	19.98	≤ 30.00	Pass
802.11ax-HE20	MCS0	02	2417	19.88	19.37	22.64	≤ 30.00	Pass
802.11ax-HE20	MCS0	03	2422	22.93	22.87	25.91	≤ 30.00	Pass
802.11ax-HE20	MCS0	06	2437	25.22	26.28	28.79	≤ 30.00	Pass
802.11ax-HE20	MCS0	09	2452	24.13	23.20	26.70	≤ 30.00	Pass
802.11ax-HE20	MCS0	10	2457	21.64	21.30	24.48	≤ 30.00	Pass
802.11ax-HE20	MCS0	11	2462	19.44	19.69	22.58	≤ 30.00	Pass
802.11ax-HE40	MCS0	03	2422	16.93	16.47	19.72	≤ 30.00	Pass
802.11ax-HE40	MCS0	04	2427	17.05	17.63	20.36	≤ 30.00	Pass
802.11ax-HE40	MCS0	06	2437	19.41	18.97	22.21	≤ 30.00	Pass
802.11ax-HE40	MCS0	08	2447	18.11	18.69	21.42	≤ 30.00	Pass
802.11ax-HE40	MCS0	09	2452	17.14	17.12	20.14	≤ 30.00	Pass

Note: For 802.11b

Total Average Power (dBm) = Ant 0 Average Power (dBm)

For 802.11g/n-HT20/n-HT40/ax-HE20/ax-HE40

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

5.2. 天線之要求

5.2.1. 適用標準

低功率射頻電機之發射機或收發信機所使用之天線，應為全固定、半固定式或以獨特之耦合(unique coupling)方式連接機體。製造者可設計供使用者因損壞而替換之天線，但不得設計或使用原認證以外之天線或可供引接各類電纜之標準天線插座或電氣連接頭，如：BNC、F type、N type、M type、UG type、RCA、SMA、SMB...等及其他各類工業或通訊標準接頭。

5.2.2. 天線樣式

此AX3000 Gigabit Wi-Fi 6 路由器其天線為半固定式Dipole Antenna，沒有外部天線接頭，(檢附天線規格書)

Antenna Type	Frequency Band (MHz)	TX Paths	Max Antenna Gain (dBi)	BF Directional Gain (dBi)	CDD Directional Gain (dBi)	
					For Power	For PSD
Dipole Antenna	2400 ~ 2500	2	2.0	5.01	2.0	5.01
	5150 ~ 5850	2	3.0	6.01	3.0	6.01

Note:

1. The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.

For CDD transmissions, directional gain is calculated as follows, $N_{ANT} = 2$, $N_{SS} = 1$.

If all antennas have the same gain, G_{ANT} , Directional gain = $G_{ANT} + \text{Array Gain}$, where Array Gain is as follows.

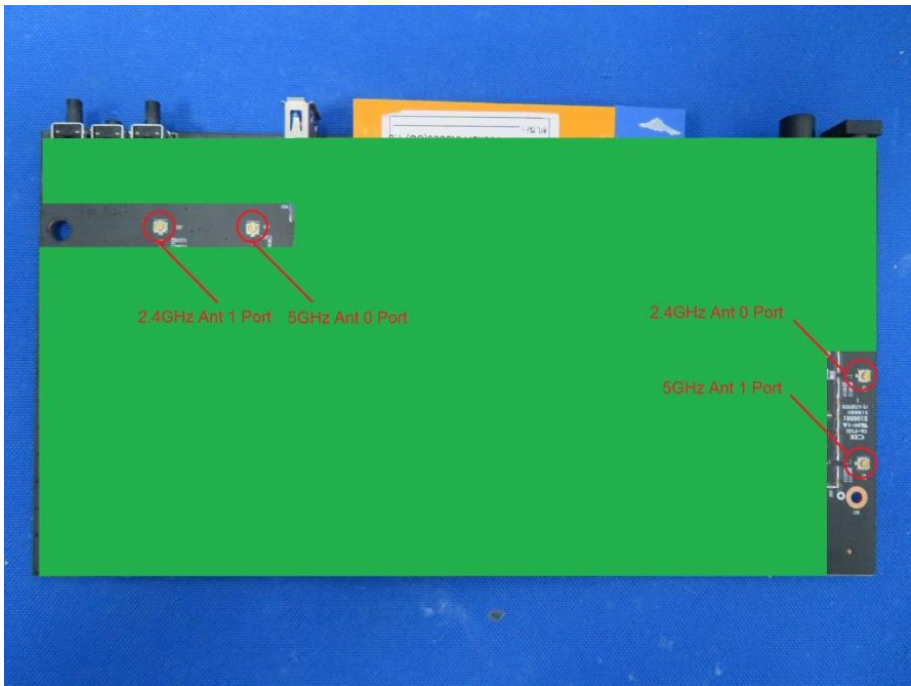
- For power spectral density (PSD) measurements on all devices,

Array Gain = $10 \log (N_{ANT} / N_{SS})$ dB = 3.01;

- For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB for $N_{ANT} \leq 4$;

2. The EUT also supports Beam Forming mode, and the Beam Forming support 802.11ac/ax, not include 802.11a/b/g/n. BF Directional gain = $G_{ANT} + 10 \log (N_{ANT})$.

Antenna RF Port				
Software Control Port	2.4GHz RF Port		5GHz RF Port	
	Ant 0	Ant 1	Ant 0	Ant 1
				

5.3. 輻射干擾測試

5.3.1. 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之第 3.10.1.5 節，使用頻帶範圍外之任意 100 千赫 (kHz)內，發射器所產生的射頻功率相較於使用頻帶範圍中包含最高所需功率之 100 千赫 (kHz)內的射頻功率，衰減值限制如下：

(1)輸出功率以低功率射頻電機技術規範附件二之峰值輸出功率方式量測者，至少須衰減 20 dB，可使用射頻傳導或輻射方式測量。

(2)輸出功率以低功率射頻電機技術規範 3.10.1(2)(2.3)之最大傳導輸出功率量測方式者，至少須衰減 30 dB。

此外，落於第 2.7 節禁用頻段之輻射發射，應符合第 2.8 節之規定。

依據國家通訊傳播委員會低功率射頻電機技術規範之第 2.8 節，低功率射頻電機，除本規範各章節另有放寬規定者外，其電場強度不得超過下表之限值，且其不必要之發射皆不得大於主波發射強度。各頻段重疊處，以較嚴格之限制值為準。

頻 率(兆赫)	電場強度(微伏/公尺)	測距(公尺)
0.009 - 0.490(含)	2,400/頻率(千赫)	300
0.490 (不含) - 1.705 (含)	24,000/頻率(千赫)	30
1.705(不含) - 30 (不含)	30	30
30 (含) - 88 (含)	100	3
88 (不含) - 216 (含)	150	3
216 (不含) - 960 (含)	200	3
960 (不含)以上	500	3

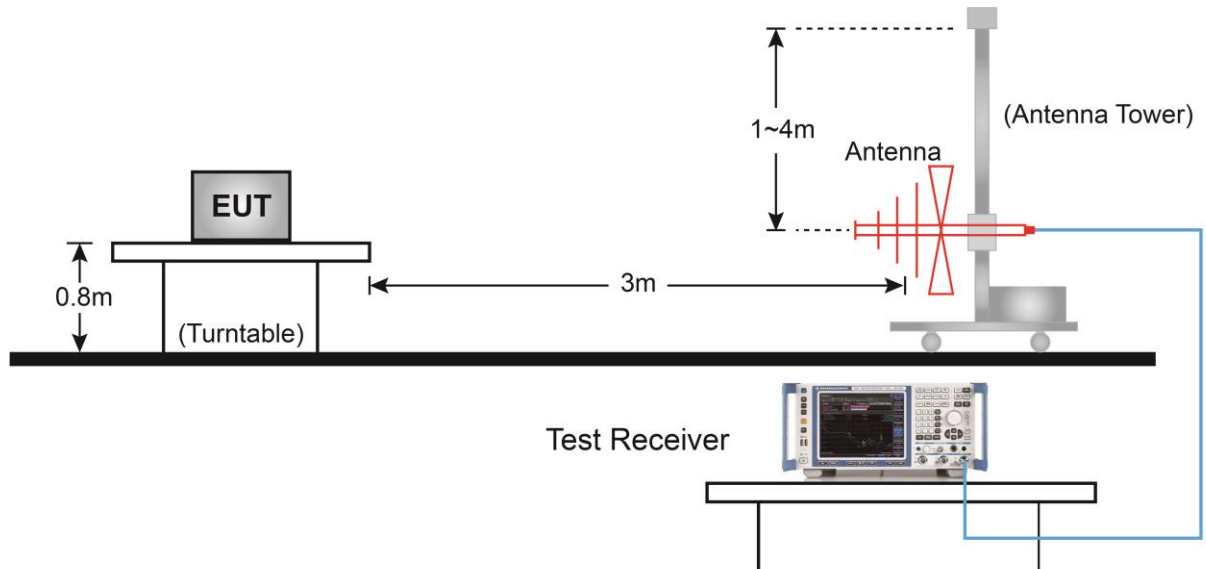
上表規定之電場強度，頻率在 9-90kHz 千赫(kHz)、110-490 千赫(kHz)以及 1000 兆赫(MHz)以上之發射，其量測以平均值檢波器為基準，且須符合第 5.14 節之規定；其他頻率之發射，應以 CISPR 準峰值(quasi-peak) 檢波器測量；非以上表所指定之距離測量時須符合第 5.5 節之規定，而輻射發射之量測頻率範圍須符合第 5.12 節之規定。

5.3.2. 量測方法

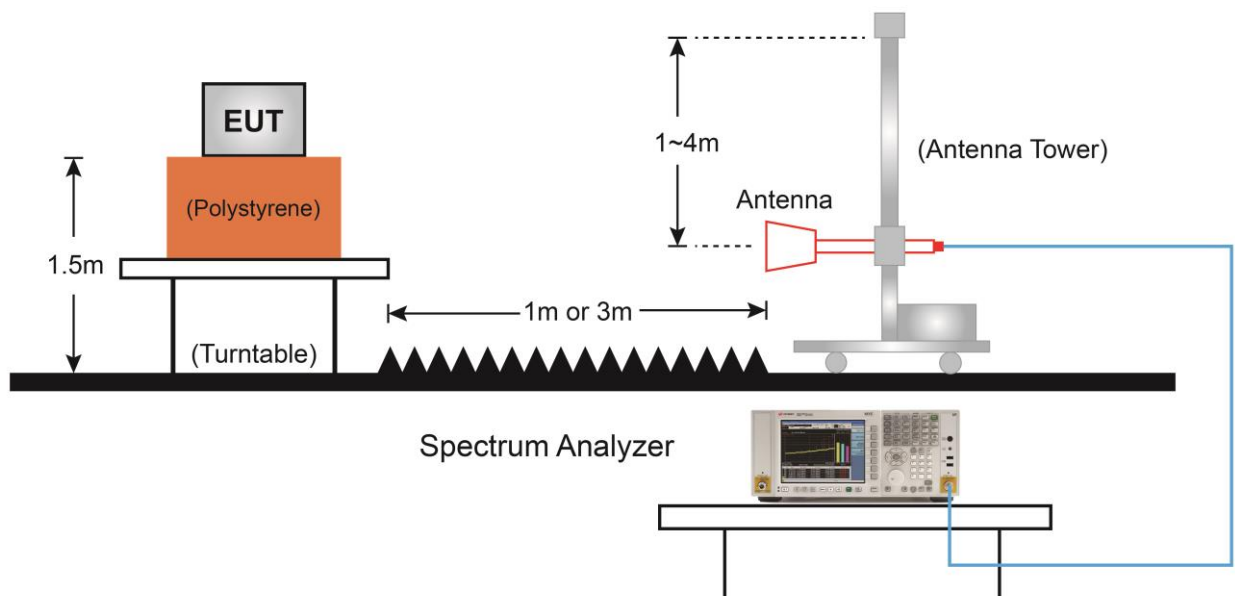
低頻待測物置於高 80 公分之非導體桌面（落地型產品置於地上），高頻待測物置於高 150 公分之非導體桌面，受測物與配件設備之電源線無須束綁，桌面上受測設備的所有電源線由桌子的後緣垂下沿旋轉桌表面接至交流插座。落地型設備的交流電源線可以方便的型態走線。桌面可 360 度旋轉，接收天線置於距待測物 3m 距離，高度可在 1 至 4 公尺間變動，以量測待測物之最大輻射電場強度。接收天線並應於水準及垂直極化方向各量測一次。

5.3.3. 測試架構圖

Below 1GHz Test Setup:



Above 1GHz Test Setup:



5.3.4. 輻射干擾測試結果

Product	AX3000 Gigabit Wi-Fi 6 路由器	Temperature	25°C
Test Engineer	Kevin Ker	Relative Humidity	52%
Test Site	AC1	Test Date	2019/11/08
Test Mode	802.11ax-HE20 - Ant 0+1 (Beam-Forming Mode)	Test Channel	01
Note	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3839.0	43.5	-0.3	43.2	74.0	-30.8	Peak	Horizontal
	4825.0	40.4	3.2	43.6	74.0	-30.4	Peak	Horizontal
*	6431.5	38.0	7.4	45.4	82.2	-36.8	Peak	Horizontal
*	8871.0	35.9	13.4	49.3	82.2	-32.9	Peak	Horizontal
	3839.0	45.9	-0.3	45.6	74.0	-28.4	Peak	Vertical
	4825.0	47.5	3.2	50.7	74.0	-23.3	Peak	Vertical
*	6627.0	38.0	8.4	46.4	82.2	-35.8	Peak	Vertical
*	10086.5	35.7	15.5	51.2	82.2	-31.0	Peak	Vertical

Note 1: “*” is not in restricted band, its limit is 30dBc of the fundamental emission level (112.2dBμV/m) or LP0002 Section 2.8 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	AX3000 Gigabit Wi-Fi 6 路由器	Temperature	25°C
Test Engineer	Kevin Ker	Relative Humidity	52%
Test Site	AC1	Test Date	2019/11/08
Test Mode	802.11ax-HE20 - Ant 0+1 (Beam-Forming Mode)	Test Channel	06
Note	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	4289.5	40.1	1.5	41.6	74.0	-32.4	Peak	Horizontal
	4825.0	39.7	3.2	42.9	74.0	-31.1	Peak	Horizontal
*	6491.0	37.8	7.7	45.5	84.5	-39.0	Peak	Horizontal
*	8709.5	37.0	13.0	50.0	84.5	-34.5	Peak	Horizontal
	3839.0	46.0	-0.3	45.7	74.0	-28.3	Peak	Vertical
	4876.0	44.1	3.3	47.4	74.0	-26.6	Peak	Vertical
*	5913.0	38.7	5.5	44.2	84.5	-40.3	Peak	Vertical
*	6763.0	36.4	9.2	45.6	84.5	-38.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (114.5dBμV/m) or LP0002 Section 2.8 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	AX3000 Gigabit Wi-Fi 6 路由器	Temperature	25°C
Test Engineer	Kevin Ker	Relative Humidity	52%
Test Site	AC1	Test Date	2019/11/08
Test Mode	802.11ax-HE20 - Ant 0+1 (Beam-Forming Mode)	Test Channel	11
Note	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3839.0	42.6	-0.3	42.3	74.0	-31.7	Peak	Horizontal
	4774.0	40.1	3.1	43.2	74.0	-30.8	Peak	Horizontal
*	5802.5	38.9	5.0	43.9	86.0	-42.1	Peak	Horizontal
*	6593.0	37.4	8.2	45.6	86.0	-40.4	Peak	Horizontal
	3839.0	46.1	-0.3	45.8	74.0	-28.2	Peak	Vertical
	4927.0	43.9	3.4	47.3	74.0	-26.7	Peak	Vertical
*	7230.5	37.2	11.1	48.3	86.0	-37.7	Peak	Vertical
*	8548.0	37.3	12.6	49.9	86.0	-36.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (116.0dBμV/m) or LP0002 Section 2.8 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	AX3000 Gigabit Wi-Fi 6 路由器	Temperature	25°C
Test Engineer	Kevin Ker	Relative Humidity	52%
Test Site	AC1	Test Date	2019/11/08
Test Mode	802.11ax-HE40 - Ant 0+1 (Beam-Forming Mode)	Test Channel	03
Note	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3839.0	41.9	-0.3	41.6	74.0	-32.4	Peak	Horizontal
	4893.0	39.1	3.3	42.4	74.0	-31.6	Peak	Horizontal
*	6652.5	37.1	8.6	45.7	76.9	-31.2	Peak	Horizontal
*	8658.5	35.9	12.9	48.8	76.9	-28.1	Peak	Horizontal
	3839.0	45.4	-0.3	45.1	74.0	-28.9	Peak	Vertical
	4995.0	39.3	3.5	42.8	74.0	-31.2	Peak	Vertical
*	6261.5	37.5	6.8	44.3	76.9	-32.6	Peak	Vertical
*	6567.5	37.7	8.1	45.8	76.9	-31.1	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (106.9dBμV/m) or LP0002 Section 2.8 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	AX3000 Gigabit Wi-Fi 6 路由器	Temperature	25°C
Test Engineer	Kevin Ker	Relative Humidity	52%
Test Site	AC1	Test Date	2019/11/08
Test Mode	802.11ax-HE40 - Ant 0+1 (Beam-Forming Mode)	Test Channel	06
Note	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3839.0	42.4	-0.3	42.1	74.0	-31.9	Peak	Horizontal
	5080.0	40.9	3.6	44.5	74.0	-29.5	Peak	Horizontal
*	6457.0	38.2	7.5	45.7	78.3	-32.6	Peak	Horizontal
*	6703.5	37.8	8.9	46.7	78.3	-31.6	Peak	Horizontal
	3839.0	44.8	-0.3	44.5	74.0	-29.5	Peak	Vertical
	5054.5	40.1	3.6	43.7	74.0	-30.3	Peak	Vertical
*	6414.5	38.4	7.4	45.8	78.3	-32.5	Peak	Vertical
*	7001.0	36.9	10.6	47.5	78.3	-30.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (108.3dBμV/m) or LP0002 Section 2.8 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

Product	AX3000 Gigabit Wi-Fi 6 路由器	Temperature	25°C
Test Engineer	Kevin Ker	Relative Humidity	52%
Test Site	AC1	Test Date	2019/11/08
Test Mode	802.11ax-HE40 - Ant 0+1 (Beam-Forming Mode)	Test Channel	09
Note	1. Average measurement was not performed if peak level lower than average limit. 2. Other frequency was 20dB below limit line within 1-18GHz, there is not show in the report.		

Mark	Frequency (MHz)	Reading Level (dBμV)	Factor (dB)	Measure Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Polarization
	3873.0	41.7	-0.3	41.4	74.0	-32.6	Peak	Horizontal
	4918.5	40.1	3.4	43.5	74.0	-30.5	Peak	Horizontal
*	6465.5	38.4	7.6	46.0	78.2	-32.2	Peak	Horizontal
*	7103.0	37.5	10.8	48.3	78.2	-29.9	Peak	Horizontal
	3839.0	44.9	-0.3	44.6	74.0	-29.4	Peak	Vertical
	5122.5	40.4	3.6	44.0	74.0	-30.0	Peak	Vertical
*	6312.5	38.5	7.0	45.5	78.2	-32.7	Peak	Vertical
*	7179.5	37.4	11.0	48.4	78.2	-29.8	Peak	Vertical

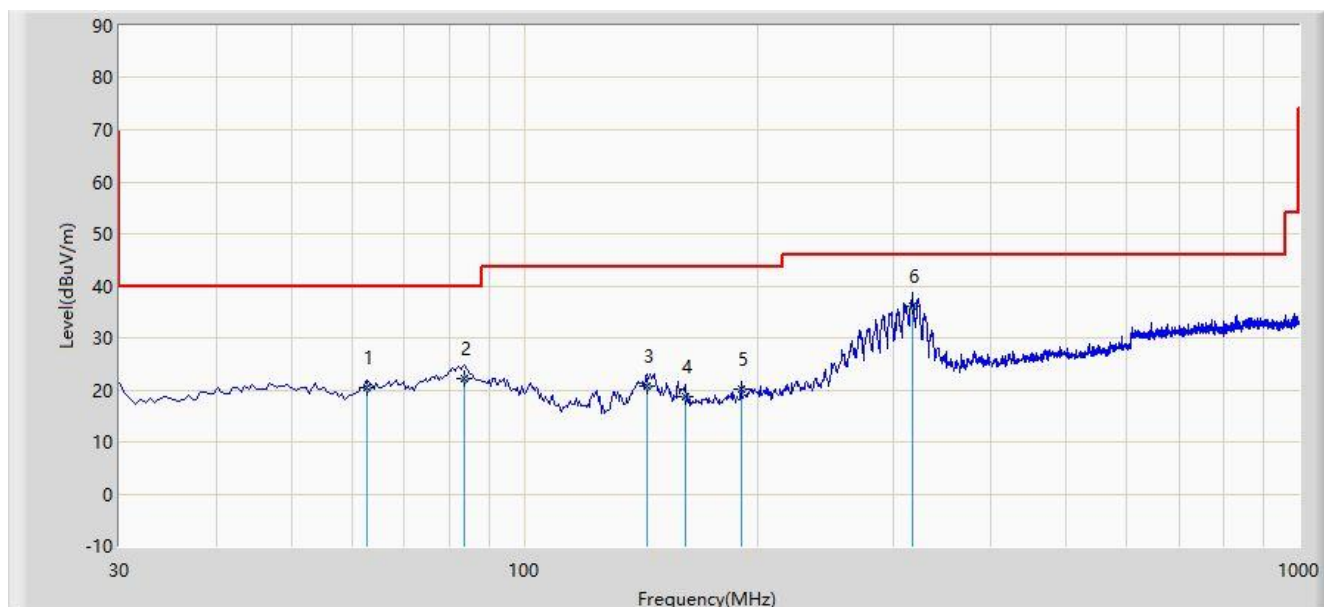
Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (108.2dBμV/m) or LP0002 Section 2.8 which is higher.

Note 2: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m) - Pre_Amplifier Gain (dB)

The Worst Case of Radiated Emission below 1GHz:

Site: AC1	Time: 2019/12/16 - 17:44
Limit: NCC LP0002_30MHz-1GHz_QP	Engineer: Kevin Ker
Probe: VULB 9162	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: There is the worst case within frequency range 30MHz~1GHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			62.626	20.416	1.260	-19.584	40.000	19.156	QP
2			83.626	22.054	6.950	-17.946	40.000	15.104	QP
3			143.959	20.597	5.030	-22.903	43.500	15.567	QP
4			161.669	18.778	2.620	-24.722	43.500	16.158	QP
5			190.362	20.043	1.320	-23.457	43.500	18.723	QP
6		*	317.610	36.145	14.030	-9.855	46.000	22.115	QP

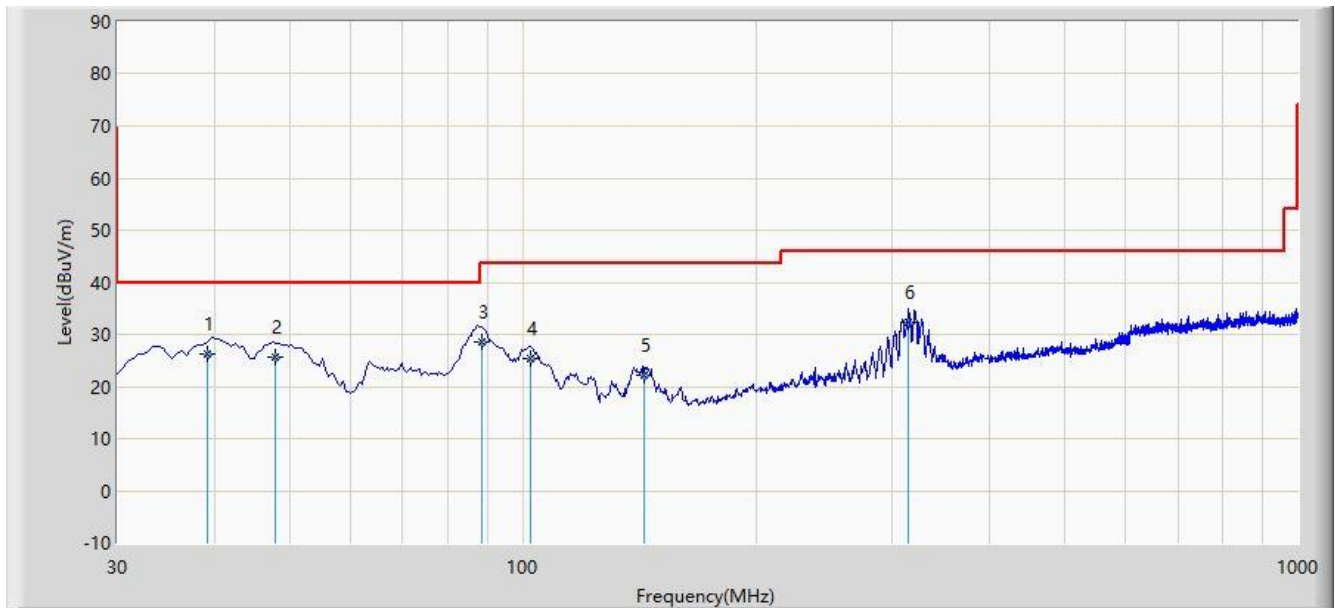
Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

Note 3: 經初測驗證過，1GHz 以下輻射干擾測試對測試頻道數並無差異，故僅檢附最差狀況之測試頻道。

Site: AC1	Time: 2019/12/16 - 17:44
Limit: NCC LP0002_30MHz-1GHz_QP	Engineer: Kevin Ker
Probe: VULB 9162	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: There is the worst case within frequency range 30MHz~1GHz	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			39.158	26.234	5.850	-13.766	40.000	20.385	QP
2			47.946	25.772	4.230	-14.228	40.000	21.543	QP
3			88.656	28.682	12.090	-14.818	43.500	16.592	QP
4			102.265	25.331	5.890	-18.169	43.500	19.441	QP
5			143.624	22.145	6.590	-21.355	43.500	15.555	QP
6		*	314.626	32.254	10.260	-13.746	46.000	21.994	QP

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

Note 3: 經初測驗證過，1GHz 以下輻射干擾測試對測試頻道數並無差異，故僅檢附最差狀況之測試頻道。

5.4. 開放頻帶邊緣之不必要幅射要求

5.4.1. 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之第 3.10.1.5 節，使用頻帶範圍外之任意 100 千赫 (kHz) 內，發射器所產生的射頻功率相較於使用頻帶範圍中包含最高所需功率之 100 千赫 (kHz) 內的射頻功率，衰減值限制如下：

(1) 輸出功率以低功率射頻電機技術規範附件二之峰值輸出功率方式量測者，至少須衰減 20 dB，可使用射頻傳導或輻射方式測量。

(2) 輸出功率以低功率射頻電機技術規範 3.10.1(2)(2.3) 之最大傳導輸出功率量測方式者，至少須衰減 30 dB。

此外，落於第 2.7 節禁用頻段之輻射發射，應符合第 2.8 節之規定(限制要求如下)：

發射依據國家通訊傳播委員會低功率射頻電機技術規範之第 2.8 節，低功率射頻電機，除本規範各章節另有放寬規定者外，其電場強度不得超過下表之限值，且其不必要之發射皆不得大於主波發射強度。各頻段重疊處，以較嚴格之限制值為準。

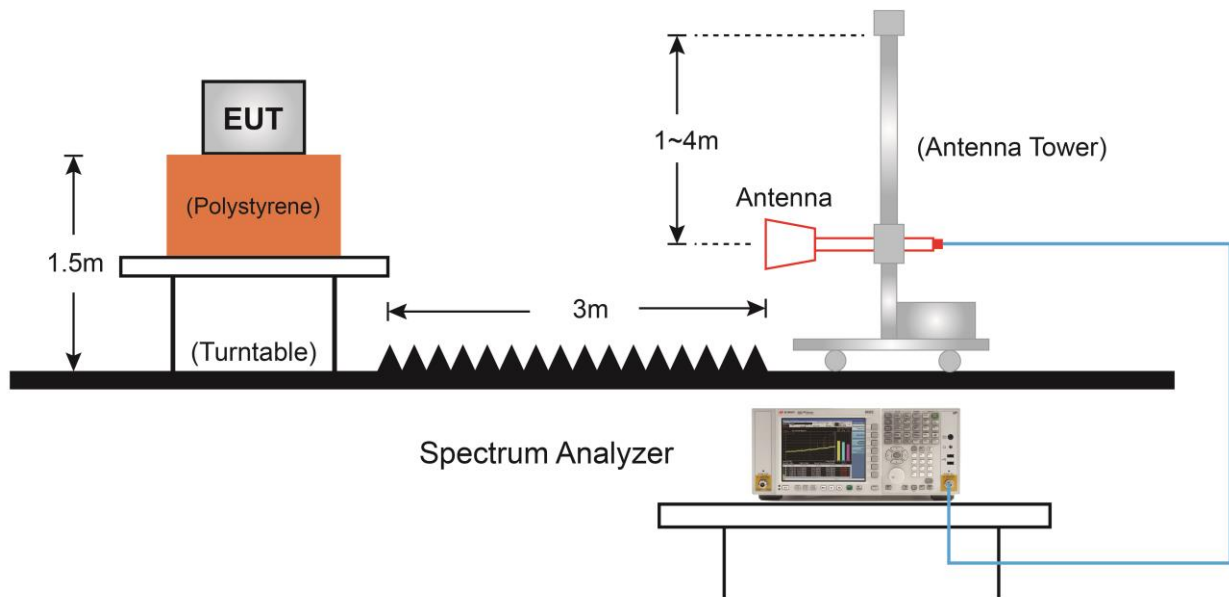
頻 率(兆赫)	電場強度(微伏/公尺)	測距(公尺)
0.009 - 0.490(含)	2,400/頻率(千赫)	300
0.490 (不含) - 1.705 (含)	24,000/頻率(千赫)	30
1.705(不含) - 30 (不含)	30	30
30 (含) - 88 (含)	100	3
88 (不含) - 216 (含)	150	3
216 (不含) - 960 (含)	200	3
960 (不含)以上	500	3

上表規定之電場強度，頻率在 9-90kHz 千赫(kHz)、110-490 千赫(kHz)以及 1000 兆赫(MHz)以上之發射，其量測以平均值檢波器為基準，且須符合第 5.14 節之規定；其他頻率之發射，應以 CISPR 準峰值(quasi-peak) 檢波器測量；非以上表所指定之距離測量時須符合第 5.5 節之規定，而輻射發射之量測頻率範圍須符合第 5.12 節之規定。

5.4.2. 量測方法

待測物置於高 80 公分之非導體桌面（落地型產品置於地上），受測物與配件設備之電源線無須束綁，桌面上受測設備的所有電源線由桌子的後緣垂下沿旋轉桌表面接至交流插座。落地型設備的交流電源線可以方便的型態走線。桌面可 360 度旋轉，接收天線置於距待測物 3m 距離，高度可在 1 至 4 公尺間變動，以量測待測物之最大輻射電場強度。接收天線並應於水準及垂直極化方向各量測一次。

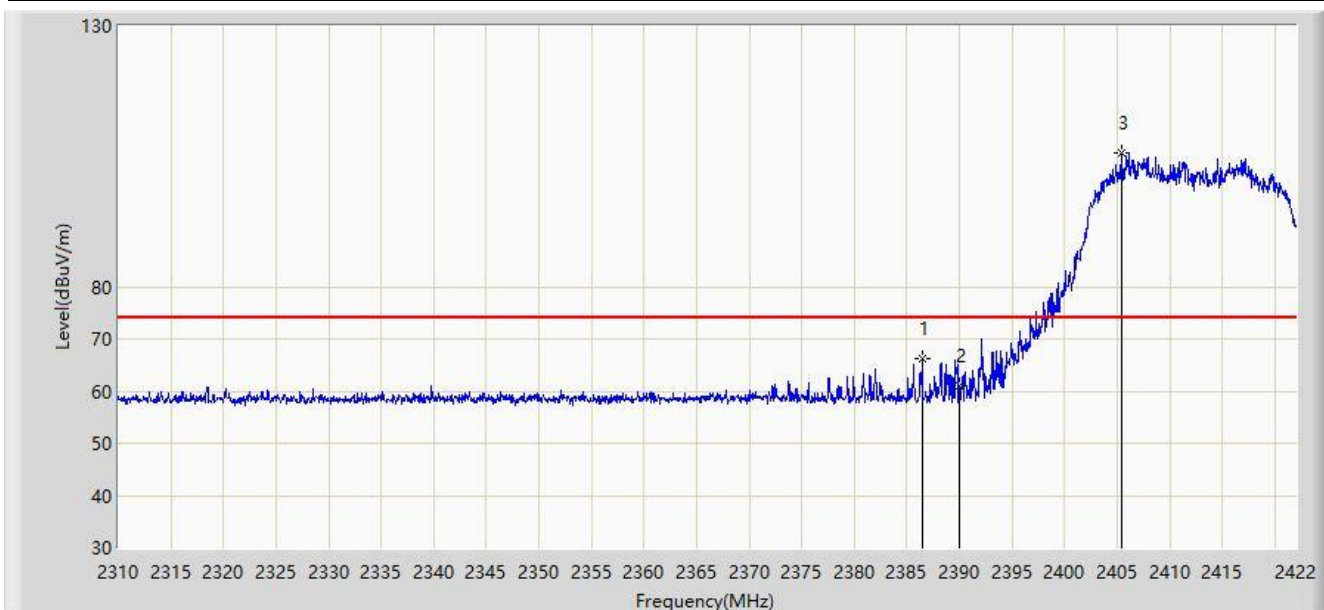
5.4.3. 測試架構圖



備 註: 使用頻率範圍外之任意 100 千赫雜訊, 使用輻射方式測量, 6 dB 頻寬使用 1MHz 遠大於 100kHz 仍可 PASS, 檢附其測試數據。

5.4.4. 測試結果

Site: AC1	Time: 2019/11/08 - 19:18
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2412MHz (Beam-Forming Mode)	

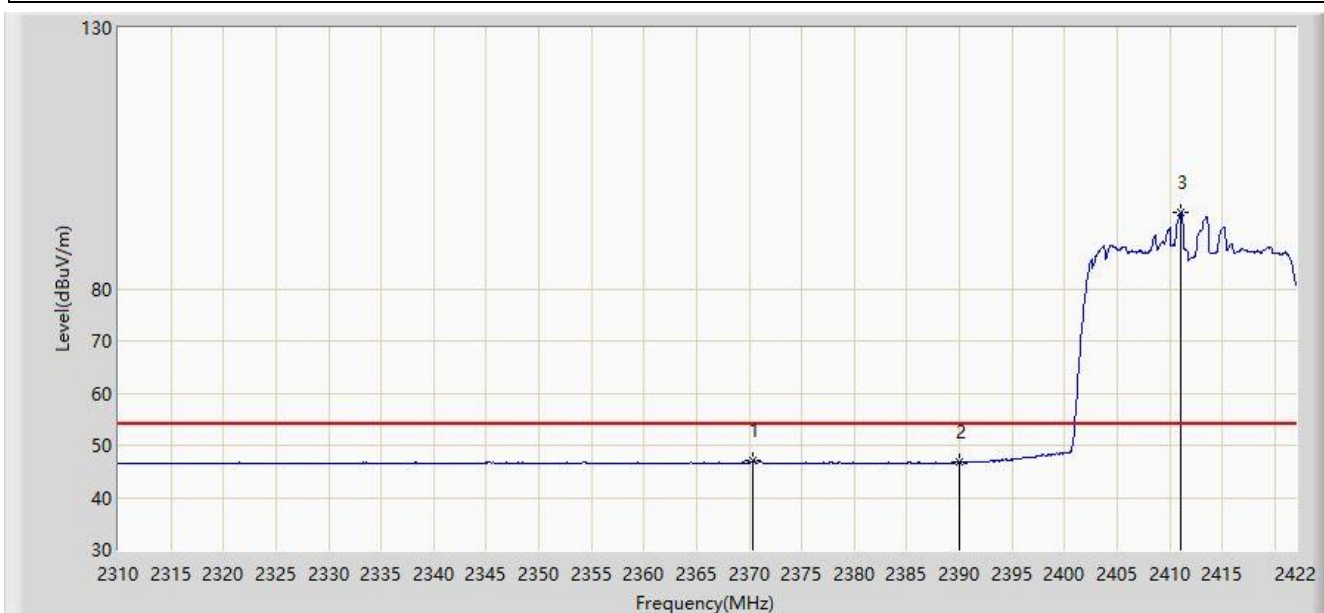


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2386.440	66.161	33.903	-7.839	74.000	32.258	PK
2			2390.000	60.947	28.673	-13.053	74.000	32.274	PK
3		*	2405.424	105.539	73.194	N/A	N/A	32.344	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/08 - 19:18
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2412MHz (Beam-Forming Mode)	

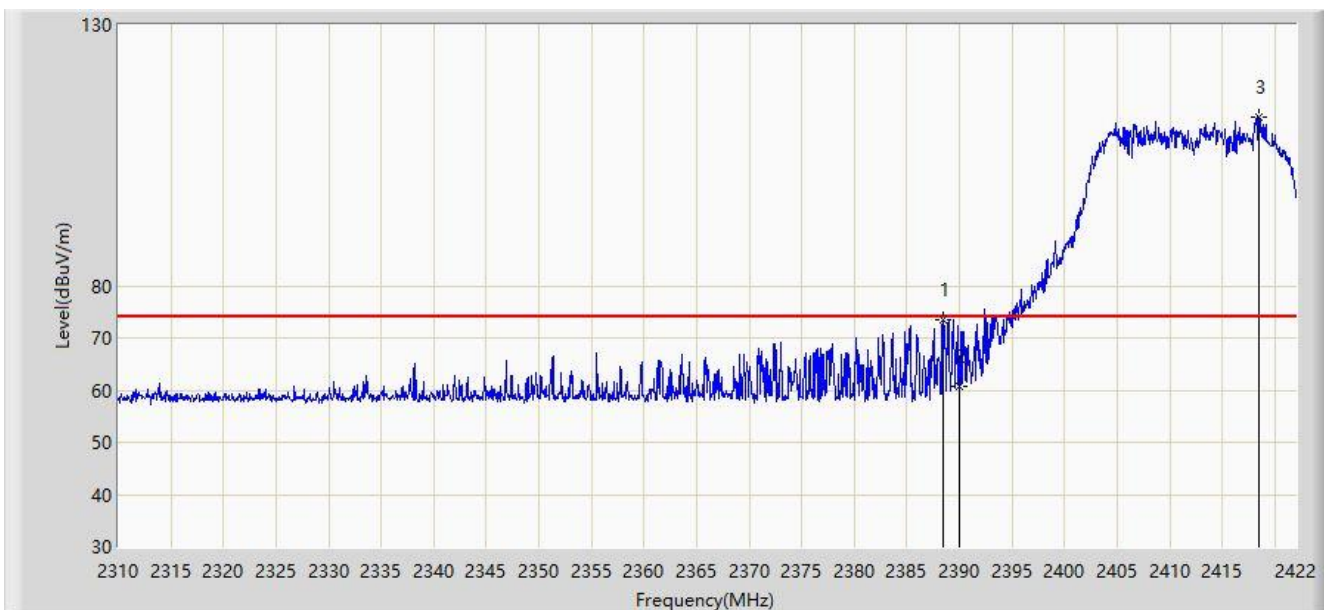


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2370.368	46.960	14.776	-7.040	54.000	32.183	AV
2			2390.000	46.799	14.525	-7.201	54.000	32.274	AV
3		*	2411.080	94.597	62.227	N/A	N/A	32.370	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/08 - 19:18
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2412MHz (Beam-Forming Mode)	

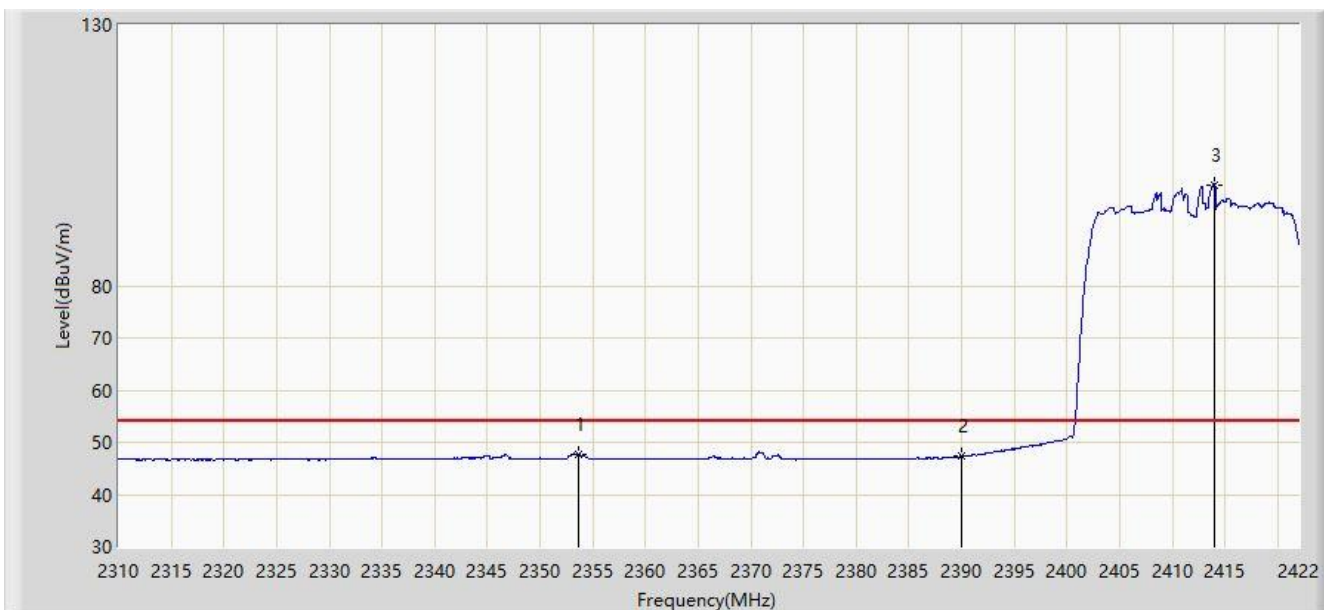


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2388.400	73.571	41.304	-0.429	74.000	32.267	PK
2			2390.000	60.589	28.315	-13.411	74.000	32.274	PK
3		*	2418.528	112.225	79.820	N/A	N/A	32.405	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/08 - 19:18
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2412MHz (Beam-Forming Mode)	

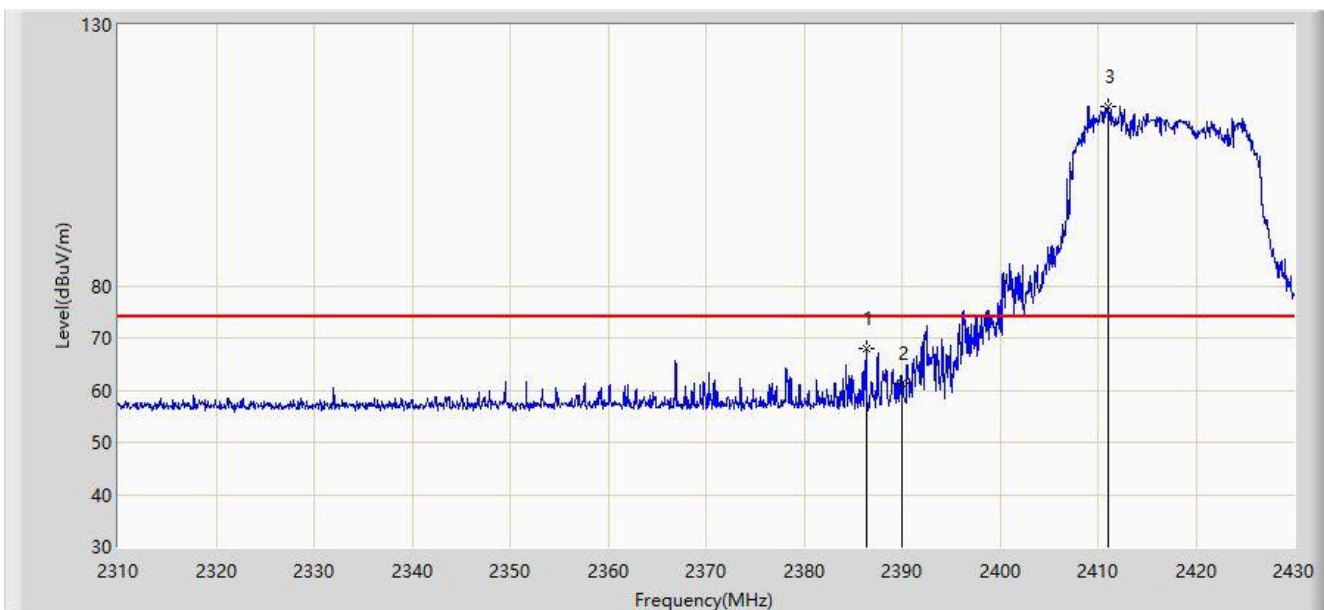


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2353.680	47.792	15.685	-6.208	54.000	32.107	AV
2			2390.000	47.368	15.094	-6.632	54.000	32.274	AV
3		*	2413.992	99.411	67.027	N/A	N/A	32.383	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 13:22
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2417MHz (Beam-Forming Mode)	

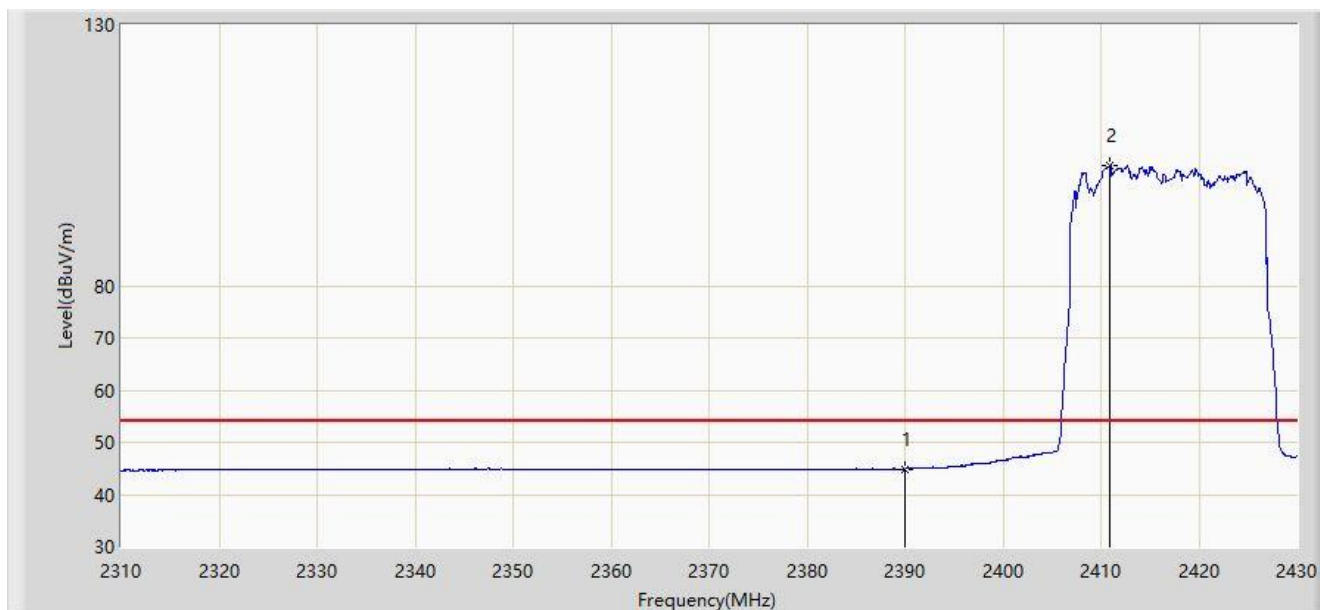


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2386.320	67.961	35.704	-6.039	74.000	32.258	PK
2			2390.000	61.247	28.973	-12.753	74.000	32.274	PK
3		*	2410.980	114.294	81.924	N/A	N/A	32.370	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 13:23
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2417MHz (Beam-Forming Mode)	

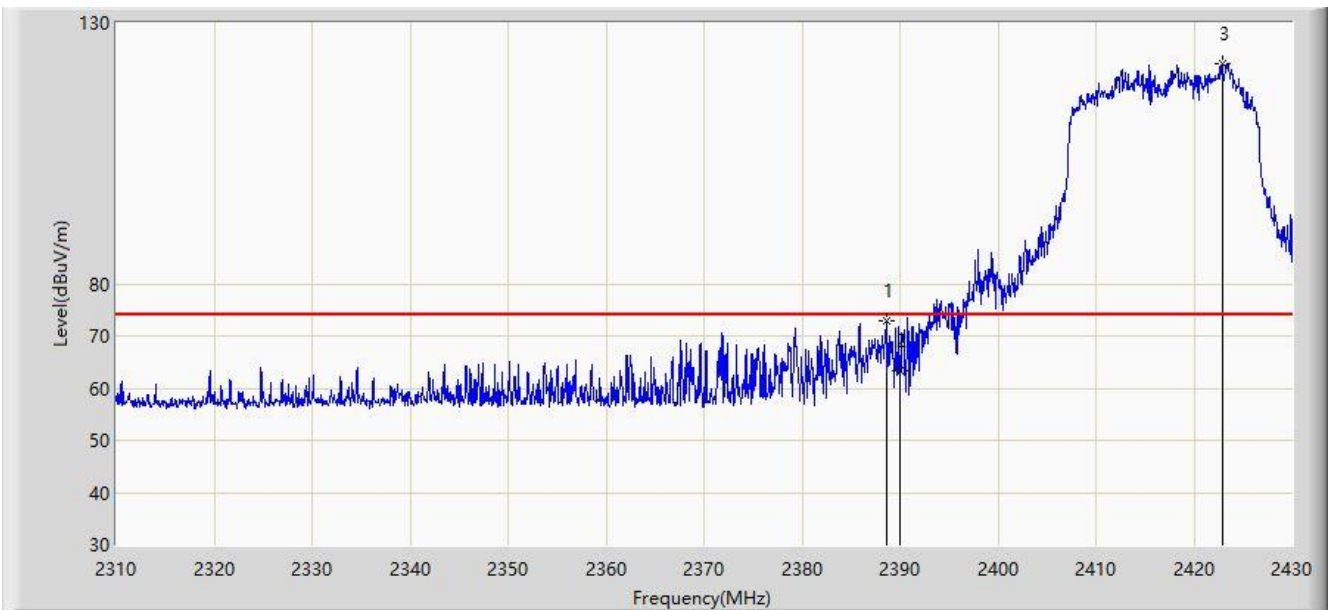


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	44.911	12.637	-9.089	54.000	32.274	AV
2		*	2410.920	102.923	70.554	N/A	N/A	32.370	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 13:25
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2417MHz (Beam-Forming Mode)	

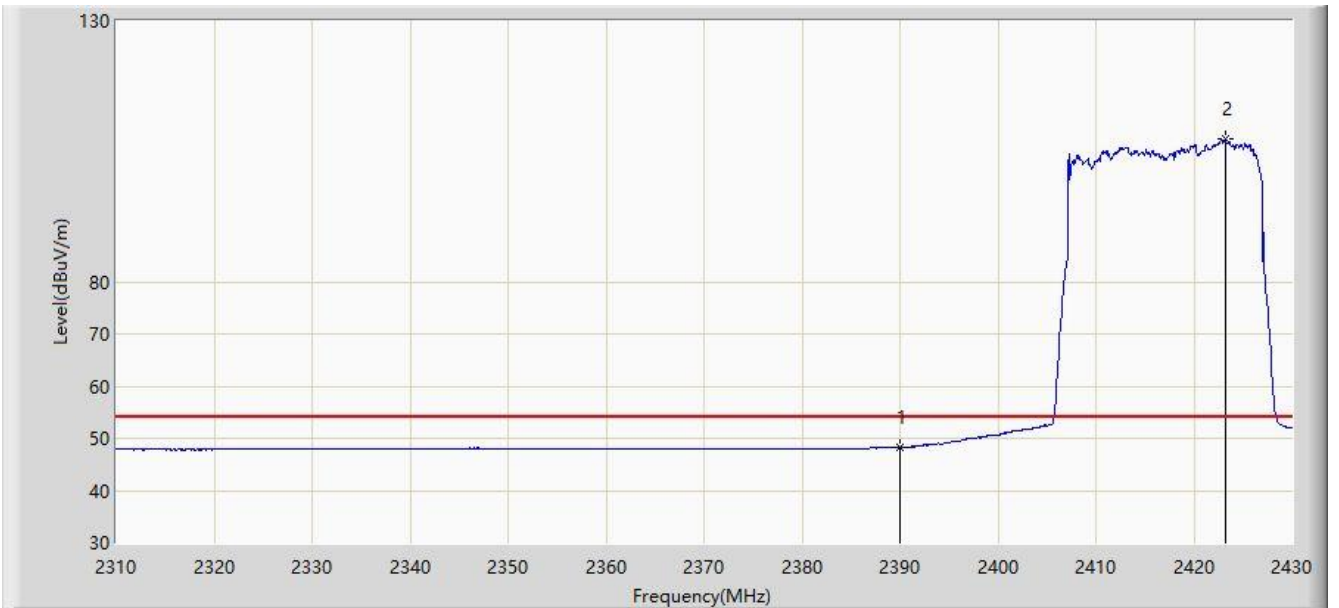


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2388.600	72.962	40.694	-1.038	74.000	32.268	PK
2			2390.000	63.412	31.138	-10.588	74.000	32.274	PK
3		*	2422.860	122.117	89.692	N/A	N/A	32.424	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 13:27
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2417MHz (Beam-Forming Mode)	

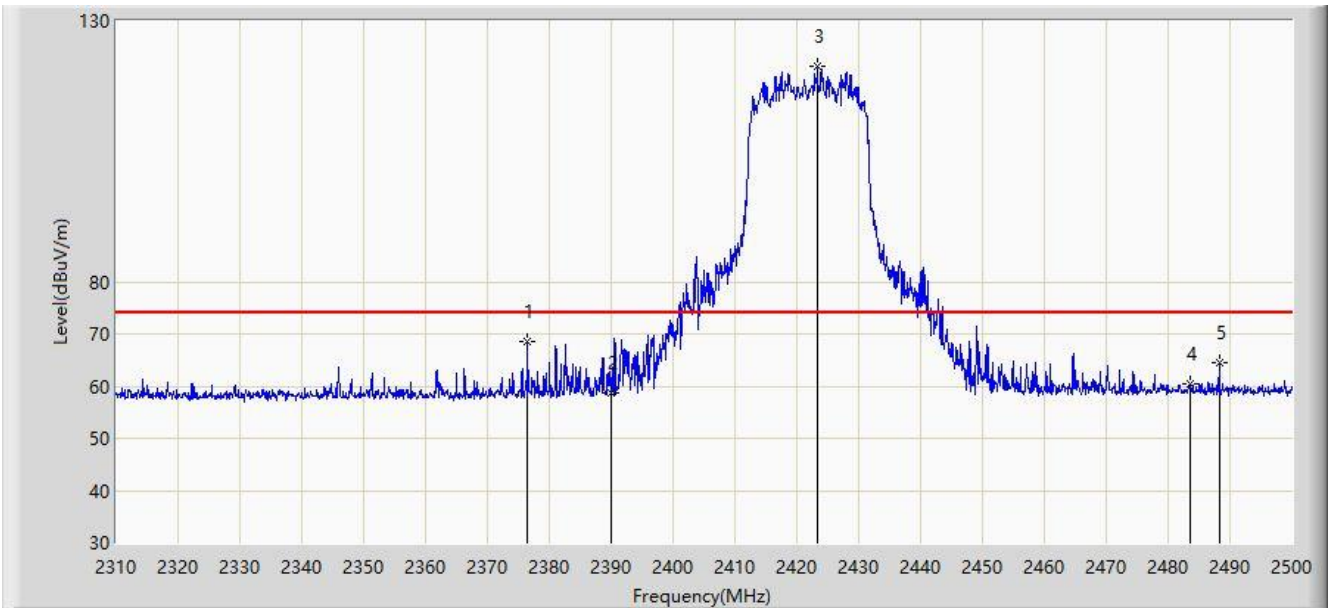


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	48.226	15.952	-5.774	54.000	32.274	AV
2		*	2423.220	107.286	74.860	N/A	N/A	32.427	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 13:29
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2422MHz (Beam-Forming Mode)	

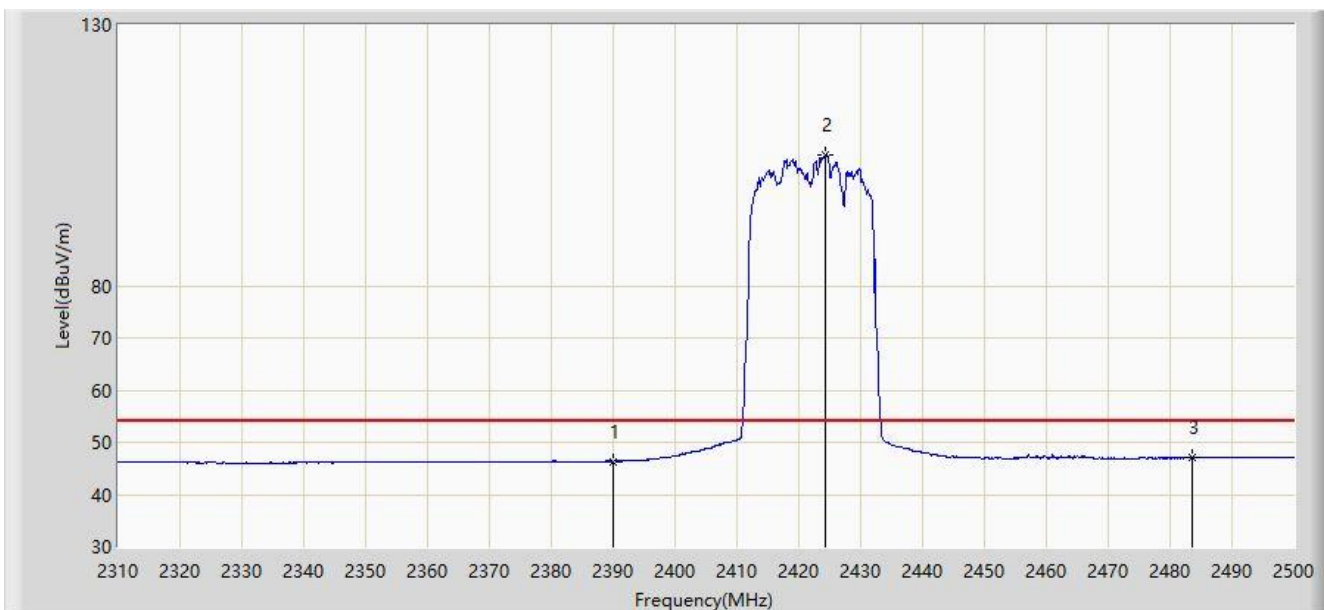


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2376.405	68.415	36.204	-5.585	74.000	32.211	PK
2			2390.000	58.661	26.387	-15.339	74.000	32.274	PK
3		*	2423.335	121.223	88.796	N/A	N/A	32.427	PK
4			2483.500	60.293	27.589	-13.707	74.000	32.704	PK
5			2488.220	64.590	31.864	-9.410	74.000	32.726	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 13:31
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2422MHz (Beam-Forming Mode)	

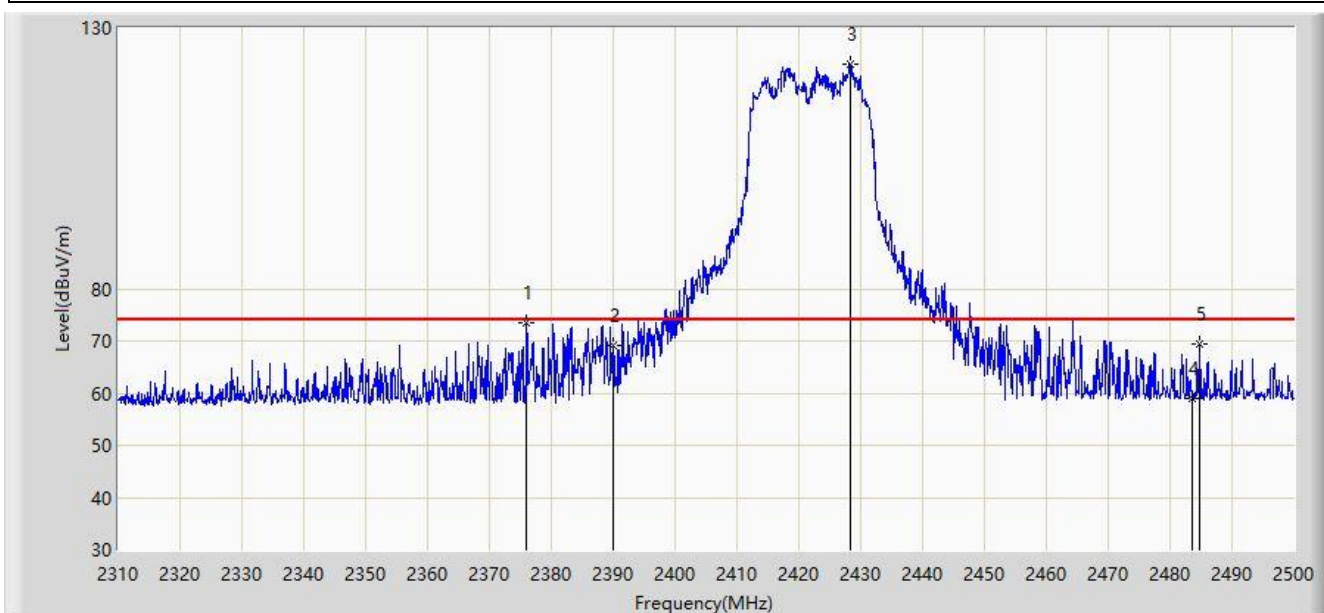


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.373	14.099	-7.627	54.000	32.274	AV
2		*	2424.380	105.028	72.596	N/A	N/A	32.432	AV
3			2483.500	46.997	14.293	-7.003	54.000	32.704	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 13:33
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2422MHz (Beam-Forming Mode)	

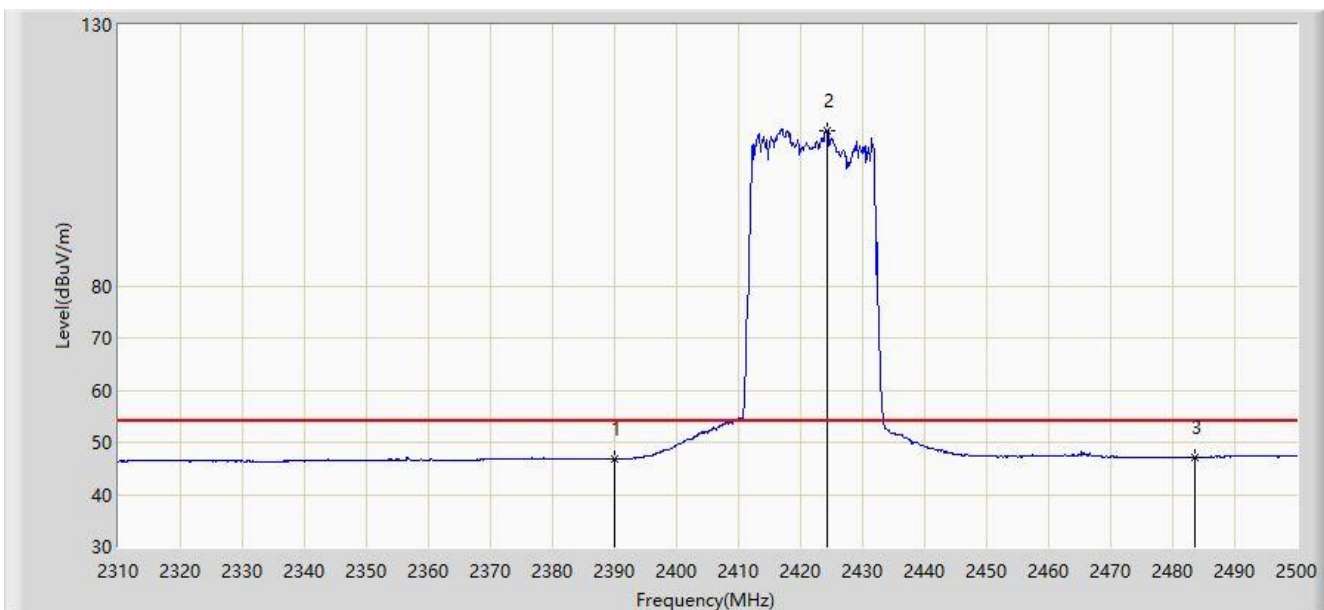


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2376.025	73.438	41.228	-0.562	74.000	32.210	PK
2			2390.000	69.015	36.741	-4.985	74.000	32.274	PK
3		*	2428.275	123.133	90.683	N/A	N/A	32.450	PK
4			2483.500	59.124	26.420	-14.876	74.000	32.704	PK
5			2484.800	69.300	36.590	-4.700	74.000	32.710	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 13:40
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2422MHz (Beam-Forming Mode)	

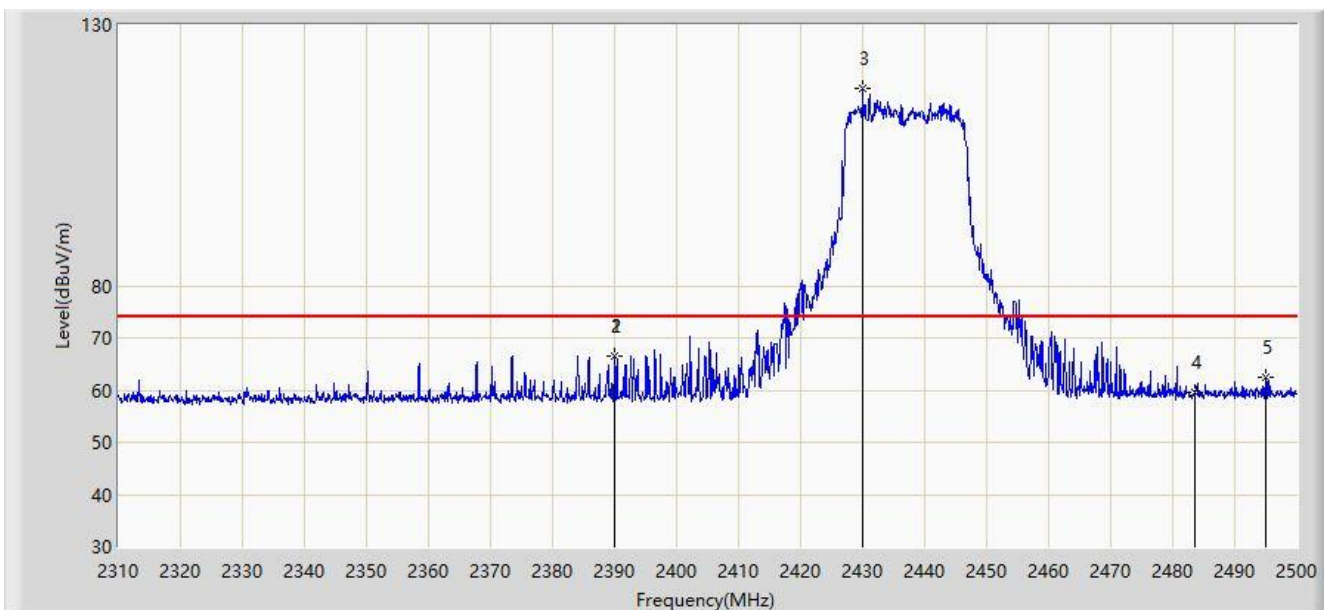


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.760	14.486	-7.240	54.000	32.274	AV
2		*	2424.285	109.759	77.328	N/A	N/A	32.431	AV
3			2483.500	47.193	14.489	-6.807	54.000	32.704	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 13:42
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2437MHz (Beam-Forming Mode)	

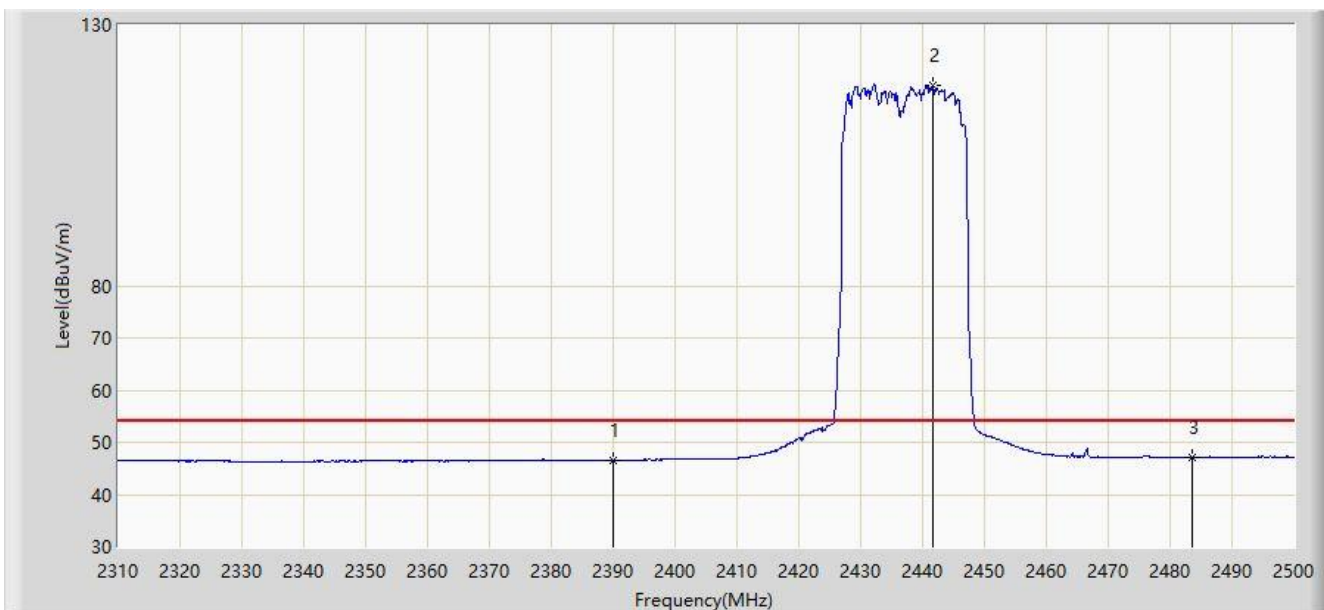


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.990	66.584	34.310	-7.416	74.000	32.274	PK
2			2390.000	66.575	34.301	-7.425	74.000	32.274	PK
3		*	2429.985	117.845	85.387	N/A	N/A	32.458	PK
4			2483.500	59.508	26.804	-14.492	74.000	32.704	PK
5			2494.965	62.370	29.614	-11.630	74.000	32.757	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 13:43
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2437MHz (Beam-Forming Mode)	

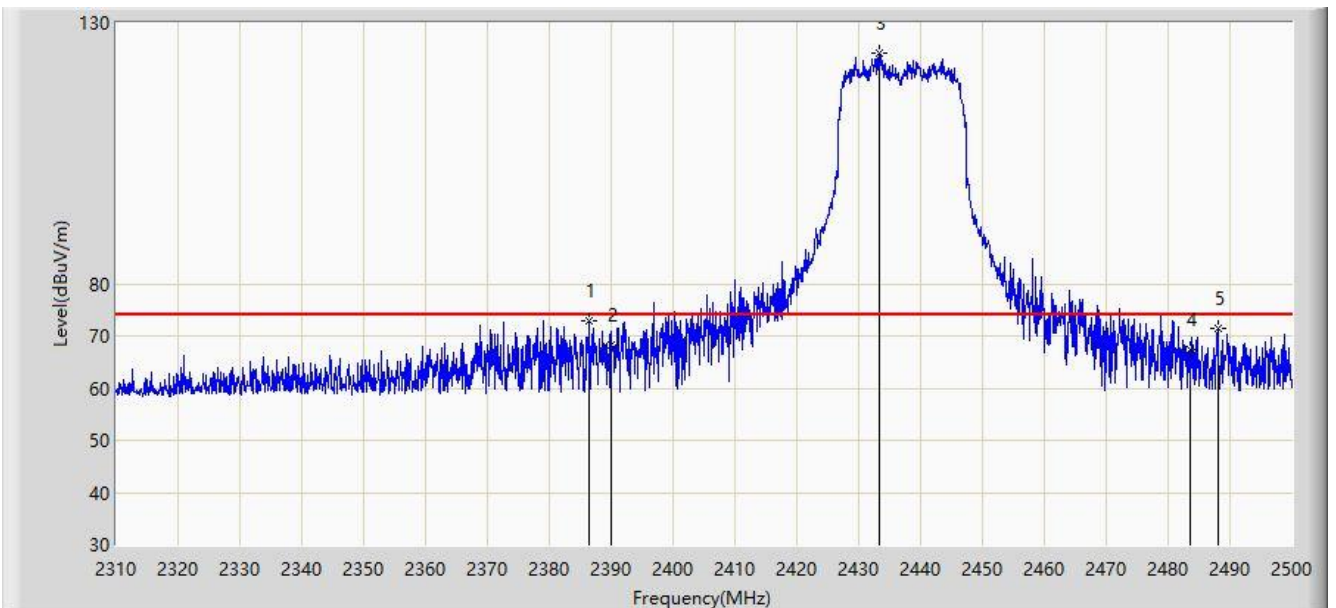


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.553	14.279	-7.447	54.000	32.274	AV
2	X	*	2441.670	118.376	85.864	N/A	N/A	32.512	AV
3			2483.500	47.162	14.458	-6.838	54.000	32.704	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 13:59
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2437MHz (Beam-Forming Mode)	

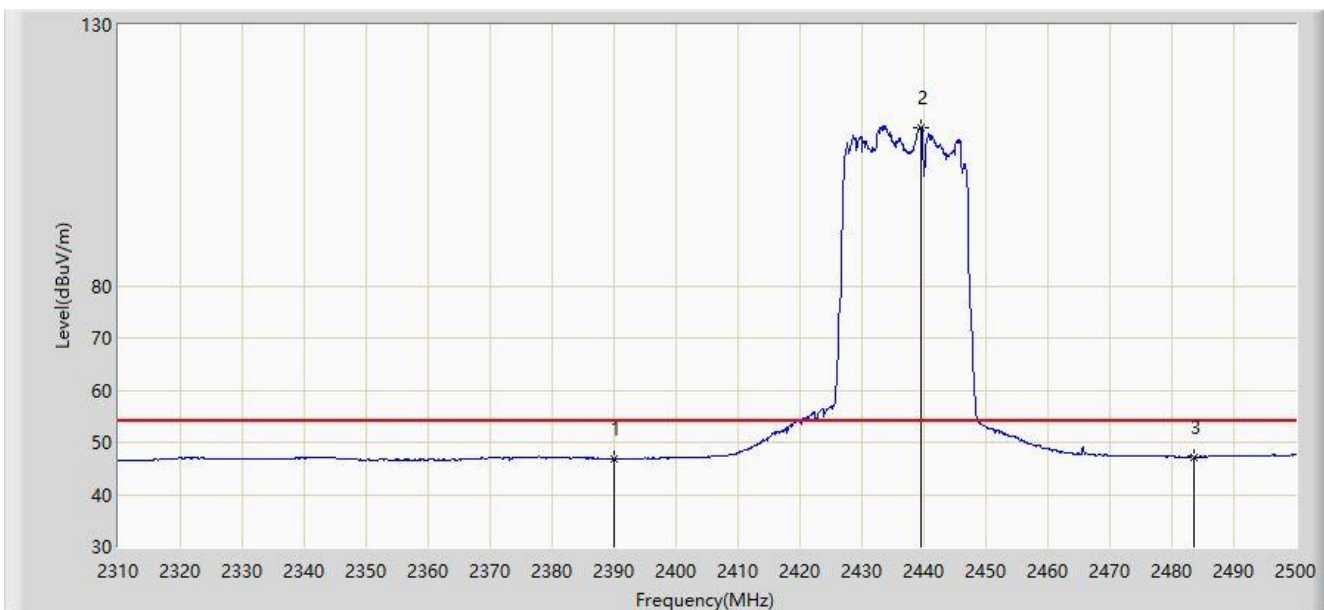


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2386.380	72.765	40.507	-1.235	74.000	32.258	PK
2			2390.000	68.158	35.884	-5.842	74.000	32.274	PK
3		*	2433.310	124.101	91.628	N/A	N/A	32.473	PK
4			2483.500	67.299	34.595	-6.701	74.000	32.704	PK
5			2488.030	71.526	38.801	-2.474	74.000	32.725	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 14:04
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2437MHz (Beam-Forming Mode)	

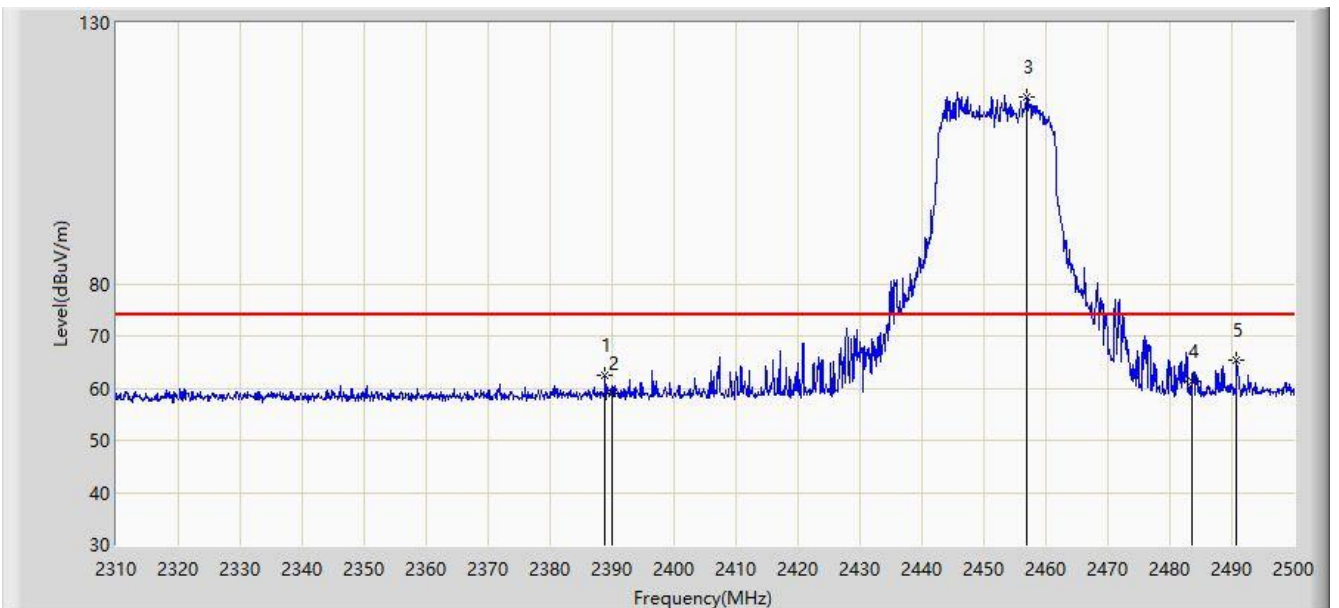


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.859	14.585	-7.141	54.000	32.274	AV
2	X	*	2439.485	110.377	77.875	N/A	N/A	32.502	AV
3			2483.500	47.225	14.521	-6.775	54.000	32.704	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 14:06
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2452MHz (Beam-Forming Mode)	

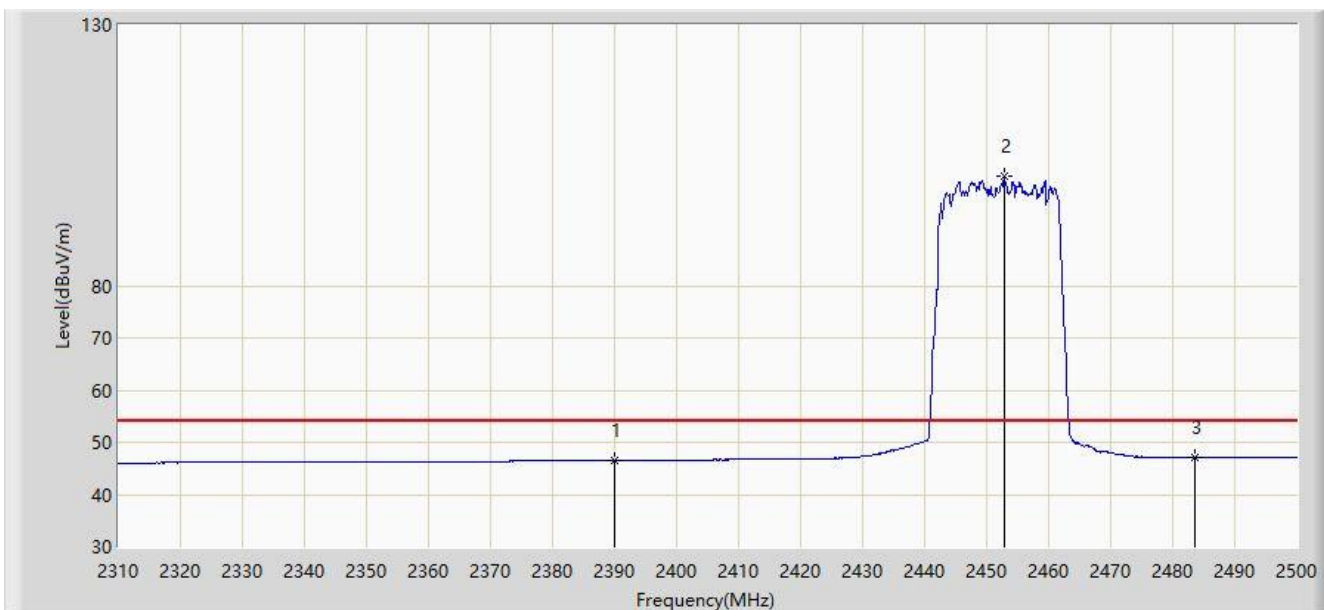


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2388.850	62.404	30.135	-11.596	74.000	32.269	PK
2			2390.000	58.959	26.685	-15.041	74.000	32.274	PK
3		*	2456.965	115.917	83.335	N/A	N/A	32.582	PK
4			2483.500	61.245	28.541	-12.755	74.000	32.704	PK
5			2490.785	65.473	32.736	-8.527	74.000	32.738	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 14:06
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2452MHz (Beam-Forming Mode)	

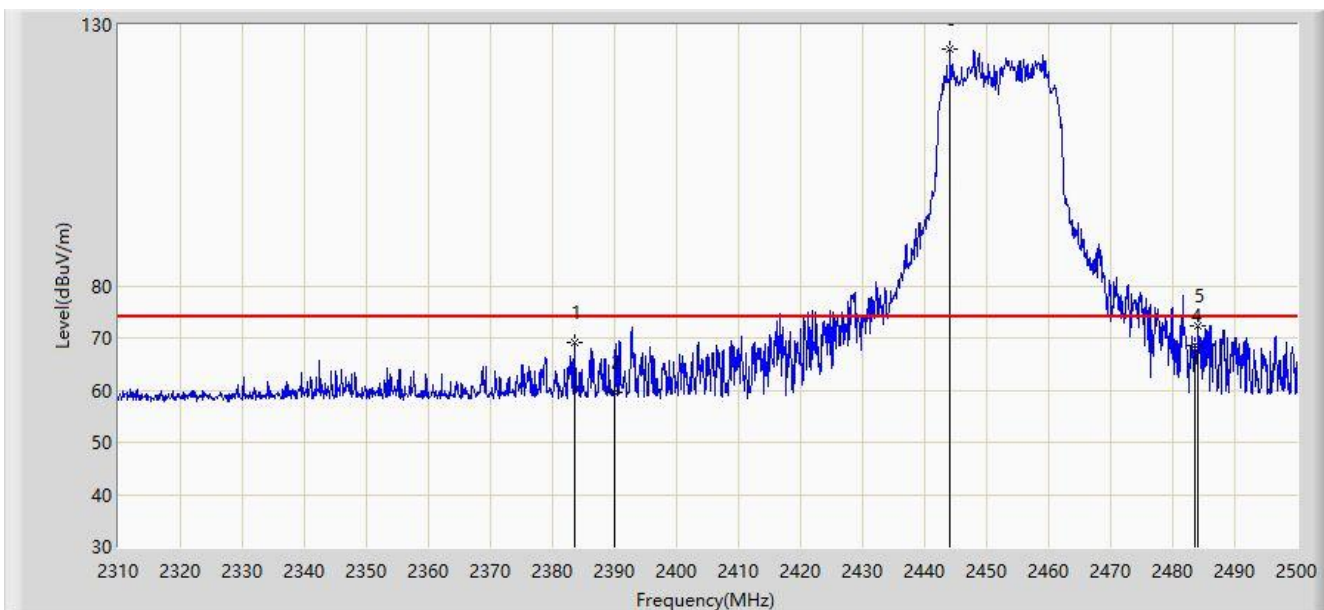


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.489	14.215	-7.511	54.000	32.274	AV
2		*	2452.785	101.143	68.580	N/A	N/A	32.564	AV
3			2483.500	47.061	14.357	-6.939	54.000	32.704	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 14:07
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2452MHz (Beam-Forming Mode)	

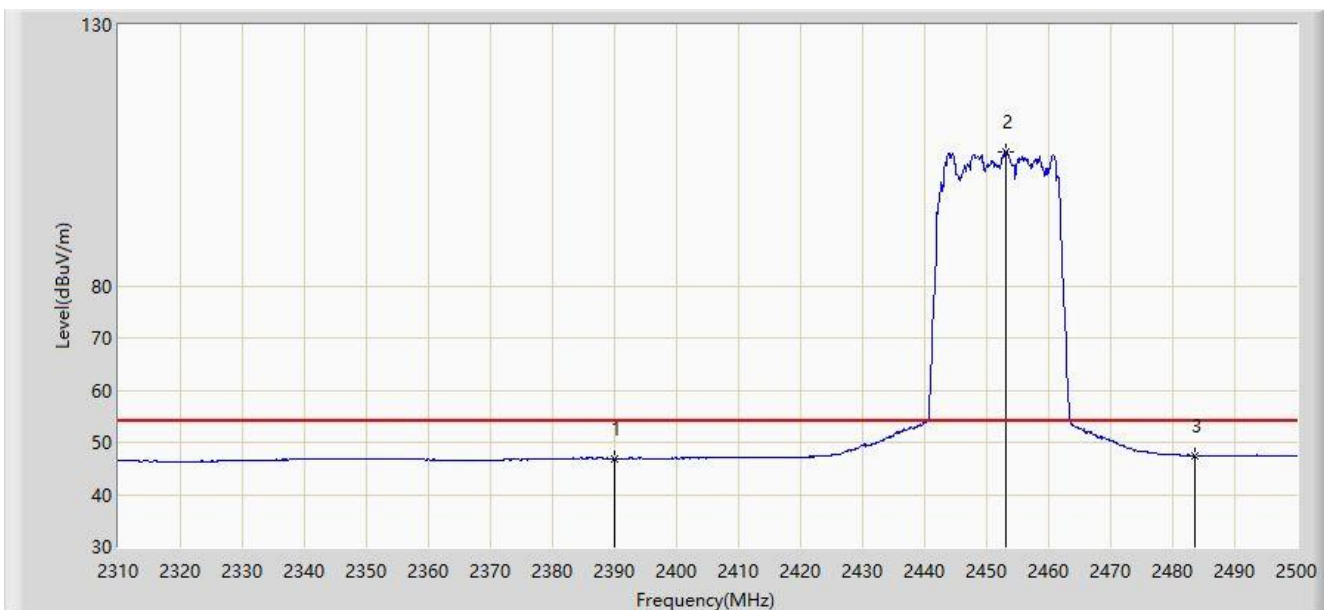


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2383.530	69.240	36.996	-4.760	74.000	32.244	PK
2			2390.000	59.682	27.408	-14.318	74.000	32.274	PK
3		*	2444.140	125.299	92.776	N/A	N/A	32.523	PK
4			2483.500	68.628	35.924	-5.372	74.000	32.704	PK
5			2484.040	72.287	39.580	-1.713	74.000	32.707	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 14:07
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2452MHz (Beam-Forming Mode)	

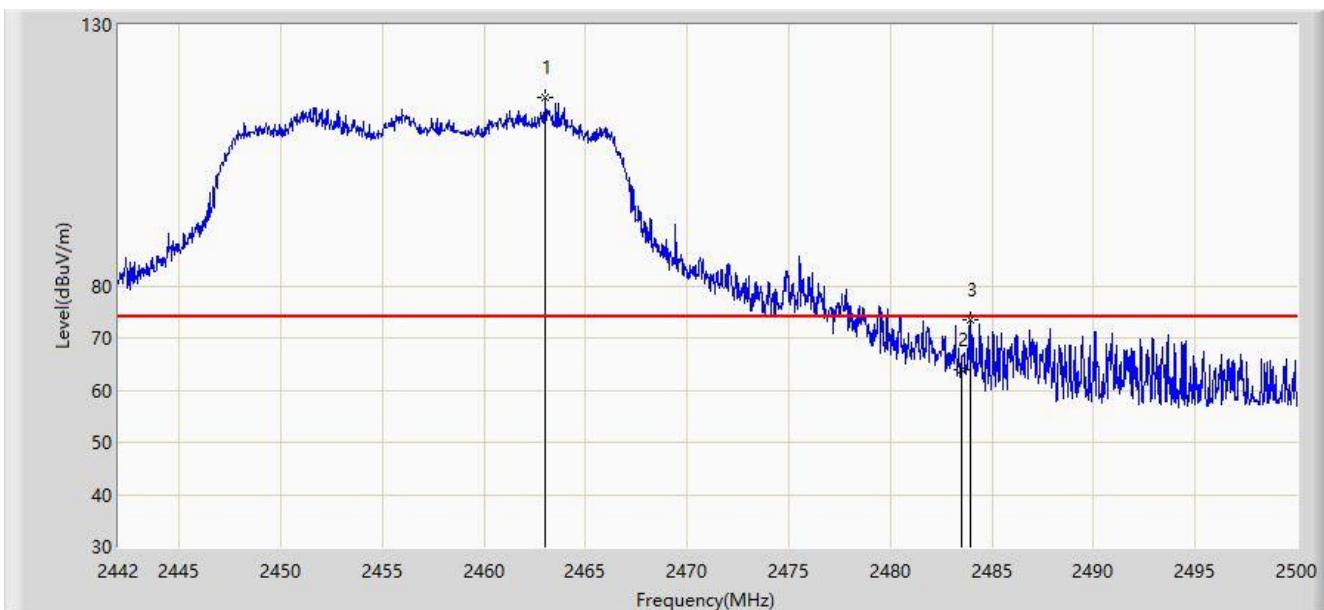


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.901	14.627	-7.099	54.000	32.274	AV
2		*	2453.165	105.640	73.075	N/A	N/A	32.565	AV
3			2483.500	47.476	14.772	-6.524	54.000	32.704	AV

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 14:09
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2457MHz (Beam-Forming Mode)	

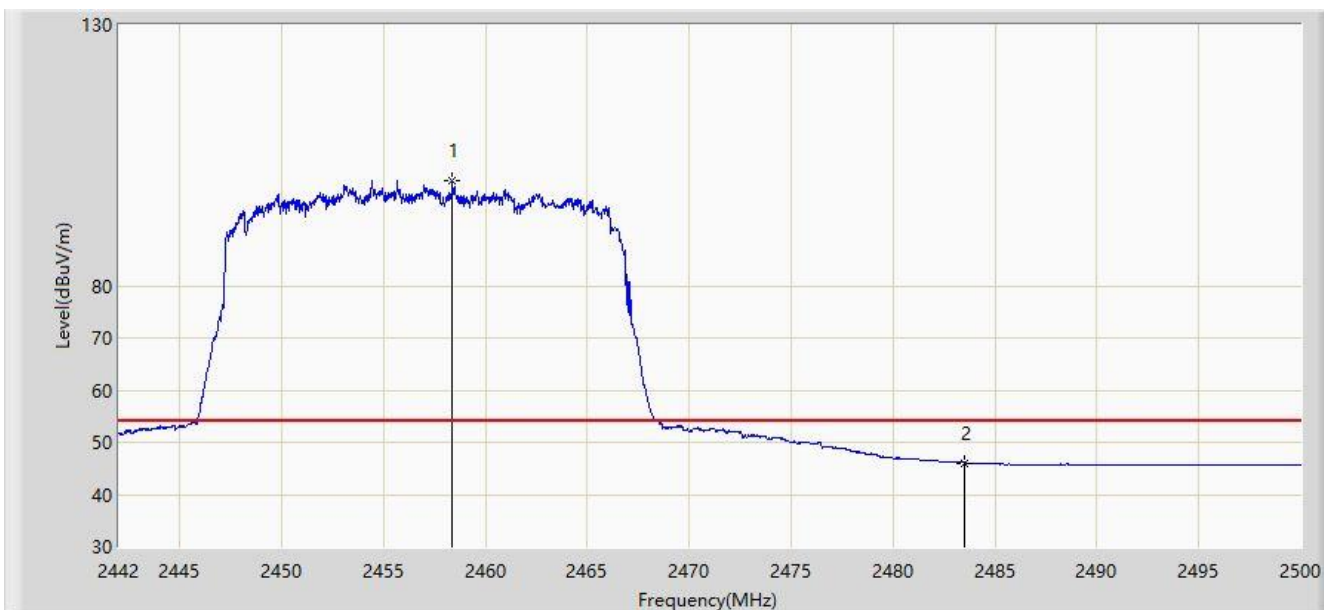


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2463.025	115.996	83.386	N/A	N/A	32.610	PK
2			2483.500	63.993	31.289	-10.007	74.000	32.704	PK
3			2483.905	73.408	40.702	-0.592	74.000	32.706	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 14:11
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2457MHz (Beam-Forming Mode)	

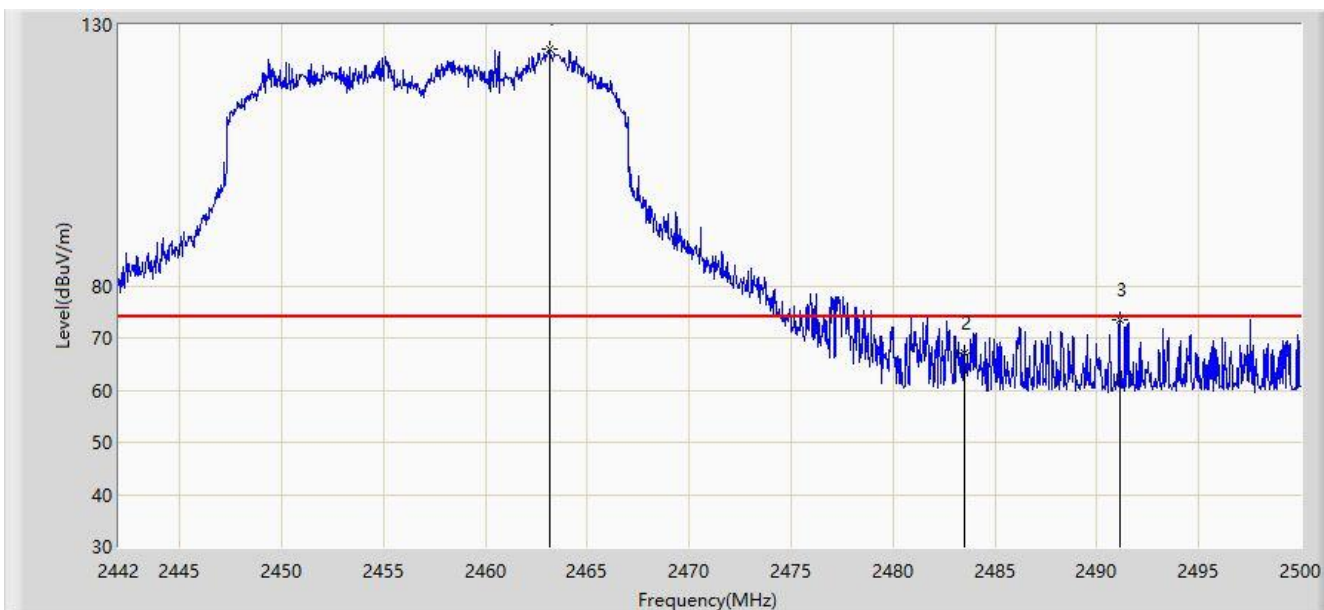


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2458.385	100.097	67.508	N/A	N/A	32.589	AV
2			2483.500	46.052	13.348	-7.948	54.000	32.704	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 14:12
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2457MHz (Beam-Forming Mode)	

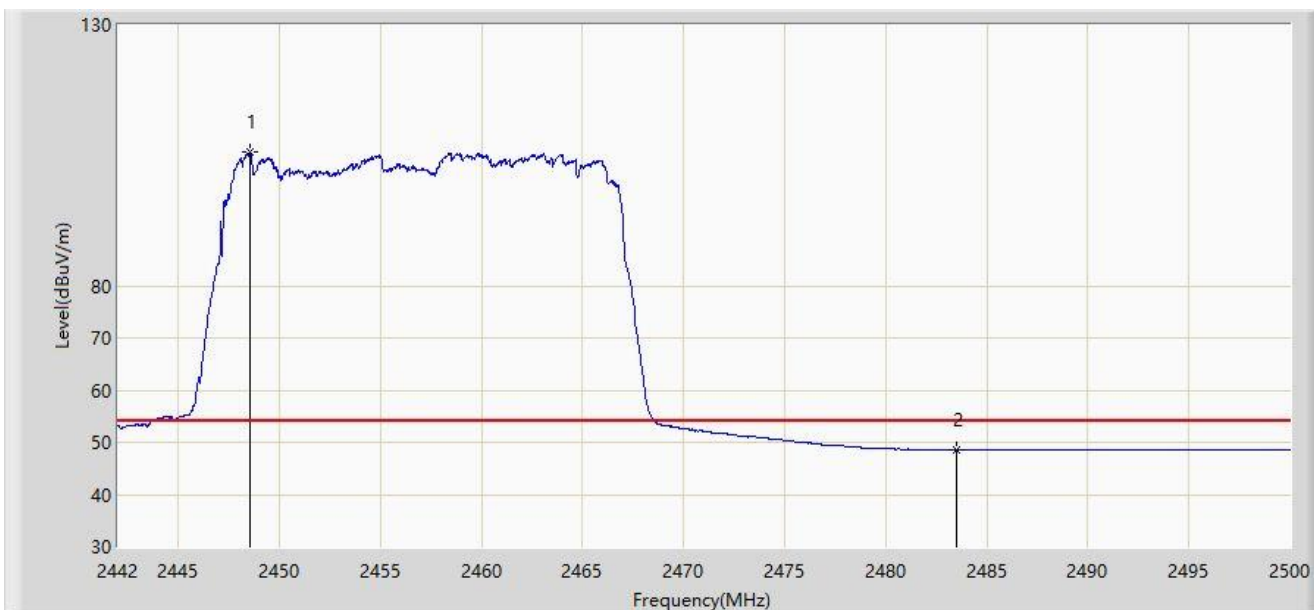


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2463.141	125.251	92.640	N/A	N/A	32.611	PK
2			2483.500	67.065	34.361	-6.935	74.000	32.704	PK
3			2491.126	73.500	40.761	-0.500	74.000	32.739	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 14:13
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2457MHz (Beam-Forming Mode)	

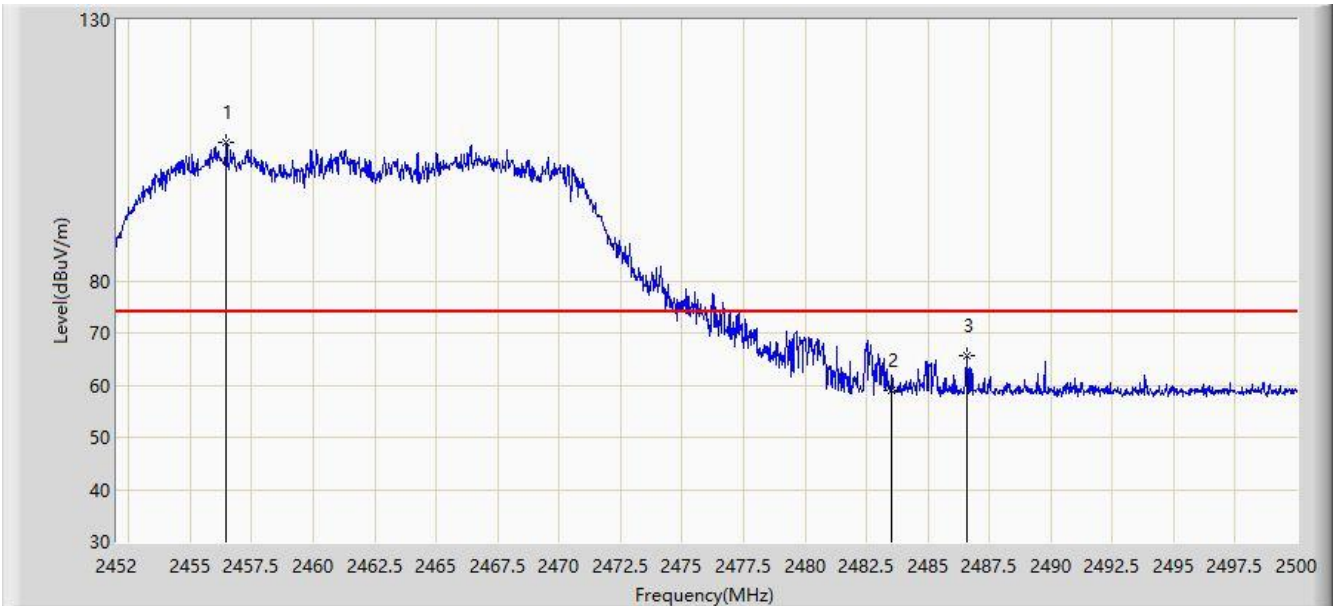


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2448.525	105.635	73.091	N/A	N/A	32.544	AV
2			2483.500	48.566	15.862	-5.434	54.000	32.704	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/08 - 19:18
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2462MHz (Beam-Forming Mode)	

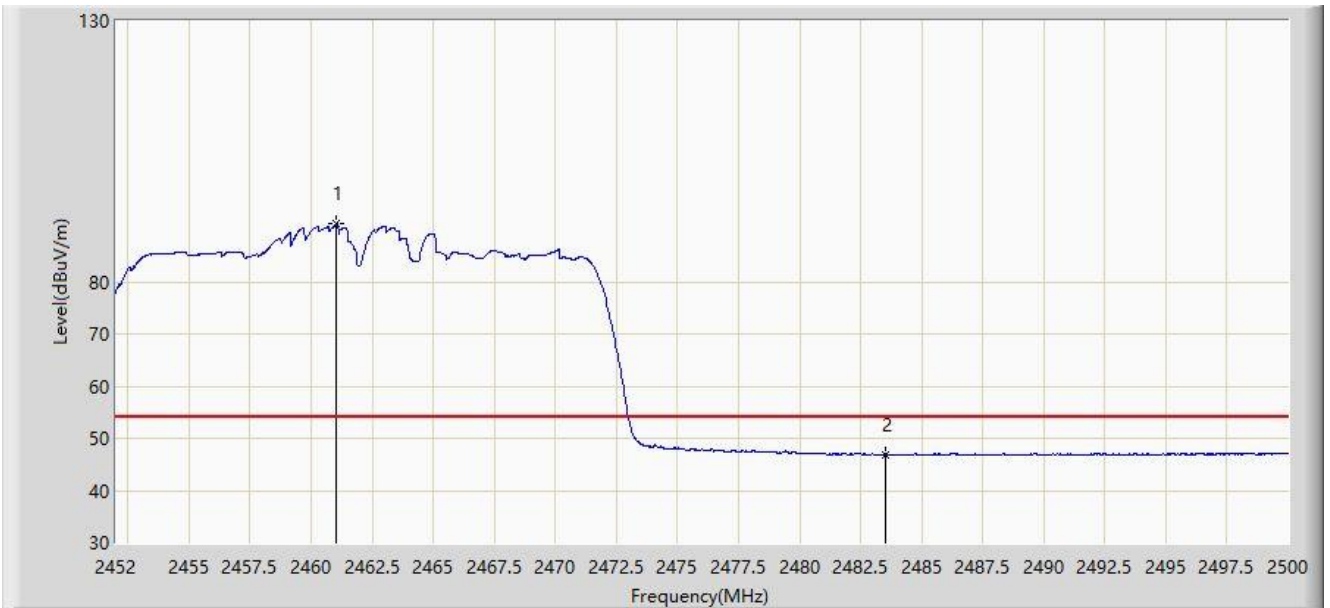


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2456.464	106.654	74.074	N/A	N/A	32.580	PK
2			2483.500	58.956	26.252	-15.044	74.000	32.704	PK
3			2486.560	65.672	32.954	-8.328	74.000	32.718	PK

Note: Measure Level (dBμV/m) = Reading Level (dBμV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/08 - 19:19
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2462MHz (Beam-Forming Mode)	

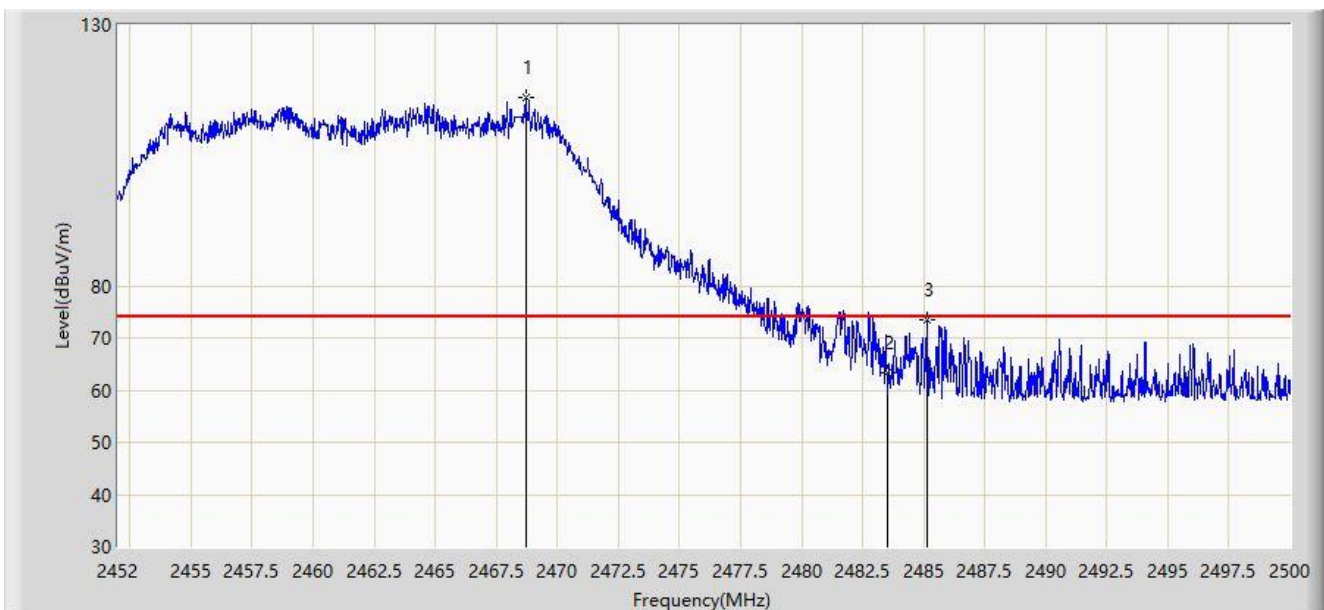


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2461.048	91.057	58.456	N/A	N/A	32.601	AV
2			2483.500	46.871	14.167	-7.129	54.000	32.704	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/08 - 19:19
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2462MHz (Beam-Forming Mode)	

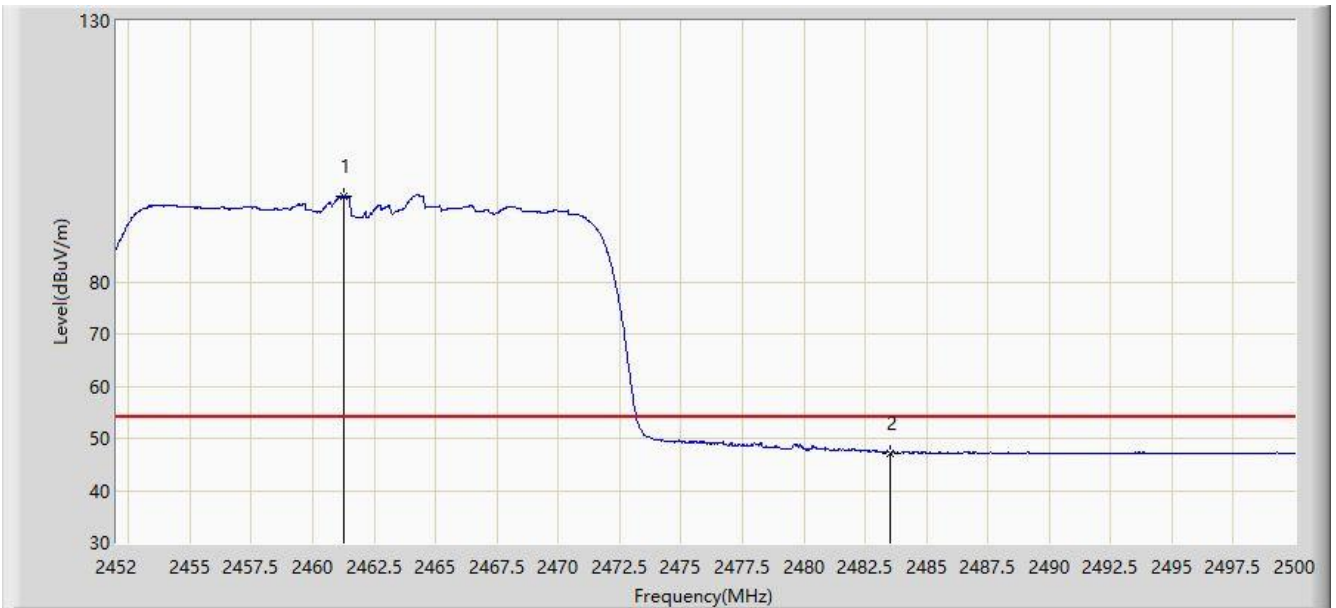


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2468.704	116.032	83.396	N/A	N/A	32.636	PK
2			2483.500	63.429	30.725	-10.571	74.000	32.704	PK
3			2485.120	73.606	40.894	-0.394	74.000	32.712	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/08 - 19:19
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE20 at channel 2462MHz (Beam-Forming Mode)	

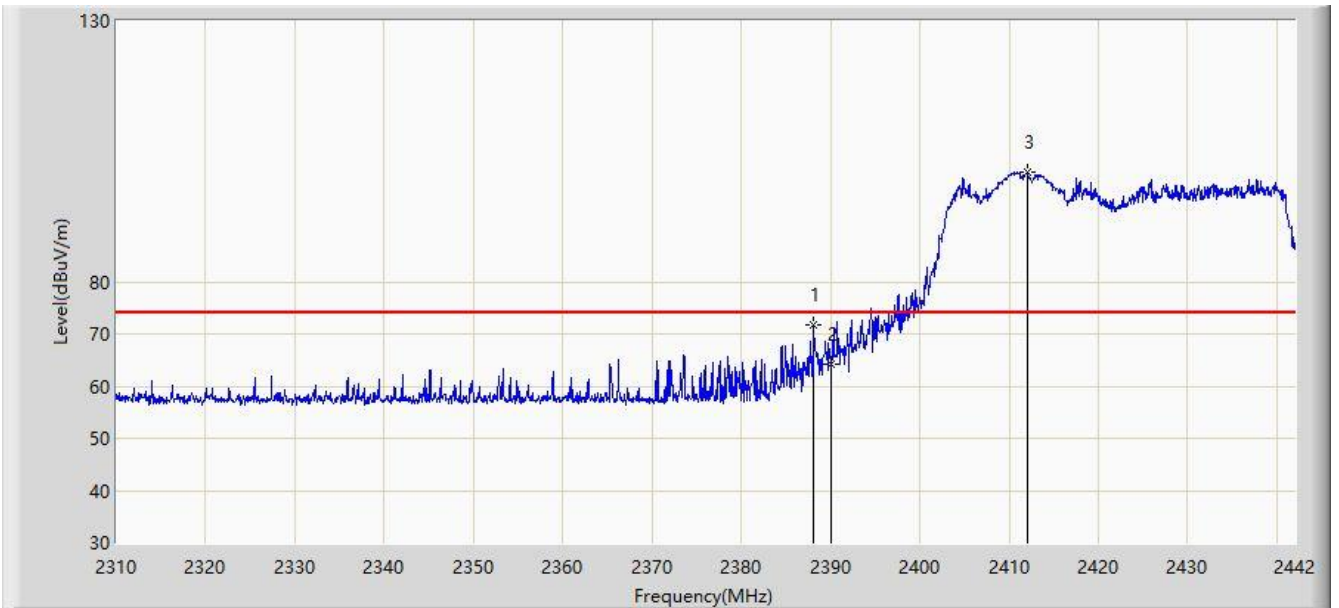


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2461.240	96.365	63.763	N/A	N/A	32.601	AV
2			2483.500	47.229	14.525	-6.771	54.000	32.704	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/08 - 19:19
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE40 at channel 2422MHz (Beam-Forming Mode)	

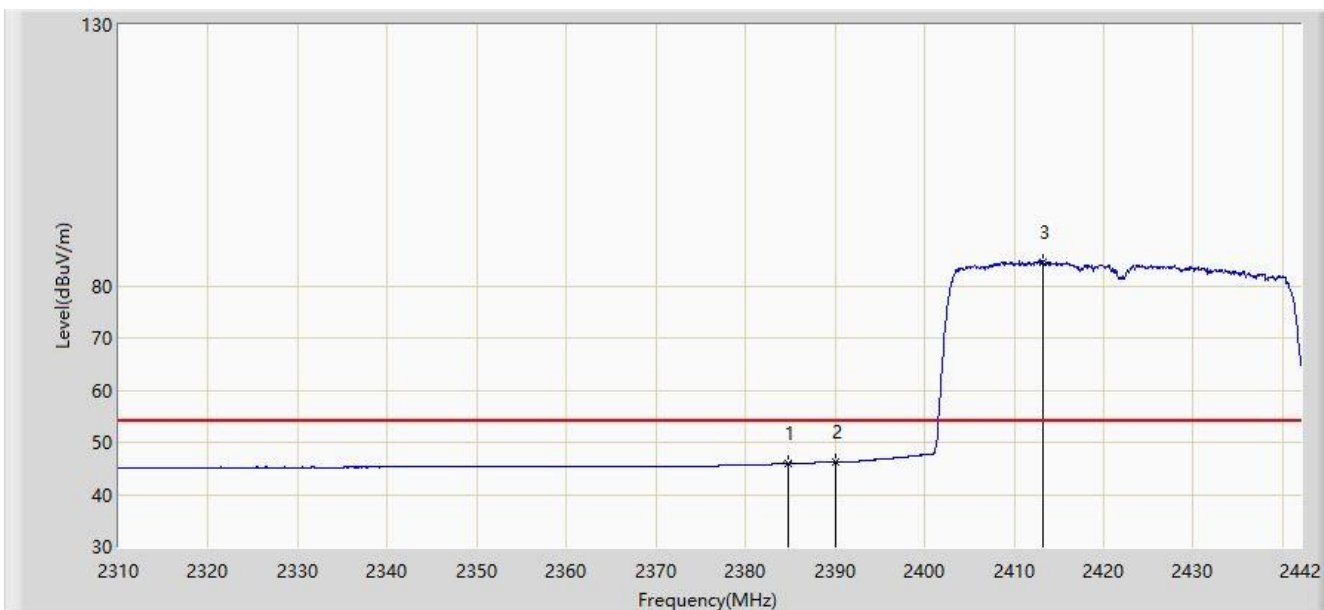


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2388.144	71.797	39.531	-2.203	74.000	32.266	PK
2			2390.000	64.251	31.977	-9.749	74.000	32.274	PK
3		*	2412.036	100.888	68.513	N/A	N/A	32.375	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/08 - 19:19
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE40 at channel 2422MHz (Beam-Forming Mode)	

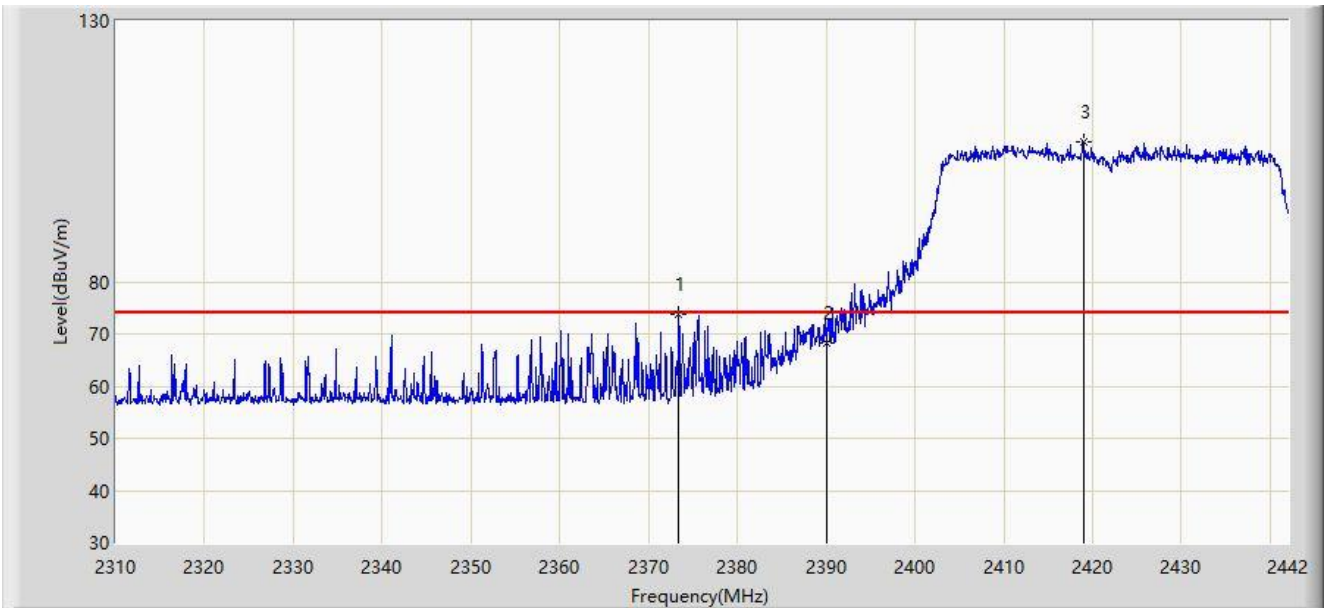


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2384.844	46.014	13.763	-7.986	54.000	32.251	AV
2			2390.000	46.218	13.944	-7.782	54.000	32.274	AV
3		*	2413.158	84.608	52.228	N/A	N/A	32.379	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/08 - 19:39
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE40 at channel 2422MHz (Beam-Forming Mode)	

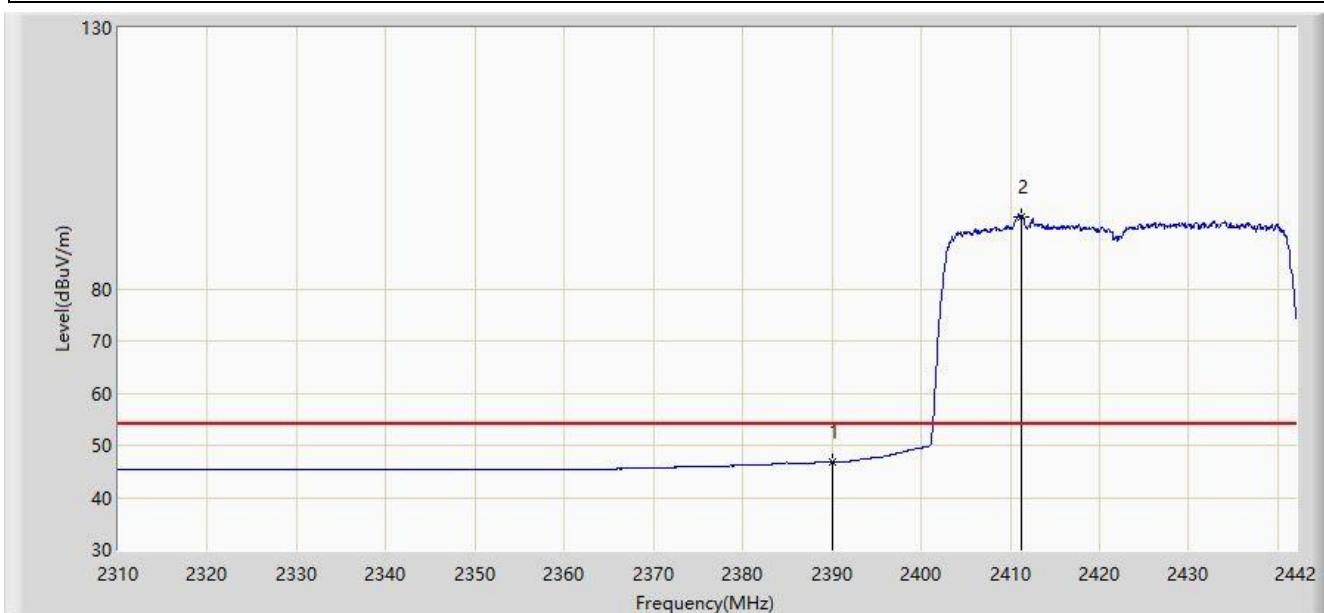


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2373.426	73.832	41.634	-0.168	74.000	32.198	PK
2			2390.000	68.261	35.987	-5.739	74.000	32.274	PK
3		*	2419.032	106.942	74.535	N/A	N/A	32.407	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/08 - 19:40
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE40 at channel 2422MHz (Beam-Forming Mode)	

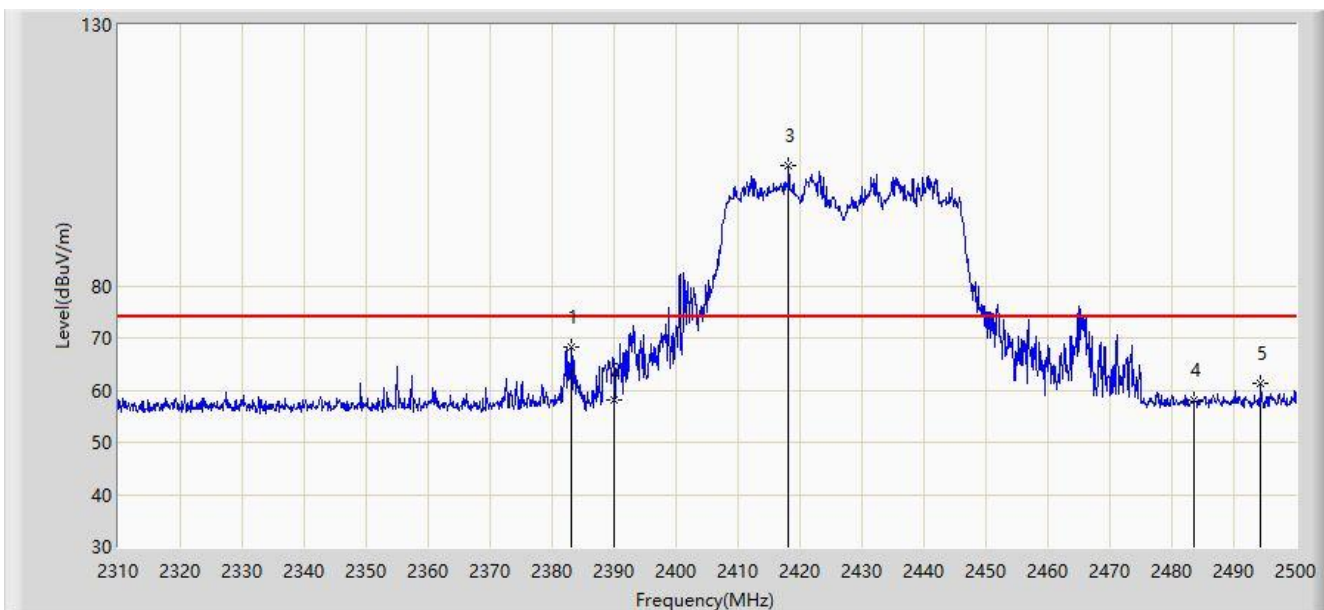


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.757	14.483	-7.243	54.000	32.274	AV
2		*	2411.178	93.873	61.502	N/A	N/A	32.371	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 14:18
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE40 at channel 2427MHz (Beam-Forming Mode)	

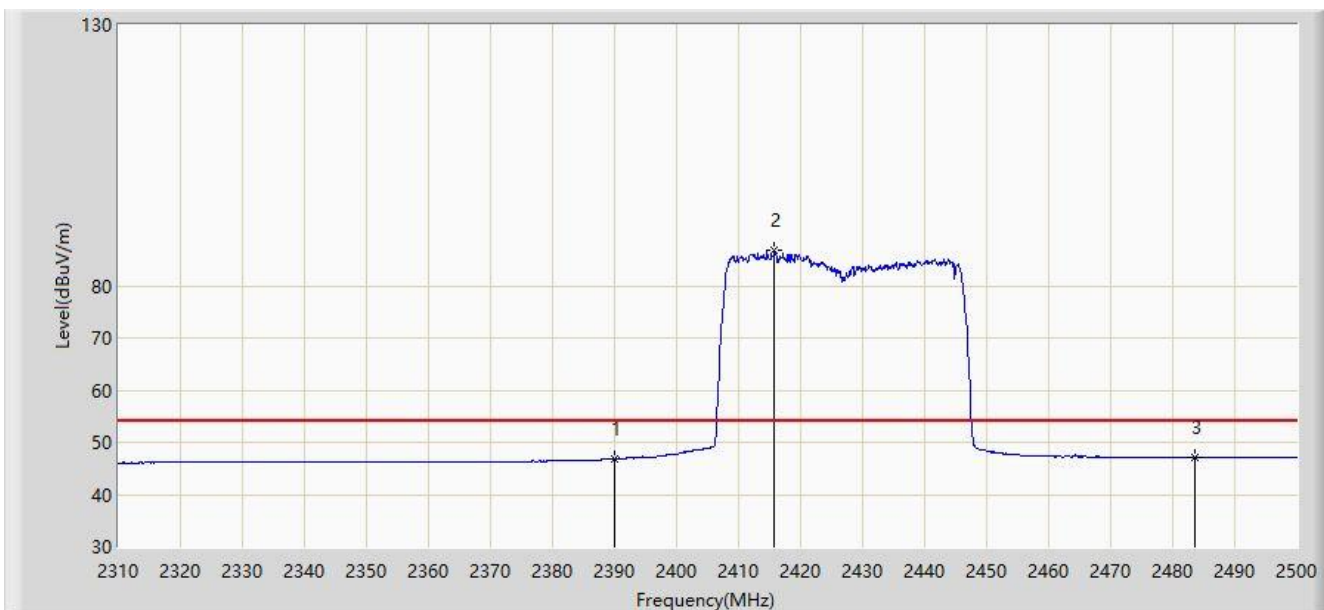


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2383.055	68.138	35.896	-5.862	74.000	32.243	PK
2			2390.000	58.246	25.972	-15.754	74.000	32.274	PK
3		*	2418.205	103.011	70.608	N/A	N/A	32.404	PK
4			2483.500	58.094	25.390	-15.906	74.000	32.704	PK
5			2494.395	61.293	28.539	-12.707	74.000	32.754	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 14:18
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE40 at channel 2427MHz (Beam-Forming Mode)	

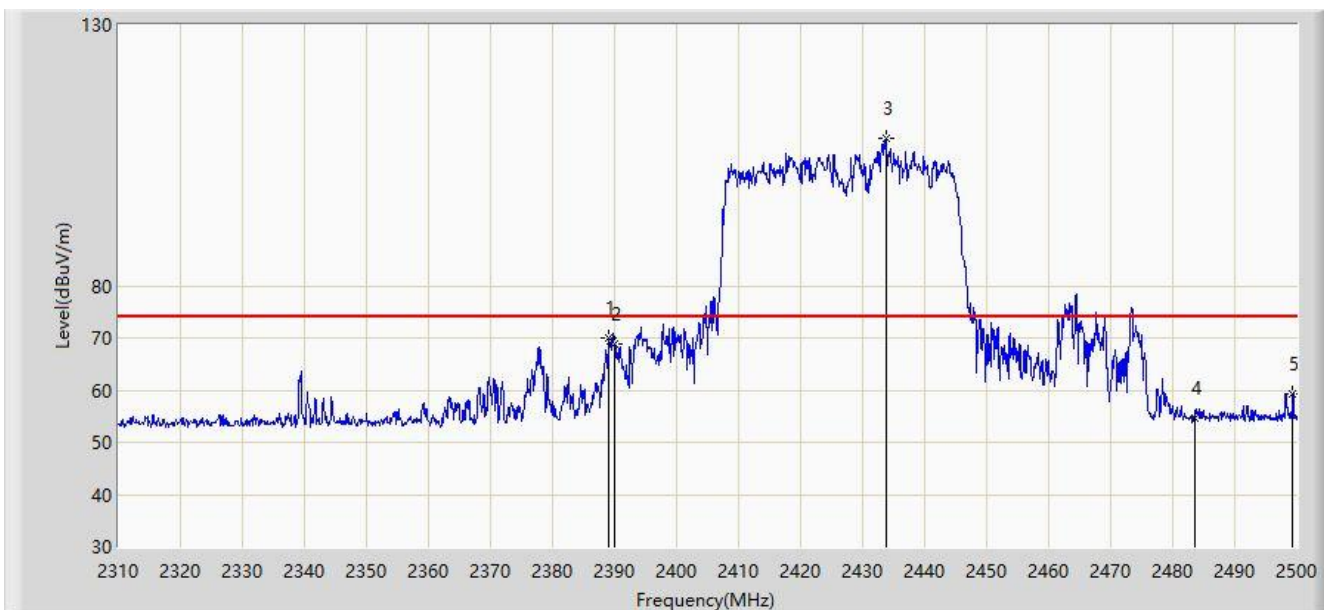


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.919	14.645	-7.081	54.000	32.274	AV
2		*	2415.830	86.742	54.350	N/A	N/A	32.392	AV
3			2483.500	47.041	14.337	-6.959	54.000	32.704	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 14:27
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE40 at channel 2427MHz (Beam-Forming Mode)	

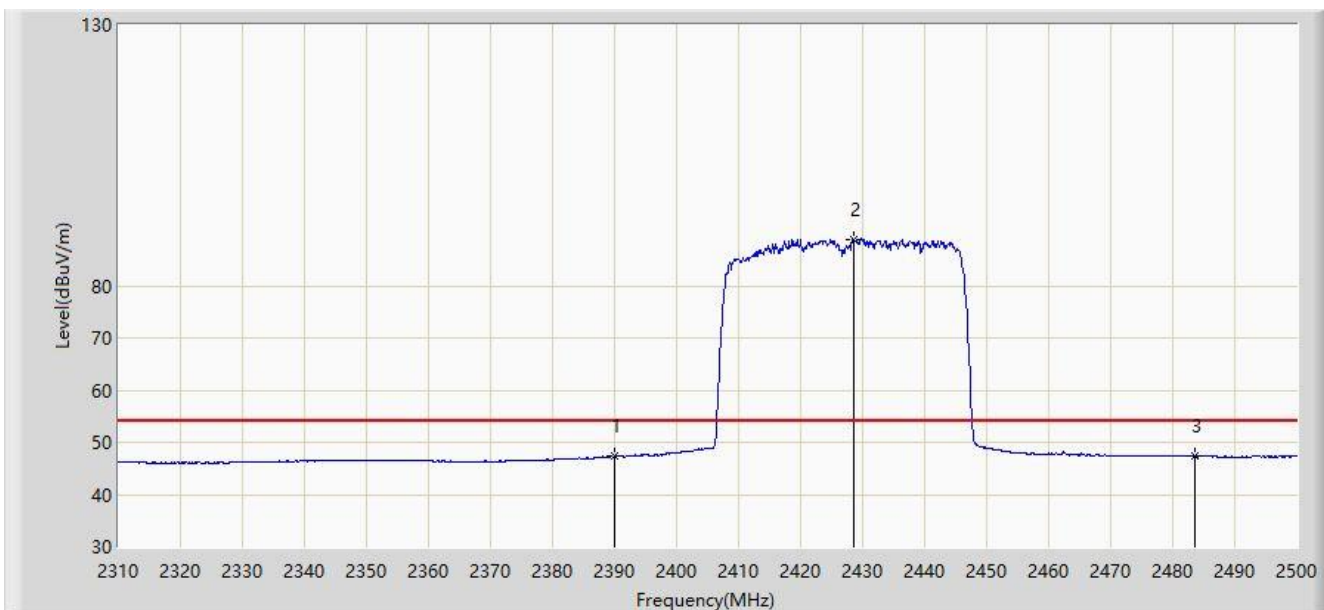


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.040	70.132	37.862	-3.868	74.000	32.270	PK
2			2390.000	68.836	36.562	-5.164	74.000	32.274	PK
3		*	2433.785	108.138	75.663	N/A	N/A	32.476	PK
4			2483.500	54.593	21.889	-19.407	74.000	32.704	PK
5			2499.335	59.396	26.622	-14.604	74.000	32.774	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 14:27
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE40 at channel 2427MHz (Beam-Forming Mode)	

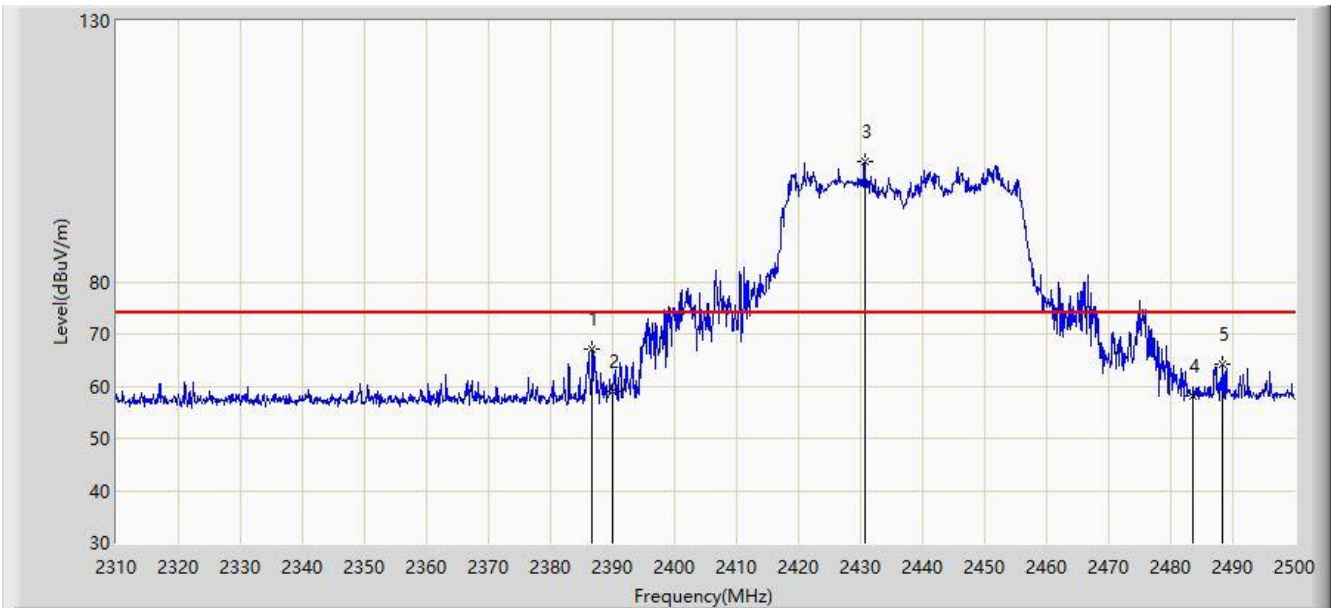


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	47.302	15.028	-6.698	54.000	32.274	AV
2		*	2428.655	88.949	56.497	N/A	N/A	32.451	AV
3			2483.500	47.284	14.580	-6.716	54.000	32.704	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 14:29
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE40 at channel 2437MHz (Beam-Forming Mode)	

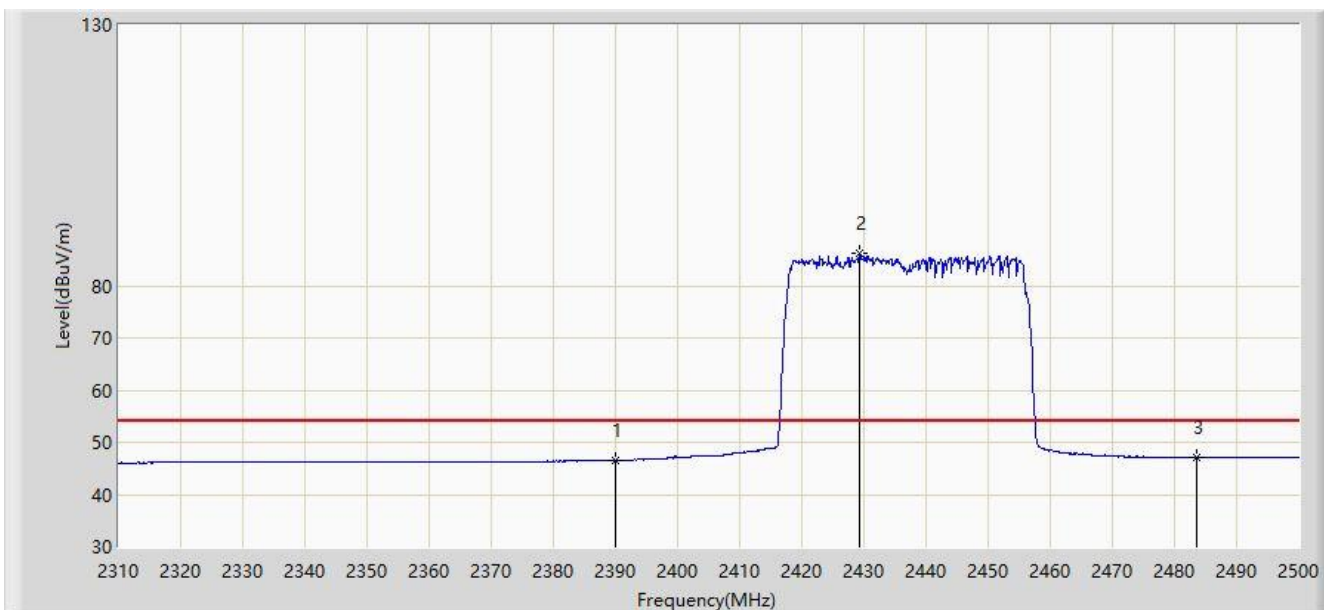


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2386.760	67.194	34.935	-6.806	74.000	32.259	PK
2			2390.000	58.980	26.706	-15.020	74.000	32.274	PK
3		*	2430.650	102.906	70.445	N/A	N/A	32.461	PK
4			2483.500	58.060	25.356	-15.940	74.000	32.704	PK
5			2488.410	64.171	31.444	-9.829	74.000	32.727	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 14:29
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE40 at channel 2437MHz (Beam-Forming Mode)	

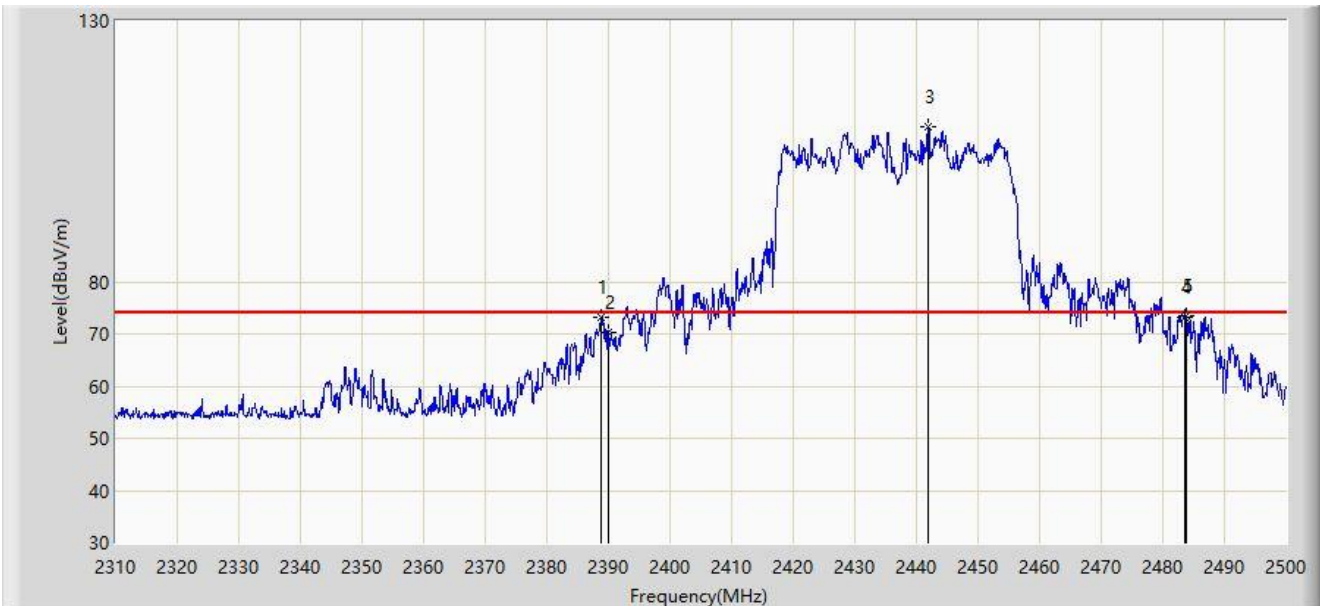


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.544	14.270	-7.456	54.000	32.274	AV
2		*	2429.225	86.135	53.681	N/A	N/A	32.454	AV
3			2483.500	47.099	14.395	-6.901	54.000	32.704	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 14:55
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE40 at channel 2437MHz (Beam-Forming Mode)	

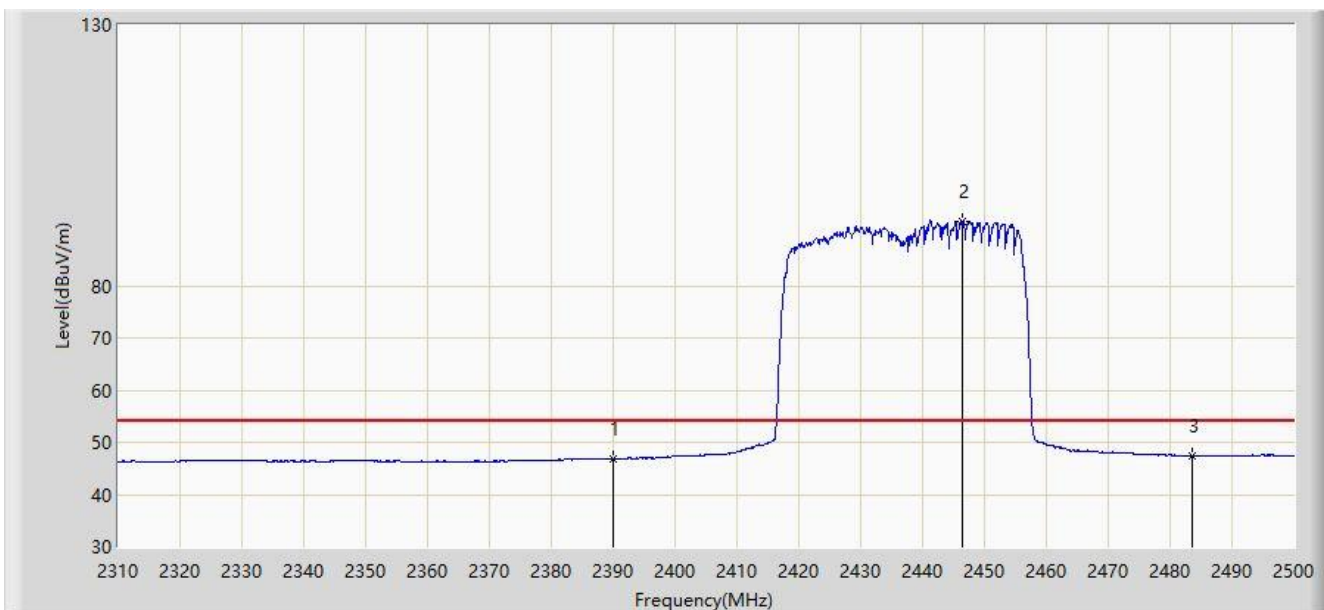


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2388.850	73.058	40.789	-0.942	74.000	32.269	PK
2			2390.000	70.316	38.042	-3.684	74.000	32.274	PK
3		*	2441.955	109.637	77.123	N/A	N/A	32.514	PK
4			2483.500	73.109	40.405	-0.891	74.000	32.704	PK
5			2483.755	73.475	40.769	-0.525	74.000	32.706	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 14:57
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE40 at channel 2437MHz (Beam-Forming Mode)	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.920	14.646	-7.080	54.000	32.274	AV
2		*	2446.325	92.313	59.780	N/A	N/A	32.534	AV
3			2483.500	47.439	14.735	-6.561	54.000	32.704	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 14:57
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE40 at channel 2447MHz (Beam-Forming Mode)	

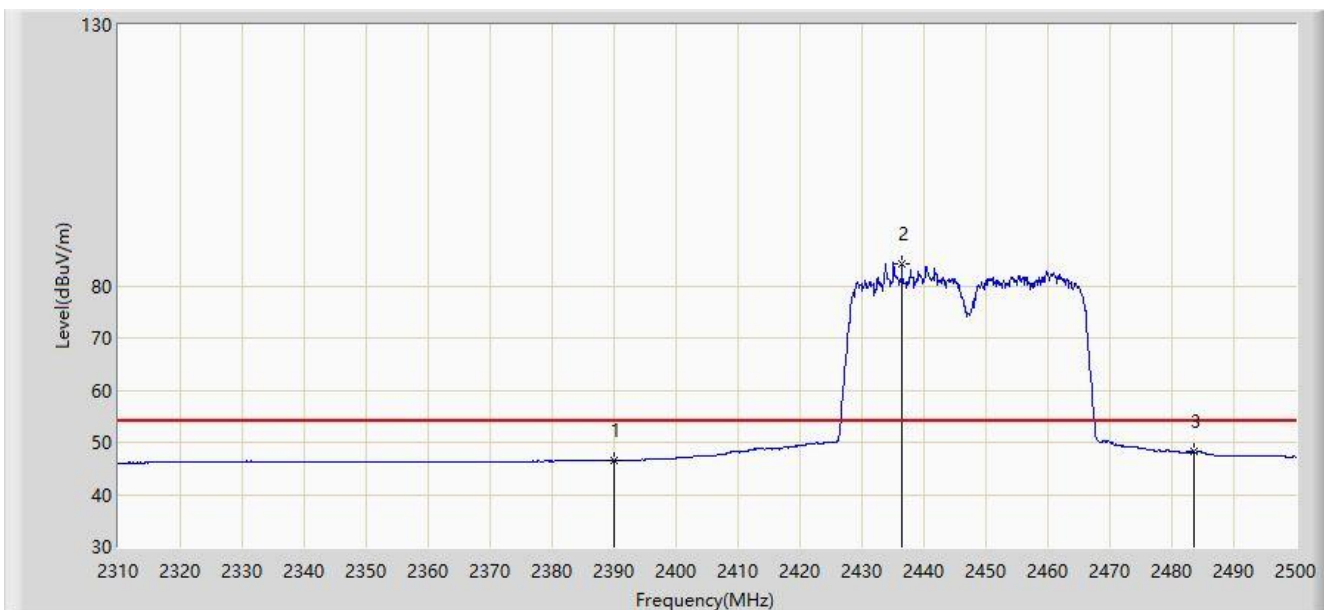


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2331.470	60.338	28.334	-13.662	74.000	32.005	PK
2			2390.000	56.865	24.591	-17.135	74.000	32.274	PK
3		*	2451.360	102.754	70.197	N/A	N/A	32.557	PK
4			2483.500	68.542	35.838	-5.458	74.000	32.704	PK
5			2484.895	69.088	36.377	-4.912	74.000	32.711	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 14:57
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE40 at channel 2447MHz (Beam-Forming Mode)	

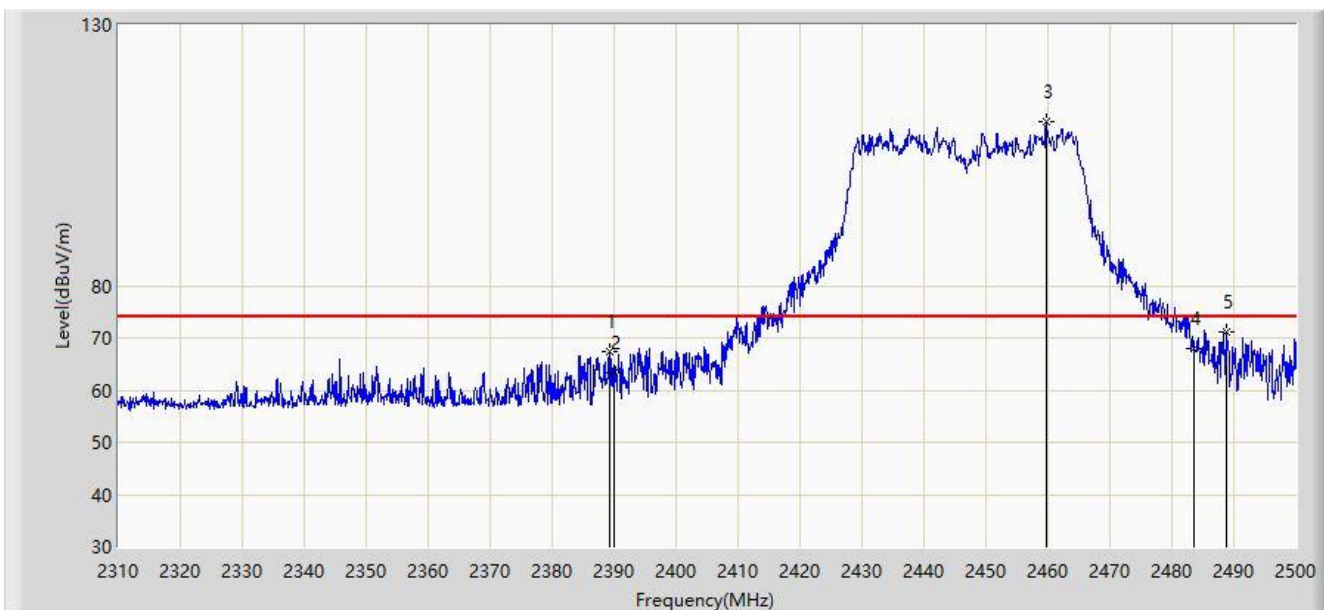


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.512	14.238	-7.488	54.000	32.274	AV
2		*	2436.445	84.203	51.715	N/A	N/A	32.488	AV
3			2483.500	48.133	15.429	-5.867	54.000	32.704	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 14:57
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE40 at channel 2447MHz (Beam-Forming Mode)	

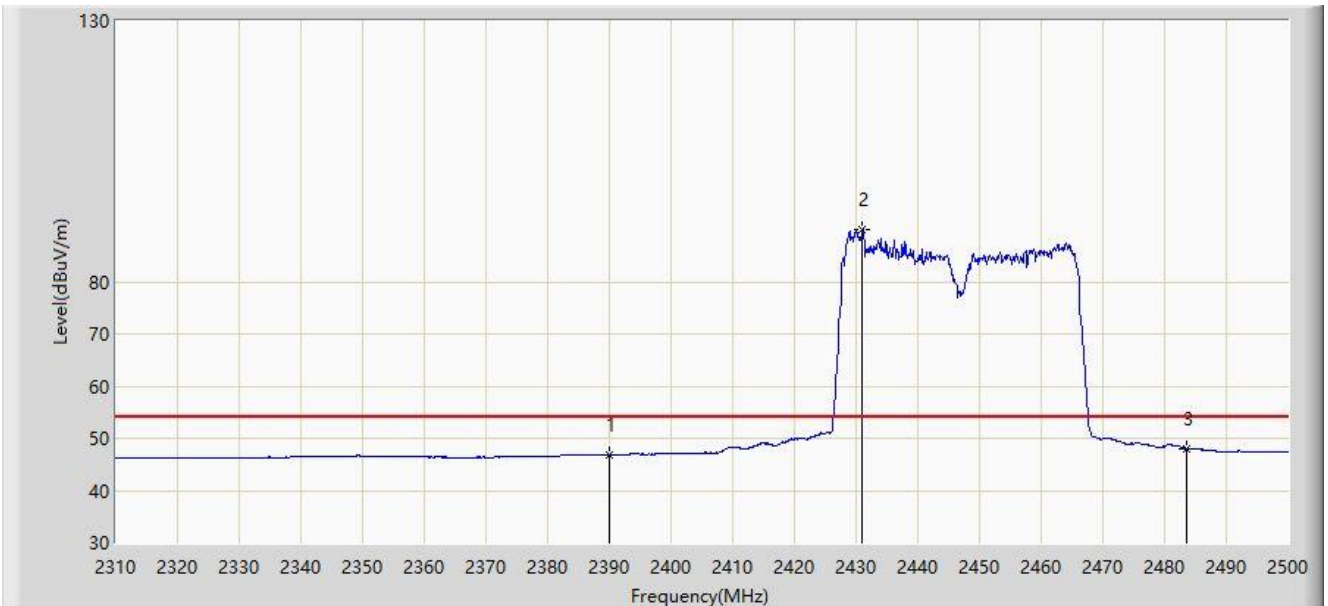


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.230	67.274	35.003	-6.726	74.000	32.271	PK
2			2390.000	63.394	31.120	-10.606	74.000	32.274	PK
3		*	2459.720	111.575	78.980	N/A	N/A	32.595	PK
4			2483.500	67.898	35.194	-6.102	74.000	32.704	PK
5			2488.790	71.165	38.437	-2.835	74.000	32.729	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/09 - 14:58
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE40 at channel 2447MHz (Beam-Forming Mode)	

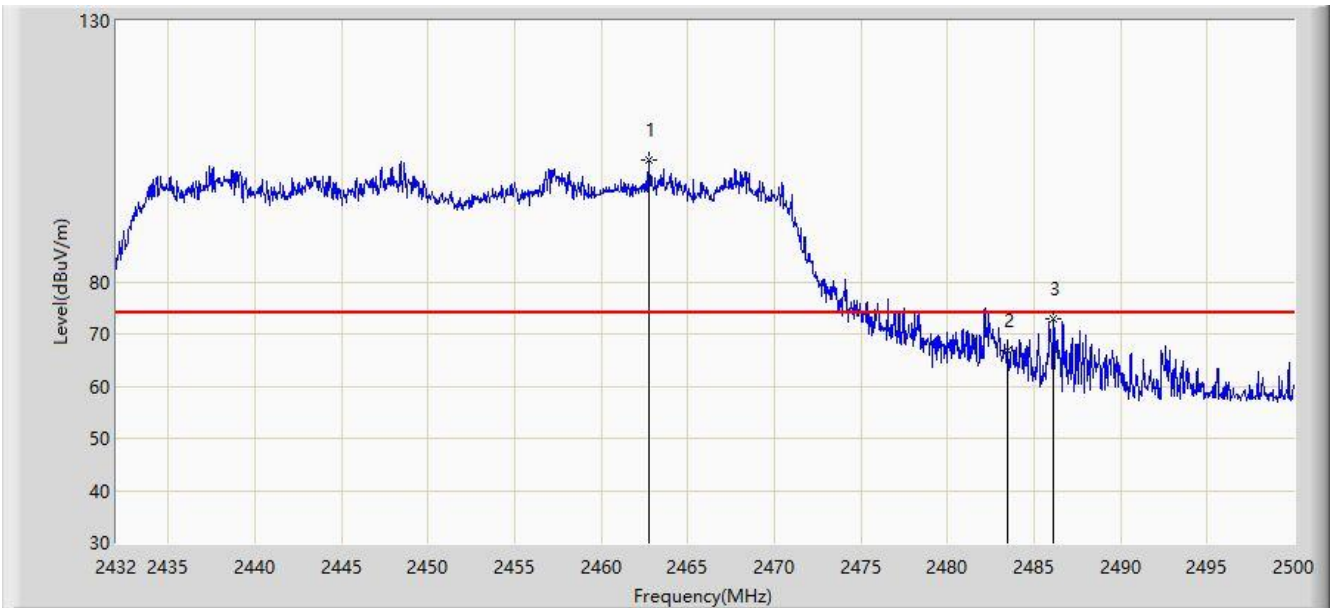


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	46.849	14.575	-7.151	54.000	32.274	AV
2		*	2431.030	89.964	57.501	N/A	N/A	32.462	AV
3			2483.500	48.026	15.322	-5.974	54.000	32.704	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/08 - 19:42
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE40 at channel 2452MHz (Beam-Forming Mode)	

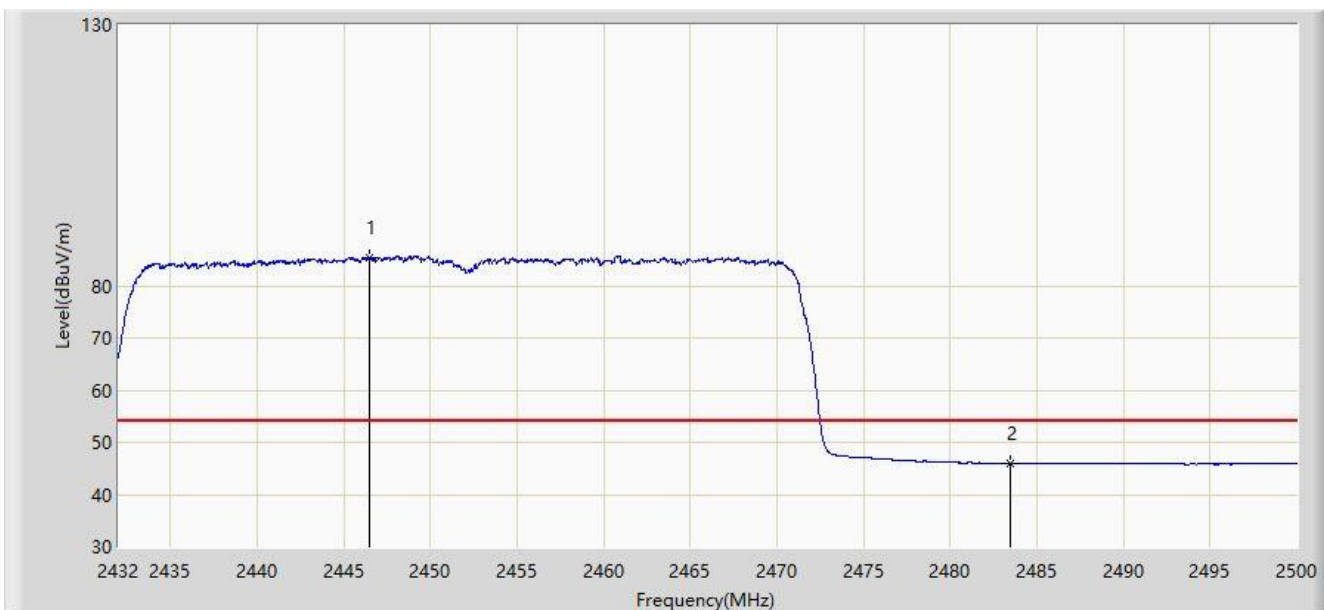


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2462.736	103.342	70.733	N/A	N/A	32.609	PK
2			2483.500	66.933	34.229	-7.067	74.000	32.704	PK
3			2486.128	72.842	40.126	-1.158	74.000	32.716	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/08 - 19:42
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE40 at channel 2452MHz (Beam-Forming Mode)	

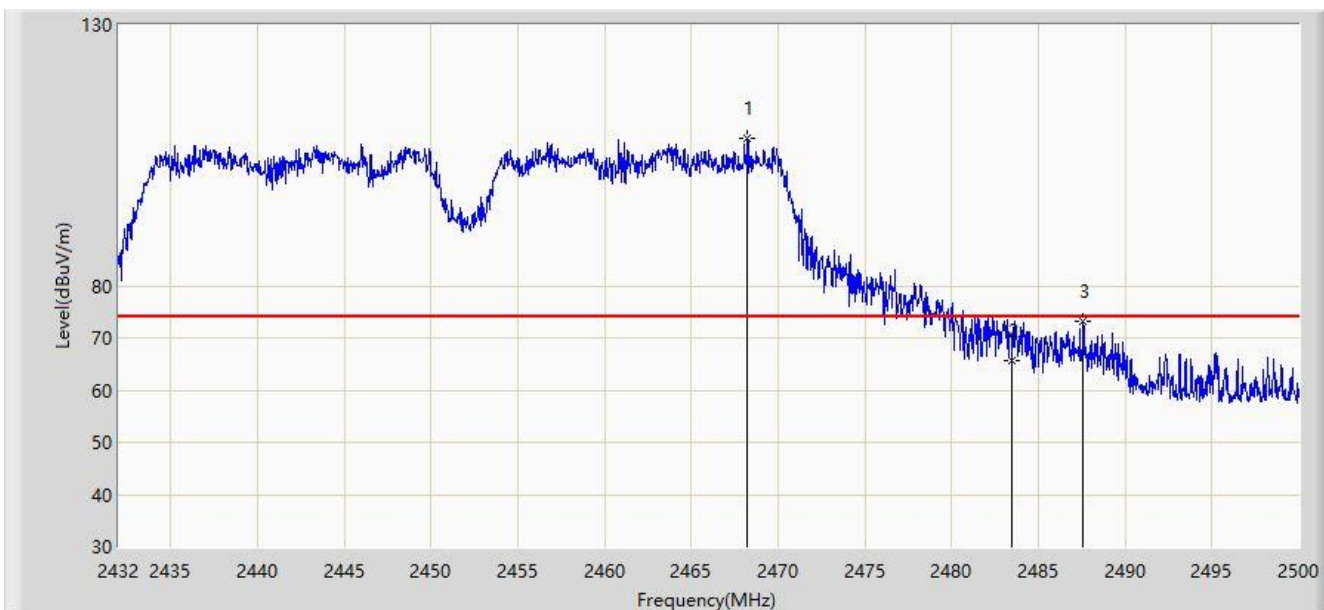


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2446.518	85.451	52.917	N/A	N/A	32.534	AV
2			2483.500	45.824	13.120	-8.176	54.000	32.704	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/08 - 19:42
Limit: NCC LP0002_1GHz-40GHz_PK	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE40 at channel 2452MHz (Beam-Forming Mode)	

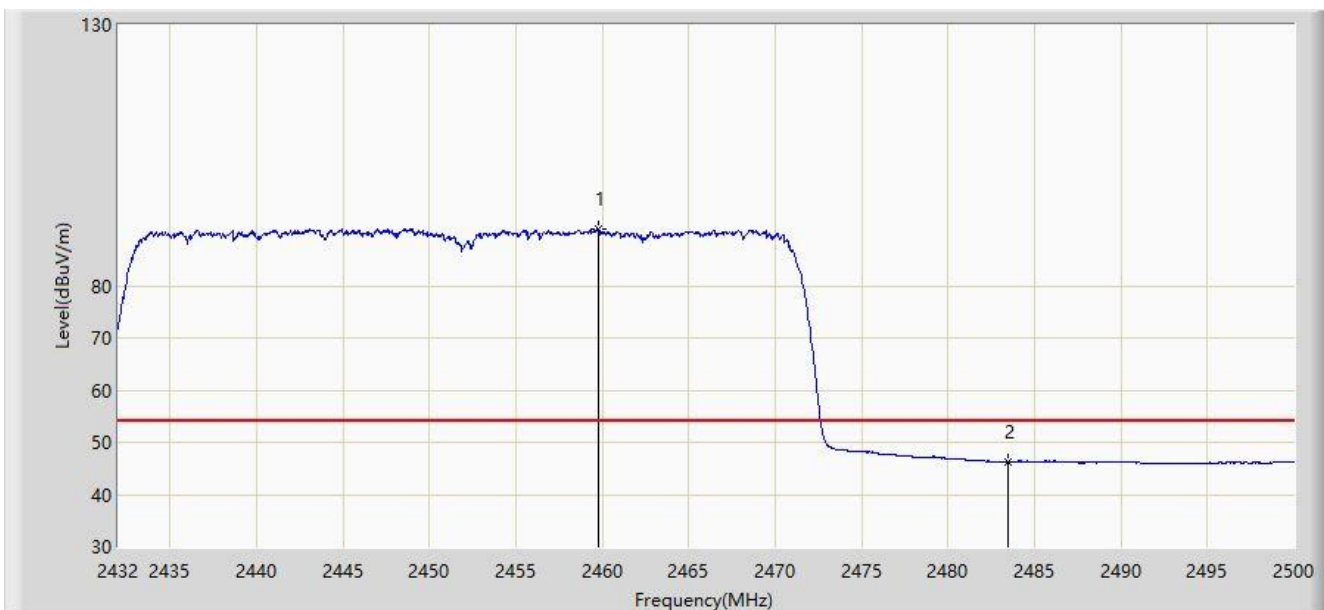


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2468.244	108.195	75.561	N/A	N/A	32.634	PK
2			2483.500	65.559	32.855	-8.441	74.000	32.704	PK
3			2487.590	73.054	40.331	-0.946	74.000	32.723	PK

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Site: AC1	Time: 2019/11/08 - 19:43
Limit: NCC LP0002_1GHz-40GHz_AV	Engineer: Kevin Ker
Probe: BBHA 9120D	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11ax-HE40 at channel 2452MHz (Beam-Forming Mode)	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2459.778	90.780	58.185	N/A	N/A	32.595	AV
2			2483.500	46.253	13.549	-7.747	54.000	32.704	AV

Note: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

5.5. 發射電功率密度

5.5.1. 適用標準

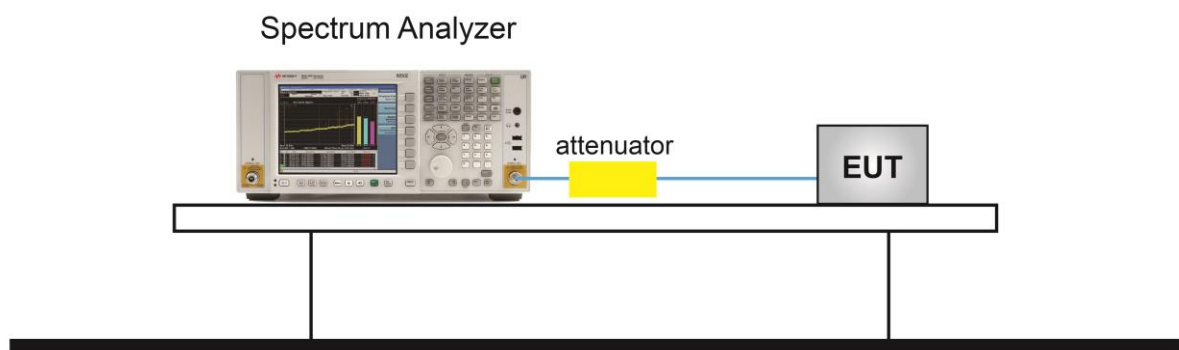
依據國家通訊傳播委員會低功率射頻電機技術規範之第 3.10.1.6(2)(B)節，在使用頻率範圍之任意 3 千赫(kHz)頻寬內，由發射機傳導至天線之峰值發射電功率密度在任意期間內，皆不得大於 8dBm。

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。找出發射峰值並擴展於通帶內，設定頻譜分析儀之解析度頻寬為 3kHz，視訊頻寬大於解析度頻寬，掃瞄時間為頻率掃瞄範圍除以 3kHz。
($\text{SWEEP TIME} = \text{SPAN}/3\text{kHz}$)。

待測物應在正常發射狀態下量測。

5.5.3. 測試架構圖



5.5.4. 功率密度量測結果

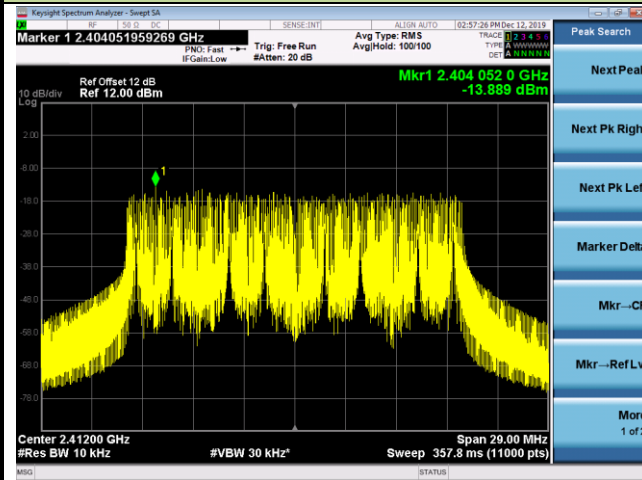
待測物名稱	AX3000 Gigabit Wi-Fi 6 路由器	溫度	24°C
測試工程師	Kevin Ker	濕度	54%
測試場地	SR1	測試日期	2019/12/12
測試項目	Power Spectral Density (Beam-Forming mode)		

Test Mode	Data Rate/ MCS	Channel No.	Freq. (MHz)	Ant 0 PSD (dBm/ 10kHz)	Ant 1 PSD (dBm/ 10kHz)	Duty Cycle (%)	Constant Factor (dBm)	Total PSD (dBm/ 3kHz)	Limit (dBm/ 3kHz)	Result
802.11ax-HE20	MCS0	01	2412	-13.89	-13.99	100.00	-5.23	-16.16	≤ 8.00	Pass
802.11ax-HE20	MCS0	06	2437	-4.38	-2.94	100.00	-5.23	-5.82	≤ 8.00	Pass
802.11ax-HE20	MCS0	11	2462	-10.03	-10.17	100.00	-5.23	-12.32	≤ 8.00	Pass
802.11ax-HE40	MCS0	03	2422	-11.55	-10.15	100.00	-5.23	-13.01	≤ 8.00	Pass
802.11ax-HE40	MCS0	06	2437	-9.61	-9.41	100.00	-5.23	-11.73	≤ 8.00	Pass
802.11ax-HE40	MCS0	09	2452	-9.18	-7.75	100.00	-5.23	-10.63	≤ 8.00	Pass

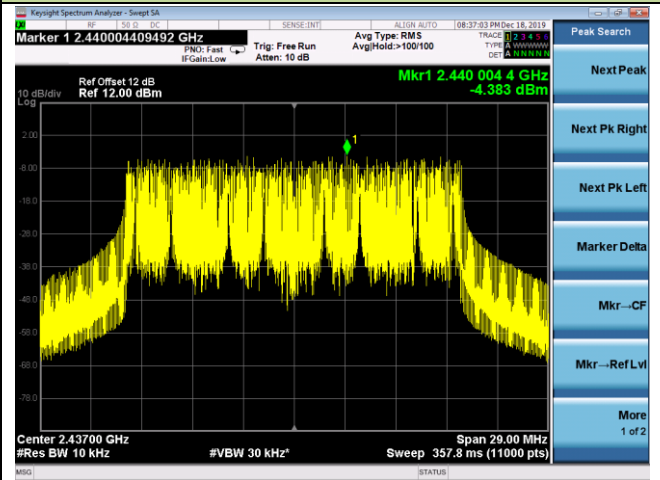
Note: When EUT duty cycle ≥ 98%, Total AVGPSPD = $10 \cdot \log \{10^{(\text{Ant 0 AVGPSPD}/10)} + 10^{(\text{Ant 1 AVGPSPD}/10)}\} + \text{Constant Factor (dB)}$.

802.11ax-HE20 AVGPSPD - Ant 0 / Ant 0 + 1

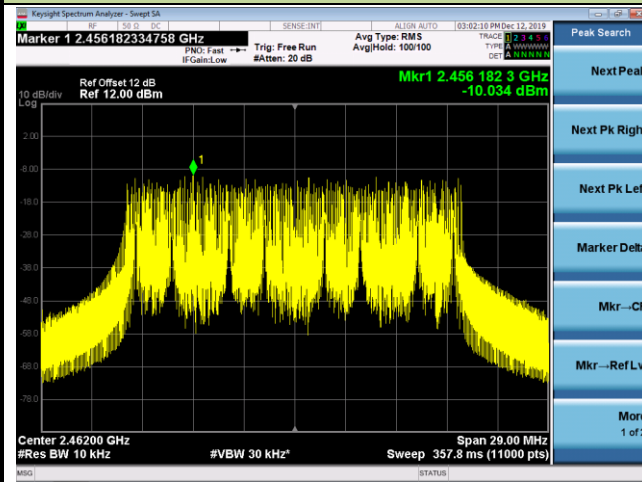
Channel 01 (2412MHz)



Channel 06 (2437MHz)

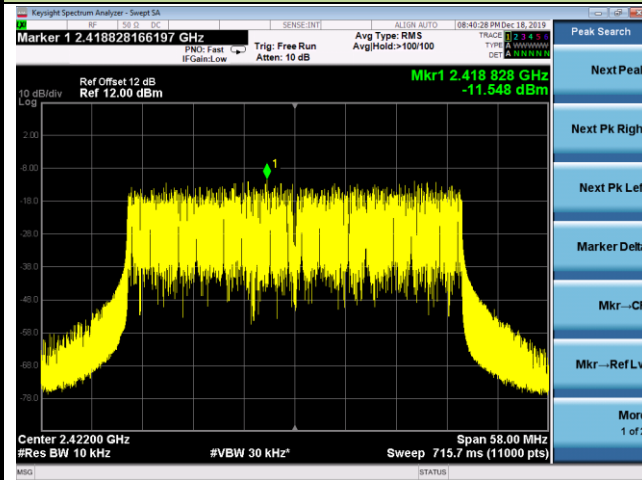


Channel 11 (2462MHz)

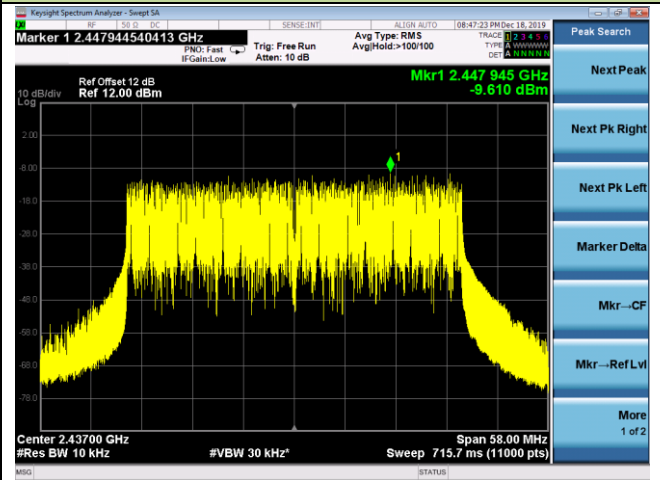


802.11ax-HE40 AVGPSPD - Ant 0 / Ant 0 + 1

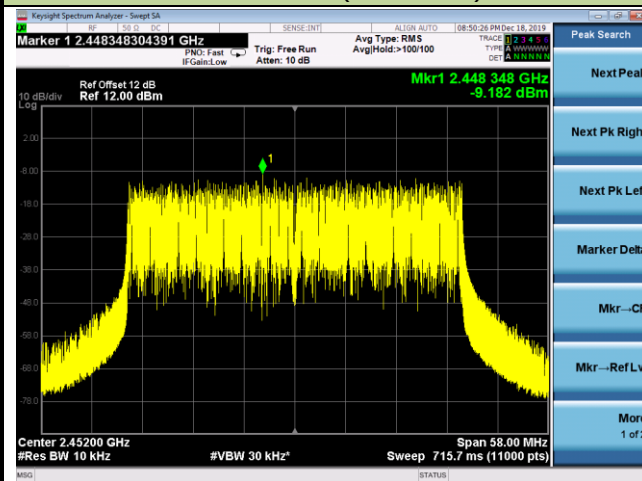
Channel 03 (2422MHz)



Channel 06 (2437MHz)

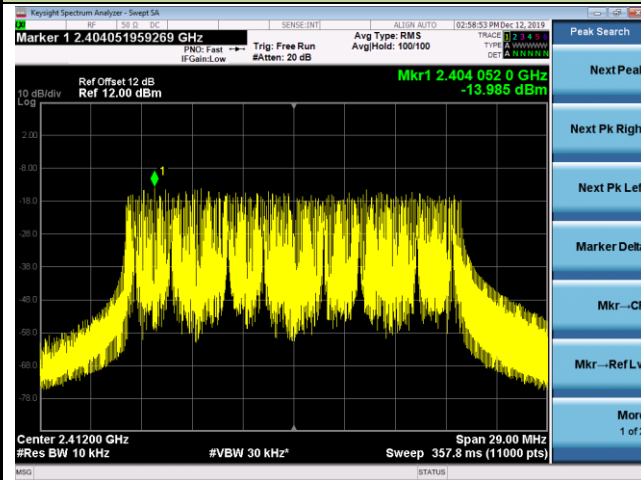


Channel 09 (2452MHz)

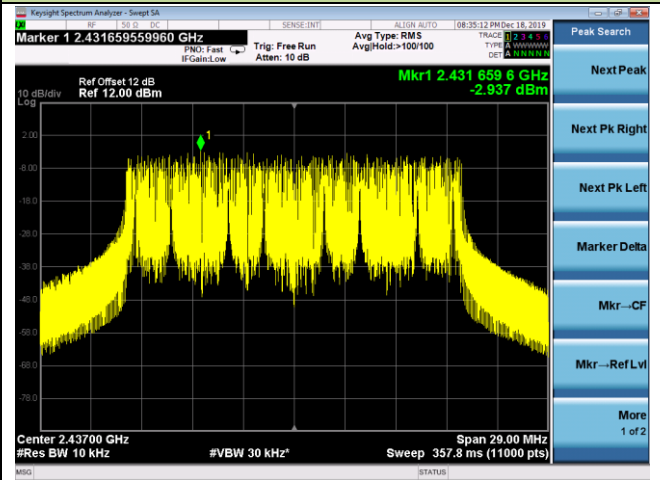


802.11ax-HE20 AVGPSPD - Ant 1 / Ant 0 + 1

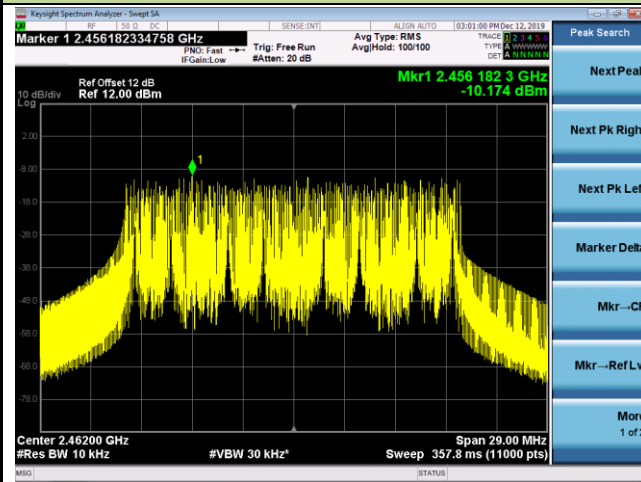
Channel 01 (2412MHz)



Channel 06 (2437MHz)

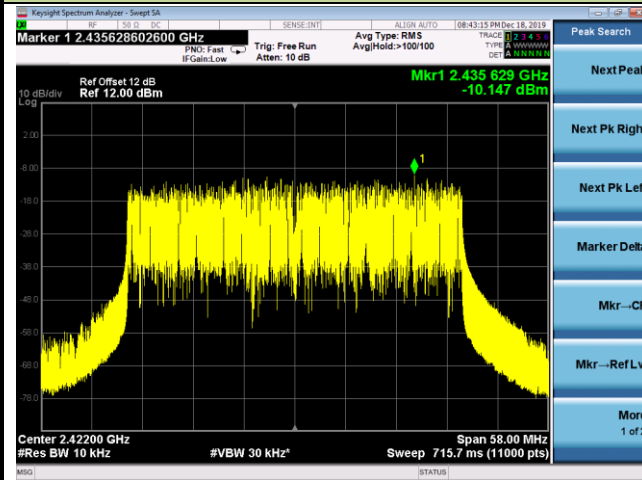


Channel 11 (2462MHz)

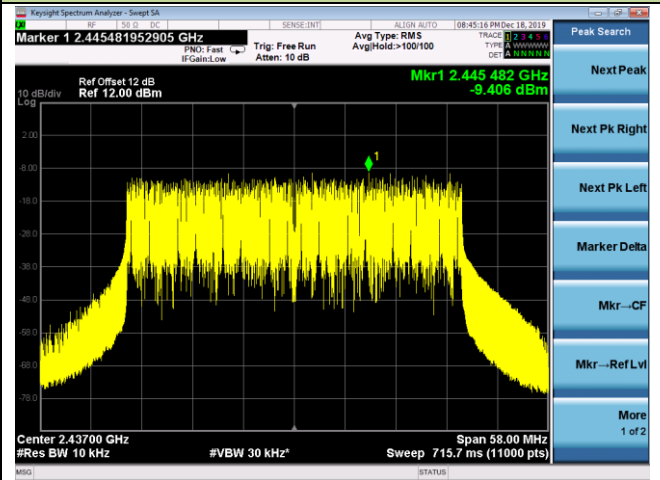


802.11ax-HE40 AVGPSPD - Ant 1 / Ant 0 + 1

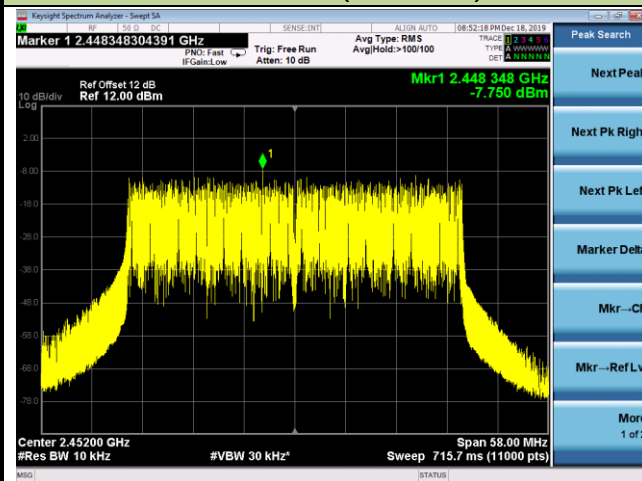
Channel 03 (2422MHz)



Channel 06 (2437MHz)



Channel 09 (2452MHz)



The End