

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 ~ 2019.05.24
發行日期: 2019.06.12

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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

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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	
Adapter	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	--	--

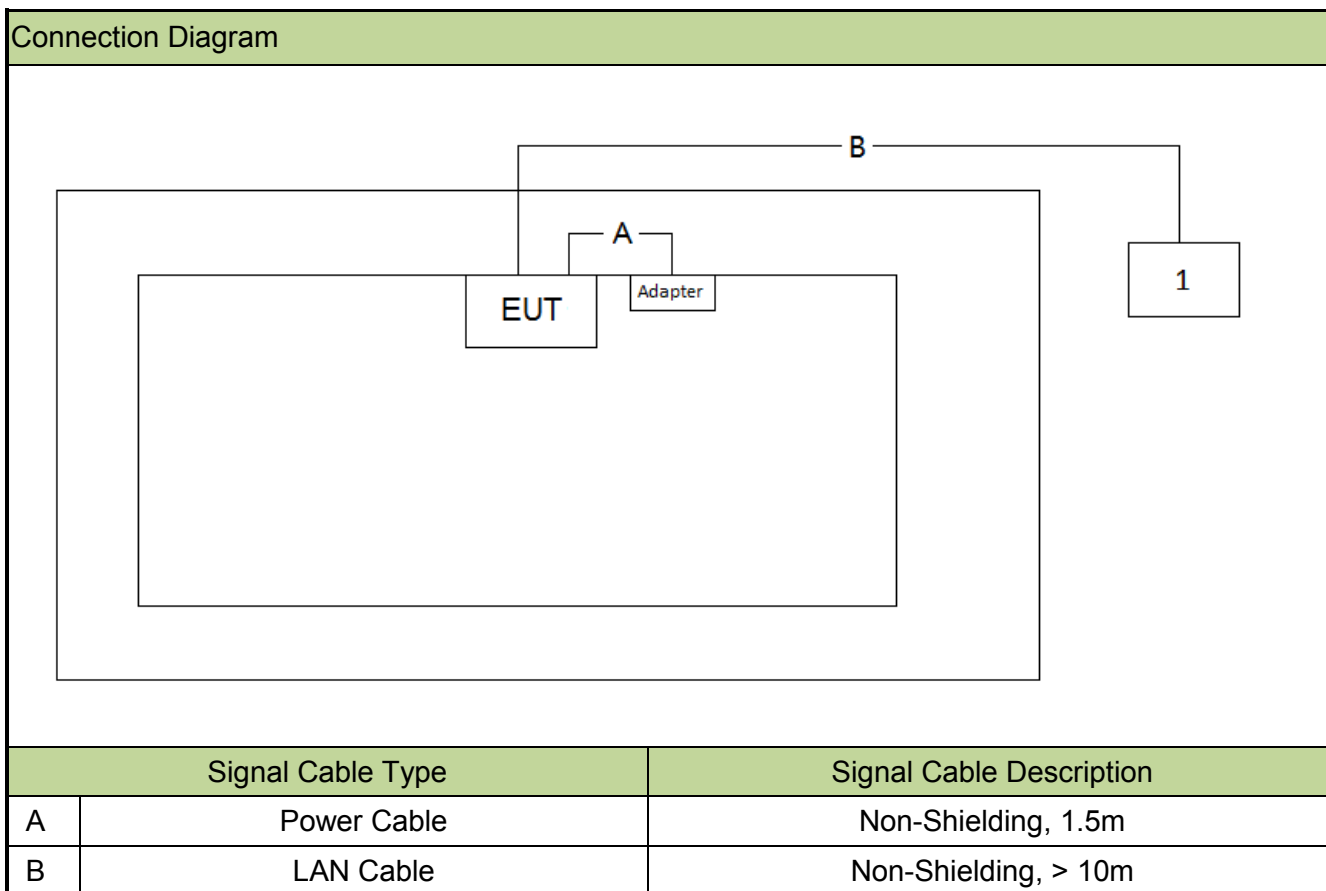
802.11n-HT40/ax-HE40

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 802.11b (1Mbps)
Mode 2: 發射器 802.11g (6Mbps)
Mode 3: 發射器 802.11n-HT20 (MCS0)
Mode 4: 發射器 802.11n-HT40 (MCS0)
Mode 5: 發射器 802.11ax-HE20 (MCS0)
Mode 6: 發射器 802.11ax-HE40 (MCS0)

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
Acitve 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	2019/07/30
Antenna Cable	HUBERSUHNER	SF106	MRTTWE00010	1 year	2019/06/18
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	2019/07/30
EXA Signal Analyzer	KEYSIGHT	N9010B	MRTSUE06457	1 year	2019/07/19
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
2.3	電源傳導	低功率射頻電機技術規範 2.3 節	符合	第 5.1 章節
3.10.1.2	峰值傳導輸出功率	$\leq 30.00\text{dBm}$	符合	第 5.2 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 5.3 章節
3.10.1.5	帶外發射限制	$\leq 30\text{dBc(Average)}$	符合	第 5.4 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 5.5 章節
2.7	頻帶邊緣	$\leq 74\text{dBuV/m(Peak)}$ $\leq 54\text{dBuV/m(Average)}$	符合	第 5.6 章節
3.10.1.6(2)(A)	佔用頻寬	$\geq 500\text{kHz}$	符合	第 5.7 章節
3.10.1.6(2)(B)	功率頻譜密度	$\leq 8\text{dBm}$	符合	第 5.8 章節

5.1. 電源端點干擾測試

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 2.3 節，以市電為電源之低功率射頻電機，其傳導回電源線上頻率自 150kHz 至 30MHz 之射頻電壓(在電源端子每一電源線對接地點)應小於或等於下表所列之限值。測量時應經過 50 微亨利(μH)及 50 歐姆(Ω)之電源線阻抗模擬網路(LISN)。頻率重疊處，以較低限值為準。

Frequency 頻率範圍 MHz	傳導限制值(dBuV)	
	準尖峰值	平均值
0.15 - 0.50	66-56 ^(註)	56-46 ^(註)
0.50 - 5.0	56	46
5.0 - 30	60	50

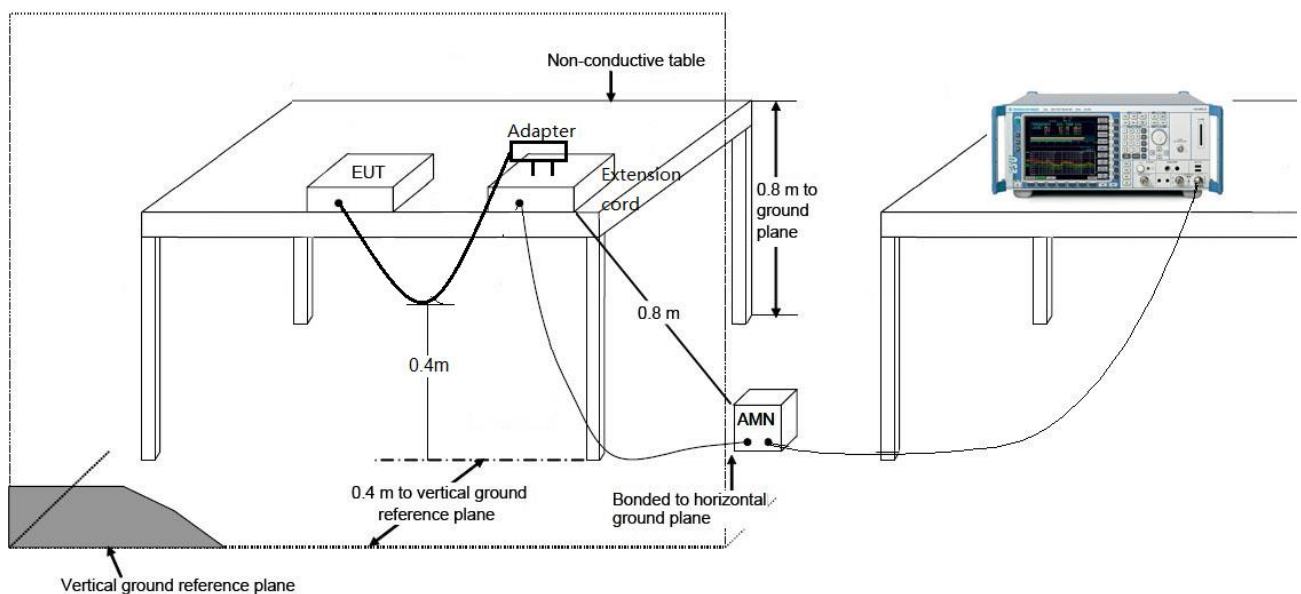
註:隨頻率之對數遞減

5.1.2. 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），將待測物之電源線接至電源阻抗網路器(LISN)，同時保持待測物至 LISN 距 80 公分，並將電源線多餘部份以 30 至 40 公分之八字形捆綁於電源線中央並離地 40cm，於在正常工作狀態下，執行待測物之火線(Line)及地線(neutral)各一次量測。電源端點場強之測量範圍由 0.15MHz -30MHz，所量測之讀值皆為準尖峰值(Quasi-Peak Value)及平均值(Average Value)。場強接收機之解析頻寬為 9kHz。

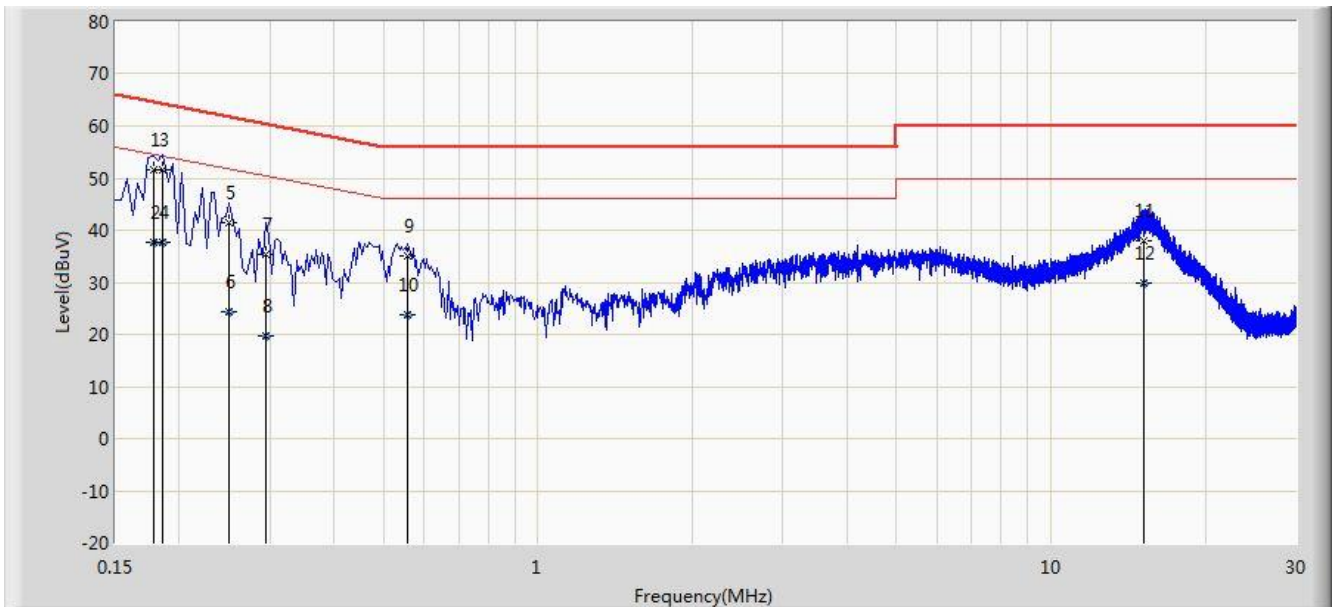
備 註: 經初測驗證過，電源端點干擾測試對測試頻道數並無差異，因此檢附其中一個測試頻道之測試數。

5.1.3. 測試架構圖



5.1.4. 電源端點測試結果

Site: SR2	Time: 2019/05/18 - 12:56
Limit: NCC LP0002_CE_0.15MHz-30MHz	Engineer: Kevin ker
Probe: ENV216_Filter On	Polarity: Line
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
Test Mode 1	

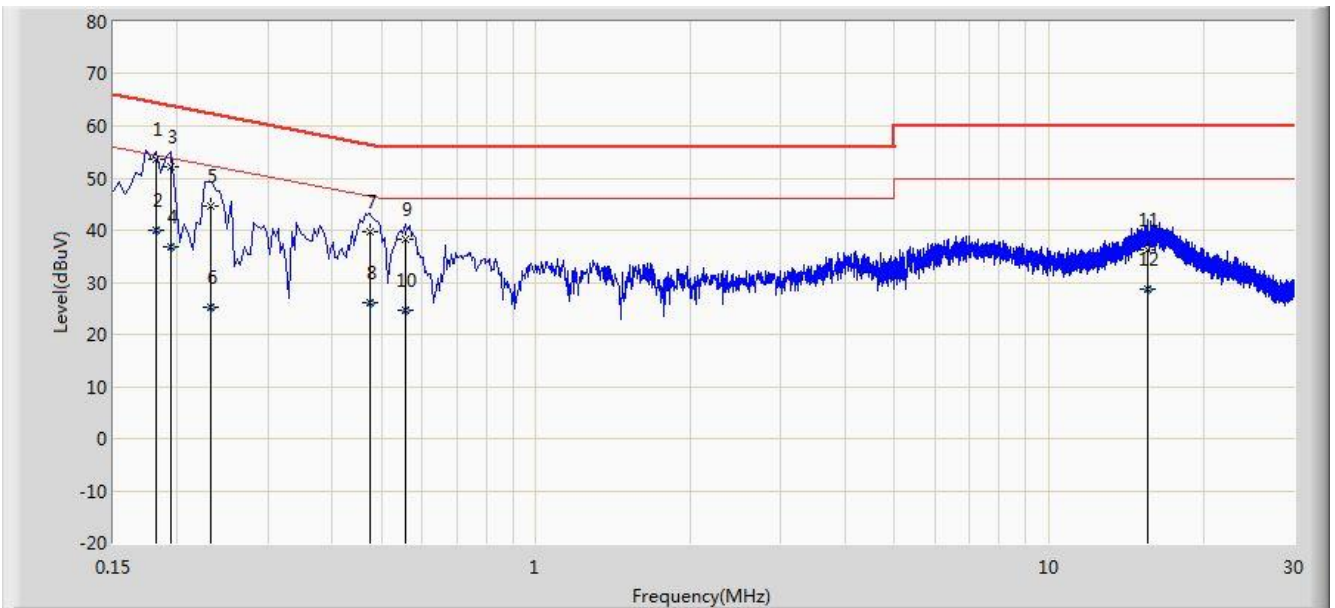


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV)	Factor (dB)	Type
1			0.178	51.539	41.473	-13.039	64.578	10.067	QP
2			0.178	37.679	27.613	-16.899	54.578	10.067	AV
3		*	0.186	51.539	41.481	-12.674	64.213	10.058	QP
4			0.186	37.539	27.481	-16.674	54.213	10.058	AV
5			0.250	41.528	31.573	-20.230	61.757	9.955	QP
6			0.250	24.276	14.321	-27.482	51.757	9.955	AV
7			0.294	35.356	25.374	-25.055	60.411	9.982	QP
8			0.294	19.626	9.644	-30.785	50.411	9.982	AV
9			0.558	35.037	24.952	-20.963	56.000	10.084	QP
10			0.558	23.637	13.552	-22.363	46.000	10.084	AV
11			15.122	37.927	27.986	-22.073	60.000	9.941	QP
12			15.122	29.987	20.046	-20.013	50.000	9.941	AV

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

Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

Site: SR2	Time: 2019/05/18 - 12:58
Limit: NCC LP0002_CE_0.15MHz-30MHz	Engineer: Kevin ker
Probe: ENV216_Filter On	Polarity: Neutral
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
Test Mode 1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV)	Factor (dB)	Type
1		*	0.182	53.542	43.503	-10.852	64.394	10.039	QP
2			0.182	40.142	30.103	-14.252	54.394	10.039	AV
3			0.194	52.188	42.179	-11.676	63.864	10.008	QP
4			0.194	36.718	26.709	-17.146	53.864	10.008	AV
5			0.232	44.687	34.777	-17.691	62.378	9.910	QP
6			0.232	25.187	15.277	-27.191	52.378	9.910	AV
7			0.474	39.661	29.553	-16.782	56.444	10.109	QP
8			0.474	26.047	15.939	-20.396	46.444	10.109	AV
9			0.558	38.229	28.127	-17.771	56.000	10.102	QP
10			0.558	24.513	14.411	-21.487	46.000	10.102	AV
11			15.590	36.370	26.389	-23.630	60.000	9.981	QP
12			15.590	28.718	18.737	-21.282	50.000	9.981	AV

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

Factor (dB) = Cable Loss (dB) + LISN Factor (dB).

5.2. 峰值傳導輸出功率

5.2.1. 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。

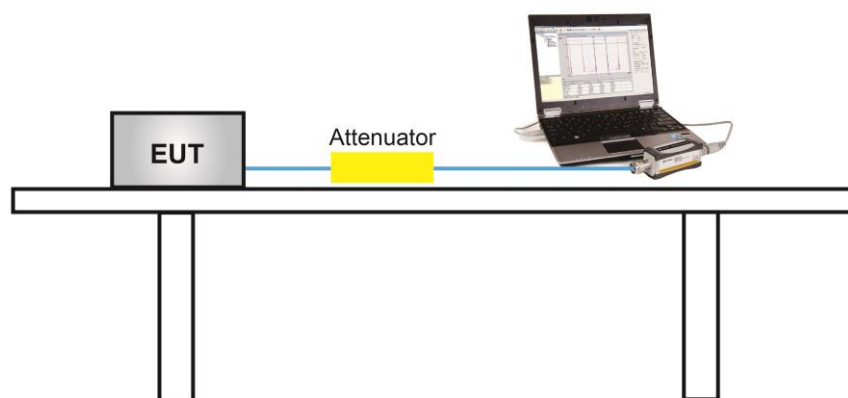
同時發射多向波束於相同或不同頻道者，其每一波束功率應符合(a)之功率限制值。如發射波束有重疊現象，功率應降低，以確保總和傳導輸出功率符合(a)之限制值。同時發射的所有波束總和傳導輸出功率不大於(a) 總和傳導輸出功率限制值加 8 dB。方向性增益值計算同(a)。

(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。

5.2.2. 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。

5.2.3. 測試架構圖



5.2.4. 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 - 802.11b - Channel 06 (2437MHz)				
Date Rate(Mbps)	1	2	5.5	11
Power (dBm)	26.38	26.13	26.06	25.84

Ant 0 / Ant 0+1 - 802.11g - Channel 06 (2437MHz)								
Date Rate(Mbps)	6	9	12	18	24	36	48	54
Power (dBm)	26.98	26.73	26.68	26.61	26.58	26.54	26.50	26.44

Ant 0 / Ant 0+1 - 802.11n-HT20 - Channel 06 (2437MHz)								
Date Rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Power (dBm)	26.01	25.93	25.84	25.78	25.68	25.61	25.57	25.48

Ant 0 / Ant 0+1 - 802.11n-HT40 - Channel 06 (2437MHz)								
Date Rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Power (dBm)	20.42	20.31	20.26	20.22	20.19	20.14	20.13	20.09

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)	26.41	26.37	26.33	26.28	26.22	26.18	26.18	26.13	26.09	26.05	26.01	25.99

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)	20.37	20.33	20.28	20.21	20.15	20.11	20.09	20.02	19.98	19.90	19.82	19.75

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	25°C
測試工程師	Kevin Ker	濕度	56%
測試場地	SR1	測試日期	2019/05/13 ~ 2019/05/24
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
802.11b	1Mbps	01	2412	26.14	--	26.14	≤ 30.00	Pass
802.11b	1Mbps	06	2437	26.38	--	26.38	≤ 30.00	Pass
802.11b	1Mbps	11	2462	26.30	--	26.30	≤ 30.00	Pass
802.11g	6Mbps	01	2412	20.58	20.95	23.78	≤ 30.00	Pass
802.11g	6Mbps	02	2417	22.08	22.63	25.37	≤ 30.00	Pass
802.11g	6Mbps	03	2422	24.65	24.78	27.73	≤ 30.00	Pass
802.11g	6Mbps	06	2437	26.98	26.32	29.67	≤ 30.00	Pass
802.11g	6Mbps	09	2452	24.47	24.31	27.40	≤ 30.00	Pass
802.11g	6Mbps	10	2457	22.55	22.34	25.46	≤ 30.00	Pass
802.11g	6Mbps	11	2462	20.86	21.14	24.01	≤ 30.00	Pass
802.11n-HT20	MCS0	01	2412	20.70	21.27	24.00	≤ 30.00	Pass
802.11n-HT20	MCS0	02	2417	21.83	22.44	25.16	≤ 30.00	Pass
802.11n-HT20	MCS0	03	2422	23.34	23.97	26.68	≤ 30.00	Pass
802.11n-HT20	MCS0	06	2437	26.01	25.83	28.93	≤ 30.00	Pass
802.11n-HT20	MCS0	09	2452	25.13	25.48	28.32	≤ 30.00	Pass
802.11n-HT20	MCS0	10	2457	23.56	23.58	26.58	≤ 30.00	Pass
802.11n-HT20	MCS0	11	2462	20.26	20.18	23.23	≤ 30.00	Pass
802.11n-HT40	MCS0	03	2422	17.40	17.97	20.70	≤ 30.00	Pass
802.11n-HT40	MCS0	04	2427	20.65	20.08	23.38	≤ 30.00	Pass
802.11n-HT40	MCS0	06	2437	19.42	21.17	23.39	≤ 30.00	Pass
802.11n-HT40	MCS0	08	2447	21.91	21.41	24.68	≤ 30.00	Pass
802.11n-HT40	MCS0	09	2452	19.35	18.36	21.89	≤ 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	17.91	17.54	20.74	≤ 30.00	Pass
802.11ax-HE20	MCS0	02	2417	21.06	20.94	24.01	≤ 30.00	Pass
802.11ax-HE20	MCS0	03	2422	23.27	23.41	26.35	≤ 30.00	Pass
802.11ax-HE20	MCS0	06	2437	26.41	27.12	29.79	≤ 30.00	Pass
802.11ax-HE20	MCS0	09	2452	25.02	24.08	27.59	≤ 30.00	Pass
802.11ax-HE20	MCS0	10	2457	22.06	22.09	25.09	≤ 30.00	Pass
802.11ax-HE20	MCS0	11	2462	20.17	19.97	23.08	≤ 30.00	Pass
802.11ax-HE40	MCS0	03	2422	17.09	16.65	19.89	≤ 30.00	Pass
802.11ax-HE40	MCS0	04	2427	18.10	17.78	20.95	≤ 30.00	Pass
802.11ax-HE40	MCS0	06	2437	20.37	19.96	23.18	≤ 30.00	Pass
802.11ax-HE40	MCS0	08	2447	19.02	18.73	21.89	≤ 30.00	Pass
802.11ax-HE40	MCS0	09	2452	18.59	18.27	21.44	≤ 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) = $10 \cdot \log \{10^{(\text{Ant 0 Average Power} / 10)} + 10^{(\text{Ant 1 Average Power} / 10)}\}$

5.3. 天線之要求

5.3.1. 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。

5.3.2. 天線樣式

此AX3000 Gigabit Wi-Fi 6 路由器其天線為半固定式Dipole Antenna，使用Fast plug SMA特殊接頭，(檢附天線規格書)

Antenna Type	Frequency Band (MHz)	T _x Paths	Max Antenna Gain (dBi)		Directional Gain (dBi)	
			Ant 0	Ant 1	For Power	For PSD
Dipole Antenna	2400 ~ 2500	2	2.00	2.00	2.00	5.01
	5150 ~ 5850	2	3.00	3.00	3.00	6.01

Note:

- 802.11b support single transmission at Ant 0 port only.
- The EUT supports Cyclic Delay Diversity (CDD) mode, and CDD signals are correlated.

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

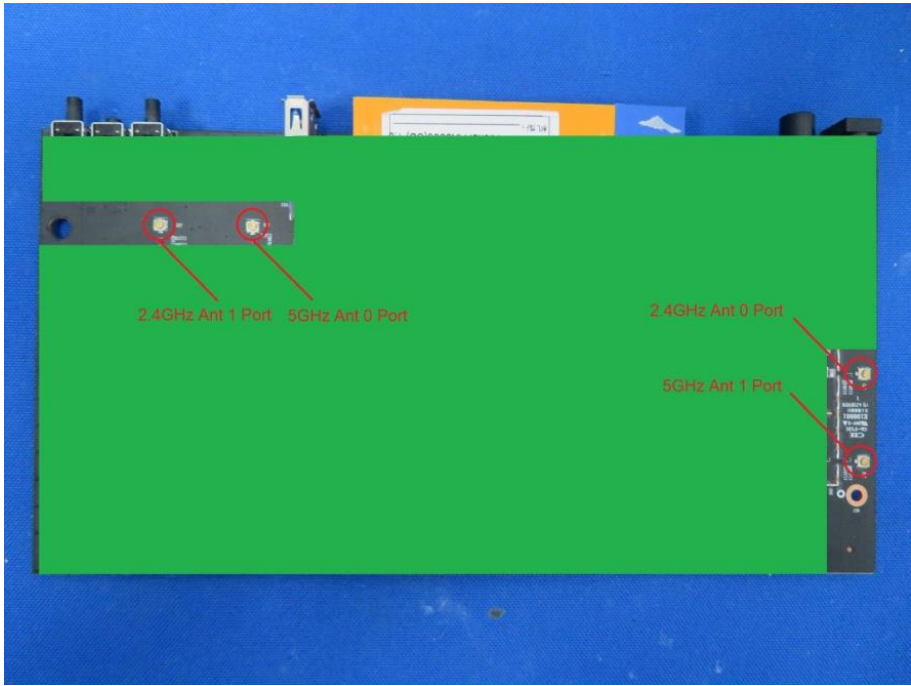
If all antennas have the same gain, G_{ANT} , Directional gain = $G_{ANT} + \text{Array Gain}$, where Array Gain is as follows.

- 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 $N_{ANT} \leq 4$;

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

5.4. 輻射干擾測試

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。

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

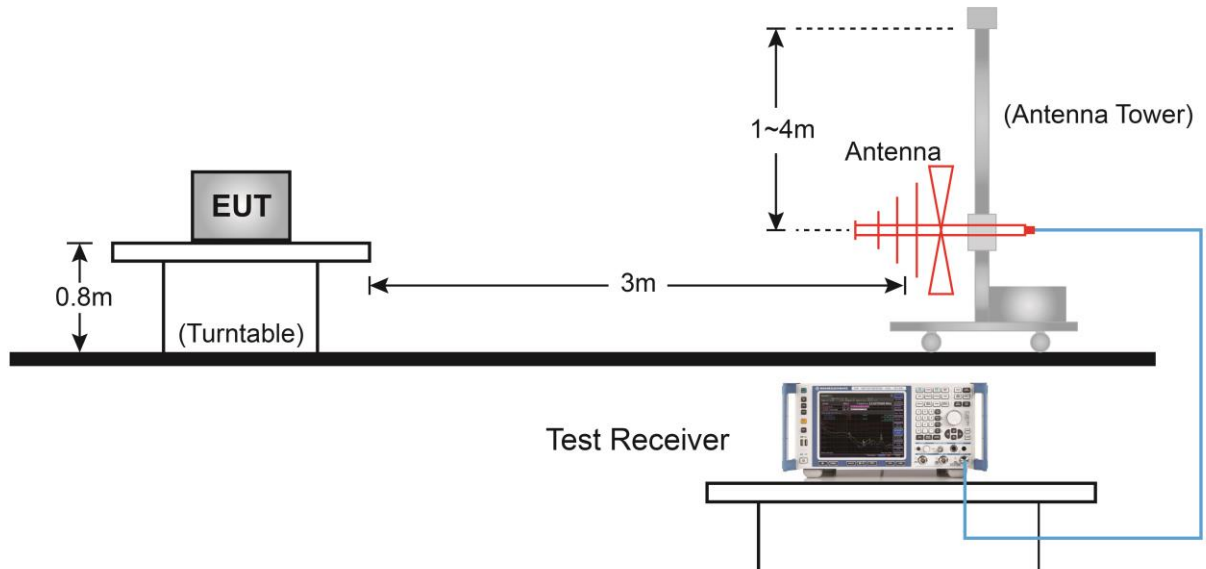
上表規定之電場強度，頻率在 9-90kHz 千赫(kHz)、110-490 千赫(kHz)以及 1000 兆赫(MHz)以上之發射，其量測以平均值檢波器為基準，且須符合第 5.14 節之規定；其他頻率之發射，應以 CISPR 準峰值(quasi-peak) 檢波器測量；非以上表所指定之距離測量時須符合第 5.5 節之規定，而輻射發射之量測頻率範圍須符合第 5.12 節之規定。

5.4.2. 量測方法

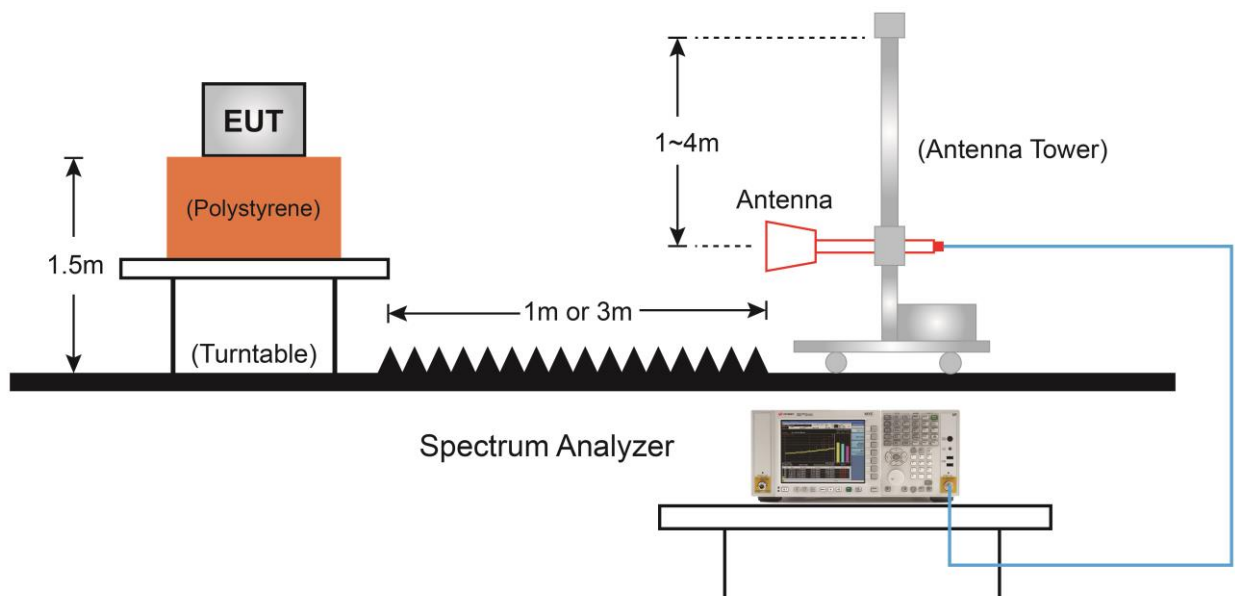
低頻待測物置於高 80 公分之非導體桌面（落地型產品置於地上），高頻待測物置於高 150 公分之非導體桌面，受測物與配件設備之電源線無須束綁，桌面上受測設備的所有電源線由桌子的後緣垂下沿旋轉桌表面接至交流插座。落地型設備的交流電源線可以方便的型態走線。桌面可 360 度旋轉，接收天線置於距待測物 3m 距離，高度可在 1 至 4 公尺間變動，以量測待測物之最大輻射電場強度。接收天線並應於水準及垂直極化方向各量測一次。

5.4.3. 測試架構圖

Below 1GHz Test Setup:



Above 1GHz Test Setup:



5.4.4. 輻射干擾測試結果

待測物名稱	AX3000 Gigabit Wi-Fi 6 路由器	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2019/05/18
測試模式	802.11b - Ant 0	測試通道	01
備註	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	49.9	0.1	50.0	74.0	-24.0	Peak	Horizontal
	4808.0	39.3	3.3	42.6	74.0	-31.4	Peak	Horizontal
*	5743.0	39.0	5.1	44.1	90.0	-45.9	Peak	Horizontal
*	6907.5	36.7	10.8	47.5	90.0	-42.5	Peak	Horizontal
	4825.0	41.1	3.4	44.5	74.0	-29.5	Peak	Vertical
	7681.0	39.9	12.8	52.7	74.0	-21.3	Peak	Vertical
*	8820.0	34.6	13.9	48.5	90.0	-41.5	Peak	Vertical
*	9738.0	36.4	15.2	51.6	90.0	-38.4	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (120.0dBμV/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)

待測物名稱	AX3000 Gigabit Wi-Fi 6 路由器	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2019/05/18
測試模式	802.11b - Ant 0	測試通道	06
備註	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
	4748.5	38.8	3.2	42.0	74.0	-32.0	Peak	Horizontal
	7409.0	33.8	12.5	46.3	74.0	-27.7	Peak	Horizontal
*	9984.5	35.5	15.7	51.2	89.3	-38.1	Peak	Horizontal
*	10494.5	33.9	17.9	51.8	89.3	-37.5	Peak	Horizontal
	4876.0	40.5	3.5	44.0	74.0	-30.0	Peak	Vertical
	7681.0	40.1	12.8	52.9	74.0	-21.1	Peak	Vertical
*	9627.5	36.2	14.9	51.1	89.3	-38.2	Peak	Vertical
*	10562.5	35.4	18.1	53.5	89.3	-35.8	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (119.3dBμV/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)

待測物名稱	AX3000 Gigabit Wi-Fi 6 路由器	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2019/05/18
測試模式	802.11b - Ant 0	測試通道	11
備註	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
	4876.0	40.5	3.5	44.0	74.0	-30.0	Peak	Horizontal
	7681.0	40.1	12.8	52.9	74.0	-21.1	Peak	Horizontal
*	9627.5	36.2	14.9	51.1	88.7	-37.6	Peak	Horizontal
*	10562.5	35.4	18.1	53.5	88.7	-35.2	Peak	Horizontal
	4927.0	48.6	3.6	52.2	74.0	-21.8	Peak	Vertical
	7681.0	39.5	12.8	52.3	74.0	-21.7	Peak	Vertical
*	9789.0	35.4	15.3	50.7	88.7	-38.0	Peak	Vertical
*	10265.0	34.6	16.9	51.5	88.7	-37.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (118.7dBμV/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)

待測物名稱	AX3000 Gigabit Wi-Fi 6 路由器	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2019/05/18
測試模式	802.11g - Ant 0 + 1	測試通道	01
備註	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
	4808.0	39.6	3.3	42.9	74.0	-31.1	Peak	Horizontal
	7434.5	35.8	12.5	48.3	74.0	-25.7	Peak	Horizontal
*	10010.0	35.8	15.8	51.6	86.5	-34.9	Peak	Horizontal
*	10520.0	33.5	18.0	51.5	86.5	-35.0	Peak	Horizontal
	4825.0	41.2	3.4	44.6	74.0	-29.4	Peak	Vertical
	7681.0	40.3	12.8	53.1	74.0	-20.9	Peak	Vertical
*	8786.0	35.5	13.9	49.4	86.5	-37.1	Peak	Vertical
*	10061.0	35.0	16.0	51.0	86.5	-35.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (116.5dBμV/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)

待測物名稱	AX3000 Gigabit Wi-Fi 6 路由器	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2019/05/18
測試模式	802.11g - Ant 0 + 1	測試通道	06
備註	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
	4876.0	42.0	3.5	45.5	74.0	-28.5	Peak	Horizontal
	7638.5	35.9	12.8	48.7	74.0	-25.3	Peak	Horizontal
*	9772.0	35.5	15.2	50.7	91.0	-40.3	Peak	Horizontal
*	10528.5	33.8	18.0	51.8	91.0	-39.2	Peak	Horizontal
	4876.0	46.9	3.5	50.4	74.0	-23.6	Peak	Vertical
	7307.0	40.3	12.2	52.5	74.0	-21.5	Peak	Vertical
*	8845.5	35.2	14.0	49.2	91.0	-41.8	Peak	Vertical
*	10180.0	35.7	16.6	52.3	91.0	-38.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (121.0BμV/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)

待測物名稱	AX3000 Gigabit Wi-Fi 6 路由器	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2019/05/18
測試模式	802.11g - Ant 0 + 1	測試通道	11
備註	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
	4816.5	39.6	3.3	42.9	74.0	-31.1	Peak	Horizontal
	7681.0	35.6	12.8	48.4	74.0	-25.6	Peak	Horizontal
*	8752.0	34.1	13.8	47.9	87.7	-39.8	Peak	Horizontal
*	9797.5	34.4	15.3	49.7	87.7	-38.0	Peak	Horizontal
	4927.0	44.6	3.6	48.2	74.0	-25.8	Peak	Vertical
	7681.0	39.8	12.8	52.6	74.0	-21.4	Peak	Vertical
*	8743.5	33.5	13.8	47.3	87.7	-40.4	Peak	Vertical
*	10112.0	36.4	16.3	52.7	87.7	-35.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (117.7dBμV/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)

待測物名稱	AX3000 Gigabit Wi-Fi 6 路由器	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2019/05/18
測試模式	802.11n-HT20 - Ant 0 + 1	測試通道	01
備註	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
	4910.0	39.0	3.6	42.6	74.0	-31.4	Peak	Horizontal
	7468.5	35.5	12.6	48.1	74.0	-25.9	Peak	Horizontal
*	9942.0	35.2	15.6	50.8	85.0	-34.2	Peak	Horizontal
*	10367.0	34.2	17.4	51.6	85.0	-33.4	Peak	Horizontal
	4825.0	40.4	3.4	43.8	74.0	-30.2	Peak	Vertical
	7681.0	39.6	12.8	52.4	74.0	-21.6	Peak	Vertical
*	8760.5	35.6	13.8	49.4	85.0	-35.6	Peak	Vertical
*	10010.0	35.7	15.8	51.5	85.0	-33.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (115.0dBμV/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)

待測物名稱	AX3000 Gigabit Wi-Fi 6 路由器	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2019/05/18
測試模式	802.11n-HT20 - Ant 0 + 1	測試通道	06
備註	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
	4884.5	41.4	3.5	44.9	74.0	-29.1	Peak	Horizontal
	7485.5	35.3	12.7	48.0	74.0	-26.0	Peak	Horizontal
*	8837.0	35.1	14.0	49.1	90.6	-41.5	Peak	Horizontal
*	10282.0	34.7	17.0	51.7	90.6	-38.9	Peak	Horizontal
	4884.5	41.4	3.5	44.9	74.0	-29.1	Peak	Vertical
	7485.5	35.3	12.7	48.0	74.0	-26.0	Peak	Vertical
*	8837.0	35.1	14.0	49.1	90.6	-41.5	Peak	Vertical
*	10282.0	34.7	17.0	51.7	90.6	-38.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (120.6dBμV/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)

待測物名稱	AX3000 Gigabit Wi-Fi 6 路由器	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2019/05/18
測試模式	802.11n-HT20 - Ant 0 + 1	測試通道	11
備註	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
	4927.0	39.2	3.6	42.8	74.0	-31.2	Peak	Horizontal
	7502.5	35.3	12.7	48.0	74.0	-26.0	Peak	Horizontal
*	8616.0	35.5	13.4	48.9	86.8	-37.9	Peak	Horizontal
*	10290.5	34.7	17.0	51.7	86.8	-35.1	Peak	Horizontal
	4927.0	43.6	3.6	47.2	74.0	-26.8	Peak	Vertical
	7681.0	38.8	12.8	51.6	74.0	-22.4	Peak	Vertical
*	8879.5	34.9	14.1	49.0	86.8	-37.8	Peak	Vertical
*	9780.5	36.2	15.3	51.5	86.8	-35.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (116.8dBμV/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)

待測物名稱	AX3000 Gigabit Wi-Fi 6 路由器	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2019/05/18
測試模式	802.11n-HT40 - Ant 0 + 1	測試通道	03
備註	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
	5105.5	39.0	3.8	42.8	74.0	-31.2	Peak	Horizontal
	7647.0	35.6	12.8	48.4	74.0	-25.6	Peak	Horizontal
*	8769.0	35.4	13.8	49.2	80.1	-30.9	Peak	Horizontal
*	10528.5	34.2	18.0	52.2	80.1	-27.9	Peak	Horizontal
	5105.5	39.0	3.8	42.8	74.0	-31.2	Peak	Vertical
	7647.0	35.6	12.8	48.4	74.0	-25.6	Peak	Vertical
*	8769.0	35.4	13.8	49.2	80.1	-30.9	Peak	Vertical
*	10528.5	34.2	18.0	52.2	80.1	-27.9	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (110.1dBμV/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)

待測物名稱	AX3000 Gigabit Wi-Fi 6 路由器	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2019/05/18
測試模式	802.11n-HT40 - Ant 0 + 1	測試通道	06
備註	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
	4961.0	39.1	3.7	42.8	74.0	-31.2	Peak	Horizontal
	7375.0	35.3	12.4	47.7	74.0	-26.3	Peak	Horizontal
*	8769.0	35.8	13.8	49.6	83.4	-33.8	Peak	Horizontal
*	10120.5	34.7	16.3	51.0	83.4	-32.4	Peak	Horizontal
	5037.5	38.6	3.8	42.4	74.0	-31.6	Peak	Vertical
	7681.0	39.6	12.8	52.4	74.0	-21.6	Peak	Vertical
*	8701.0	34.8	13.6	48.4	83.4	-35.0	Peak	Vertical
*	10027.0	35.0	15.9	50.9	83.4	-32.5	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.4dBμV/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)

待測物名稱	AX3000 Gigabit Wi-Fi 6 路由器	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2019/05/18
測試模式	802.11n-HT40 - Ant 0 + 1	測試通道	09
備註	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
	4978.0	36.9	3.7	40.6	74.0	-33.4	Peak	Horizontal
	7519.5	35.4	12.7	48.1	74.0	-25.9	Peak	Horizontal
*	8692.5	34.7	13.6	48.3	81.0	-32.7	Peak	Horizontal
*	10384.0	34.1	17.5	51.6	81.0	-29.4	Peak	Horizontal
	5063.0	38.8	3.8	42.6	74.0	-31.4	Peak	Vertical
	7681.0	39.5	12.8	52.3	74.0	-21.7	Peak	Vertical
*	9704.0	36.4	15.1	51.5	81.0	-29.5	Peak	Vertical
*	10146.0	35.0	16.4	51.4	81.0	-29.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (111.0dBμV/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)

待測物名稱	AX3000 Gigabit Wi-Fi 6 路由器	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2019/05/18
測試模式	802.11ax-HE20 - Ant 0 + 1	測試通道	01
備註	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
	5080.0	38.5	3.8	42.3	74.0	-31.7	Peak	Horizontal
	7468.5	34.6	12.6	47.2	74.0	-26.8	Peak	Horizontal
*	8599.0	35.5	13.4	48.9	82.5	-33.6	Peak	Horizontal
*	10112.0	35.1	16.3	51.4	82.5	-31.1	Peak	Horizontal
	3839.0	51.4	0.1	51.5	74.0	-22.5	Peak	Vertical
	7681.0	39.6	12.8	52.4	74.0	-21.6	Peak	Vertical
*	8769.0	35.6	13.8	49.4	82.5	-33.1	Peak	Vertical
*	10282.0	34.8	17.0	51.8	82.5	-30.7	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.5dBμV/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)

待測物名稱	AX3000 Gigabit Wi-Fi 6 路由器	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2019/05/18
測試模式	802.11ax-HE20 - Ant 0 + 1	測試通道	06
備註	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	48.4	0.1	48.5	74.0	-25.5	Peak	Horizontal
	4884.5	39.4	3.5	42.9	74.0	-31.1	Peak	Horizontal
*	5768.5	38.2	5.2	43.4	91.6	-48.2	Peak	Horizontal
*	7069.0	35.6	11.5	47.1	91.6	-44.5	Peak	Horizontal
	3839.0	51.3	0.1	51.4	74.0	-22.6	Peak	Vertical
	4876.0	43.0	3.5	46.5	74.0	-27.5	Peak	Vertical
*	6261.5	37.3	7.3	44.6	91.6	-47.0	Peak	Vertical
*	7026.5	36.6	11.4	48.0	91.6	-43.6	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (121.6dBμV/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)

待測物名稱	AX3000 Gigabit Wi-Fi 6 路由器	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2019/05/18
測試模式	802.11ax-HE20 - Ant 0 + 1	測試通道	11
備註	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	48.3	0.1	48.4	74.0	-25.6	Peak	Horizontal
	4714.5	38.4	3.1	41.5	74.0	-32.5	Peak	Horizontal
*	5598.5	37.3	4.5	41.8	85.9	-44.1	Peak	Horizontal
*	6525.0	36.2	8.6	44.8	85.9	-41.1	Peak	Horizontal
	4927.0	40.3	3.6	43.9	74.0	-30.1	Peak	Vertical
	7681.0	39.1	12.8	51.9	74.0	-22.1	Peak	Vertical
*	9636.0	35.4	14.9	50.3	85.9	-35.6	Peak	Vertical
*	10299.0	32.8	17.1	49.9	85.9	-36.0	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (115.9dBμV/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)

待測物名稱	AX3000 Gigabit Wi-Fi 6 路由器	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2019/05/18
測試模式	802.11ax-HE40 - Ant 0 + 1	測試通道	03
備註	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
	4978.0	38.7	3.7	42.4	74.0	-31.6	Peak	Horizontal
	7502.5	34.4	12.7	47.1	74.0	-26.9	Peak	Horizontal
*	9729.5	36.0	15.1	51.1	80.9	-29.8	Peak	Horizontal
*	10086.5	35.5	16.1	51.6	80.9	-29.3	Peak	Horizontal
	4859.0	38.2	3.4	41.6	74.0	-32.4	Peak	Vertical
	7681.0	39.3	12.8	52.1	74.0	-21.9	Peak	Vertical
*	9993.0	35.5	15.7	51.2	80.9	-29.7	Peak	Vertical
*	10392.5	33.2	17.5	50.7	80.9	-30.2	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (110.9dBμV/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 Router	Temperature	25°C
Test Engineer	Kevin Ker	Relative Humidity	52%
Test Site	AC1	Test Date	2019/05/18
Test Mode	802.11ax-HE40 - Ant 0+1	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
	4697.5	38.5	3.1	41.6	74.0	-32.4	Peak	Horizontal
	4978.0	38.8	3.7	42.5	74.0	-31.5	Peak	Horizontal
*	6057.5	37.6	6.4	44.0	83.1	-39.1	Peak	Horizontal
*	7086.0	36.0	11.5	47.5	83.1	-35.6	Peak	Horizontal
	3839.0	51.1	0.1	51.2	74.0	-22.8	Peak	Vertical
	7681.0	39.9	12.8	52.7	74.0	-21.3	Peak	Vertical
*	9704.0	36.1	15.1	51.2	83.1	-31.9	Peak	Vertical
*	10562.5	33.7	18.1	51.8	83.1	-31.3	Peak	Vertical

Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (113.1dBμV/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)

待測物名稱	AX3000 Gigabit Wi-Fi 6 路由器	溫度	26°C
測試工程師	Kevin Ker	濕度	56%
測試場地	AC1	測試日期	2019/05/18
測試模式	802.11ax-HE40 - Ant 0 + 1	測試通道	09
備註	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	48.6	0.1	48.7	74.0	-25.3	Peak	Horizontal
	5012.0	39.0	3.8	42.8	74.0	-31.2	Peak	Horizontal
*	5675.0	37.4	4.8	42.2	82.9	-40.7	Peak	Horizontal
*	6584.5	36.9	9.0	45.9	82.9	-37.0	Peak	Horizontal
	3839.0	51.2	0.1	51.3	74.0	-22.7	Peak	Vertical
	7681.0	39.2	12.8	52.0	74.0	-22.0	Peak	Vertical
*	9797.5	33.4	15.3	48.7	82.9	-34.2	Peak	Vertical
*	10333.0	33.2	17.2	50.4	82.9	-32.5	Peak	Vertical

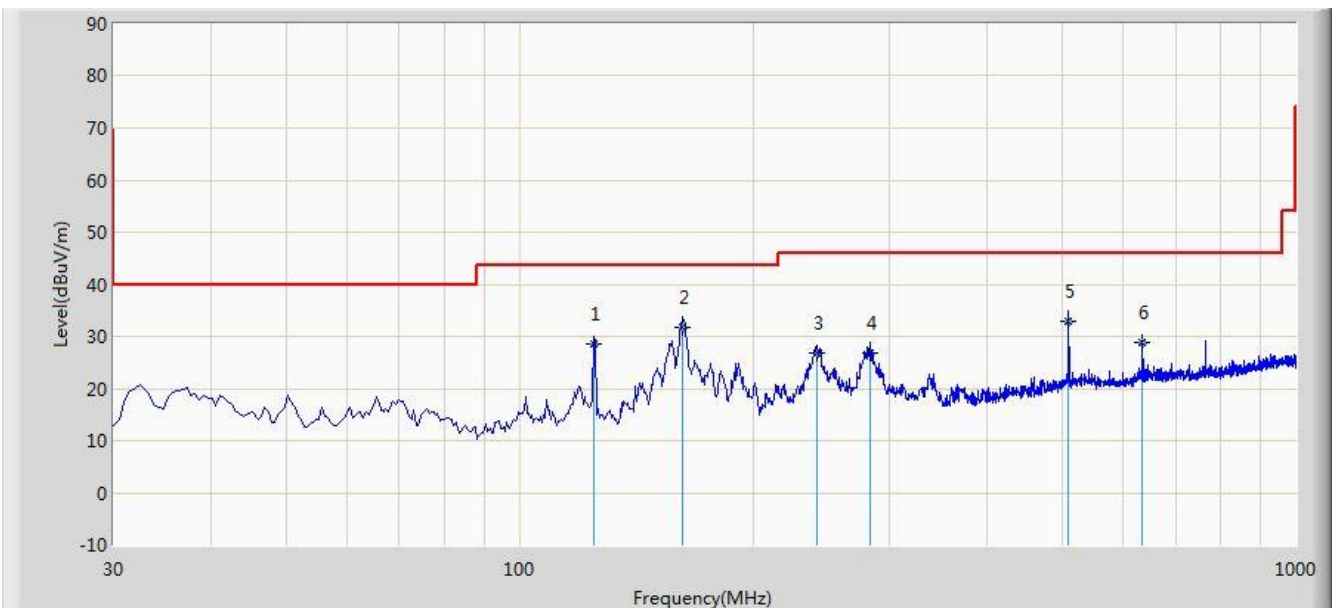
Note 1: "*" is not in restricted band, its limit is 30dBc of the fundamental emission level (112.9dBμV/m) or LP0002 Section 2.8 which is higher.

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

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

The Worst Case of Radiated Emission below 1GHz:

Site: AC1	Time: 2019/05/24 - 09:20
Limit: NCC LP0002_30MHz-1GHz_QP	Engineer: Kevin Ker
Probe: VULB9162_0.03GHz_8GHz	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			124.575	28.410	11.180	-15.090	43.500	17.230	QP
2		*	162.405	31.660	15.460	-11.840	43.500	16.200	QP
3			241.460	26.945	6.980	-19.055	46.000	19.965	QP
4			282.685	26.909	5.911	-19.091	46.000	20.998	QP
5			510.150	32.809	6.690	-13.191	46.000	26.119	QP
6			635.280	28.732	0.560	-17.268	46.000	28.172	QP

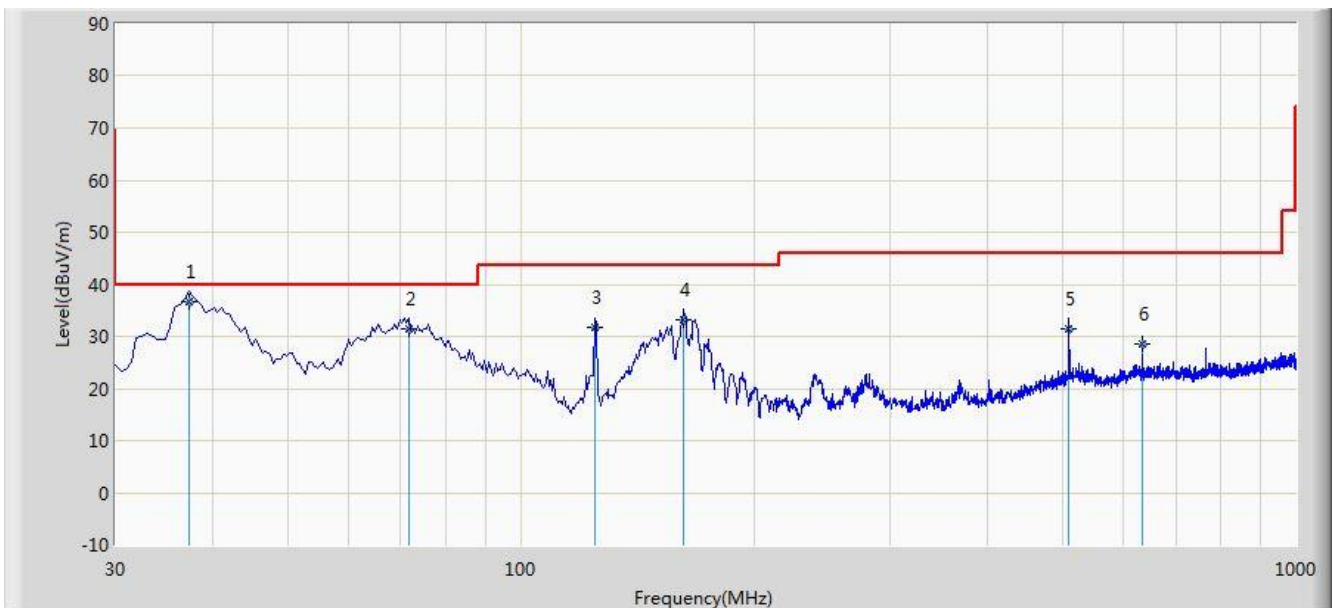
Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

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 ~ 40GHz), 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: 2019/05/24 - 09:22
Limit: NCC LP0002_30MHz-1GHz_QP	Engineer: Kevin Ker
Probe: VULB9162_0.03GHz_8GHz	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		*	37.275	36.661	16.904	-3.339	40.000	19.757	QP
2			71.710	31.535	16.159	-8.465	40.000	15.376	QP
3			124.575	31.597	14.367	-11.903	43.500	17.230	QP
4			161.920	33.206	17.022	-10.294	43.500	16.184	QP
5			510.150	31.562	5.443	-14.438	46.000	26.119	QP
6			635.280	28.422	0.250	-17.578	46.000	28.172	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 ~ 40GHz), 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。

5.5. 混附發射之 RF 傳導發射

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 3.10.1.5 節，使用頻帶範圍外之任意 100 千赫 (kHz) 內，發射機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，至少須衰減 20 dB，以射頻傳導或輻射方式測量。如發射機以本節 3.10.1(2)(2.3) 之峰值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。

備註

解析頻寬設置為 1.3 MHz 是為了提供量測速度。使用限值還是法規定義的基於解析頻寬 100 kHz 情形下主波下降 20dB，如果量測波形接近限值，我們會使用降低解析頻寬方式作驗證。

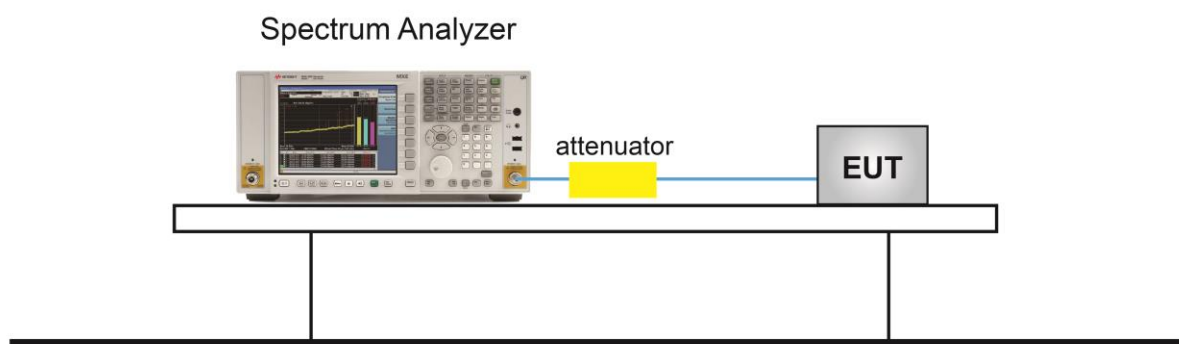
5.5.2. 量測方法

依據國家通訊傳播委員會低功率射頻電機技術規範之附件三，頻率跳頻展頻系統檢測之參考程式七 混附發射之 RF 傳導發射：

(一) 頻譜分析儀設定如下：

1. 頻率掃描範圍足以檢測頻帶內的發射波峰位準以及由受測物產生之最低頻率到第 10 次諧波的所有混附發射，通常需要分幾段以涵蓋全部頻率範圍。
2. 解析頻寬為 100kHz，視訊頻寬不小於解析頻寬。
3. 掃描時間為自動，檢波功能為峰值，訊號軌跡為最大保留(Max Hold)。
4. 將標記設定於任何欲紀錄之波峰上，所顯示之位準值必須符合指定之限制值。

5.5.3. 測試架構圖



5.5.4. 混附發射之 RF 傳導發射測試結果

待測物名稱	AX3000 Gigabit Wi-Fi 6 路由器	溫度	23 ~ 25°C
測試工程師	Kevin Ker	濕度	46 ~ 54%
測試場地	SR2	測試日期	2019/05/17~2019/05/24

Test Mode	Data Rate / MCS	Channel No.	Frequency (MHz)	Limit (dBc)	Result
802.11b	1Mbps	01	2412	30	Pass
802.11b	1Mbps	06	2437	30	Pass
802.11b	1Mbps	11	2462	30	Pass
802.11g	6Mbps	01	2412	30	Pass
802.11g	6Mbps	06	2437	30	Pass
802.11g	6Mbps	11	2462	30	Pass
802.11n-HT20	MCS0	01	2412	30	Pass
802.11n-HT20	MCS0	06	2437	30	Pass
802.11n-HT20	MCS0	11	2462	30	Pass
802.11n-HT40	MCS0	03	2422	30	Pass
802.11n-HT40	MCS0	06	2437	30	Pass
802.11n-HT40	MCS0	09	2452	30	Pass
802.11ax-HE20	MCS0	01	2412	30	Pass
802.11ax-HE20	MCS0	06	2437	30	Pass
802.11ax-HE20	MCS0	11	2462	30	Pass
802.11ax-HE40	MCS0	03	2422	30	Pass
802.11ax-HE40	MCS0	06	2437	30	Pass
802.11ax-HE40	MCS0	09	2452	30	Pass

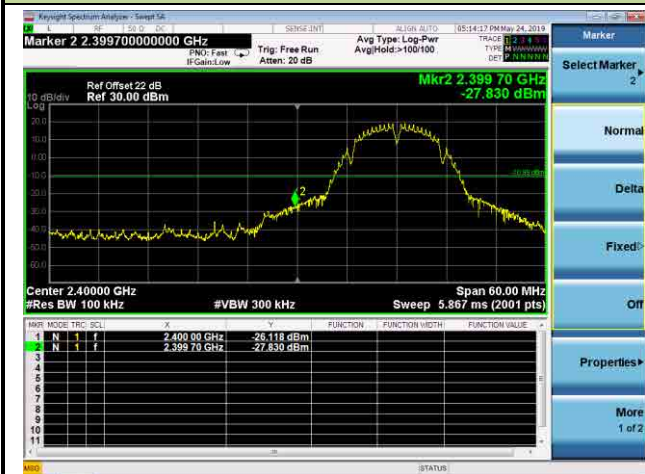
802.11b Out-of-Band Emissions - Ant 0

100kHz PSD reference Level

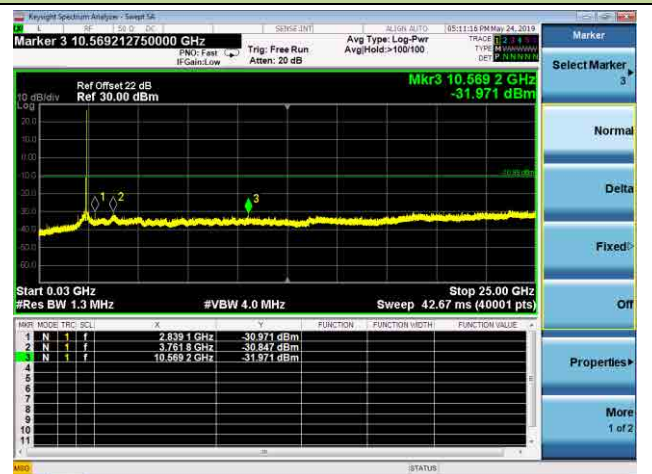


Channel 01 (2412MHz)

Low Band Edge

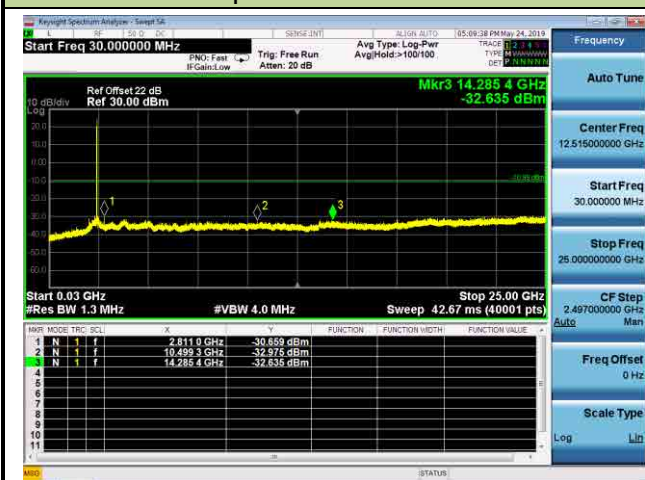


Spurious Emission



Channel 06 (2437MHz)

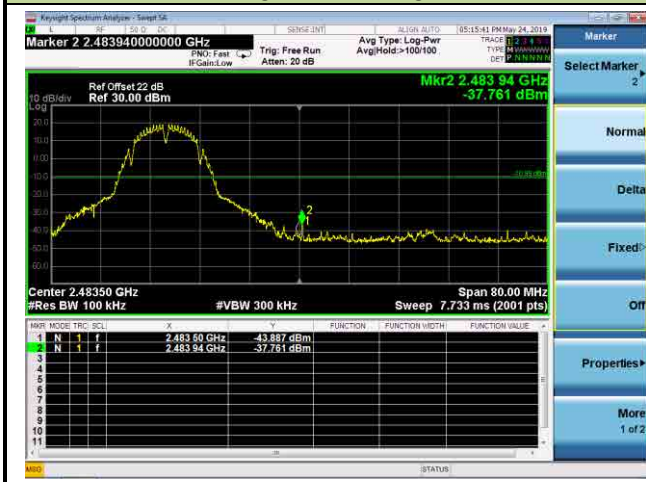
Spurious Emission



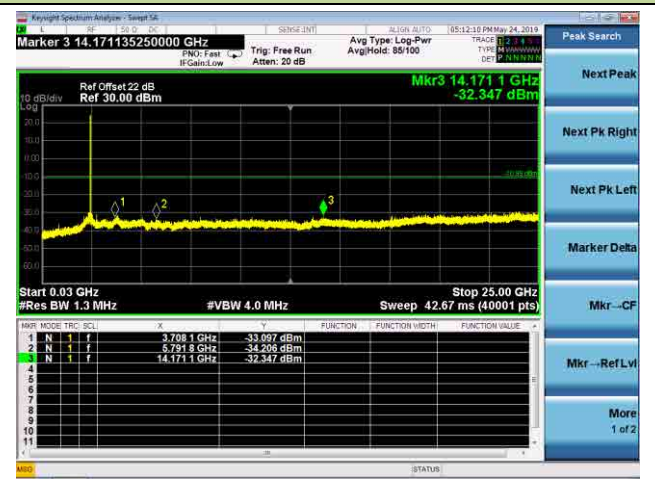
802.11b Out-of-Band Emissions - Ant 0

Channel 11 (2462MHz)

High Band Edge



Spurious Emission



802.11g Out-of-Band Emissions - Ant 0 / Ant 0 +1

100kHz PSD reference Level



Channel 01 (2412MHz)

Low Band Edge



Spurious Emission



Channel 06 (2437MHz)

Spurious Emission



802.11b Out-of-Band Emissions - Ant 0 / Ant 0 +1

Channel 11 (2462MHz)

High Band Edge



Spurious Emission



802.11n-HT20 Out-of-Band Emissions - Ant 0 / Ant 0 + 1

100kHz PSD reference Level



Channel 01 (2412MHz)

Low Band Edge



Spurious Emission



Channel 06 (2437MHz)

Spurious Emission



802.11n-HT20 Out-of-Band Emissions - Ant 0 / Ant 0 + 1

Channel 11 (2462MHz)

High Band Edge



Spurious Emission



802.11n-HT40 Out-of-Band Emissions - Ant 0 / Ant 0 + 1

100kHz PSD reference Level

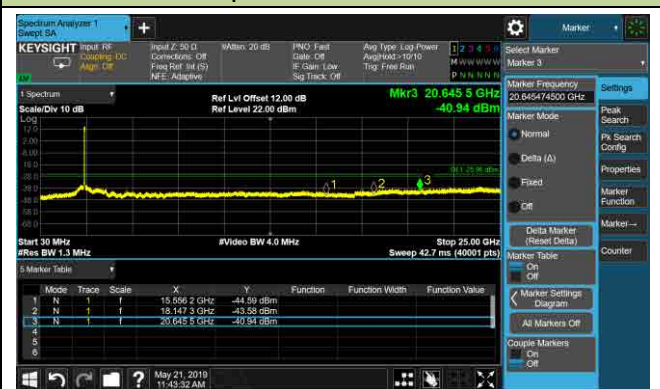


Channel 03 (2422MHz)

Low Band Edge



Spurious Emission



Channel 06 (2437MHz)

Spurious Emission



802.11n-HT40 Out-of-Band Emissions - Ant 0 / Ant 0 + 1

Channel 09 (2422MHz)

High Band Edge



Spurious Emission



802.11ax-HE20 Out-of-Band Emissions - Ant 0 / Ant 0 + 1

100kHz PSD reference Level



Channel 01 (2412MHz)

Low Band Edge



Spurious Emission



Channel 06 (2437MHz)

Spurious Emission



802.11ax-HE20 Out-of-Band Emissions - Ant 0 / Ant 0 + 1

Channel 11 (2462MHz)

High Band Edge



Spurious Emission



802.11ax-HE40 Out-of-Band Emissions - Ant 0 / Ant 0 + 1

100kHz PSD reference Level



Channel 03 (2422MHz)

Low Band Edge



Spurious Emission



Channel 06 (2437MHz)

Spurious Emission



5.6. 開放頻帶邊緣之不必要幅射要求

5.6.1. 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。

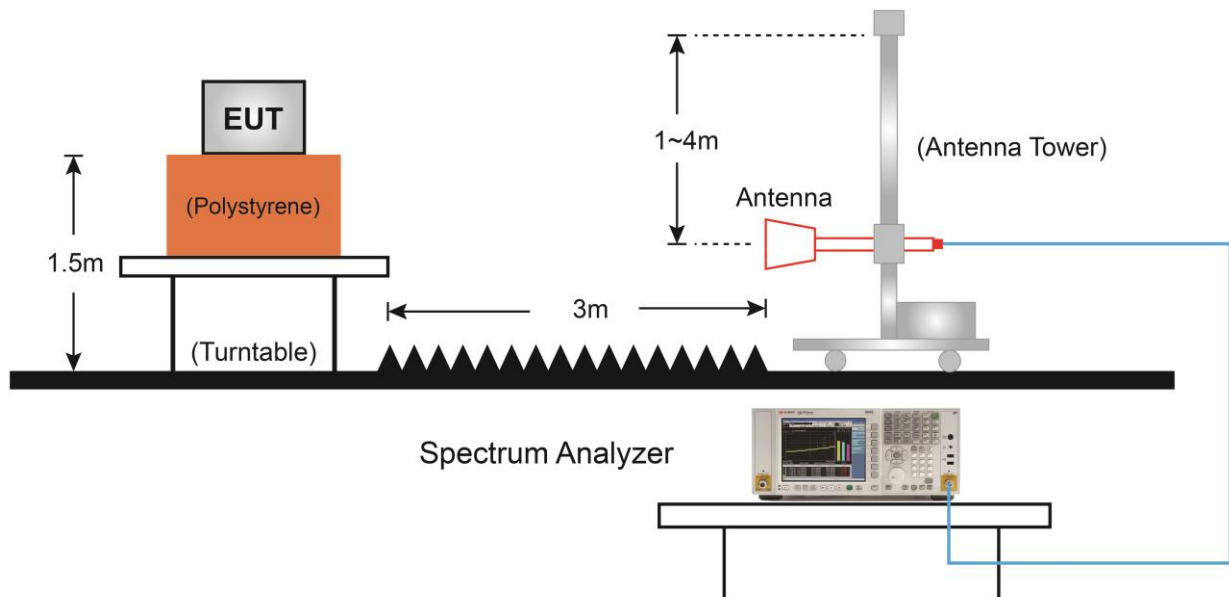
頻 率(兆赫)	電場強度(微伏/公尺)	測距(公尺)
0.009 - 0.490(含)	2,400/頻率(千赫)	300
0.490 (不含) - 1.705 (含)	24,000/頻率(千赫)	30
1.705(不含) - 30 (不含)	30	30
30 (含) - 88 (含)	100	3
88 (不含) - 216 (含)	150	3
216 (不含) - 960 (含)	200	3
960 (不含)以上	500	3

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。

5.6.2. 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。

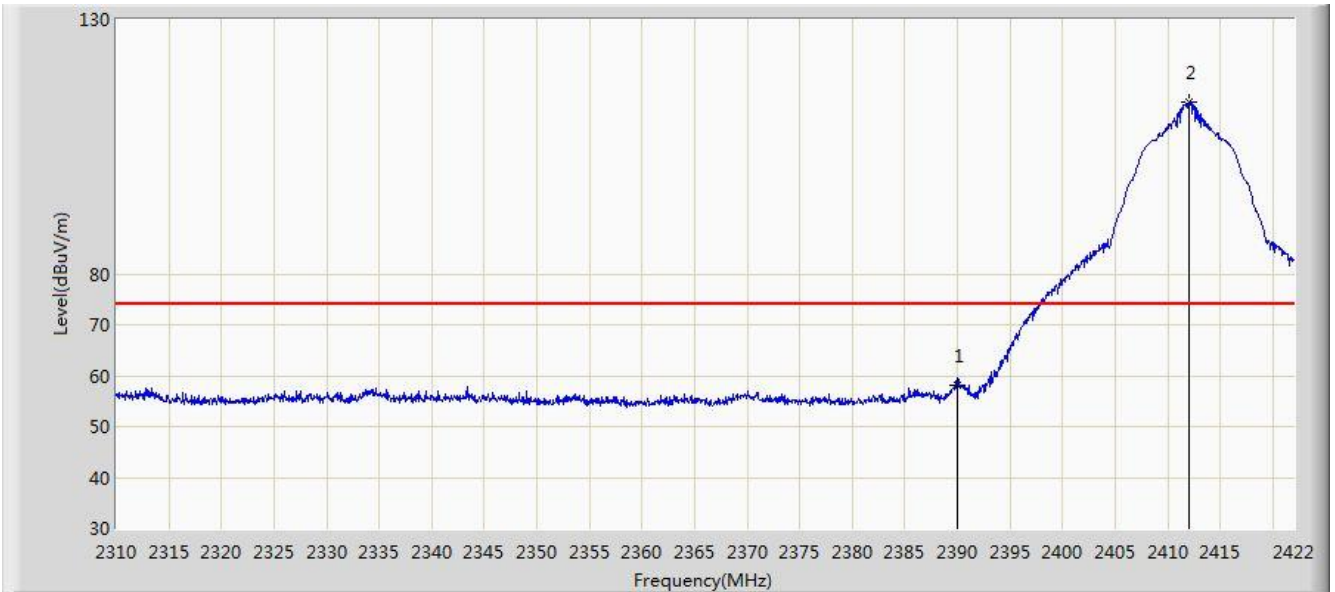
5.6.3. 測試架構圖



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。

5.6.4. 測試結果

Site: AC1	Time: 2019/05/23 - 21:30
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11b at Channel 2412MHz - Ant 0	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	58.012	60.372	-15.988	74.000	-2.360	PK
2		*	2412.088	113.872	116.144	N/A	N/A	-2.272	PK

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

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

Site: AC1	Time: 2019/05/23 - 21:36
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11b at Channel 2412MHz - Ant 0	

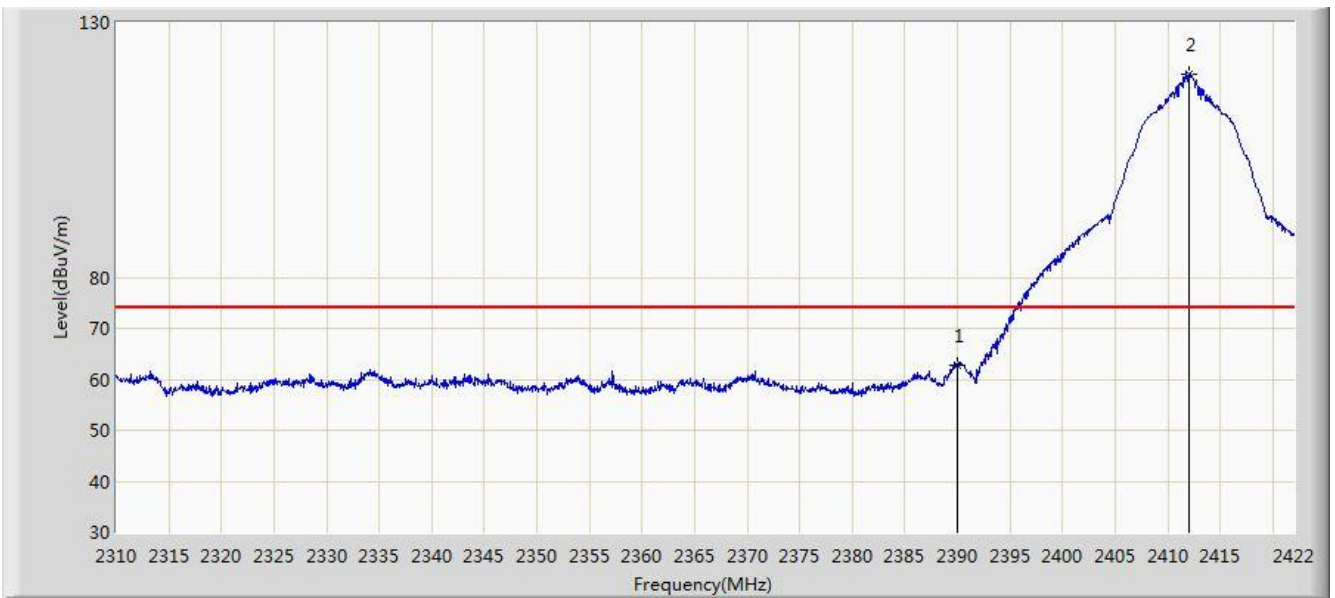


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	47.531	49.891	-6.469	54.000	-2.360	AV
2		*	2411.024	103.790	106.066	N/A	N/A	-2.276	AV

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

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

Site: AC1	Time: 2019/05/23 - 21:38
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11b at Channel 2412MHz - Ant 0	

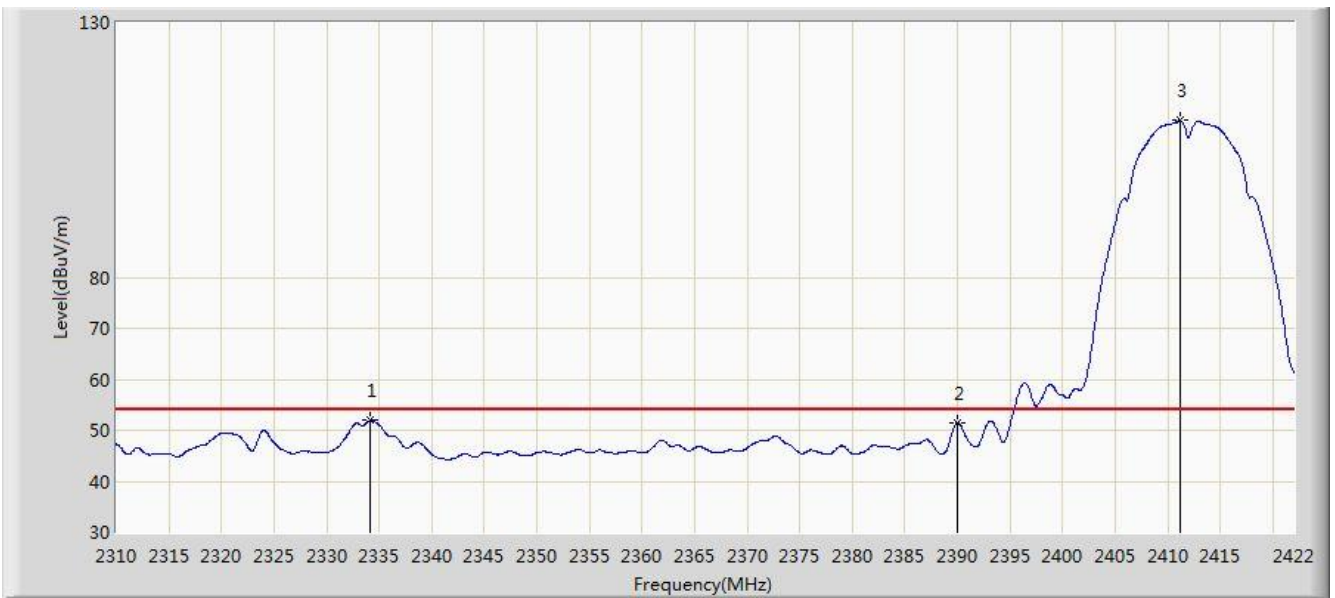


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	62.728	65.088	-11.272	74.000	-2.360	PK
2		*	2412.032	119.964	122.236	N/A	N/A	-2.272	PK

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

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

Site: AC1	Time: 2019/05/23 - 21:41
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11b at Channel 2412MHz - Ant 0	

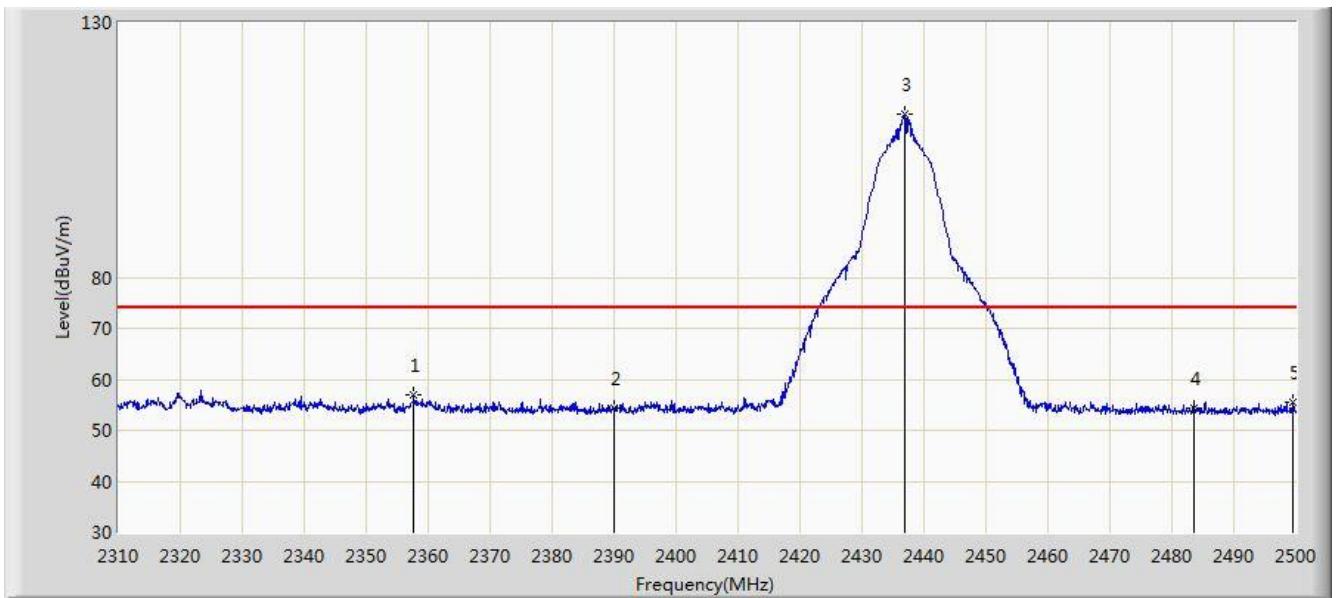


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2334.136	51.907	54.491	-2.093	54.000	-2.584	AV
2			2390.000	51.557	53.917	-2.443	54.000	-2.360	AV
3		*	2411.136	110.726	113.002	N/A	N/A	-2.276	AV

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

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

Site: AC1	Time: 2019/05/23 - 22:14
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11b at Channel 2437MHz - Ant 0	

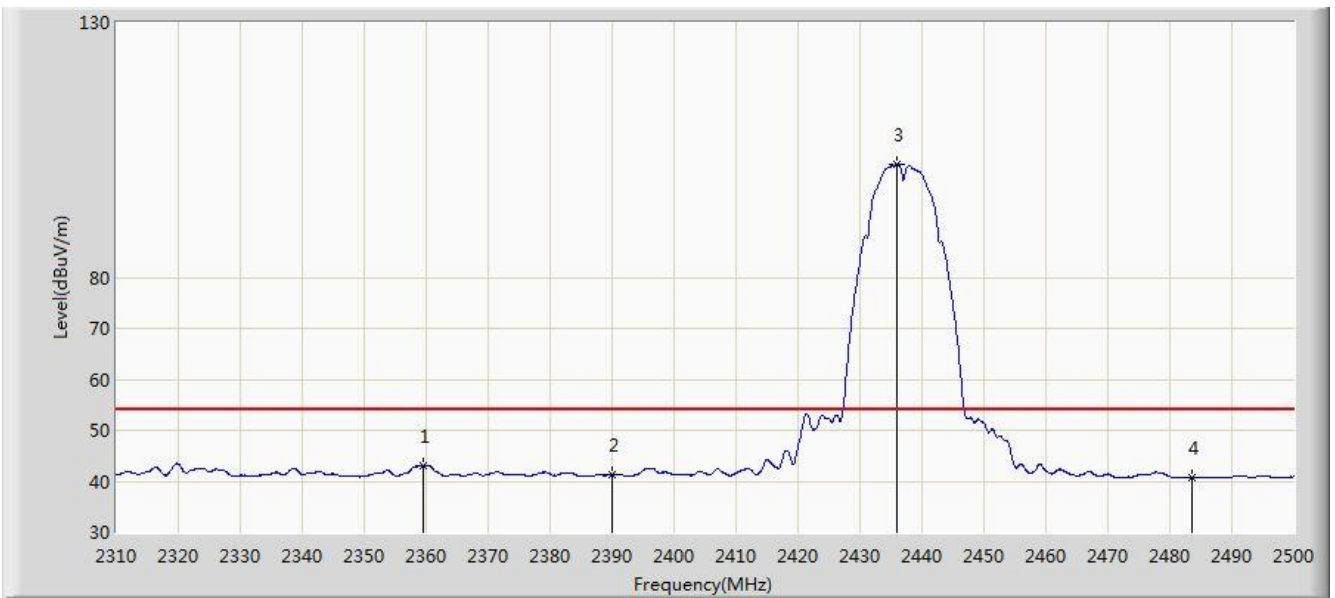


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2357.690	56.866	59.355	-17.134	74.000	-2.489	PK
2			2390.000	54.309	56.669	-19.691	74.000	-2.360	PK
3		*	2437.015	111.885	114.057	N/A	N/A	-2.172	PK
4			2483.500	54.323	56.309	-19.677	74.000	-1.986	PK
5			2499.430	55.610	57.548	-18.390	74.000	-1.937	PK

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

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

Site: AC1	Time: 2019/05/23 - 22:17
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11b at Channel 2437MHz - Ant 0	

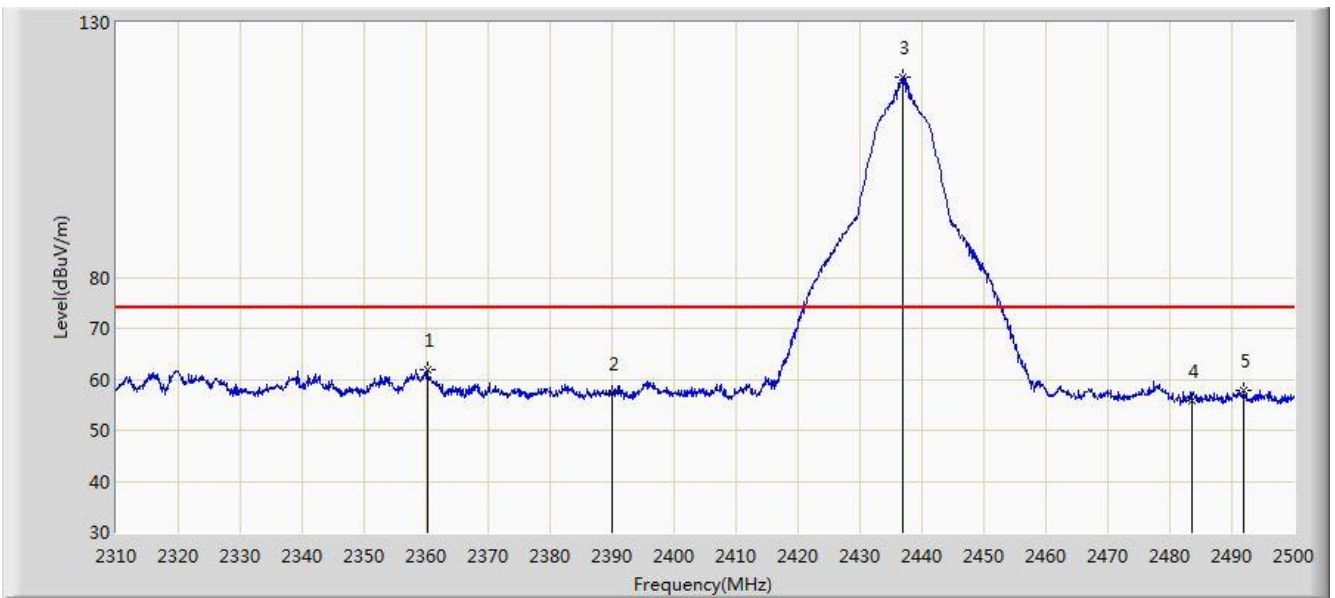


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2359.495	42.928	45.410	-11.072	54.000	-2.482	AV
2			2390.000	41.280	43.640	-12.720	54.000	-2.360	AV
3		*	2436.065	102.316	104.492	N/A	N/A	-2.176	AV
4			2483.500	40.755	42.741	-13.245	54.000	-1.986	AV

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

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

Site: AC1	Time: 2019/05/23 - 22:03
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11b at Channel 2437MHz - Ant 0	

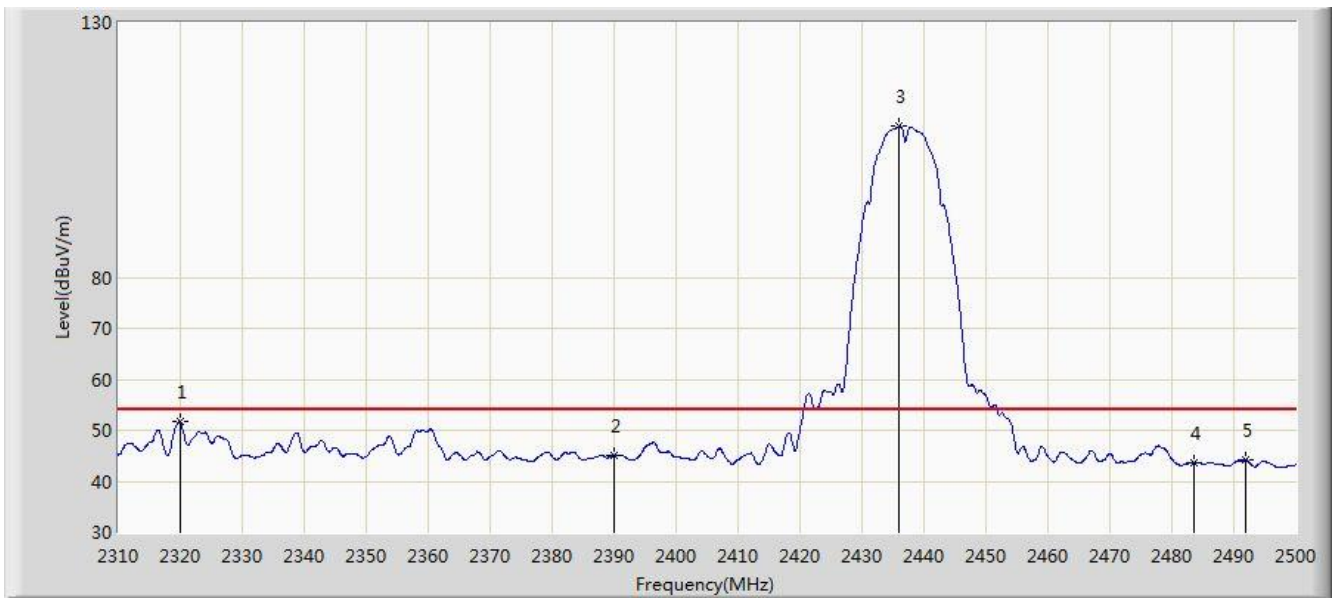


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2360.255	61.947	64.426	-12.053	74.000	-2.478	PK
2			2390.000	57.243	59.603	-16.757	74.000	-2.360	PK
3		*	2436.920	119.287	121.459	N/A	N/A	-2.173	PK
4			2483.500	55.897	57.883	-18.103	74.000	-1.986	PK
5			2492.020	57.829	59.781	-16.171	74.000	-1.952	PK

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

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

Site: AC1	Time: 2019/05/23 - 22:07
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11b at Channel 2437MHz - Ant 0	

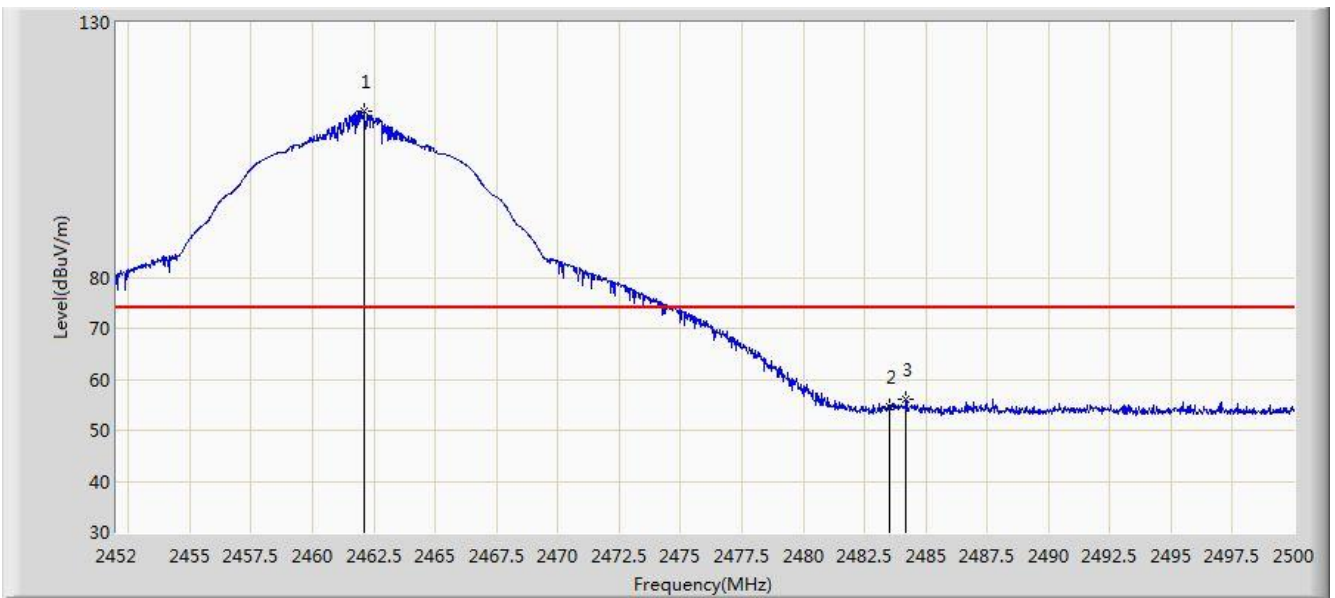


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2319.975	51.621	54.261	-2.379	54.000	-2.640	AV
2			2390.000	45.104	47.464	-8.896	54.000	-2.360	AV
3		*	2436.065	109.779	111.955	N/A	N/A	-2.176	AV
4			2483.500	43.555	45.541	-10.445	54.000	-1.986	AV
5			2491.925	44.182	46.134	-9.818	54.000	-1.952	AV

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

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

Site: AC1	Time: 2019/05/23 - 21:59
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11b at Channel 2462MHz - Ant 0	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2462.104	112.504	114.575	N/A	N/A	-2.072	PK
2			2483.500	54.688	56.674	-19.312	74.000	-1.986	PK
3			2484.208	56.158	58.141	-17.842	74.000	-1.983	PK

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

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

Site: AC1	Time: 2019/05/23 - 22:02
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11b at Channel 2462MHz - Ant 0	

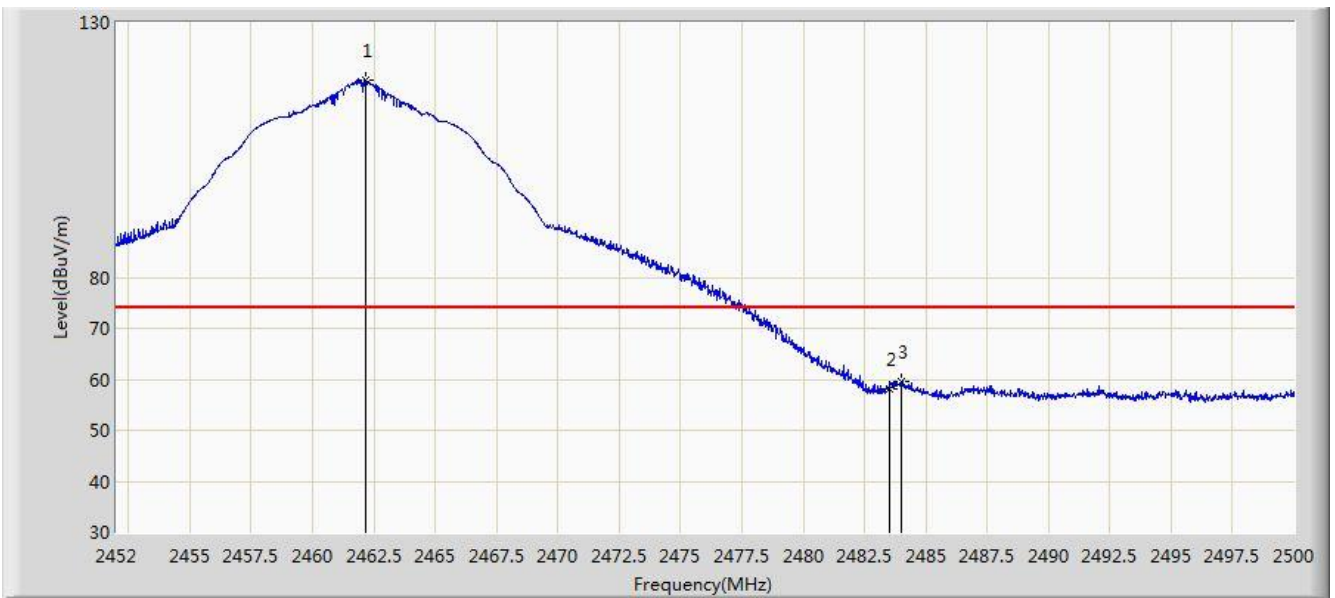


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2462.872	102.533	104.601	N/A	N/A	-2.068	AV
2			2483.500	41.687	43.673	-12.313	54.000	-1.986	AV
3			2484.016	42.272	44.256	-11.728	54.000	-1.984	AV

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

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

Site: AC1	Time: 2019/05/23 - 21:44
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11b at Channel 2462MHz - Ant 0	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2462.152	118.707	120.778	N/A	N/A	-2.071	PK
2			2483.500	58.102	60.088	-15.898	74.000	-1.986	PK
3			2483.992	59.613	61.597	-14.387	74.000	-1.984	PK

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

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

Site: AC1	Time: 2019/05/23 - 21:58
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11b at Channel 2462MHz - Ant 0	

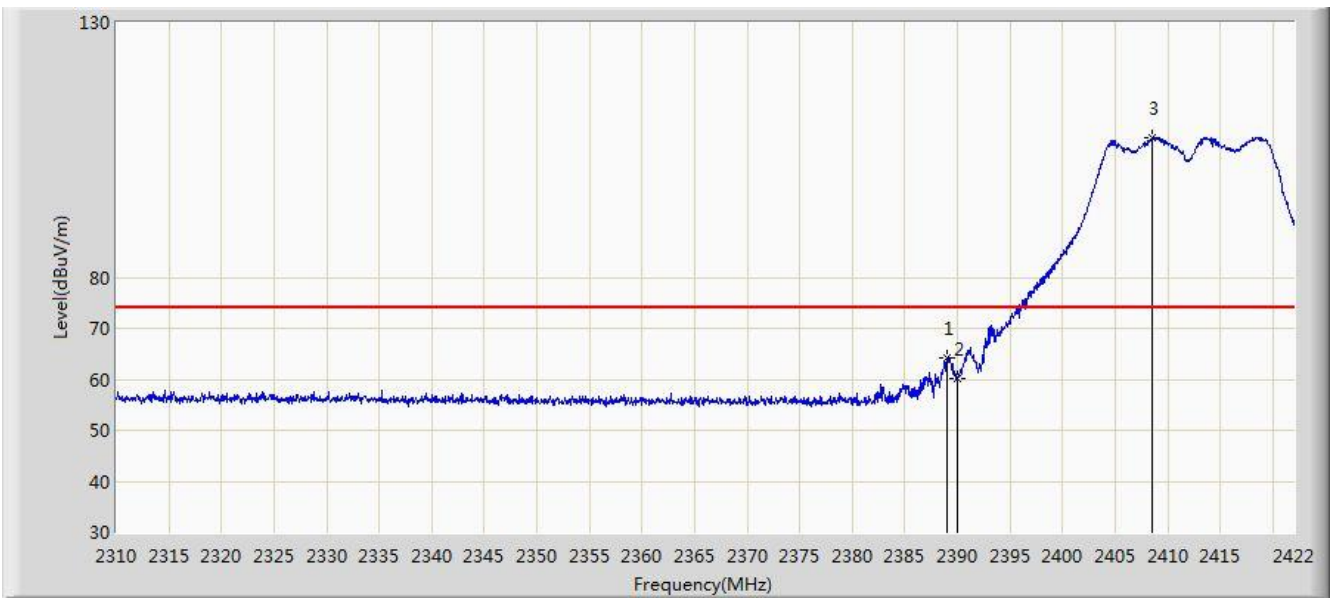


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1		*	2461.384	108.114	110.188	N/A	N/A	-2.074	AV
2			2483.500	44.514	46.500	-9.486	54.000	-1.986	AV
3			2484.232	45.418	47.401	-8.582	54.000	-1.983	AV

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

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

Site: AC1	Time: 2019/04/30 - 02:25
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11g at Channel 2412MHz - Ant 0+1	

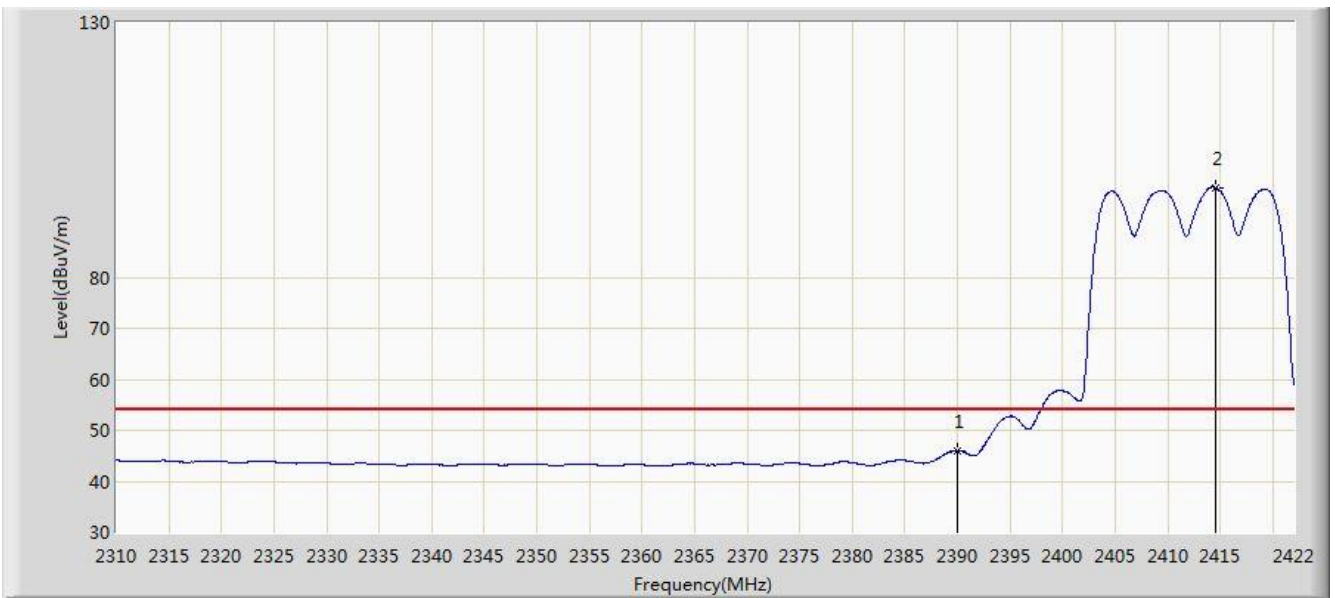


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.072	64.075	66.439	-9.925	74.000	-2.364	PK
2			2390.000	60.112	62.472	-13.888	74.000	-2.360	PK
3		*	2408.560	107.486	109.772	N/A	N/A	-2.286	PK

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

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

Site: AC1	Time: 2019/04/30 - 02:26
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11g at Channel 2412MHz - Ant 0+1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	45.989	48.349	-8.011	54.000	-2.360	AV
2		*	2414.608	97.548	99.810	N/A	N/A	-2.262	AV

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

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

Site: AC1	Time: 2019/04/30 - 02:24
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11g at Channel 2412MHz - Ant 0+1	

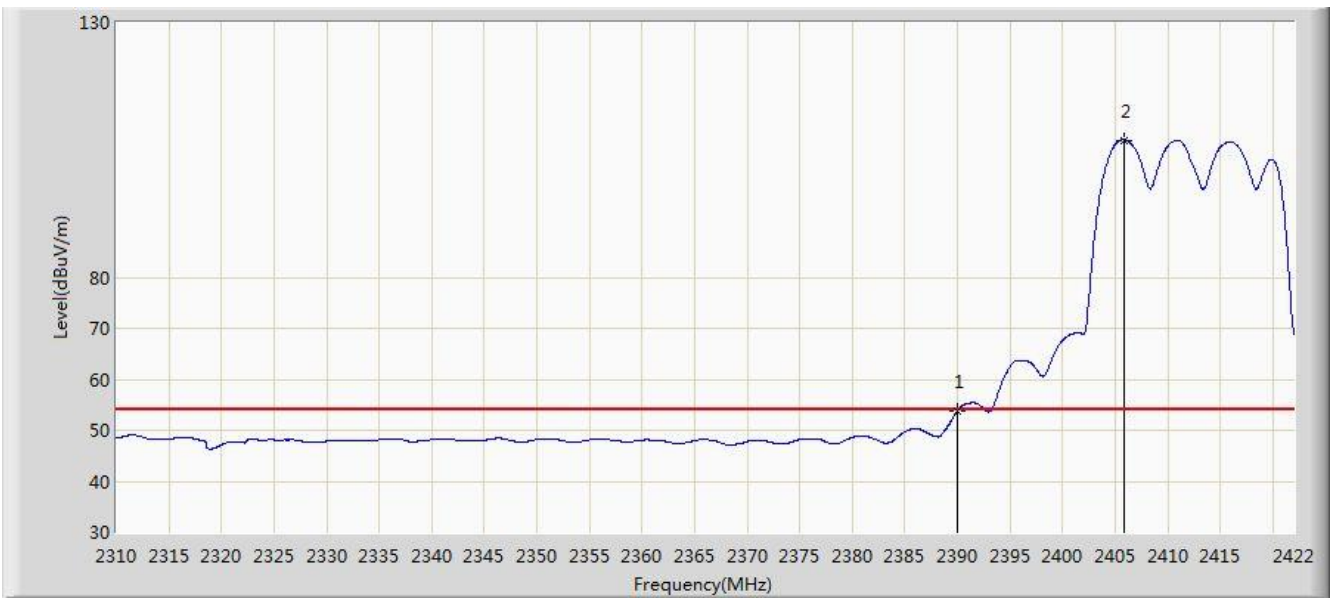


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	70.093	72.453	-3.907	74.000	-2.360	PK
2		*	2410.688	116.492	118.769	N/A	N/A	-2.278	PK

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

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

Site: AC1	Time: 2019/04/30 - 02:23
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11g at Channel 2412MHz - Ant 0+1	

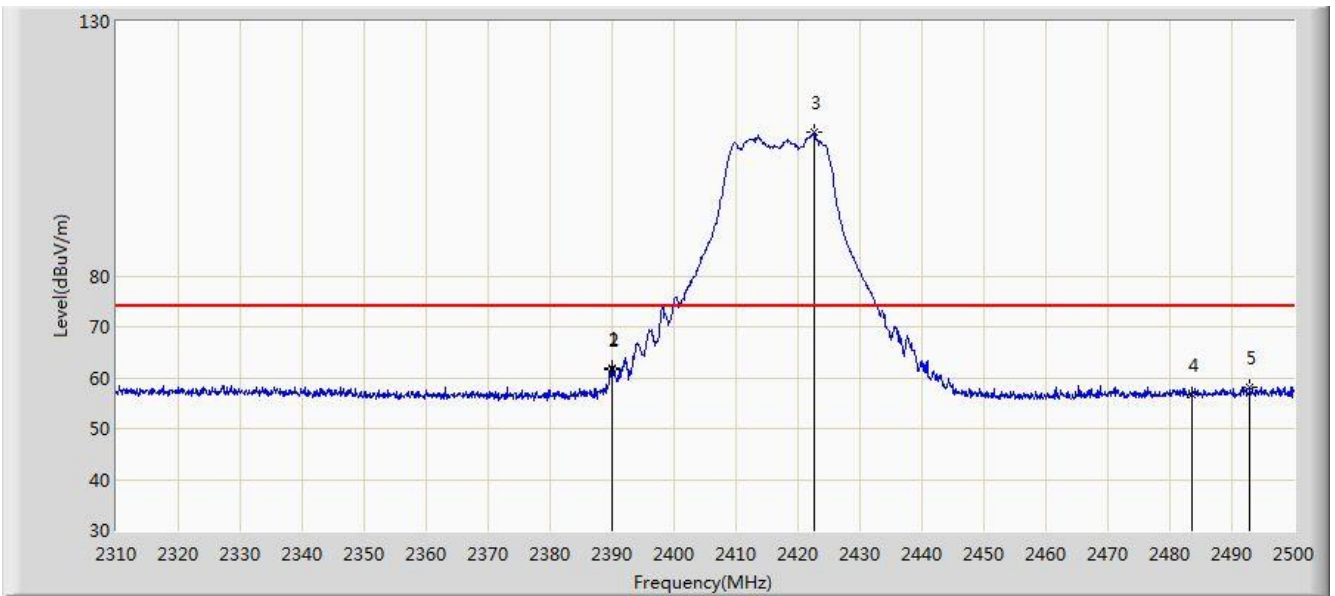


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Margin (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	53.746	56.106	-0.254	54.000	-2.360	AV
2		*	2405.928	106.953	109.249	N/A	N/A	-2.296	AV

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

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

Site: AC1	Time: 2019/05/06 - 18:04
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11g at Channel 2417MHz - Ant 0+1	

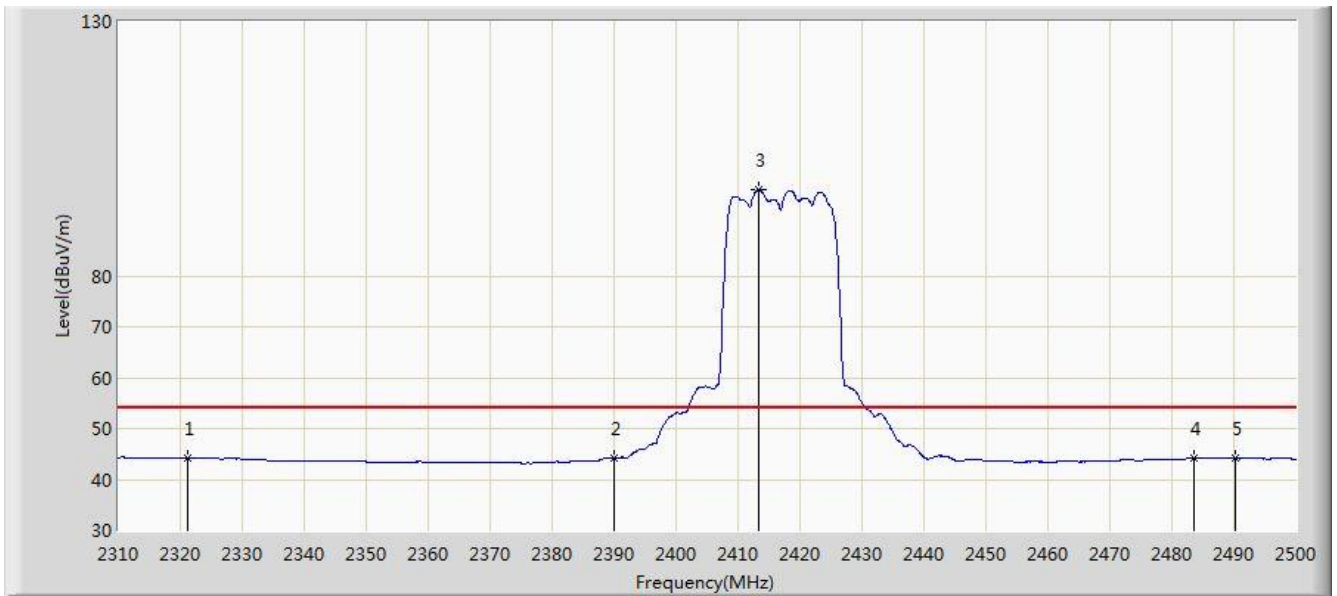


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2389.895	61.776	64.136	-12.224	74.000	-2.360	PK
2			2390.000	61.648	64.008	-12.352	74.000	-2.360	PK
3		*	2422.575	108.251	110.481	N/A	N/A	-2.230	PK
4			2483.500	56.695	58.681	-17.305	74.000	-1.986	PK
5			2492.875	58.225	60.173	-15.775	74.000	-1.948	PK

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

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

Site: AC1	Time: 2019/05/06 - 18:08
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11g at Channel 2417MHz - Ant 0+1	

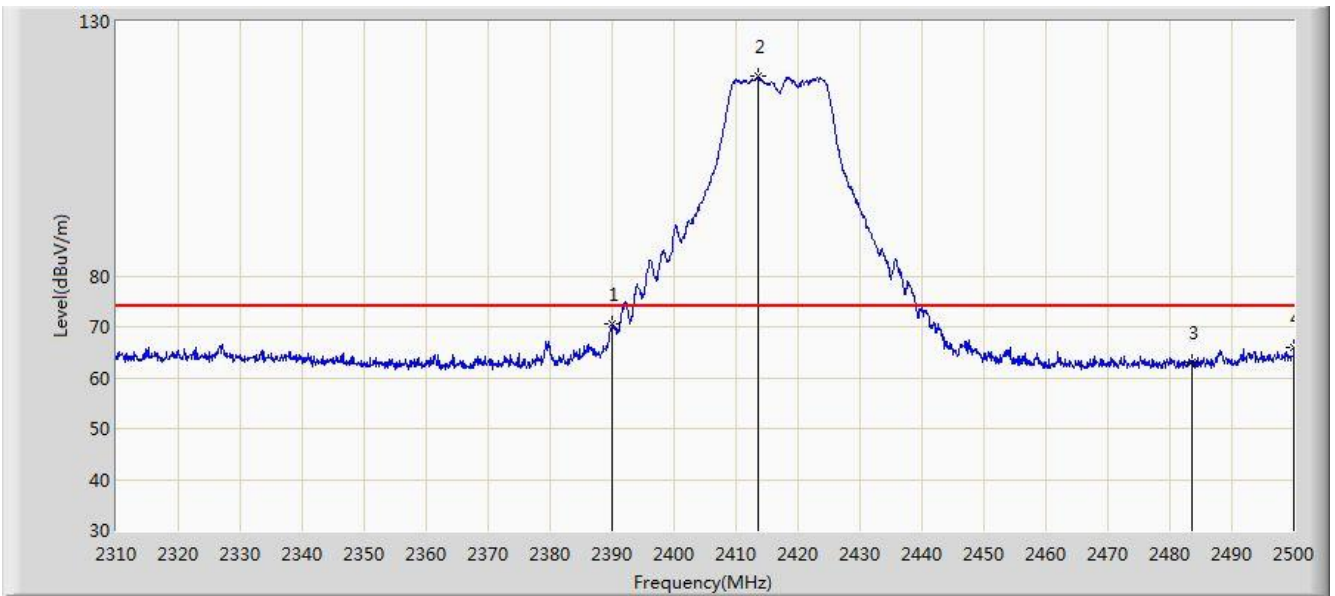


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2321.115	44.224	46.860	-9.776	54.000	-2.636	AV
2			2390.000	44.113	46.473	-9.887	54.000	-2.360	AV
3		*	2413.360	97.037	99.304	N/A	N/A	-2.267	AV
4			2483.500	44.130	46.116	-9.870	54.000	-1.986	AV
5			2490.120	44.139	46.098	-9.861	54.000	-1.960	AV

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

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

Site: AC1	Time: 2019/05/06 - 17:14
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11g at Channel 2417MHz - Ant 0+1	

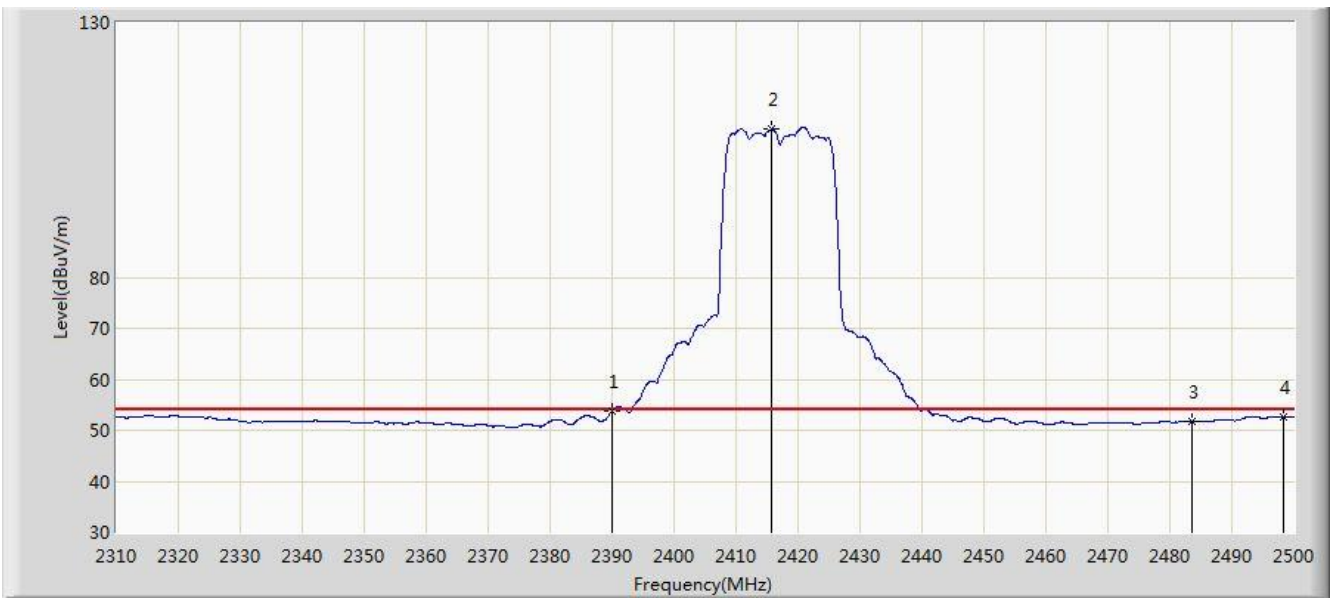


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	70.592	72.952	-3.408	74.000	-2.360	PK
2		*	2413.550	119.150	121.416	N/A	N/A	-2.266	PK
3			2483.500	63.085	65.071	-10.915	74.000	-1.986	PK
4			2500.000	65.882	67.820	-8.118	74.000	-1.937	PK

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

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

Site: AC1	Time: 2019/05/06 - 18:03
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11g at Channel 2417MHz - Ant 0+1	

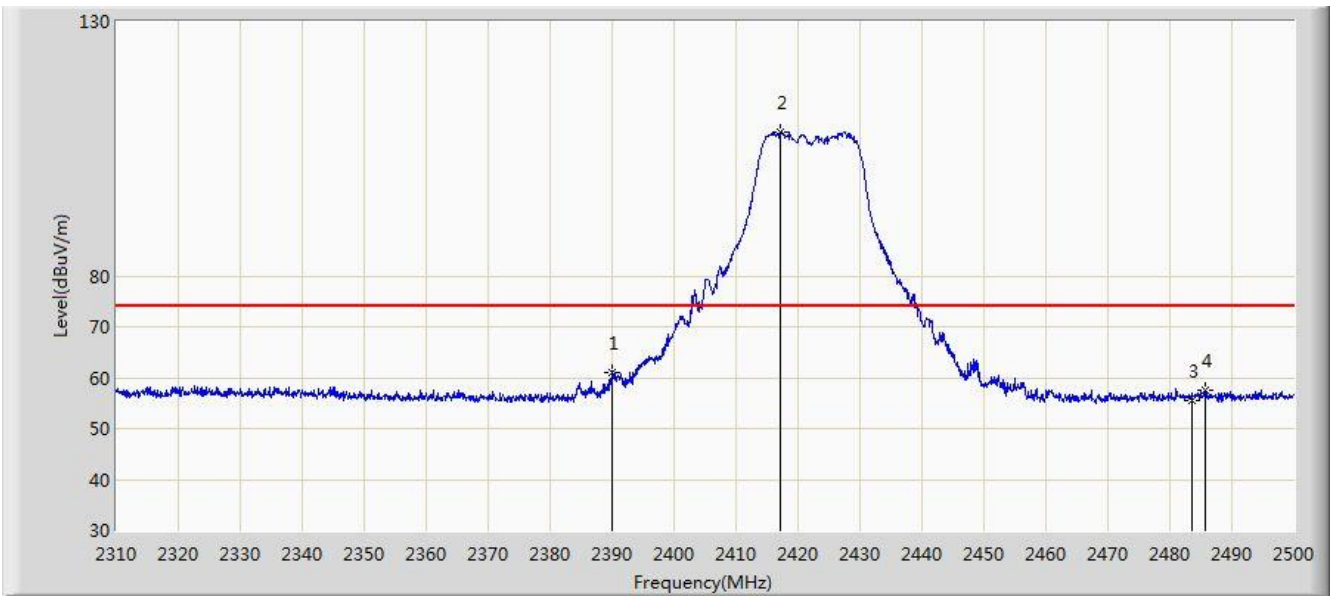


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	53.851	56.211	-0.149	54.000	-2.360	AV
2		*	2415.735	109.107	111.364	N/A	N/A	-2.257	AV
3			2483.500	51.793	53.779	-2.207	54.000	-1.986	AV
4			2498.385	52.684	54.621	-1.316	54.000	-1.937	AV

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

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

Site: AC1	Time: 2019/05/06 - 18:20
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11g at Channel 2422MHz - Ant 0+1	

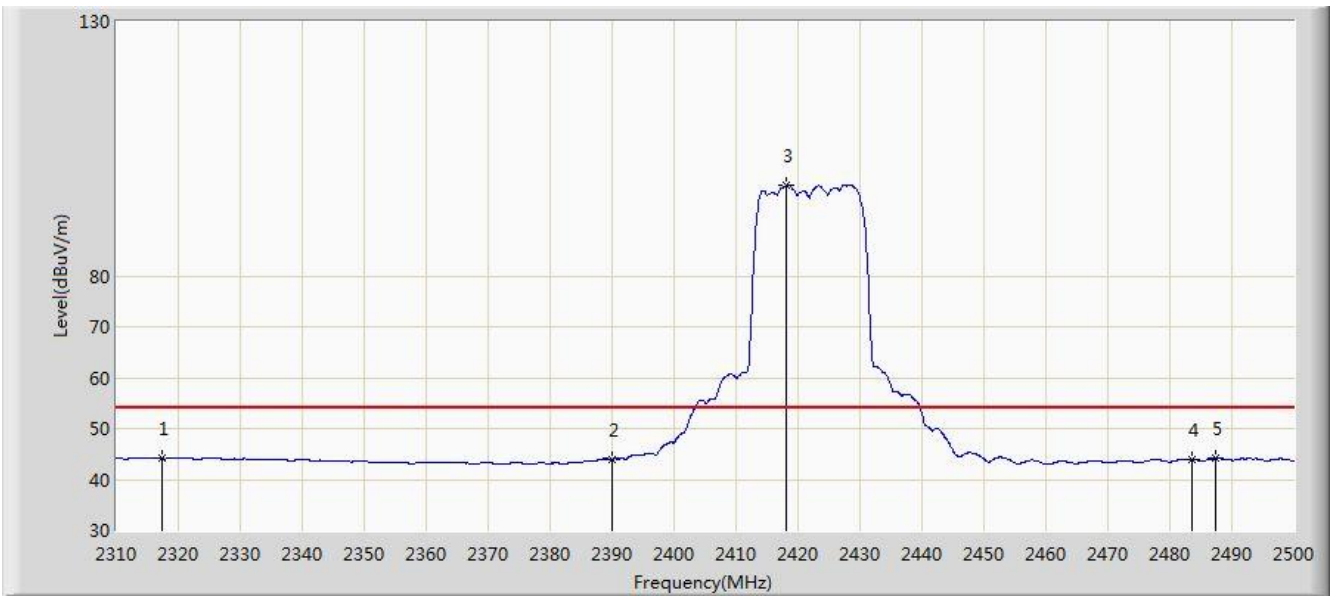


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2390.000	61.057	63.417	-12.943	74.000	-2.360	PK
2		*	2417.255	108.119	110.370	N/A	N/A	-2.251	PK
3			2483.500	55.630	57.616	-18.370	74.000	-1.986	PK
4			2485.655	57.554	59.531	-16.446	74.000	-1.977	PK

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

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

Site: AC1	Time: 2019/05/06 - 18:23
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Horizontal
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11g at Channel 2422MHz - Ant 0+1	

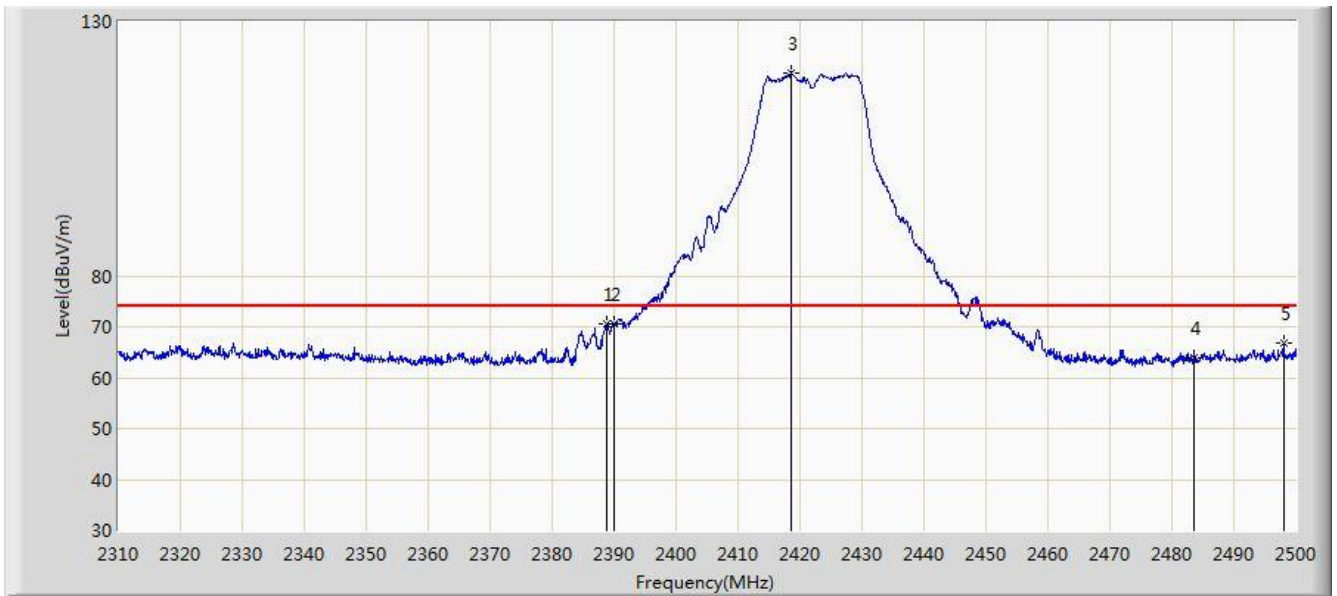


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2317.315	44.140	46.791	-9.860	54.000	-2.650	AV
2			2390.000	43.922	46.282	-10.078	54.000	-2.360	AV
3		*	2418.205	97.889	100.137	N/A	N/A	-2.247	AV
4			2483.500	43.949	45.935	-10.051	54.000	-1.986	AV
5			2487.460	44.169	46.139	-9.831	54.000	-1.970	AV

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

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

Site: AC1	Time: 2019/05/06 - 18:13
Limit: NCC LP0002_1GHz-40GHz	Engineer: Kevin ker
Probe: BBHA9120D_1GHz_18GHz	Polarity: Vertical
EUT: AX3000 Gigabit Wi-Fi 6 路由器	Power: AC 110V/60Hz
測試模式: Transmit by 802.11g at Channel 2422MHz - Ant 0+1	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor (dB)	Type
1			2388.755	70.525	72.890	-3.475	74.000	-2.365	PK
2			2390.000	70.537	72.897	-3.463	74.000	-2.360	PK
3		*	2418.490	119.994	122.240	N/A	N/A	-2.247	PK
4			2483.500	63.906	65.892	-10.094	74.000	-1.986	PK
5			2498.005	66.921	68.858	-7.079	74.000	-1.937	PK

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

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