低功率射頻電機試驗報告

申請廠商	AMAX INDUSTRIAL GROUP CHINA CO.,LTD OFFICE NO.3 10/F WITTY COMMERCIAL BUILDING 1A-1L TUNG CHOI STREET MONGKOK KOWLOON HONG KONG
製造廠商	AMAX INDUSTRIAL GROUP CHINA CO.,LTD
產品名稱	SHIFT 24
廠牌	AMAX
型號	1422642-R
發射功率	81.59dBuV/m (Peak)
工作頻率	2407-2479MHz
調變方式	GFSK
法規	LP0002: 3.10.2節

實驗室資訊

台灣檢驗科技股份有限公司 射頻實驗中心

新北市新北產業園區五工路134號

認證有效期間：107年06月14日起至110年06月13日止

試驗受理日期　民國109年05月15日

試驗執行日期　民國109年05月18日~ 民國109年06月12日

報告發行日期　民國109年06月22日

林耀鵬

Testing Laboratory
3702

報告簽署人
林耀鵬 簽章

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Revision History				
Report Number	**Revision**	**Description**	**Issue Date**	**Remark**
E2/2020/50059	Rev.00	Original.	Jun. 22, 2020	Revised By: Yuri Tsai

Note:

1、 Disclaimer
Antenna information is provided by the applicant, the test results of this report are applicable to the sample EUT received.

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測試標準

國家通訊傳播委員會低功率射頻電機技術規範

民國 107 年 1 月 10 日版本

待測裝置已於台灣檢驗科技股份有限公司射頻實驗中心，依據國家通訊傳播委員會於中華民國一百零七年一月頒佈之低功率射頻電機技術規範測試。

台灣檢驗科技股份有限公司根據此條文規範項目測試，測試各項數據皆能符合此規範規定之限度值。

台灣檢驗科技股份有限公司依低功率射頻電機技術規範審驗要點規範製作測試結果報告,測試結果評判為合格。

備註：

1. 報告中所描述之測試結果和待測設備的架構組合，均根據實際量測情況作詳實的記錄，且本測試報告僅對上述待測設備樣品負責。
2. 此份報告未經本公司同意，不得部份摘錄複製使用。

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測試實驗室資料:

實驗室認可登錄	:	中華民國實驗室認證體系
認可編號	:	TAF 3702，認可頻率範圍9kHz ~ 200GHz
認證有效期間	:	107年06月14日起至110年06月13日止
測試場地	:	桃園市龜山區(華亞科技園區)科技一路2號
實驗室名稱	:	台灣檢驗科技股份有限公司 射頻實驗中心
實驗室地址	:	新北市新北產業園區五工路134號
電話	:	886-2-22993939
傳真	:	886-2-22982698

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實驗室之量測不確定度

量測項目	量測不確定度 (擴充不確定度)		
傳導干擾量測	電源線	0.15-30MHz	2.586dB
輻射干擾量測 (3m測距)	水平極化	9kHz - 30MHz	2.3dB
		30-167MHz	4.22dB
		167-500MHz	3.44dB
		0.5-1GHz	3.39dB
		1-18GHz	4.08dB
		18-40GHz	4.08dB
	垂直極化	9kHz - 30MHz	2.3dB
		30-180MHz	3.37dB
		180-417MHz	3.19dB
		0.417-1GHz	3.19dB
		1-18GHz	4.04dB
		18-40GHz	4.04dB
頻率誤差量測	範例一	2.4 GHz	290 Hz
	範例二	5 GHz	724.3 Hz
輸出功率	傳導方式	2.4 GHz	1.3 dB
		5 GHz	1.55 dB
有效輻射功率 (輻射方式)	水平極化	2.4GHz	4.21 dB
		5 GHz	4.62 dB
	垂直極化	2.4 GHz	4.42 dB
		5 GHz	4.74 dB
功率頻譜密度	傳導方式	2.4GHz	1.3dB
		5GHz	1.67dB
鄰頻道功率量測 (輻射方式)	水平極化	30-167MHz	4.22dB
		167-500MHz	3.44dB
		0.5-1GHz	3.39dB
	垂直極化	30-180MHz	3.37dB
		180-417MHz	3.19dB
		0.417-1GHz	3.19dB

附註: 1. K=2 即代表測試結果具有95%的量測可信度。
2. 本報告中的符合性判定僅依據試驗結果，不考慮其試驗結果的量測不確定度。

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目錄 頁次

1 一般資料 7

2 適用規範 9

3 受測裝置之系統說明 11

4 量測儀器設備 12

5 電源線傳導干擾之量測 13

6 場強輻射之量測 16

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1 一般資料

1.1 產品特性

產品名稱	SHIFT 24
產品型號	1422642-R
產品商標	AMAX
Hardware Version	N/A
Software Version	N/A
USB Cable	Model:CT-6176; Supplier:AMAX
使用電源	3.7Vdc from Lithium-polymer battery or 5V from USB Port
發射頻帶	2407MHz-2479MHz
輸出功率	81.59dBuV/m
調變方式	GFSK
頻道數	4 Channels
頻道間隔	2407, 2443, 2467, 2479
天線型式 / 天線增益	Wire Antenna, Gain: 0dBi Model No.: DF2421; Supplier: N/A

本案經申請者切結器材不提供隨貨配件，配件由實驗室提供併同檢驗，產品名稱: Adapter，廠牌: HSHONGAHAING，型號: MUC-5K。

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1.2 測試方法之依據

本測試報告之所有項目皆依據國家通訊傳播委員會低功率射頻電機技術規範(LP0002, 107.1.10版本)如無國家標準可適用者，得依美國EIA、IEEE ANSI檢驗法檢驗，及美國FCC 47 CFR Part 2有關檢驗之規定及參考ANSI 63.10:2013、FCC CFR 47 15.249之檢驗法。

項次	測試項目	適用規範	測試結果	量測設備	備註
1	電源線傳導干擾	低功率射頻電機技術規範2.3節	請參閱5.5節	請參閱4.1節	合格
2	主波發射	低功率射頻電機技術規範3.10.2節(2)	請參閱6.5節	請參閱4.2節	合格
3	不必要發射	低功率射頻電機技術規範3.10.2節(2)	請參閱6.5節	請參閱4.2節	合格
	以下空白				

RADIATED EMISSION TEST:

RADIATED EMISSION TEST (BELOW 1 GHz)	
MODE	TESTED CHANNEL
(TX)	2443MHz
RADIATED EMISSION TEST (ABOVE 1 GHz)	
MODE	TESTED CHANNEL
(TX)	2407MHz,2443MHz,2479MHz

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2 適用規範

輻射之規定

(1)使用頻率：

(1.1) 2400-2483.5 兆赫(MHz)

(1.2) 5725-5875 兆赫(MHz)

(1.3) 24.0-24.25 秭赫(GHz)

(2)主波發射：距3公尺處其電場強度限值如下表，除諧波外，指定頻帶外之發射應比主波低50dB以上或依第2.8節之發射限制，兩者取其較鬆者：

主波頻率 (兆赫)	主波電場強度 (毫伏/公尺)	諧波電場強度 (微伏/公尺)
2400-2483.5	50	500
5725-5875	50	500
24000-24250	250	2500

(3) 本節之所有發射限制值係以平均值檢測儀量測，且須符合第低功率射頻電機5.14節之峰值規定。

(4)傳導之規定

依據NCC低功率射頻電機技術規範之2.3節，電源傳導干擾之限制要求如下：

頻率(MHz)	傳導限制值 (dBuV)	
	準峰值 (Quasi – peak)	平均值 (Average)
0.15 – 0.5	66 – 56	56 - 46
0.5 – 5	56	46
5 - 30	60	50

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(5)禁用頻帶限制之規定

依據NCC低功率射頻電機技術規範2.7節之要求，任何低功率射頻電機之主波皆不得使用下表所列各頻帶內之頻率；低功率射頻電機落於下表所列頻帶內之混附發射，其電場強度必須符合第2.8節的限制規定。

頻率 (MHz)	頻率 (MHz)	頻率 (MHz)
0.090～0.110	240.00～285.00	3332.0～3339.0
0.490～0.510	322.00～335.40	3345.8～3358.0
2.172～2.198	399.90～410.00	3500.0～4400.0
3.013～3.033	485.00～510.00	4500.0～5250.0
4.115～4.198	608.00～614.00	5350.0～5460.0
5.670～5.690	703.00～748.00	7250.0～7750.0
6.200～6.300	758.00～803.00	8025.0～8500.0
8.230～8.400	825.00～915.00	9000.0～9200.0
12.265～12.600	930.00～1240.0	9300.0～9500.0
13.340～13.430	1300.0～1427.0	10600～12700
14.965～15.020	1435.0～1626.5	13250～13400
16.700～16.755	1660.0～1785.0	14470～14500
19.965～20.020	1805.0～1880.0	15350～16200
25.500～25.700	1885.0～1900.0	17700～21400
37.475～38.275	1905.0～1985.0	22010～23120
73.500～75.400	2010.0～2025.0	23600～24000
108.00～138.00	2110.0～2170.0	31200～31800
149.90～150.05	2200.0～2300.0	36430～36500
156.70～156.90	2310.0～2390.0	38600 以上
162.01～167.17	2483.5～2900.0	
167.72～173.20	3260.0～3267.0	

(6)依據NCC低功率射頻電機技術規範2.11節之要求，收、發信機為成套銷售者，收、發 信機應一併送審或提供經型式認證合格之對應收、發信機之送審資料；送信機之輻 射電場強度不得超過第2.8節之發射規定，且不得接收、解調第2.7節所列之頻率

(7) 發射天線之要求

低功率發射機，依據NCC低功率射頻電機技術規範2.2節之規定，其發射天線應為全固定式或半固定式，不得使用可供引接之天線接頭。

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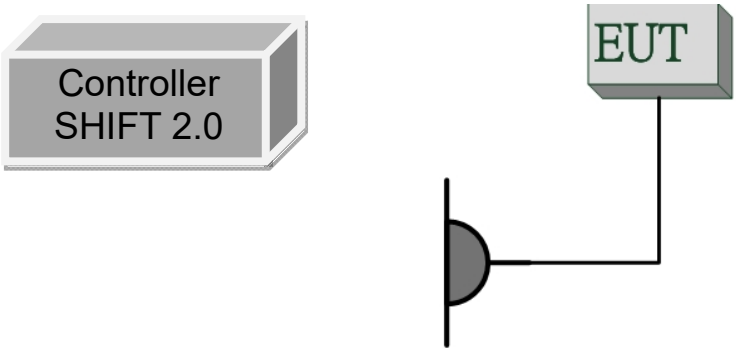
3 受測裝置之系統說明

裝置名稱	製造者/申請者	型號
* SHIFT 2.0	AMAX INDUSTRIAL GROUP CHINA CO.,LTD / AMAX INDUSTRIAL GROUP CHINA CO.,LTD	1422642-R

3.1 量測配置圖

3.1.1 Radiated 量測配置圖

Conduction 量測配置圖



3.2 輔助測試週邊設備名稱描述

編號	產品別	商標	型號	序號	信號線	電源線
1.	2.4G Test Software	N/A	N/A	N/A	N/A	N/A
2.	Adapter	HSHONGAHAING	MUC-5K	AC-USB012	N/A	N/A
3.	USB Cable	AMAX	CT-6176	N/A	N/A	N/A
4.	Controller SHIFT 2.0	AMAX	1422642-T	N/A	N/A	N/A

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4 量測儀器設備

4.1 AC 電源端傳導干擾之量測儀器

Conducted Emission Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
LISN	SCHWARZBECK Mess-Elektronik	NSLK8127	974	03/25/2020	03/24/2021
EMI Test Receiver	R&S	ESCI	101342	04/28/2020	04/27/2021

4.3 天線端傳導測試之量測儀器

N/A

4.4 量測場強輻射之量測儀器

966 Chamber					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Broadband Antenna	SCHWAZBECK	VULB 9168	9168-617	11/04/2019	11/03/2020
Horn Antenna	Schwarzbeck	BBHA9170	185	08/07/2019	08/06/2020
Horn Antenna	Schwarzbeck	BBHA9120D	1341	06/12/2019	06/11/2020
Loop Antenna	ETS.LINDGREN	6502	143303	04/28/2020	04/27/2021
3m Site NSA	SGS	966 chamber D	N/A	07/12/2019	07/11/2020
Spectrum Analyzer	KEYSIGHT	N9010A	MY51440113	07/15/2019	07/14/2020
Pre-Amplifier	EMC Instruments	EMC184045B	980135	11/20/2019	11/19/2020
Pre-Amplifier	EMC Instruments	EMC9135	980234	11/20/2019	11/19/2020
Pre-Amplifier	EMC Instruments	EMC12630SE	980271	11/20/2019	11/19/2020
Attenuator	Woken	WATT-218FS-10	RF25	11/20/2019	11/19/2020
High Pass Filter	R&S	F13 HPF 3GHz	RF64	11/20/2019	11/19/2020
Low Pass Filter	EWT	EWT-56-0019	RF46	11/20/2019	11/19/2020
Notch Filter	EWT	EWT-54-0038	RF55	11/20/2019	11/19/2020
Coaxial Cable	Huber Suhner	SUCOFLEX 104	MY17388/4	11/20/2019	11/19/2020
Coaxial Cable	Huber Suhner	RG 214/U	W22.03	11/20/2019	11/19/2020
Coaxial Cable	Huber Suhner	SUCOFLEX 104	MY17413/4	11/20/2019	11/19/2020

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5 電源線傳導干擾之量測

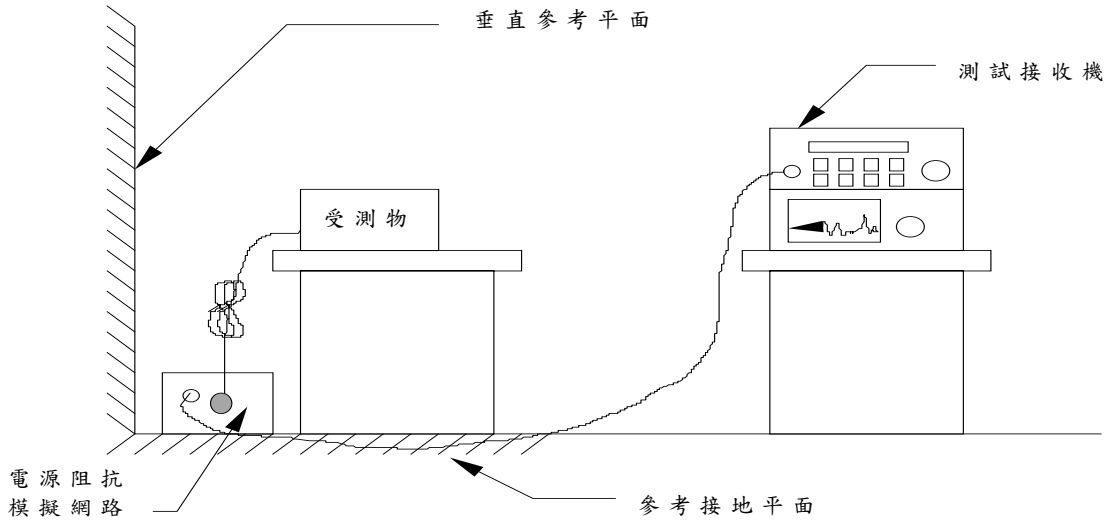
5.1 適用標準

依據NCC低功率射頻電機技術規範2.3節之要求。

5.2 測試方法

將待測物置於0.8米高的非金屬桌面，使其在工作狀態，待測物電源線接至電源線阻抗穩定網路上，從測試接收機記錄頻率由 0.15MHz 至 30MHz 之間之電源線傳導放射強度的峰值量側(Peak)並提供掃描圖, Mark 最大的六個頻率點進行準峰值量測(QP),如果準峰值QP結果值已低於AV限制值時將不再進行AV值的量測。

5.3 測試配置



5.4 干擾值之計算

電源傳導干擾電壓之計算公式如下

結果值(QP/AV Level) = 儀器讀值(QP/AV Reading) + 校正因子

其中校正因子為：

饋線損失 + 電源阻抗模擬網路損失

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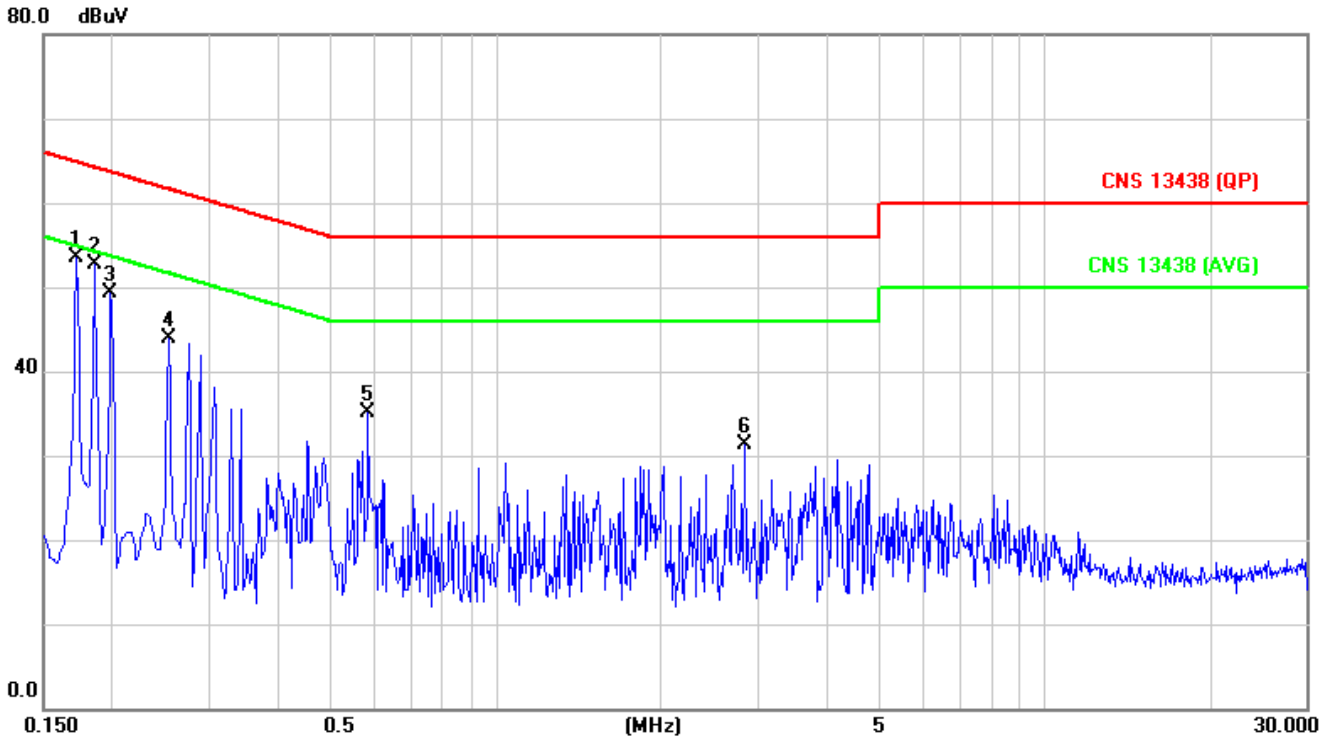
5.5 傳導干擾之量測結果

Site:	: Conduction Room C	Date: 2020/5/29	Time: 下午 02:52:28
Limit:	CNS 13438 (QP)	Probe: L1	Temperature: 23.8 ℃
Mode:	System	Power: AC110V/60Hz	Humidity: 68 %RH
Report:	E2-2020-50059		Air Pressure: 1010 hpa
Tester:	Kailin		
Note:	Adapter:MUC-5K		



No.	Mk.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Measurement (dBuV)	Limit (dBuV)	Over (dB)	Detector
1	*	0.1725	43.23	10.22	53.45	64.84	-11.39	peak
2		0.1860	42.51	10.22	52.73	64.21	-11.48	peak
3		0.1995	39.12	10.22	49.34	63.63	-14.29	peak
4		0.2535	33.65	10.22	43.87	61.64	-17.77	peak
5		0.5865	24.78	10.27	35.05	56.00	-20.95	peak
6		2.8410	20.93	10.46	31.39	56.00	-24.61	peak

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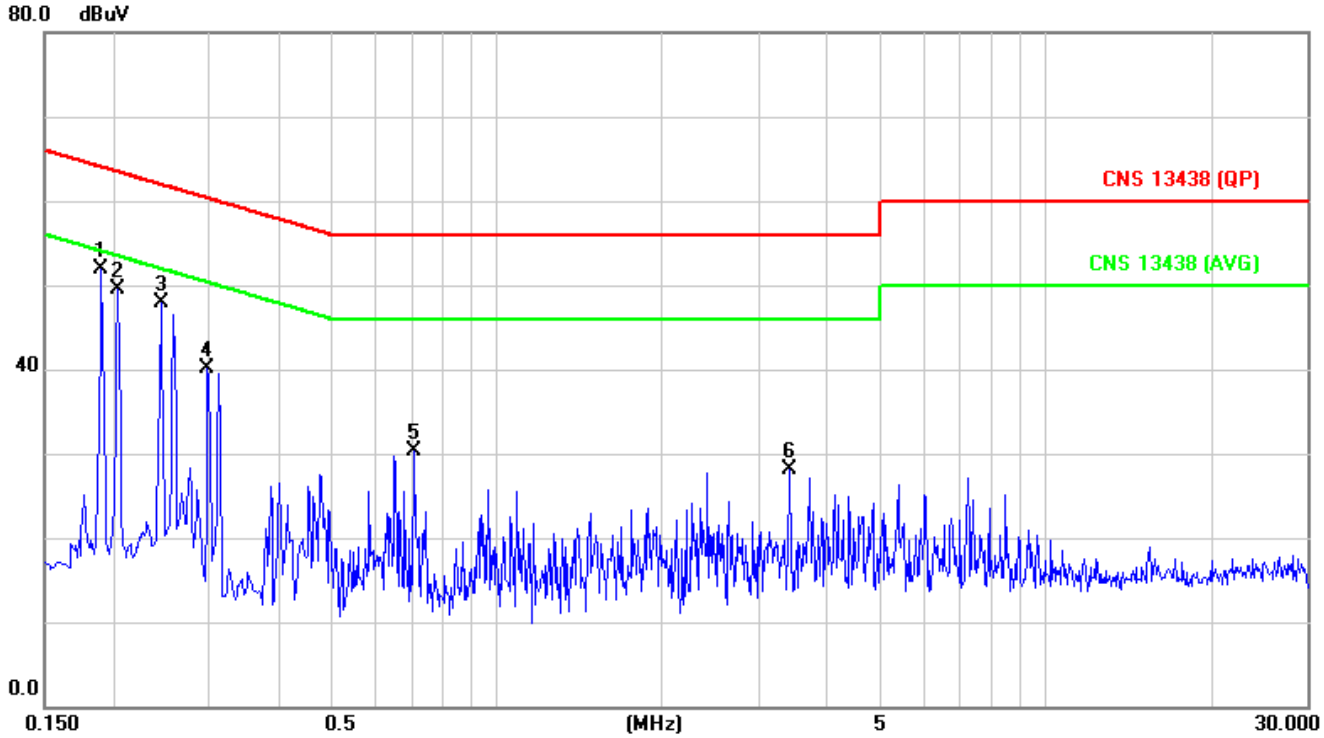
Site:	: Conduction Room C	Date: 2020/5/29	Time: 下午 02:53:35
Limit:	CNS 13438 (QP)	Probe: N	Temperature: 23.8 ℃
Mode:	System	Power: AC110V/60Hz	Humidity: 68 %RH
Report:	E2-2020-50059		Air Pressure: 1010 hpa
Tester:	Kailin		
Note:	Adapter:MUC-5K		



No.	Mk.	Freq. (MHz)	Reading (dBuV)	Factor (dB)	Measurement (dBuV)	Limit (dBuV)	Over (dB)	Detector
1	*	0.1905	41.70	10.21	51.91	64.01	-12.10	peak
2		0.2040	39.21	10.21	49.42	63.45	-14.03	peak
3		0.2445	37.70	10.21	47.91	61.94	-14.03	peak
4		0.2985	29.92	10.21	40.13	60.28	-20.15	peak
5		0.7080	20.09	10.31	30.40	56.00	-25.60	peak
6		3.4305	17.56	10.48	28.04	56.00	-27.96	peak

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6 場強輻射之量測

6.1 適用標準

依據NCC低功率射頻電機技術規範3.10節(2)之要求，(2)主波發射：距3公尺處其電場強度限值如下表，除諧波外，指定頻帶外之發射應比主波低50dB以上或依第2.8節之發射限制，兩者取其較鬆者。

6.2 量測方法

將待測物置於 0.8 米高的非金屬桌面，使其在工作狀態，接收天線置於 3 米外相同的高度。待測物分別要垂直或水平放置，而且桌面要 360 度旋轉，另外接收天線也要從 1.0 米至 4.0 米升降變化，以找出最大的輻射電場強度，接收天線置於水平、垂直極向各執行測試一次。1GHz 以下先進行Peak 值量測, 若Peak 以低於QP 限制值將不在進行QP 量測, 否則, 則進行QP 值量測, 1GHz 以上將待測物置於 1.5 米高的非金屬桌面, 先進行Peak 值量測, 若Peak 以低於AV 限制值將不在進行AV值量測, 否則, 則進行AV 值量測。

6.3 場強度之計算

A. 場強之計算公式如下

結果值 = 讀值 + 校正因數

其中校正因數為：

天線因數+ 饋線損失 + 濾波器損失（若有使用） - 放大器增益（若有使用）

量測結果請見下頁。

B. 限制值的計算公式如下

主波 (Average)

50 mV/m = 20 log (50 X1000) = 94 dBuV/m

主波 (Peak)

114 dBuV/m = 94 dBuV/m + 20

諧波 (Average)

500 uV/m = 20 log (500) = 54 dBuV/m

諧波 (Peak)

74 dBuV/m =54 dBuV/m + 20

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9kHz~150kHz 測試

解析頻寬:	300Hz	視訊頻寬:	300Hz
量測天線:	ETS.LINDGREN	檢測器:	Quasi-Peak

150kHz~30MHz 測試

解析頻寬:	10kHz	視訊頻寬:	10kHz
量測天線:	ETS.LINDGREN	檢測器:	Quasi-Peak

1GHz 以下測試

解析頻寬:	100kHz	視訊頻寬:	100kHz
量測天線:	VULB 9168	檢測器:	Quasi-Peak

1GHz 以上測試

量測天線:	BBHA9170, BBHA9120D	檢測器:	Peak, Average
頻譜分析儀設定	Peak: RBW: 1MHz ; VBW: 1MHz，Average: RBW: 1MHz ; VBW: 10Hz		

註 1:輻射量測僅放最差模式 (30MHz ~1000MHz)。

註 2:經評估後，9 kHz ~ 30MHz 之幅射量測皆低於限制值 20dB 以上，依據 LP0002 5.13 規定混附發射毋需記錄。

註 3: 經評估後，比較 H PLAN、E1 PLAN 和 E2 PLAN 測試值後附上最差模式 E2 PLAN 數據。

註 4: Actual FS(dBμV/m) = SPA. Reading level(dBμV) + Factor(dB)
Factor(dB) = Antenna Factor(dBμV/m) + Cable Loss(dB) – Pre_Amplifier Gain(dB)

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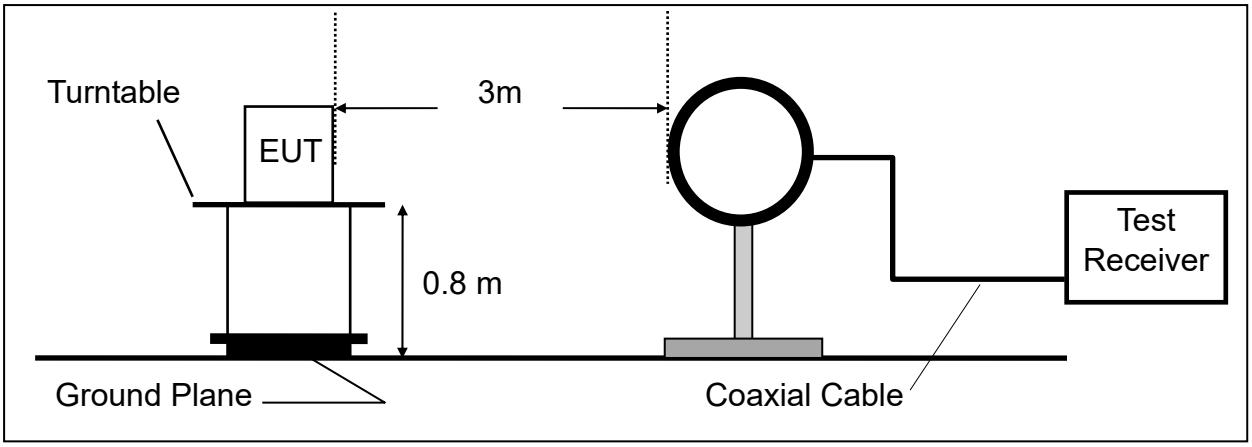
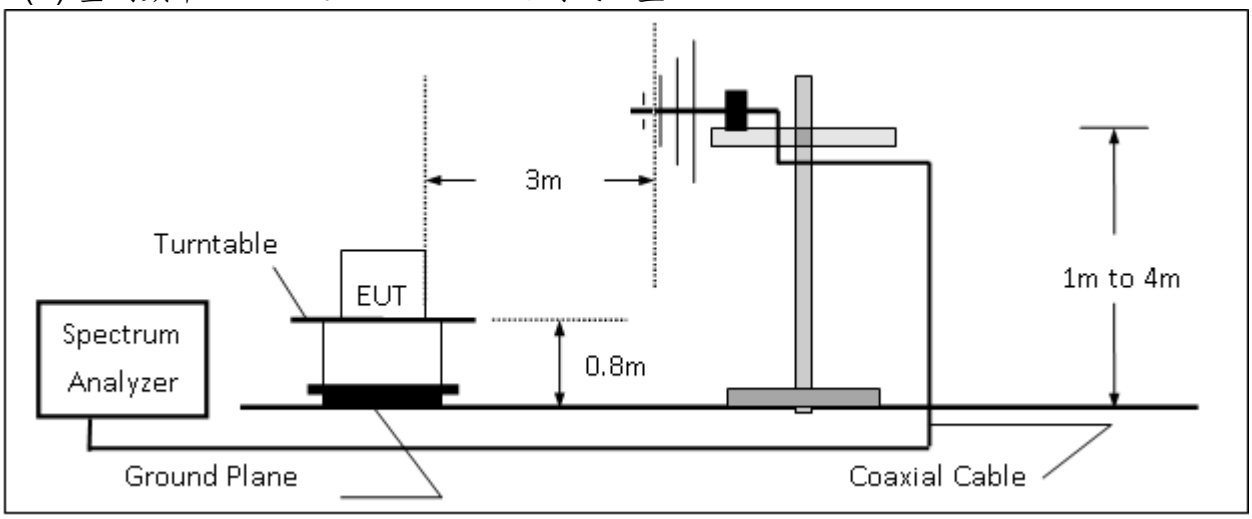
6.4 輻射之測試配置

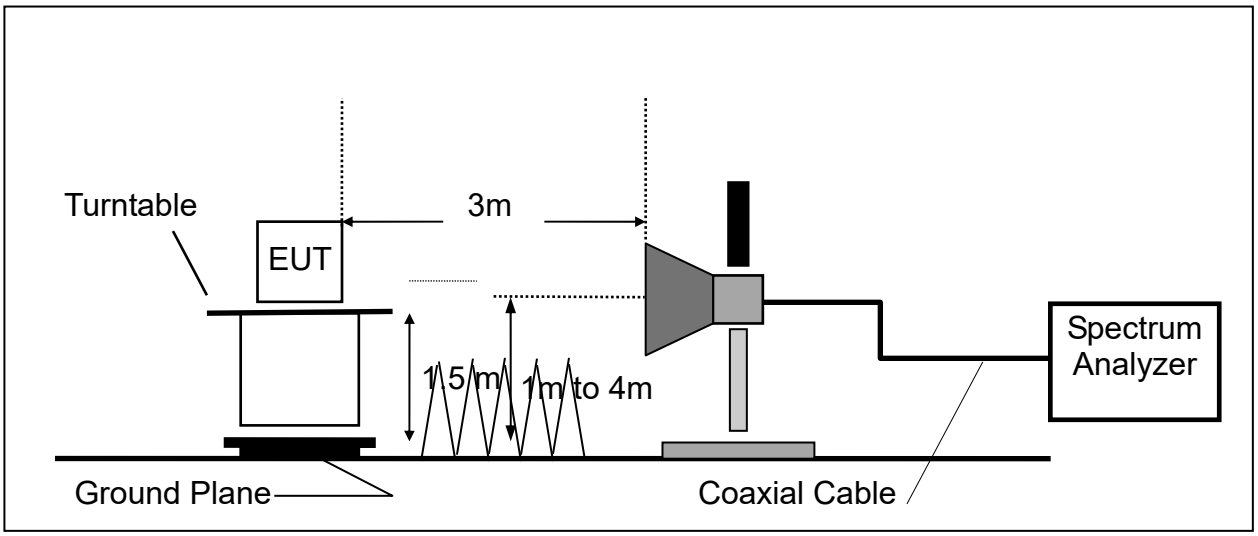
(A) 量測頻率低於 30MHz 以下之測試配置



(B) 量測頻率 30MHz 至 1000MHz 之測試配置



(C) 量測頻率 1000MHz 以上之測試配置



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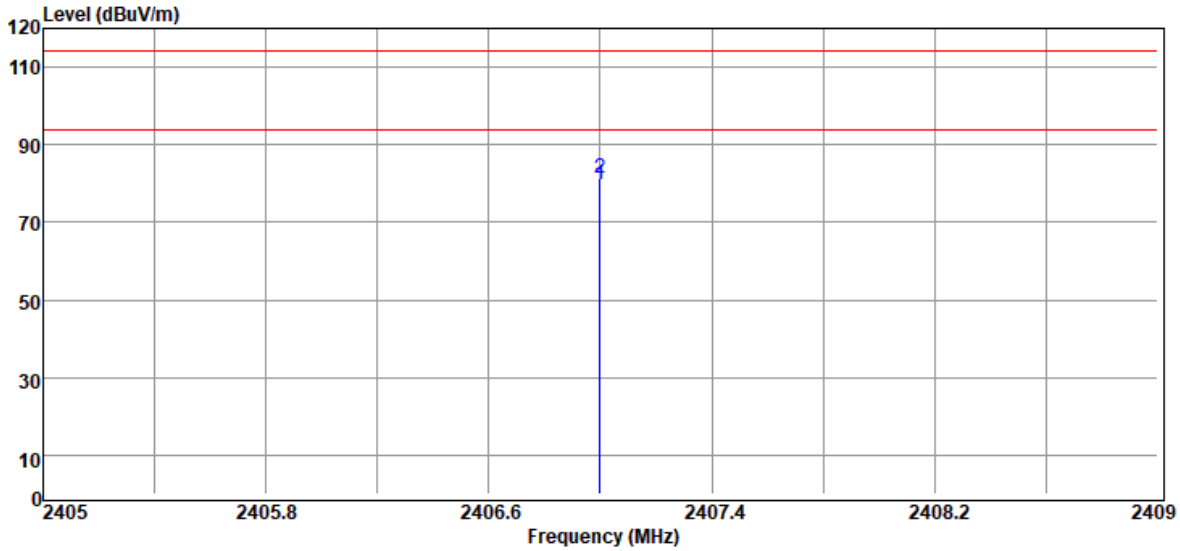
6.5 場強輻射之量測結果

6.5.1 發射機 – 主波及頻帶邊緣

Report Number	:E2/2020/50059	Test Date	:2020-05-28
Operation Mode	:2.4G	Temp./Humi.	:21.3/74
Test Frequency	:2407 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Main CH LOW	Engineer	:Kailin
EUT Pol	:E2 Plan		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
2407.00	Average	85.11	-5.48	79.63	94.00	-14.37
2407.00	Peak	87.07	-5.48	81.59	114.00	-32.41

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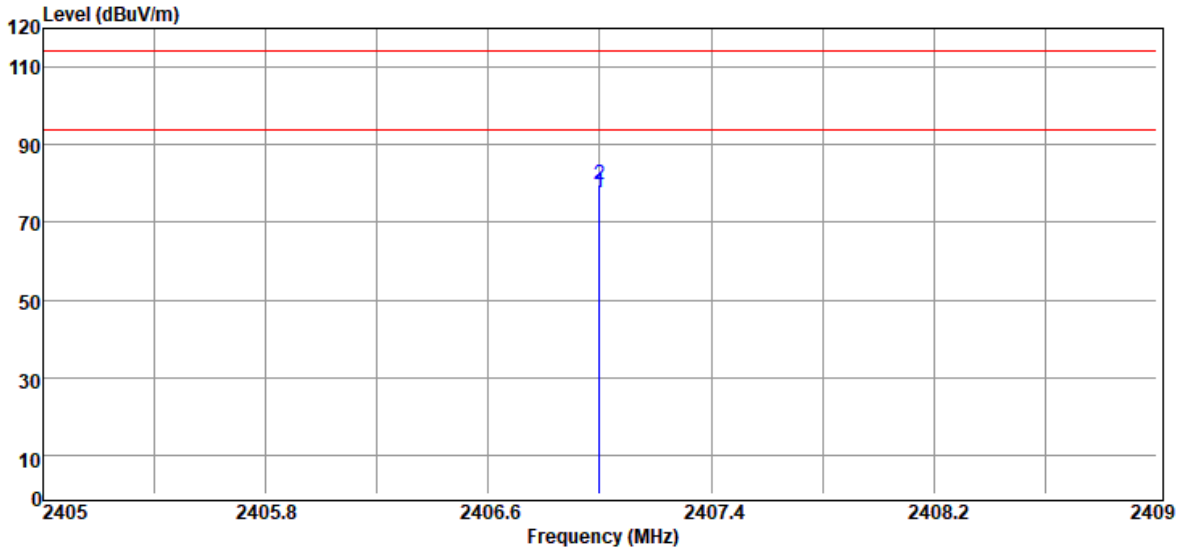
Report Number	:E2/2020/50059	Test Date	:2020-05-28
Operation Mode	:2.4G	Temp./Humi.	:21.3/74
Test Frequency	:2407 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Main CH LOW	Engineer	:Kailin
EUT Pol	:E2 Plan		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
2407.00	Average	83.11	-5.48	77.63	94.00	-16.37
2407.00	Peak	85.12	-5.48	79.64	114.00	-34.36

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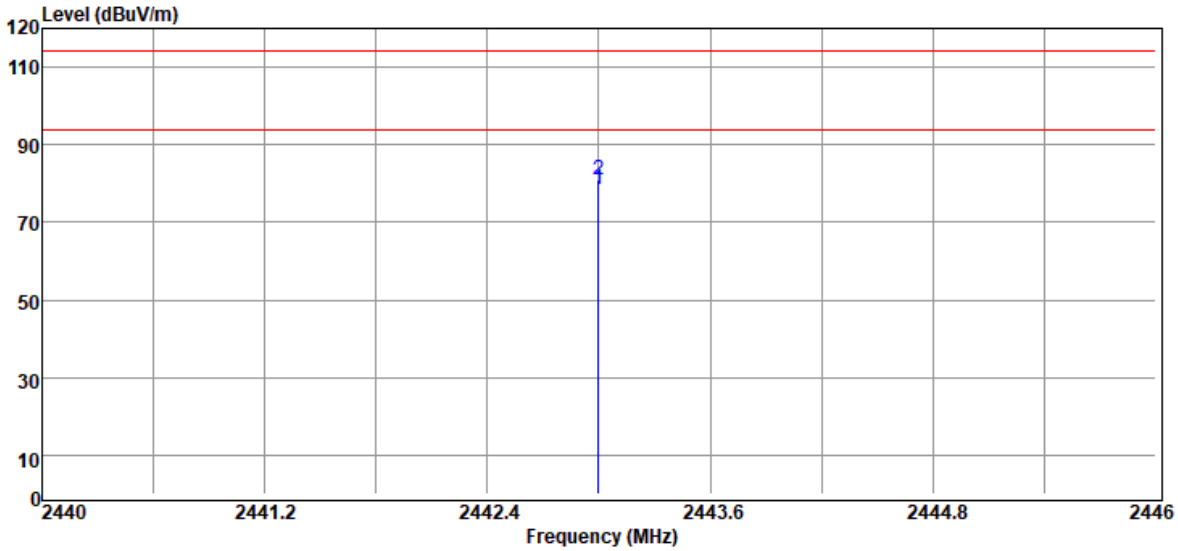
Report Number	:E2/2020/50059	Test Date	:2020-05-28
Operation Mode	:2.4G	Temp./Humi.	:21.5/72
Test Frequency	:2443 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Main CH MID	Engineer	:Kailin
EUT Pol	:E2 Plan		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
2443.00	Average	84.15	-5.52	78.63	94.00	-15.37
2443.00	Peak	86.31	-5.52	80.79	114.00	-33.21

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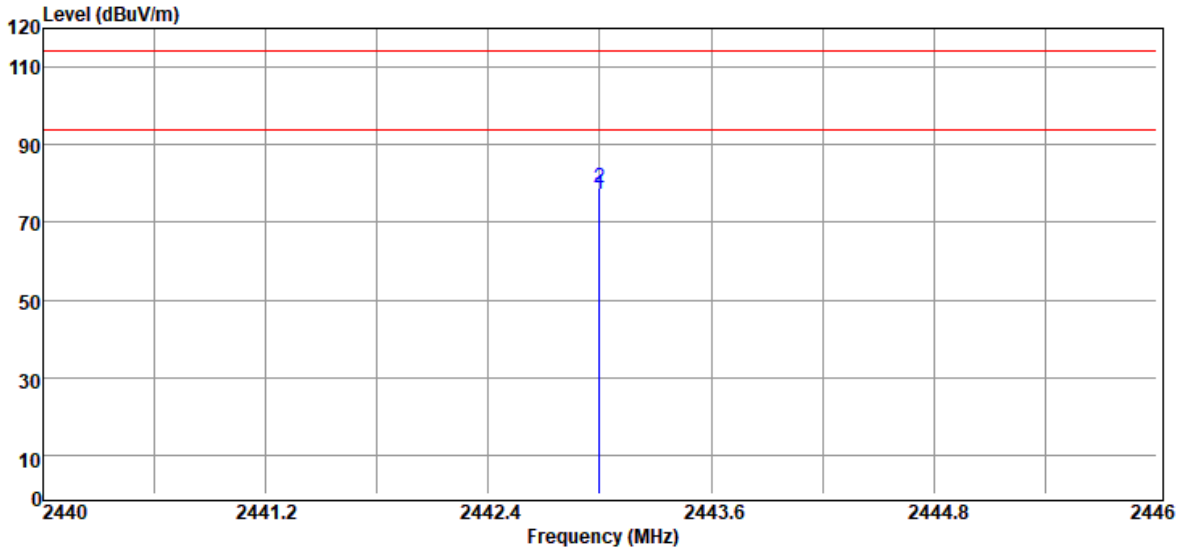
Report Number	:E2/2020/50059	Test Date	:2020-05-28
Operation Mode	:2.4G	Temp./Humi.	:21.5/72
Test Frequency	:2443 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Main CH MID	Engineer	:Kailin
EUT Pol	:E2 Plan		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
2443.00	Average	82.77	-5.52	77.25	94.00	-16.75
2443.00	Peak	84.56	-5.52	79.04	114.00	-34.96

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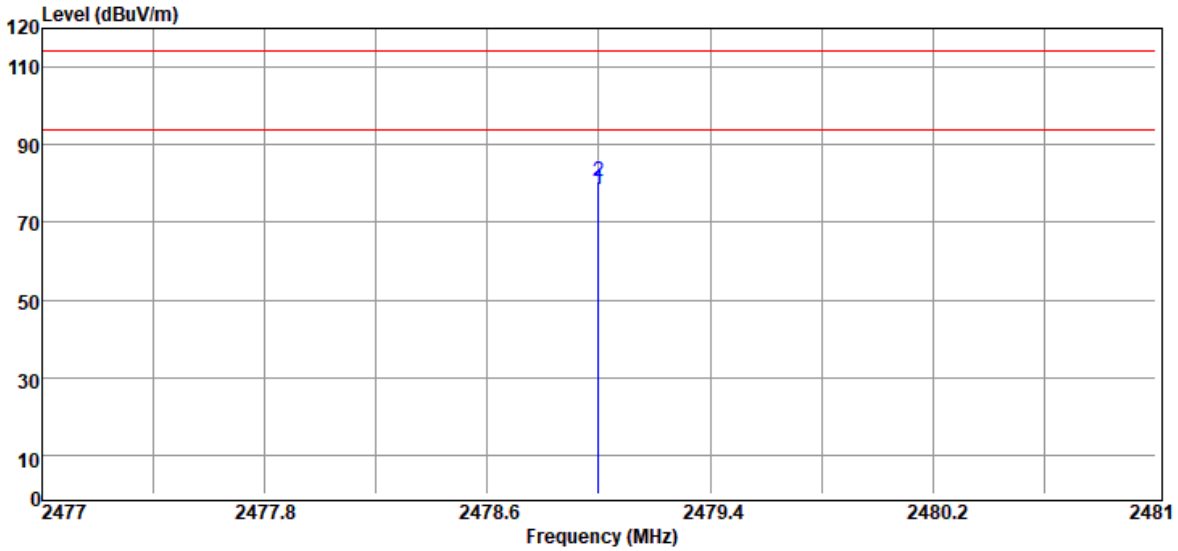
Report Number	:E2/2020/50059	Test Date	:2020-05-28
Operation Mode	:2.4G	Temp./Humi.	:21.5/73
Test Frequency	:2479 MHz	Antenna Pol.	:VERTICAL
Test Mode	:Main CH HIGH	Engineer	:Kailin
EUT Pol	:E2 Plan		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
2479.00	Average	84.01	-5.44	78.57	94.00	-15.43
2479.00	Peak	86.16	-5.44	80.72	114.00	-33.28

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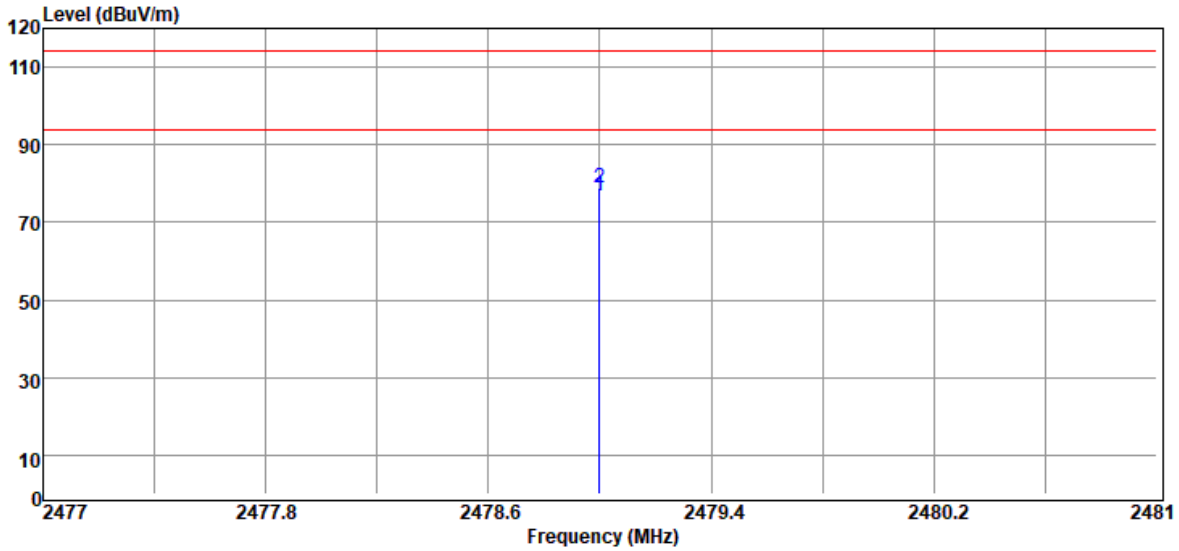
Report Number	:E2/2020/50059	Test Date	:2020-05-28
Operation Mode	:2.4G	Temp./Humi.	:21.5/73
Test Frequency	:2479 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:Main CH HIGH	Engineer	:Kailin
EUT Pol	:E2 Plan		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
2479.00	Average	82.07	-5.44	76.63	94.00	-17.37
2479.00	Peak	84.17	-5.44	78.73	114.00	-35.27

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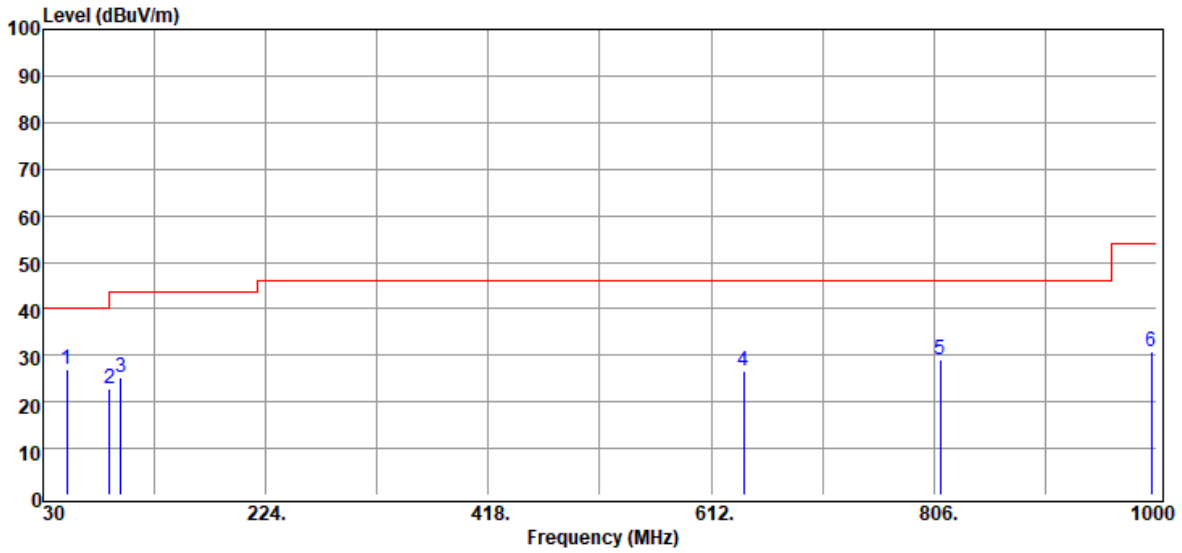
6.5.2 發射機諧波及指定頻帶外之場強輻射量測(1GHz 以下)

Report Number	:E2/2020/50059	Test Date	:2020-05-28
Operation Mode	:2.4G	Temp./Humi.	:21.5/71
Test Frequency	:2443 MHz	Antenna Pol.	:VERTICAL
Test Mode	:TX CH MID	Engineer	:Kailin
EUT Pol	:E2 Plan		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
50.37	Peak	43.81	-16.87	26.94	40.00	-13.06
88.20	Peak	45.34	-22.53	22.81	43.50	-20.69
97.90	Peak	47.09	-21.85	25.24	43.50	-18.26
640.13	Peak	34.68	-8.08	26.60	46.00	-19.40
811.82	Peak	35.13	-6.11	29.02	46.00	-16.98
995.15	Peak	34.89	-4.12	30.77	54.00	-23.23

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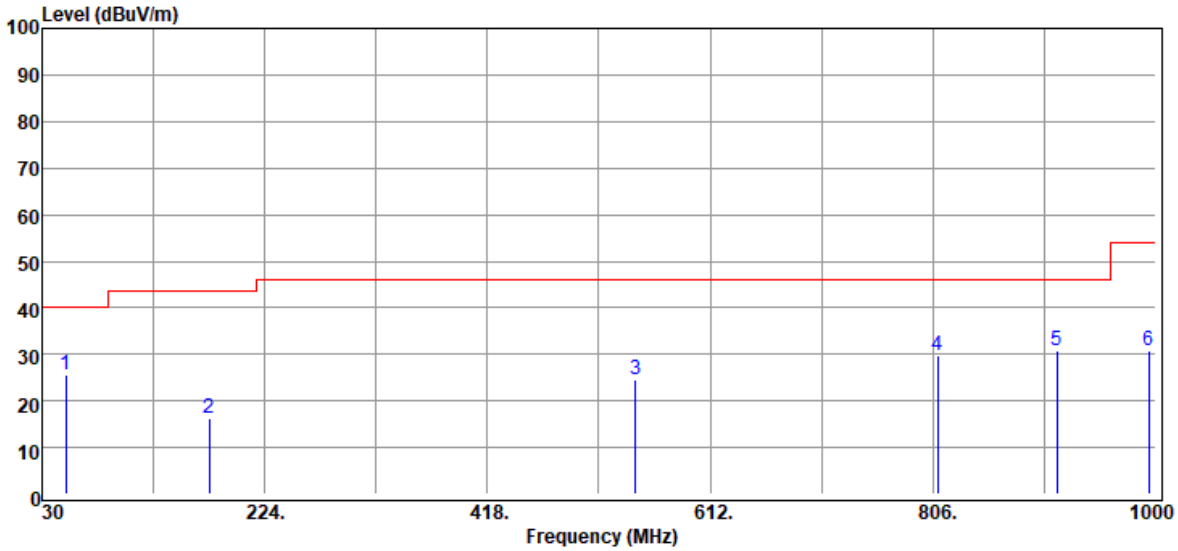
Report Number	:E2/2020/50059	Test Date	:2020-05-28
Operation Mode	:2.4G	Temp./Humi.	:21.5/71
Test Frequency	:2443 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:TX CH MID	Engineer	:Kailin
EUT Pol	:E2 Plan		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
50.37	Peak	42.63	-16.87	25.76	40.00	-14.24
175.50	Peak	33.01	-16.59	16.42	43.50	-27.08
547.01	Peak	35.19	-10.54	24.65	46.00	-21.35
809.88	Peak	35.90	-6.12	29.78	46.00	-16.22
913.67	Peak	35.86	-5.04	30.82	46.00	-15.18
994.18	Peak	34.91	-4.10	30.81	54.00	-23.19

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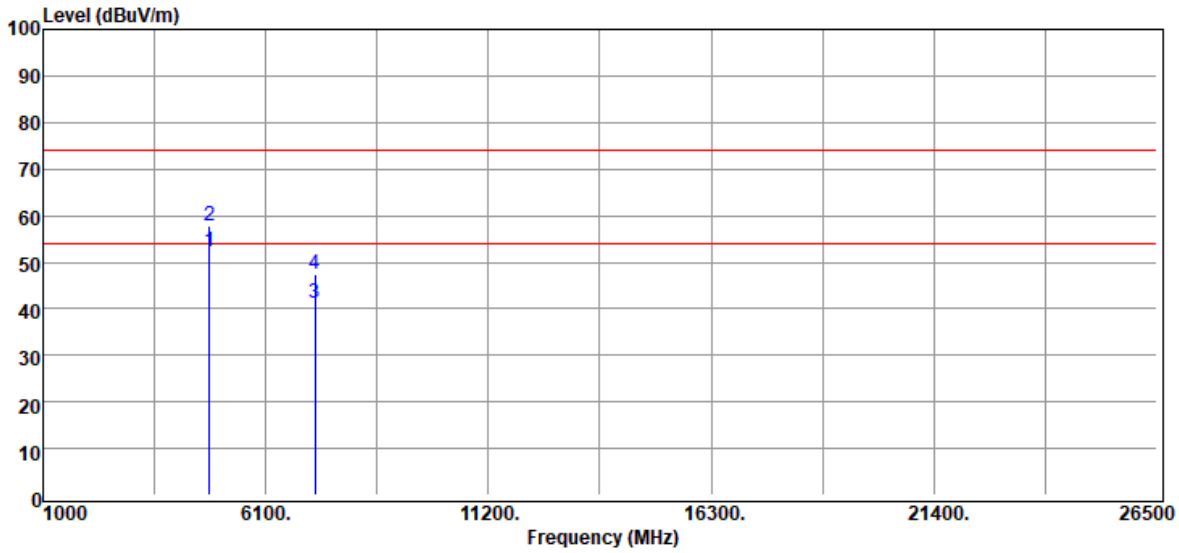
6.5.3 發射機諧波及指定頻帶外之場強輻射量測(1GHz 以上)

Report Number	:E2/2020/50059	Test Date	:2020-05-28
Operation Mode	:2.4G	Temp./Humi.	:21.4/73
Test Frequency	:2407 MHz	Antenna Pol.	:VERTICAL
Test Mode	:TX CH LOW	Engineer	:Kailin
EUT Pol	:E2 Plan		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
4814.00	Average	52.63	-0.35	52.28	54.00	-1.72
4814.00	Peak	58.05	-0.35	57.70	74.00	-16.30
7221.00	Average	35.80	5.43	41.23	54.00	-12.77
7221.00	Peak	41.98	5.43	47.41	74.00	-26.59

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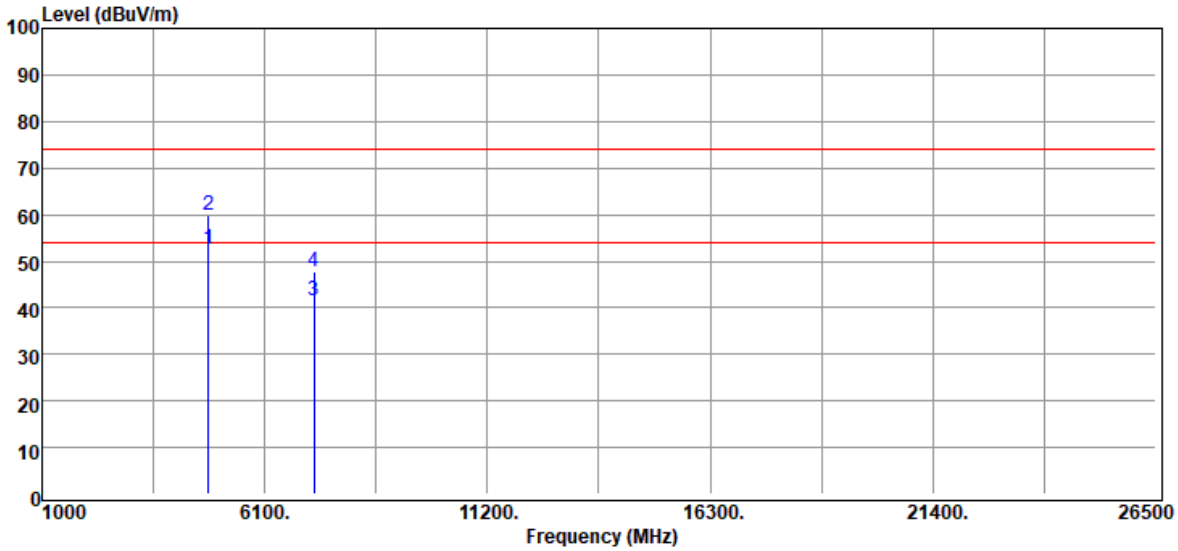
Report Number	:E2/2020/50059	Test Date	:2020-05-28
Operation Mode	:2.4G	Temp./Humi.	:21.4/73
Test Frequency	:2407 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:TX CH LOW	Engineer	:Kailin
EUT Pol	:E2 Plan		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
4814.00	Average	52.78	-0.35	52.43	54.00	-1.57
4814.00	Peak	60.12	-0.35	59.77	74.00	-14.23
7221.00	Average	36.16	5.43	41.59	54.00	-12.41
7221.00	Peak	42.17	5.43	47.60	74.00	-26.40

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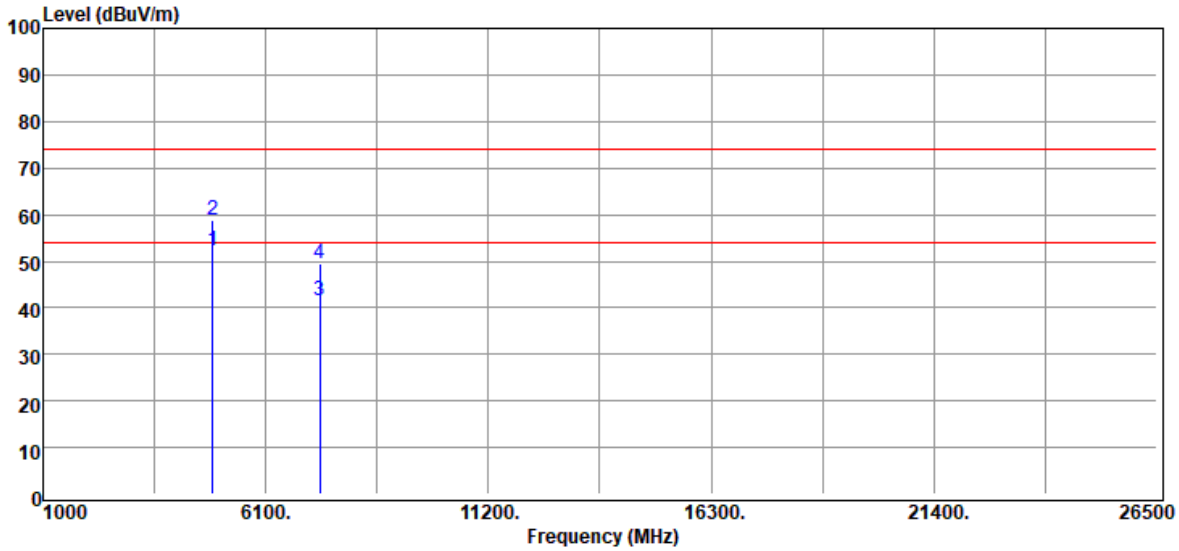
Report Number	:E2/2020/50059	Test Date	:2020-05-28
Operation Mode	:2.4G	Temp./Humi.	:21.4/73
Test Frequency	:2443 MHz	Antenna Pol.	:VERTICAL
Test Mode	:TX CH MID	Engineer	:Kailin
EUT Pol	:E2 Plan		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
4886.00	Average	52.71	-0.45	52.26	54.00	-1.74
4886.00	Peak	59.44	-0.45	58.99	74.00	-15.01
7329.00	Average	35.77	5.76	41.53	54.00	-12.47
7329.00	Peak	43.71	5.76	49.47	74.00	-24.53

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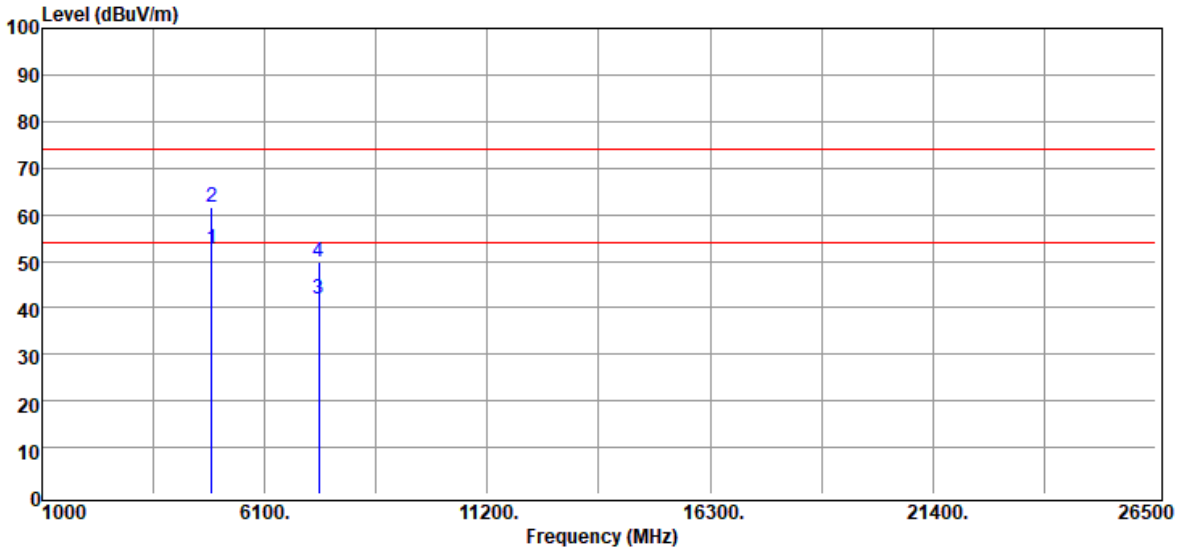
Report Number	:E2/2020/50059	Test Date	:2020-05-28
Operation Mode	:2.4G	Temp./Humi.	:21.4/73
Test Frequency	:2443 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:TX CH MID	Engineer	:Kailin
EUT Pol	:E2 Plan		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
4886.00	Average	52.95	-0.45	52.50	54.00	-1.50
4886.00	Peak	62.11	-0.45	61.66	74.00	-12.34
7329.00	Average	36.11	5.76	41.87	54.00	-12.13
7329.00	Peak	44.15	5.76	49.91	74.00	-24.09

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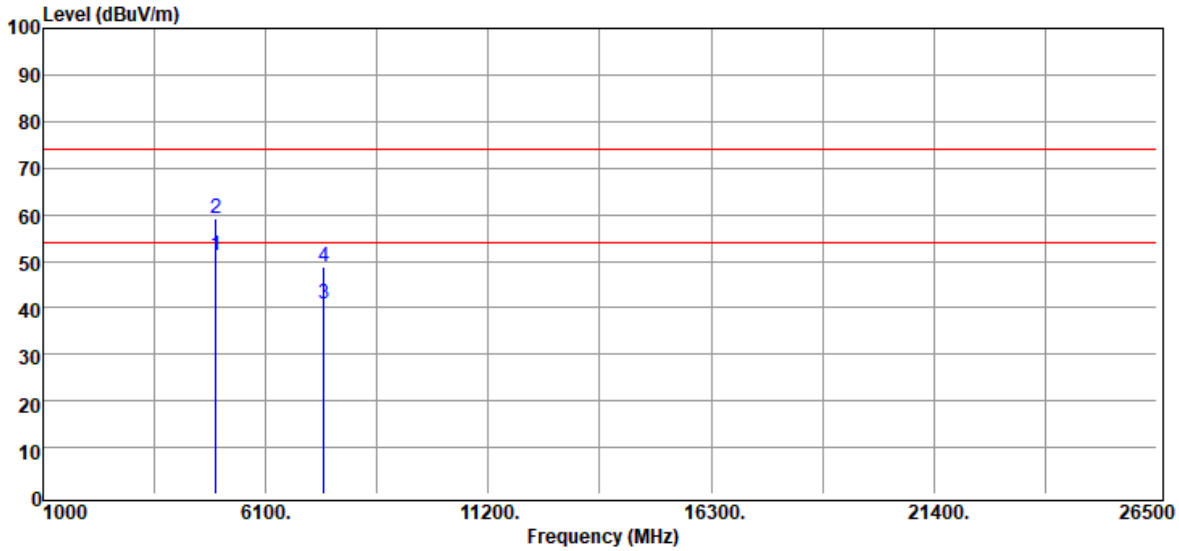
Report Number	:E2/2020/50059	Test Date	:2020-05-28
Operation Mode	:2.4G	Temp./Humi.	:21.4/73
Test Frequency	:2479 MHz	Antenna Pol.	:VERTICAL
Test Mode	:TX CH HIGH	Engineer	:Kailin
EUT Pol	:E2 Plan		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
4958.00	Average	51.96	-0.74	51.22	54.00	-2.78
4958.00	Peak	59.76	-0.74	59.02	74.00	-14.98
7437.00	Average	35.14	5.63	40.77	54.00	-13.23
7437.00	Peak	43.11	5.63	48.74	74.00	-25.26

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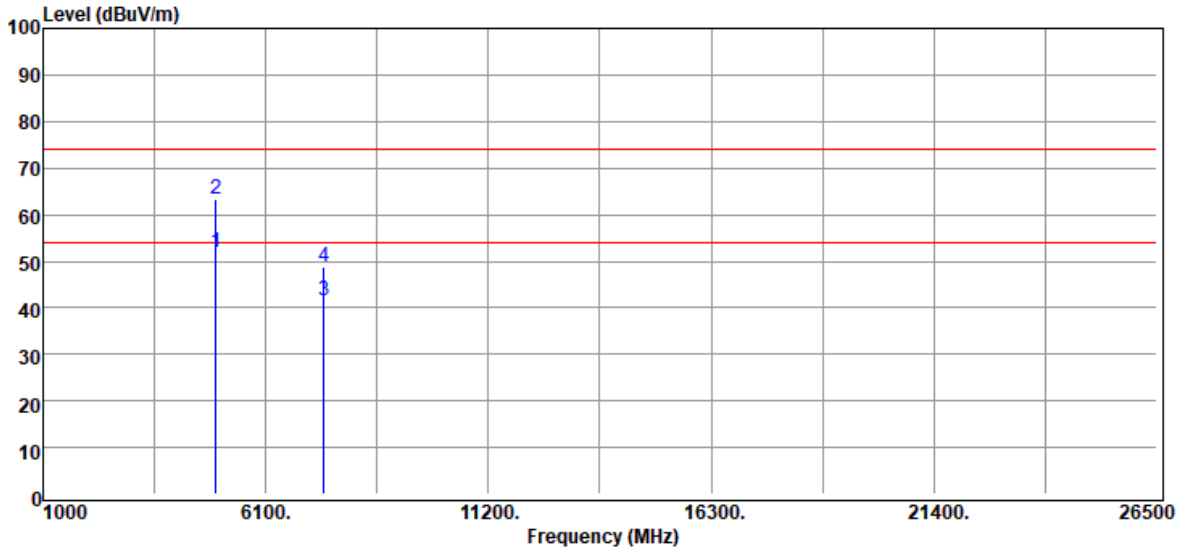
Report Number	:E2/2020/50059	Test Date	:2020-05-28
Operation Mode	:2.4G	Temp./Humi.	:21.4/73
Test Frequency	:2479 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:TX CH HIGH	Engineer	:Kailin
EUT Pol	:E2 Plan		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
4958.00	Average	52.73	-0.74	51.99	54.00	-2.01
4958.00	Peak	64.21	-0.74	63.47	74.00	-10.53
7437.00	Average	35.77	5.63	41.40	54.00	-12.60
7437.00	Peak	43.22	5.63	48.85	74.00	-25.15

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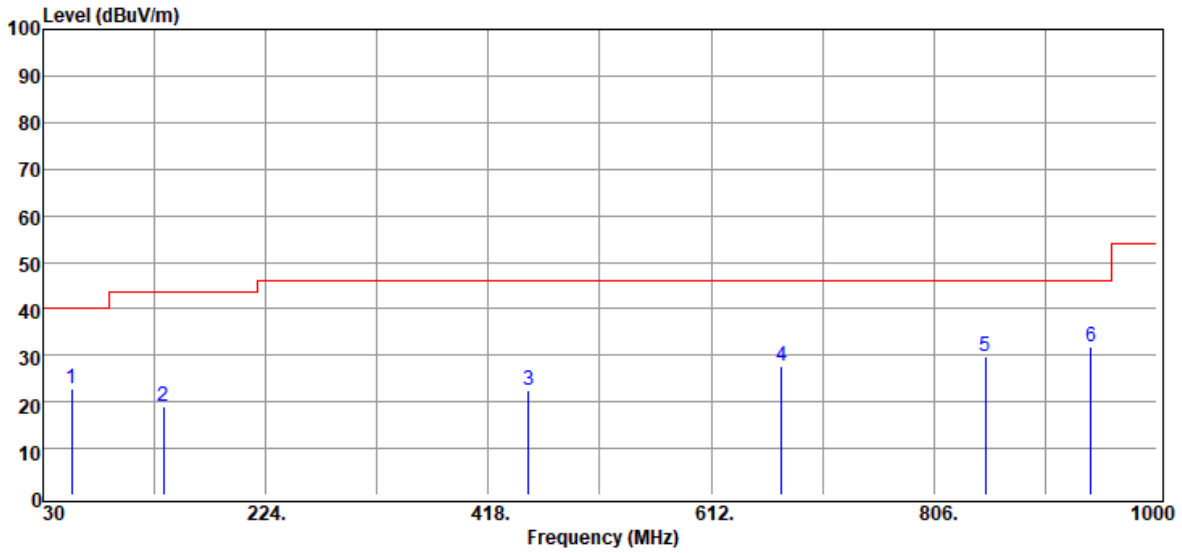
6.5.4 接收機場強輻射之量測結果(1GHz 以下)（最差模式）

Report Number	:E2/2020/50059	Test Date	:2020-05-28
Operation Mode	:2.4G	Temp./Humi.	:21.4/72
Test Frequency	:2443 MHz	Antenna Pol.	:VERTICAL
Test Mode	:RX CH MID	Engineer	:Kailin
EUT Pol	:E2 Plan		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
55.22	Peak	39.99	-17.05	22.94	40.00	-17.06
134.76	Peak	36.27	-17.36	18.91	43.50	-24.59
452.92	Peak	33.98	-11.32	22.66	46.00	-23.34
673.11	Peak	36.55	-8.72	27.83	46.00	-18.17
850.62	Peak	35.95	-6.29	29.66	46.00	-16.34
942.77	Peak	36.53	-4.71	31.82	46.00	-14.18

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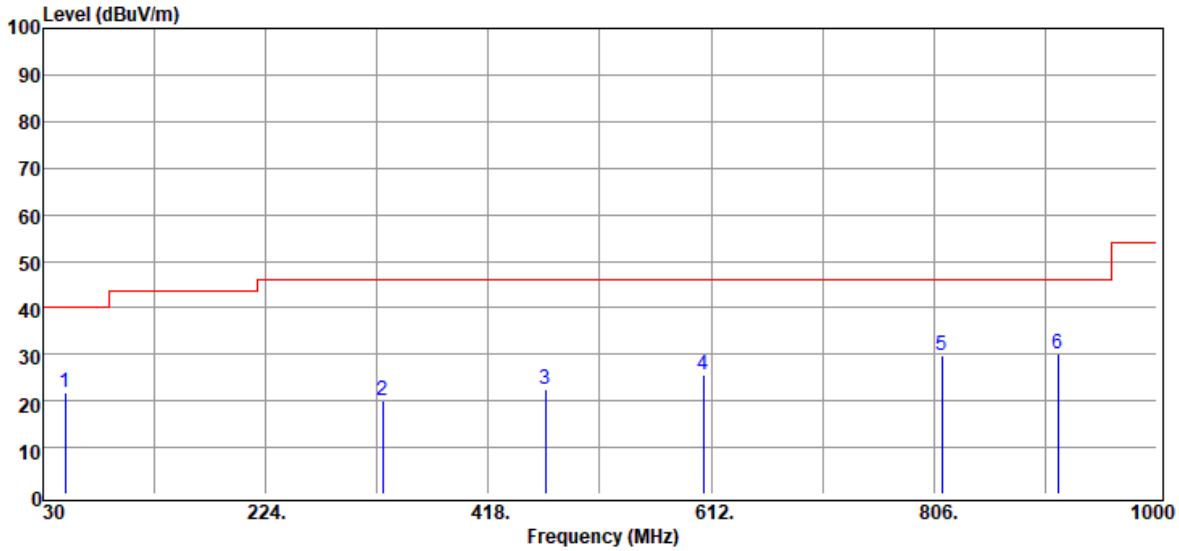
Report Number	:E2/2020/50059	Test Date	:2020-05-28
Operation Mode	:2.4G	Temp./Humi.	:21.4/72
Test Frequency	:2443 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:RX CH MID	Engineer	:Kailin
EUT Pol	:E2 Plan		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
49.40	Peak	38.74	-16.82	21.92	40.00	-18.08
325.85	Peak	34.67	-14.47	20.20	46.00	-25.80
467.47	Peak	33.97	-11.38	22.59	46.00	-23.41
605.21	Peak	33.74	-8.23	25.51	46.00	-20.49
812.79	Peak	35.98	-6.11	29.87	46.00	-16.13
913.67	Peak	35.29	-5.04	30.25	46.00	-15.75

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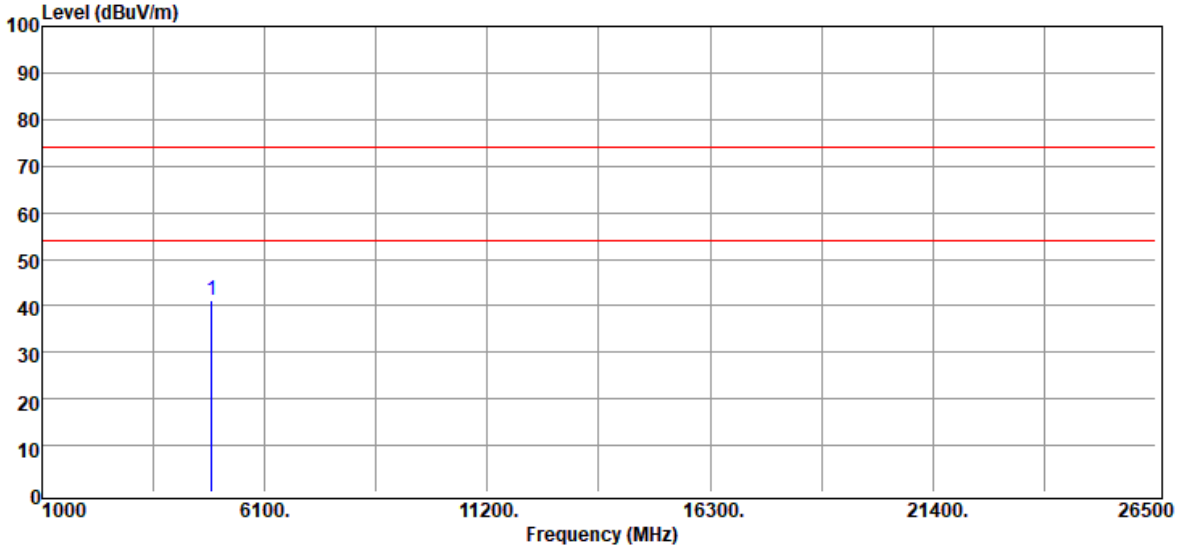
6.5.5 接收機場強輻射之量測結果(1GHz 以上)（最差模式）

Report Number	:E2/2020/50059	Test Date	:2020-05-28
Operation Mode	:2.4G	Temp./Humi.	:21.5/72
Test Frequency	:2443 MHz	Antenna Pol.	:VERTICAL
Test Mode	:RX CH MID	Engineer	:Kailin
EUT Pol	:E2 Plan		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBμV	Factor dB	Actual FS dBμV/m	Limit @3m dBμV/m	Margin dB
4886.00	Peak	41.55	-0.45	41.10	74.00	-32.90

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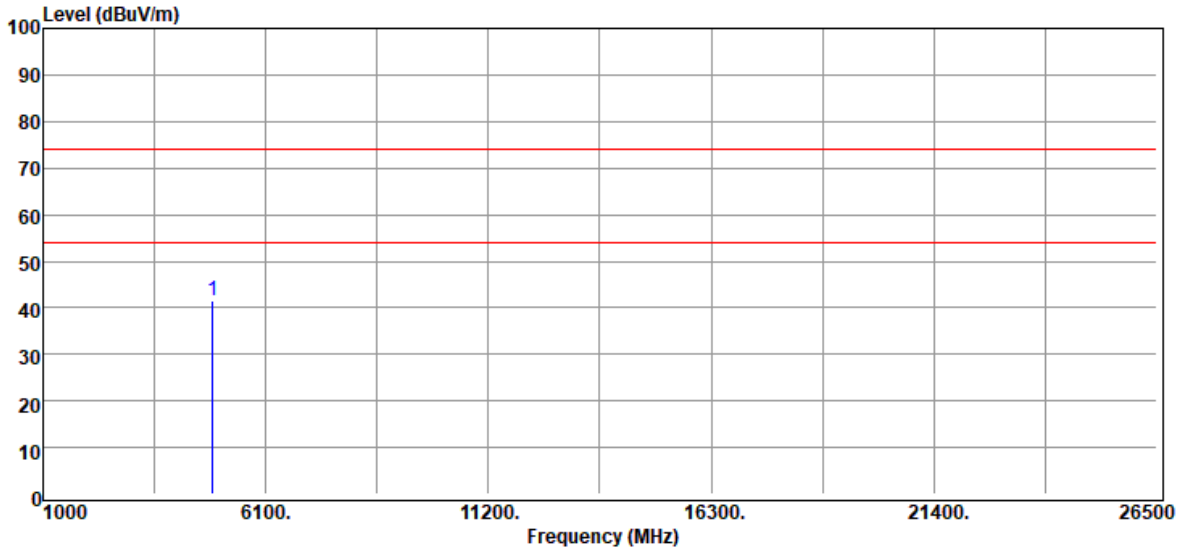
Report Number	:E2/2020/50059	Test Date	:2020-05-28
Operation Mode	:2.4G	Temp./Humi.	:21.5/72
Test Frequency	:2443 MHz	Antenna Pol.	:HORIZONTAL
Test Mode	:RX CH MID	Engineer	:Kailin
EUT Pol	:E2 Plan		



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Reading Level dBµV	Factor dB	Actual FS dBµV/m	Limit @3m dBµV/m	Margin dB
4886.00	Peak	42.02	-0.45	41.57	74.00	-32.43

~ End of Report ~

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