

低功率射頻電機技術規範測試報告

報告編號:

RT160630E01G

申請者

網件有限公司

產品名稱

Arlo Pro

型號

VMC4030

製造廠商

NETGEAR, Inc.

商標或廠牌

NETGEAR

該產品樣品試驗

國家通訊傳播委員會低功率射頻電機技術規範

依據之試驗標準

107 年 1 月修訂

試驗結果

合格

香港商立德國際商品試驗有限公司桃園分公司 新竹實驗室

日期 107 年 05 月 02 日

報告簽署人簽章:

陳 瓊 美



目 錄

報告發行紀錄	4
1 低功率射頻電機量測記錄表	6
2 一般敘述	7
2.1 待測設備	7
2.2 輔助測試之週邊設備描述	11
2.3 測試架構圖	12
3 適用規範	13
3.1 規範要求	13
3.2 限制使用之頻帶	14
4 帶外發射之量測	15
4.1 適用標準	15
4.2 量測方法	15
4.3 量測儀器	16
4.4 測試配置	17
4.5 場強度之計算	17
4.6 量測結果	18
4.6.1 發射諧波	18
4.6.2 接收諧波	36
4.6.3 其它不必要之訊號	42
4.7 量測結果判定	43
4.8 配置照片	43
5 電源線傳導干擾之量測	44
5.1 適用標準	44
5.2 量測方法	44
5.3 量測儀器	44
5.4 測試配置	45
5.5 干擾值之計算	45
5.6 量測結果 (模式一)	46
5.7 量測結果 (模式二)	48
5.8 量測結果 (模式三)	50
5.9 量測結果判定	51
5.10 配置照片	51
6 6 dB 頻寬之要求	52
6.1 適用標準	52
6.2 量測方法	52
6.3 量測儀器	52
6.4 測試配置	52
6.5 量測結果 (模式一)	53
6.6 量測結果判定	54
7 傳導輸出功率之量測	55
7.1 適用標準	55
7.2 量測方法	55
7.3 量測儀器	55
7.4 測試配置	55
7.5 量測結果 (模式一)	56

7.6	量測結果判定.....	56
8	功率頻譜密度之量測	57
8.1	適用標準	57
8.2	量測方法	57
8.3	量測儀器	57
8.4	測試配置	57
8.5	量測結果 (模式一).....	58
8.6	量測結果判定.....	59
9	檢測實驗室基本資料	60

報告發行紀錄

Issue No.	Description	Date Issued
RT160630E01G	Original release.	107 年 05 月 02 日

證 明 書

產 品 名 稱： Arlo Pro
商 標： NETGEAR
型 號： VMC4030
申 請 者： 網件有限公司
量 測 規 範： 低功率射頻電機技術規範 LP0002
ANSI C63.10-2013

香港商立德國際商品試驗有限公司桃園分公司在此證明上述待測設備樣品(型號：VMC4030)，收件日期 106 年 09 月 28 日，於 106 年 11 月 30 日及 107 年 03 月 30 日，已在本公司的標準測試場地完成量測。報告中所描述之測試結果和待測設備的架構組合，均根據樣品實際的量測情況作詳實的記錄。

立德桃園分公司依“低功率射頻電機技術規範”、“低功率電波輻射性電機管理辦法”及“電信管制射頻器材審驗辦法”製作測試結果報告。

特 此 證 明 ！

報告製作者：

柯 昇 伶

， 日 期： 107 年 05 月 02 日

柯 昇 伶 / 專員

審 核 者：

陳 瓊 美

， 日 期： 107 年 05 月 02 日

陳 瓊 美 / 經理

香港商立德國際商品試驗有限公司桃園分公司

實驗室地址：300 新竹市科學工業園區力行一路 1 號 E-2

此份報告不得摘錄複製，除全份
複製外，需經實驗室書面同意。



1 低功率射頻電機量測記錄表

申請廠商：網件有限公司

製造廠商：NETGEAR, Inc.

申請廠商地址：台北市內湖區基湖路3巷9號3樓

廠牌：NETGEAR

產品名稱：Arlo Pro

型號：VMC4030

量測單位名稱：香港商立德國際商品試驗有限公司桃園分公司 新竹實驗室

量測單位地址：300 新竹市科學工業園區力行一路1號E-2

量測單位認可編號：TAF 2022

量測規範：低功率射頻電機技術規範 LP0002
ANSI C63.10-2013
KDB 558074

WLAN 2.4GHz 頻段概要

項次	量測項目	規 範	量測結果判定
1	帶外發射	低功率射頻電機技術規範 3.10.1.5 節	合格
2	電源線傳導干擾	低功率射頻電機技術規範 2.3 節	合格
3	6 dB 頻寬	低功率射頻電機技術規範 3.10.1.6 節	合格
4	峰值傳導輸出功率	低功率射頻電機技術規範 3.10.1.2 節	合格
5	功率頻譜密度	低功率射頻電機技術規範 3.10.1.6 節	合格

2 一般敘述

2.1 待測設備

產品名稱：	Arlo Pro
型號：	VMC4030
額定電源：	5 or 9Vdc from power adapter or 7.2V from battery
調變方式：	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
調變技術：	DSSS, OFDM
傳輸速率：	802.11b: up to 11Mbps 802.11g: up to 54Mbps 802.11n: up to 72.2Mbps
載波頻率：	2.412 ~ 2.462GHz
頻道數：	11
發射功率：	24.98dBm
天線種類：	見註
電源線類別：	見註
信號線類別：	USB cable x 1 (unshielded, 2m)
配件：	Adapter x 1

Note:

- 此報告為報告RT160630E01B之系列報告，本次報告RT160630E01G，除了以下規格皆變動外，其餘產品規格皆相同，經評估，全部測試項目須執行，故符合系列申請審驗。

◆ Changed main board - WiFi antenna and WiFi design.

Original								
Antenna Set.	Brand	Model	Antenna Gain (dBi)	Frequency range (GHz to GHz)	Antenna Type	Connector Type	Cable Loss (db)	Cable Length (mm)
1	Master Wave	98P4ZMIPF000	1.24	2.4~2.4835	Metal	i-pex(MHF)	NA	31+/-5
			0.62	2.4~2.4835	Metal	i-pex(MHF)	NA	45+/-5
Newly								
Antenna Set.	Brand	Model	Antenna Gain (dBi)	Frequency range (GHz to GHz)	Antenna Type	Connector Type	Cable Loss (db)	Cable Length (mm)
1	Master Wave	902P00197N0	1.94	2.4~2.4835	PIFA	NA	NA	NA
		902P00196N0	1.94	2.4~2.4835	PIFA	NA	NA	NA

◆ Changed sensor board PCB structure.

- Added NMOS for IR-LED light leakage issue.
- SB PCB from HDI to none HDI process.
- Replaced the 0 ohm resistor by short footprint.
- Replaced the 2nd Lens vendor.

◆ Changed IR-LED board.

- Replaced the 0 ohm resistor by short footprint.

◆ Changed MIC-FPC.

◆ ME:

- New Front Cover and Battery holder for 6 screw reduction and V6 SMT Pro2 Antenna.

◆ Added one new adapter as following table:

Original				
Adapter				
No.	Brand	Model No.	P/N	Spec.
1	NETGEAR	AD2085320	332-10893-01	Input: 100-240Vac, 0.3A, 50/60Hz Output: 5V or 9V, 1.1A or 1.8A
Battery				
No	Brand	Model No.	P/N	Spec.
1	NETGEAR	A-1	308-10029-01	7.2Vdc, 2440mAh
Newly				
Adapter				
No.	Brand	Model No.	P/N	Spec.
2	NETGEAR	AD2090321	332-11052-01	Input: 100-240Vac, 0.5A, 50/60Hz Output: 5V or 9V, 1.1A or 1.3A

Note: For radiated emission test, the EUT was pre-tested with above adapters and battery, the worst case was found in adapter 1. Therefore only the test data of the adapter 1 was recorded in this report.

2. 此待測物之技術的種類為 1TX / 1RX 之組合。

MODULATION MODE	DATA RATE (MCS)	TX & RX CONFIGURATION	
802.11b	1~11Mbps	1TX diversity	1RX diversity
802.11g	6~54Mbps	1TX diversity	1RX diversity
802.11n (HT20)	MCS 0~7	1TX diversity	1RX diversity

3. 待測設備的測試模式如下:

電源線傳導干擾	
測試模式	描述
一	Power from adapter 1
二	Power from Notebook
三	Power from adapter 2
場強輻射	
測試模式	描述
一	Power from adapter 1

4. 此報告中，場強輻射量測經過評估後以下列測試模式進行最終量測。

量測項目	發射	接收
2412 ~ 2462MHz		
1GHz 以上量測	802.11b: Ch 1, 6, 11 802.11g: Ch 1, 6, 11 802.11n (HT20): Ch 1, 6, 11	Ch 1, 6, 11
其它不必要之訊號	802.11b: Ch 6	Ch 6

*於原始測試報告電源線傳導干擾量測經過評估後，以 802.11b: Ch6 測試模式進行最終量測

5. 於原始測試報告，此待測設備，經評估經評估兩個正交軸方位評估測試擺設方式：平躺、直立，其中場強輻射(Below 1GHz)以平躺擺放擁有最大干擾值，場強輻射(Above 1GHz)以直立擺放擁有最大干擾值，故以此擺放方式進行最終量測，並將測試結果紀錄。

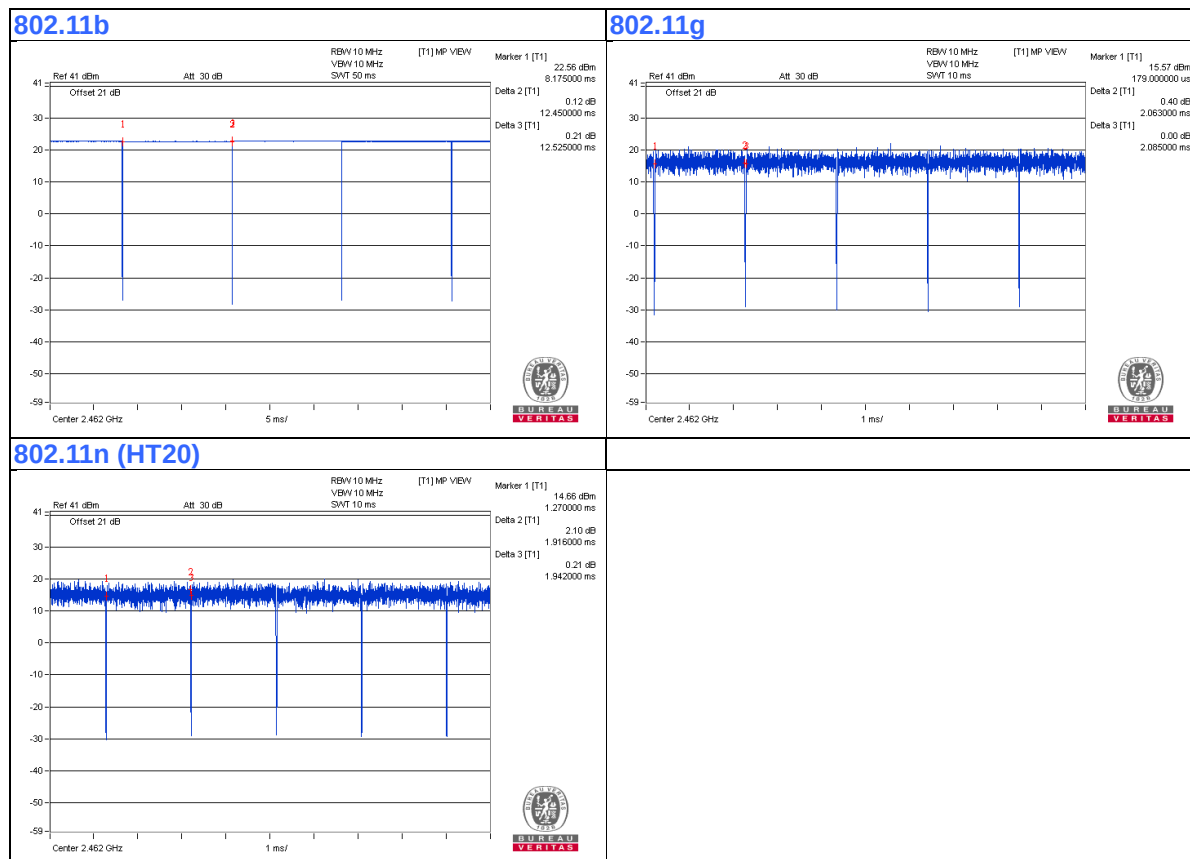
6. Duty cycle of test signal.

If duty cycle of test signal is $\geq 98\%$, duty factor is not required.

802.11b: Duty cycle = $12.45/12.525 = 0.994$

802.11g: Duty cycle = $2.063/2.085 = 0.989$

802.11n (HT20): Duty cycle = $1.916/1.942 = 0.987$



此裝置各頻道的中心頻率如下：

2.4 GHz 頻段：

802.11b, 802.11g, 802.11n (HT20):

頻道	對應頻率 (MHz)	頻道	對應頻率 (MHz)
01	2412	07	2442
02	2417	08	2447
03	2422	09	2452
04	2427	10	2457
05	2432	11	2462
06	2437		

詳細之規格請參考使用說明書，產品的照片請參照 BV 報告編號：160630E01G

2.2 輔助測試之週邊設備描述

待測設備於受測時均接上其所屬的配件或一般用途之相關設備；下列輔助設備或配件測試中所使用的配備，以形成一個代表待測物實際運作的受測系統。

ID	Product	Brand	Model No.	Serial No.	FCC ID	Remarks
A.	Notebook	DELL	E5430	4YV4VY1	FCC DoC	Provided by lab

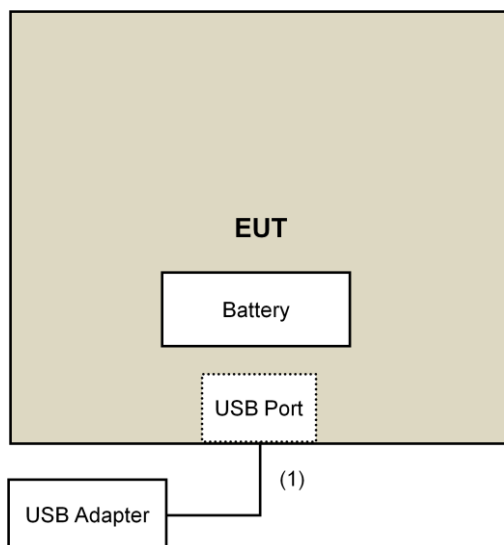
Note:

1. All power cords of the above support units are non-shielded (1.8m).

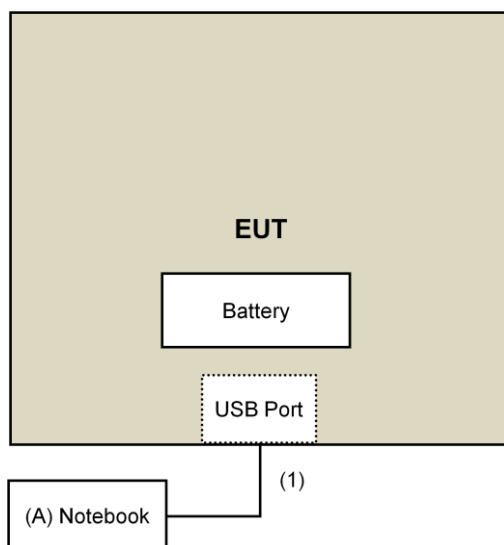
ID	Descriptions	Qty.	Length (m)	Shielding (Yes/No)	Cores (Qty.)	Remarks
1.	USB Cable	1	2	No	0	Supplied by client

2.3 測試架構圖

Adapter Mode:



Notebook Mode:



3 適用規範

3.1 規範要求

(1) 傳導之規定

依據國家通訊傳播委員會低功率射頻電機技術規範之 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(註)	56-46(註)
0.5-5	56	46
5-30	60	50

(註)：隨頻率之對數遞減。

(2) 帶外發射之規定

依據國家通訊傳播委員會低功率射頻電機技術規範 3.10.1.5 節之要求，操作頻帶範圍外之任意 100 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 kHz 內的射頻功率，其衰減值限制如下：(1) 輸出功率以附件二之峰值輸出功率方式測量者，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 3.10.1.2(1)(C)之最大傳導輸出功率測量方式者，至少須衰減 30 dB。

頻率(MHz)	電場強度(微伏特/公尺, uV/m)	測距(公尺)
0.009 - 0.490(含)	2,400/f(kHz)	300
0.490 (不含) - 1.705 (含)	24,000/f(kHz)	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

(3) 天線之規定

天線規格不受第 2.2 節規定之限制。

(4) 天線增益之要求

低功率發射機，依據國家通訊傳播委員會低功率射頻電機技術規範 3.10.1.3 節及 4.7.3 節之規定如下：

- (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) 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。
 - (b) 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。

除(A)及(B)外，使用超過 6 dBi 方向增益之發射天線時，應依超過 6 dBi 天線方向增益的 dBi 總量，等量減少最大傳導輸出功率限制值。

(5) 6dB 頻寬之要求

(對使用數位調變技術(digital modulation techniques)系統之低功率發射機，依據國家通訊傳播委員會低功率射頻電機技術規範 3.10.1.6 節之規定，6dB 頻寬至少應有 500kHz。

(6) 傳導輸出功率之要求

依據國家通訊傳播委員會低功率射頻電機技術規範 3.10.1.2 節之規定：

數位調變技術系統：1 W(含)以下。

(7) 功率頻譜密度之要求

依據國家通訊傳播委員會低功率射頻電機技術規範 3.10.1.6 節之規定，在使用頻率範圍之任一 3 kHz 頻寬內，由發射機傳導至天線之功率頻譜密度在任意傳輸期間內，皆小於或等於 8 毫分貝(dBm)，且應依 3.10.1.3 之方式降低功率頻譜密度限制值。

3.2 限制使用之頻帶

除本規範另有規定外，任何低功率射頻電機之主波皆不得使用下表所列各頻段之頻率；低功率射頻電機落於下表所列頻段之混附發射，其電場強度必須符合 2.8 之限制規定。

頻率(兆赫)	頻率(兆赫)	頻率(兆赫)
0.090~0.110	240.00~285.00	3332.0~3339.0
0.490~0.510	322.00~335.40	3345.8~3358.0
2.172~2.198	399.90~410.00	3500.0~4400.0
3.013~3.033	485.00~510.00	4500.0~5250.0
4.115~4.198	608.00~614.00	5350.0~5460.0
5.670~5.690	703.00~748.00	7250.0~7750.0
6.200~6.300	758.00~803.00	8025.0~8500.0
8.230~8.400	825.00~915.00	9000.0~9200.0
12.265~12.600	930.00~1240.0	9300.0~9500.0
13.340~13.430	1300.0~1427.0	10600~12700
14.965~15.020	1435.0~1626.5	13250~13400
16.700~16.755	1660.0~1785.0	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	

4 帶外發射之量測

4.1 適用標準

請見本報告 3.1 節第 2 項(I)的規定。

4.2 量測方法

在電波暗室，將待測物置於 0.8 米高的非金屬桌面，使其操作在工作狀態。接收天線置於 3 米距離。桌面要 360 度旋轉，另外接收天線從離地 1 米至 4 米升降變化，以找出最大的輻射電場強度，接收天線分別置於水平、垂直極化各執行測試一次。

備註：對於 1GHz 以上場強輻射的測試，待測物則置於 1.5 米高的非金屬桌面

4.3 量測儀器

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Keysight	N9038A	MY54450088	July 08, 2017	July 07, 2018
Pre-Amplifier ^(*) EMCI	EMC001340	980142	Jan. 20, 2016	Jan. 19, 2018
Loop Antenna ^(*) Electro-Metrics	EM-6879	264	Dec. 16, 2016	Dec. 15, 2018
RF Cable	NA	LOOPCAB-001 LOOPCAB-002	Jan. 17, 2017	Jan. 16, 2018
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-01	Nov. 09, 2017	Nov. 08, 2018
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-406	Dec. 13, 2016	Dec. 12, 2017
RF Cable	8D	966-4-1 966-4-2 966-4-3	Apr. 01, 2017	Mar. 31, 2018
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-4-01	Oct. 03, 2017	Oct. 02, 2018
Horn_Antenna SCHWARZBECK	BBHA 9120D	9120D-783	Dec. 27, 2016	Dec. 26, 2017
Pre-Amplifier EMCI	EMC12630SE	980385	Feb. 02, 2017	Feb. 01, 2018
RF Cable	EMC104-SM-SM-1200 EMC104-SM-SM-2000 EMC104-SM-SM-5000	160923 150318 150321	Feb. 02, 2017 Mar. 29, 2017 Mar. 29, 2017	Feb. 01, 2018 Mar. 28, 2018 Mar. 28, 2018
Pre-Amplifier EMCI	EMC184045SE	980387	Feb. 02, 2017	Feb. 01, 2018
Horn_Antenna SCHWARZBECK	BBHA 9170	BBHA9170608	Dec. 15, 2016	Dec. 14, 2017
RF Cable	SUCOFLEX 102	36432/2 36433/2	Jan. 15, 2017	Jan. 14, 2018
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208410	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP02	NA	NA

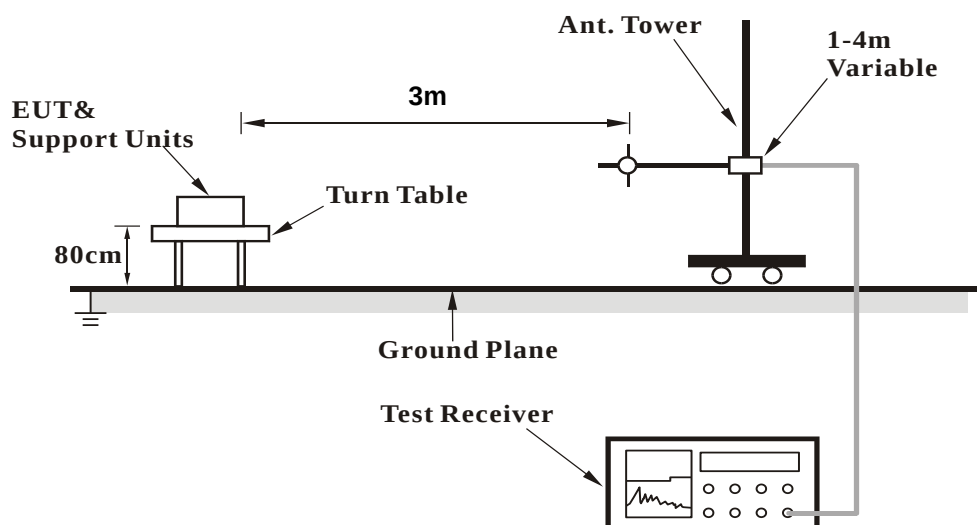
Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. *The calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
3. The test was performed in 966 Chamber No. 4.
4. The CANADA Site Registration No. is 20331-2
5. Loop antenna was used for all emissions below 30 MHz.
6. The following table is for the measurement uncertainty, which is calculated as per the document CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

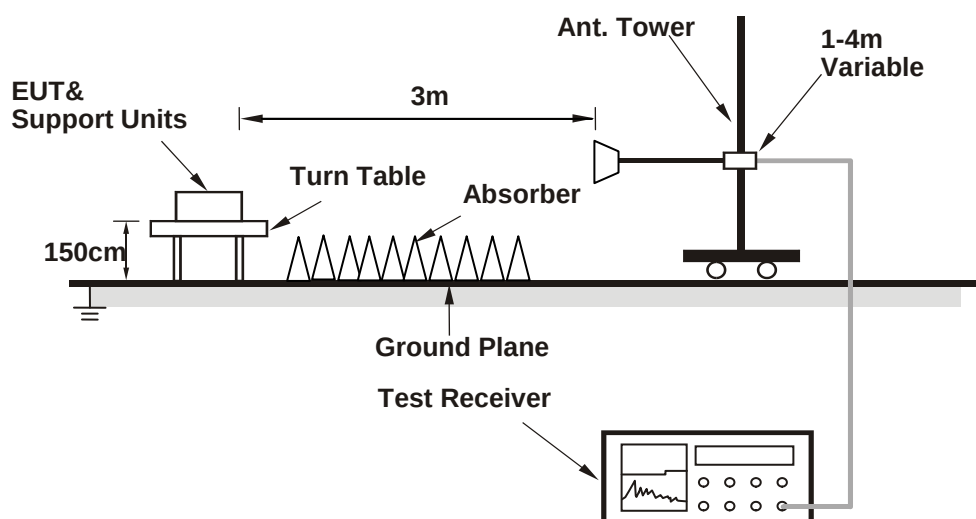
Measurement	Value
Radiated emissions (30MHz-1GHz)	5.30 dB
Radiated emissions (1GHz ~6GHz)	5.16 dB
Radiated emissions (6GHz ~18GHz)	4.91 dB
Radiated emissions (18GHz ~40GHz)	5.30 dB

4.4 測試配置

<Frequency Range below 1GHz>



<Frequency Range above 1GHz>



4.5 場強度之計算

場強之計算公式如下：

結果值 Emission level (dBuV/m) = 機器讀值 Raw Value (dBuV) + 校正因子 Correction Factor (dB/m)

餘裕度 Margin (dB) = 結果值 Emission level (dBuV/m) - 限制值 Limit value (dBuV/m)

量測結果請見下頁。

4.6 量測結果

4.6.1 發射諧波

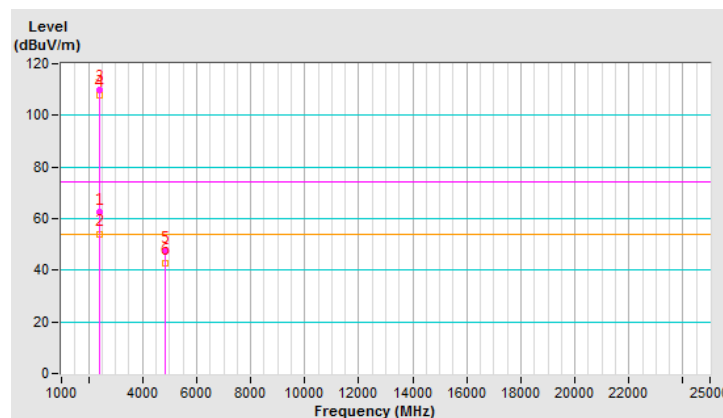
802.11b

操作模式：	發射	調變技術：	DSSS
基本波頻率：	CH 1：2412 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	23°C	量測場地濕度：	71%RH
測試日期：	106 年 11 月 30 日	測試者：	羅益偉

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2385.00	62.3 PK	74.0	-11.7	1.14 H	315	63.6	-1.3
2	2385.00	53.9 AV	54.0	-0.1	1.14 H	315	55.2	-1.3
3	*2412.00	110.0 PK			1.14 H	315	111.1	-1.1
4	*2412.00	107.8 AV			1.14 H	315	108.9	-1.1
5	4824.00	47.2 PK	74.0	-26.8	1.09 H	22	44.0	3.2
6	4824.00	42.9 AV	54.0	-11.1	1.09 H	22	39.7	3.2
7	#7236.00	-	-	-	-	-	-	-
8	#9648.00	-	-	-	-	-	-	-
9	12060.00	-	-	-	-	-	-	-
10	14472.00	-	-	-	-	-	-	-
11	#16884.00	-	-	-	-	-	-	-
12	19296.00	-	-	-	-	-	-	-
13	#21708.00	-	-	-	-	-	-	-
14	#24120.00	-	-	-	-	-	-	-

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency (主頻).
6. " # ": The radiated frequency is out of the restricted band.
7. " - ": The emission levels were too low to be detected.
8. The blank is not available, the limit of fundamental frequency was restricted at the output power.

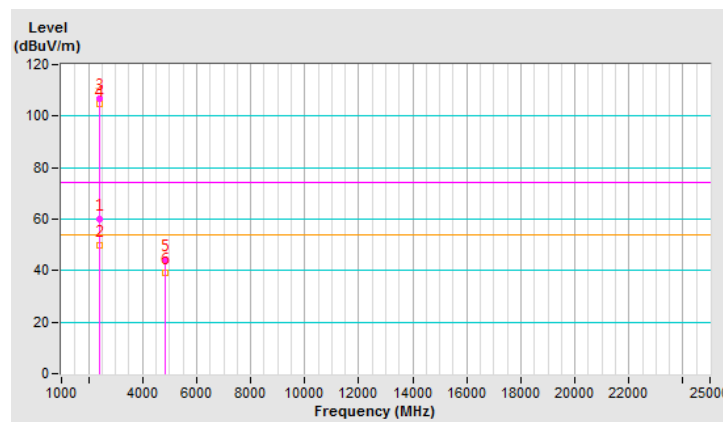


操作模式：	發射	調變技術：	DSSS
基本波頻率：	CH 1：2412 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	23°C	量測場地濕度：	71%RH
測試日期：	106 年 11 月 30 日	測試者：	羅益偉

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2385.00	60.0 PK	74.0	-14.0	2.78 V	129	61.3	-1.3
2	2385.00	49.8 AV	54.0	-4.2	2.78 V	129	51.1	-1.3
3	*2412.00	106.7 PK			2.78 V	129	107.8	-1.1
4	*2412.00	104.5 AV			2.78 V	129	105.6	-1.1
5	4824.00	44.2 PK	74.0	-29.8	1.01 V	314	41.0	3.2
6	4824.00	39.0 AV	54.0	-15.0	1.01 V	314	35.8	3.2
7	#7236.00	-	-	-	-	-	-	-
8	#9648.00	-	-	-	-	-	-	-
9	12060.00	-	-	-	-	-	-	-
10	14472.00	-	-	-	-	-	-	-
11	#16884.00	-	-	-	-	-	-	-
12	19296.00	-	-	-	-	-	-	-
13	#21708.00	-	-	-	-	-	-	-
14	#24120.00	-	-	-	-	-	-	-

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency (主頻).
6. " # ": The radiated frequency is out of the restricted band.
7. " - ": The emission levels were too low to be detected.
8. The blank is not available, the limit of fundamental frequency was restricted at the output power.



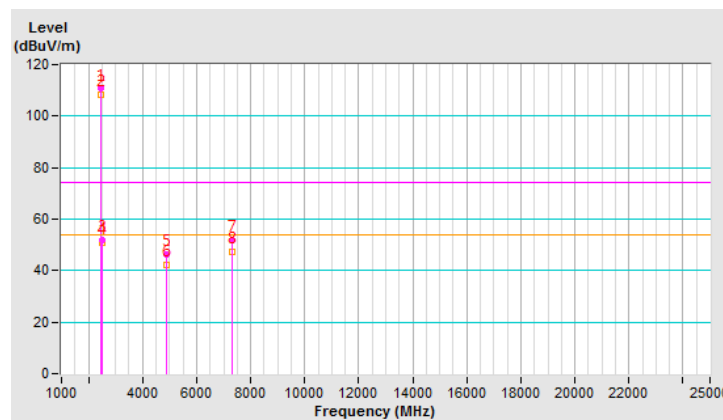
操作模式：	發射	調變技術：	DSSS
基本波頻率：	CH 6：2437 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	23°C	量測場地濕度：	71%RH
測試日期：	106 年 11 月 30 日	測試者：	羅益偉

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	110.6 PK			1.14 H	317	111.8	-1.2
2	*2437.00	108.4 AV			1.14 H	317	109.6	-1.2
3	2485.00	52.1 PK	74.0	-21.9	1.14 H	317	53.1	-1.0
4	2485.00	50.9 AV	54.0	-3.1	1.14 H	317	51.9	-1.0
5	4874.00	46.5 PK	74.0	-27.5	1.00 H	12	43.2	3.3
6	4874.00	42.4 AV	54.0	-11.6	1.00 H	12	39.1	3.3
7	7311.00	51.8 PK	74.0	-22.2	1.00 H	140	42.0	9.8
8	7311.00	47.3 AV	54.0	-6.7	1.00 H	140	37.5	9.8
9	#9748.00	-	-	-	-	-	-	-
10	12185.00	-	-	-	-	-	-	-
11	#14622.00	-	-	-	-	-	-	-
12	#17059.00	-	-	-	-	-	-	-
13	19496.00	-	-	-	-	-	-	-
14	#21933.00	-	-	-	-	-	-	-
15	#24370.00	-	-	-	-	-	-	-

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency (主頻).
6. " # ": The radiated frequency is out of the restricted band.
7. " - ": The emission levels were too low to be detected.
8. The blank is not available, the limit of fundamental frequency was restricted at the output power.



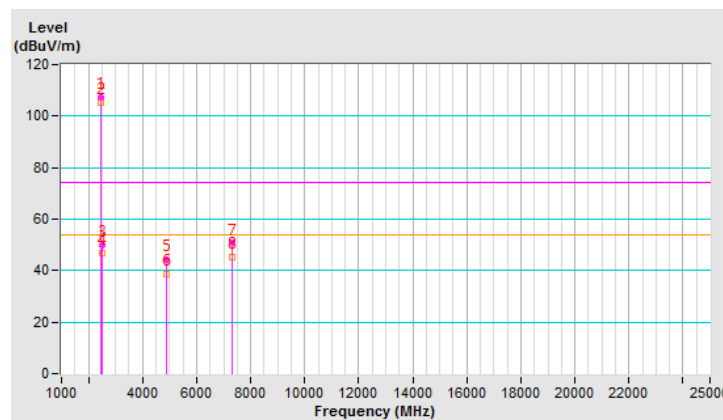
操作模式：	發射	調變技術：	DSSS
基本波頻率：	CH 6：2437 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	23°C	量測場地濕度：	71%RH
測試日期：	106 年 11 月 30 日	測試者：	羅益偉

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2437.00	107.3 PK			2.78 V	136	108.5	-1.2
2	*2437.00	105.1 AV			2.78 V	136	106.3	-1.2
3	2485.00	49.8 PK	74.0	-24.2	2.78 V	136	50.8	-1.0
4	2485.00	46.8 AV	54.0	-7.2	2.78 V	136	47.8	-1.0
5	4874.00	44.1 PK	74.0	-29.9	1.00 V	310	40.8	3.3
6	4874.00	38.7 AV	54.0	-15.3	1.00 V	310	35.4	3.3
7	7311.00	50.6 PK	74.0	-23.4	1.09 V	134	40.8	9.8
8	7311.00	45.2 AV	54.0	-8.8	1.09 V	134	35.4	9.8
9	#9748.00	-	-	-	-	-	-	-
10	12185.00	-	-	-	-	-	-	-
11	#14622.00	-	-	-	-	-	-	-
12	#17059.00	-	-	-	-	-	-	-
13	19496.00	-	-	-	-	-	-	-
14	#21933.00	-	-	-	-	-	-	-
15	#24370.00	-	-	-	-	-	-	-

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency (主頻).
6. " # ": The radiated frequency is out of the restricted band.
7. " - ": The emission levels were too low to be detected.
8. The blank is not available, the limit of fundamental frequency was restricted at the output power.



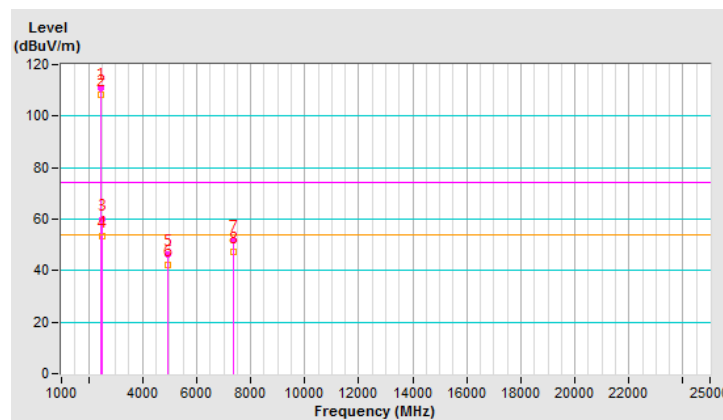
操作模式：	發射	調變技術：	DSSS
基本波頻率：	CH 11：2462 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	23°C	量測場地濕度：	71%RH
測試日期：	106 年 11 月 30 日	測試者：	羅益偉

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	110.7 PK			1.10 H	316	111.8	-1.1
2	*2462.00	108.4 AV			1.10 H	316	109.5	-1.1
3	2488.00	60.2 PK	74.0	-13.8	1.10 H	316	61.2	-1.0
4	2488.00	53.6 AV	54.0	-0.4	1.10 H	316	54.6	-1.0
5	4924.00	46.2 PK	74.0	-27.8	1.00 H	27	42.7	3.5
6	4924.00	42.4 AV	54.0	-11.6	1.00 H	27	38.9	3.5
7	7386.00	51.9 PK	74.0	-22.1	1.03 H	148	42.0	9.9
8	7386.00	47.4 AV	54.0	-6.6	1.03 H	148	37.5	9.9
9	#9848.00	-	-	-	-	-	-	-
10	12310.00	-	-	-	-	-	-	-
11	#14772.00	-	-	-	-	-	-	-
12	#17234.00	-	-	-	-	-	-	-
13	19696.00	-	-	-	-	-	-	-
14	22158.00	-	-	-	-	-	-	-
15	#24620.00	-	-	-	-	-	-	-

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency (主頻).
6. " # ": The radiated frequency is out of the restricted band.
7. " - ": The emission levels were too low to be detected.
8. The blank is not available, the limit of fundamental frequency was restricted at the output power.



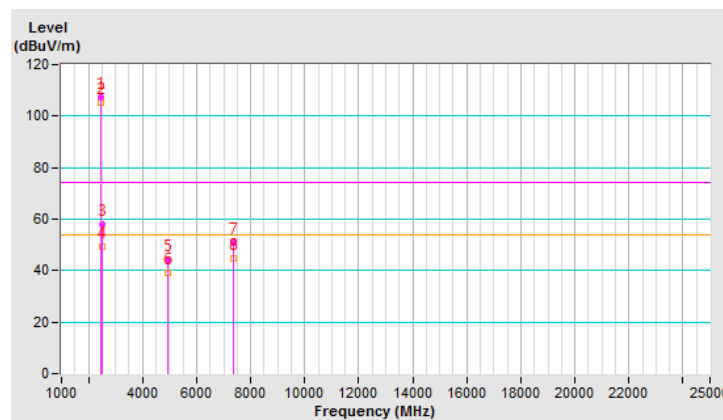
操作模式：	發射	調變技術：	DSSS
基本波頻率：	CH 11：2462 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	23°C	量測場地濕度：	71%RH
測試日期：	106 年 11 月 30 日	測試者：	羅益偉

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	107.4 PK			2.75 V	124	108.5	-1.1
2	*2462.00	105.1 AV			2.75 V	124	106.2	-1.1
3	2488.00	57.9 PK	74.0	-16.1	2.75 V	124	58.9	-1.0
4	2488.00	49.5 AV	54.0	-4.5	2.75 V	124	50.5	-1.0
5	4924.00	44.1 PK	74.0	-29.9	1.00 V	320	40.6	3.5
6	4924.00	39.0 AV	54.0	-15.0	1.00 V	320	35.5	3.5
7	7386.00	50.7 PK	74.0	-23.3	1.13 V	144	40.8	9.9
8	7386.00	45.0 AV	54.0	-9.0	1.13 V	144	35.1	9.9
9	#9848.00	-	-	-	-	-	-	-
10	12310.00	-	-	-	-	-	-	-
11	#14772.00	-	-	-	-	-	-	-
12	#17234.00	-	-	-	-	-	-	-
13	19696.00	-	-	-	-	-	-	-
14	22158.00	-	-	-	-	-	-	-
15	#24620.00	-	-	-	-	-	-	-

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency (主頻).
6. " # ": The radiated frequency is out of the restricted band.
7. " - ": The emission levels were too low to be detected.
8. The blank is not available, the limit of fundamental frequency was restricted at the output power.



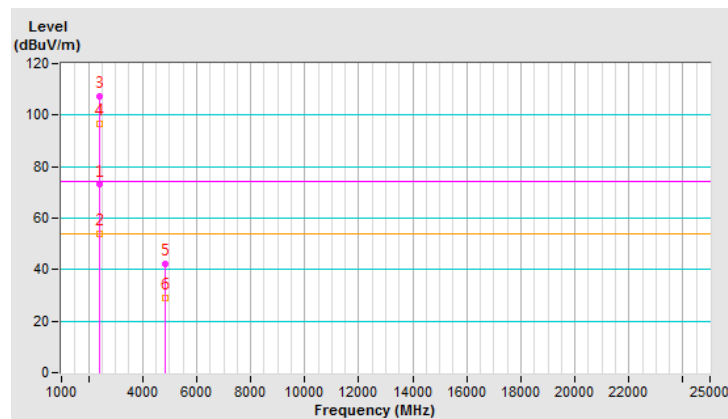
802.11g

操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 1：2412 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	23°C	量測場地濕度：	71%RH
測試日期：	106 年 11 月 30 日	測試者：	羅益偉

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	73.0 PK	74.0	-1.0	1.14 H	316	74.3	-1.3
2	2390.00	53.9 AV	54.0	-0.1	1.14 H	316	55.2	-1.3
3	*2412.00	107.2 PK			1.14 H	316	108.3	-1.1
4	*2412.00	96.6 AV			1.14 H	316	97.7	-1.1
5	4824.00	42.3 PK	74.0	-31.7	1.03 H	24	39.1	3.2
6	4824.00	29.0 AV	54.0	-25.0	1.03 H	24	25.8	3.2
7	#7236.00	-	-	-	-	-	-	-
8	#9648.00	-	-	-	-	-	-	-
9	12060.00	-	-	-	-	-	-	-
10	14472.00	-	-	-	-	-	-	-
11	#16884.00	-	-	-	-	-	-	-
12	19296.00	-	-	-	-	-	-	-
13	#21708.00	-	-	-	-	-	-	-
14	#24120.00	-	-	-	-	-	-	-

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency (主頻).
6. " # ": The radiated frequency is out of the restricted band.
7. " - ": The emission levels were too low to be detected.
8. The blank is not available, the limit of fundamental frequency was restricted at the output power.



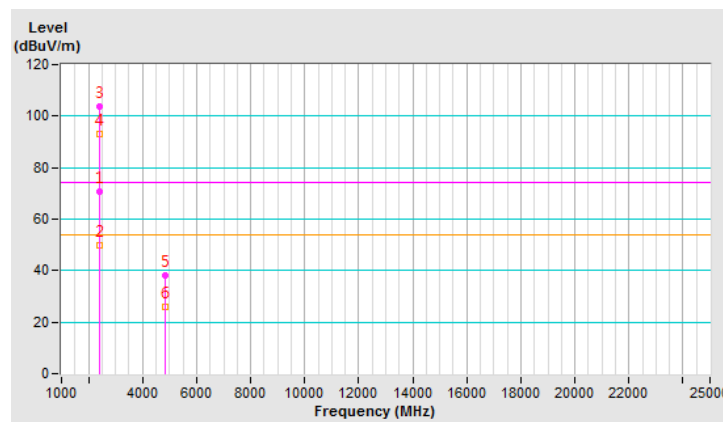
操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 1：2412 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	23°C	量測場地濕度：	71%RH
測試日期：	106 年 11 月 30 日	測試者：	羅益偉

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	70.7 PK	74.0	-3.3	2.70 V	114	72.0	-1.3
2	2390.00	49.8 AV	54.0	-4.2	2.70 V	114	51.1	-1.3
3	*2412.00	103.9 PK			2.70 V	114	105.0	-1.1
4	*2412.00	93.3 AV			2.70 V	114	94.4	-1.1
5	4824.00	38.3 PK	74.0	-35.7	1.05 V	306	35.1	3.2
6	4824.00	25.9 AV	54.0	-28.1	1.05 V	306	22.7	3.2
7	#7236.00	-	-	-	-	-	-	-
8	#9648.00	-	-	-	-	-	-	-
9	12060.00	-	-	-	-	-	-	-
10	14472.00	-	-	-	-	-	-	-
11	#16884.00	-	-	-	-	-	-	-
12	19296.00	-	-	-	-	-	-	-
13	#21708.00	-	-	-	-	-	-	-
14	#24120.00	-	-	-	-	-	-	-

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency (主頻).
6. " # ": The radiated frequency is out of the restricted band.
7. " - ": The emission levels were too low to be detected.
8. The blank is not available, the limit of fundamental frequency was restricted at the output power.



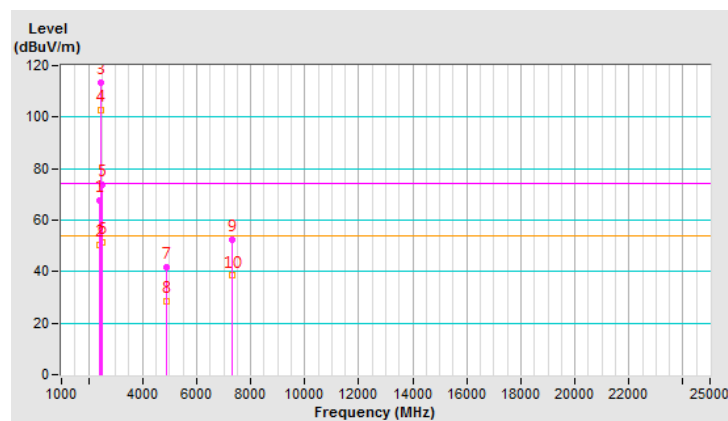
操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 6：2437 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	23°C	量測場地濕度：	71%RH
測試日期：	106 年 11 月 30 日	測試者：	羅益偉

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.8 PK	74.0	-6.2	1.16 H	316	69.1	-1.3
2	2390.00	50.5 AV	54.0	-3.5	1.16 H	316	51.8	-1.3
3	*2437.00	113.5 PK			1.16 H	316	114.7	-1.2
4	*2437.00	102.7 AV			1.16 H	316	103.9	-1.2
5	2483.50	73.8 PK	74.0	-0.2	1.16 H	316	74.8	-1.0
6	2483.50	51.4 AV	54.0	-2.6	1.16 H	316	52.4	-1.0
7	4874.00	41.8 PK	74.0	-32.2	1.00 H	10	38.5	3.3
8	4874.00	28.5 AV	54.0	-25.5	1.00 H	10	25.2	3.3
9	7311.00	52.5 PK	74.0	-21.5	1.00 H	140	42.7	9.8
10	7311.00	38.4 AV	54.0	-15.6	1.00 H	140	28.6	9.8
11	#9748.00	-	-	-	-	-	-	-
12	12185.00	-	-	-	-	-	-	-
13	#14622.00	-	-	-	-	-	-	-
14	#17059.00	-	-	-	-	-	-	-
15	19496.00	-	-	-	-	-	-	-
16	#21933.00	-	-	-	-	-	-	-
17	#24370.00	-	-	-	-	-	-	-

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency (主頻).
6. " # ": The radiated frequency is out of the restricted band.
7. " - ": The emission levels were too low to be detected.
8. The blank is not available, the limit of fundamental frequency was restricted at the output power.



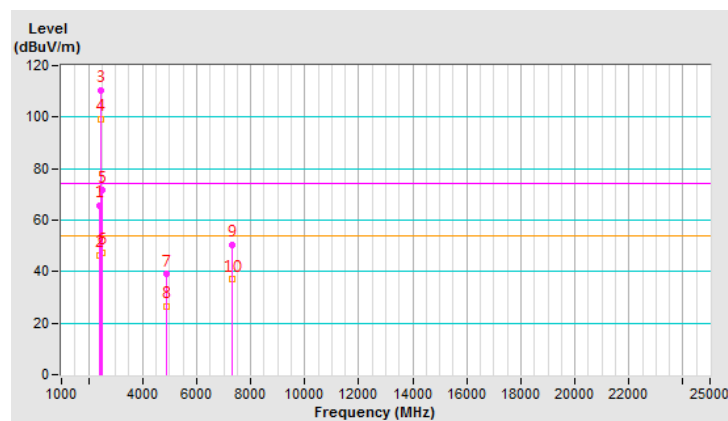
操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 6：2437 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	23°C	量測場地濕度：	71%RH
測試日期：	106 年 11 月 30 日	測試者：	羅益偉

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.5 PK	74.0	-8.5	2.67 V	104	66.8	-1.3
2	2390.00	46.4 AV	54.0	-7.6	2.67 V	104	47.7	-1.3
3	*2437.00	110.2 PK			2.67 V	104	111.4	-1.2
4	*2437.00	99.4 AV			2.67 V	104	100.6	-1.2
5	2483.50	71.5 PK	74.0	-2.5	2.67 V	104	72.5	-1.0
6	2483.50	47.3 AV	54.0	-6.7	2.67 V	104	48.3	-1.0
7	4874.00	38.9 PK	74.0	-35.1	1.00 V	300	35.6	3.3
8	4874.00	26.4 AV	54.0	-27.6	1.00 V	300	23.1	3.3
9	7311.00	50.2 PK	74.0	-23.8	1.10 V	133	40.4	9.8
10	7311.00	36.9 AV	54.0	-17.1	1.10 V	133	27.1	9.8
11	#9748.00	-	-	-	-	-	-	-
12	12185.00	-	-	-	-	-	-	-
13	#14622.00	-	-	-	-	-	-	-
14	#17059.00	-	-	-	-	-	-	-
15	19496.00	-	-	-	-	-	-	-
16	#21933.00	-	-	-	-	-	-	-
17	#24370.00	-	-	-	-	-	-	-

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency (主頻).
6. " # ": The radiated frequency is out of the restricted band.
7. " - ": The emission levels were too low to be detected.
8. The blank is not available, the limit of fundamental frequency was restricted at the output power.



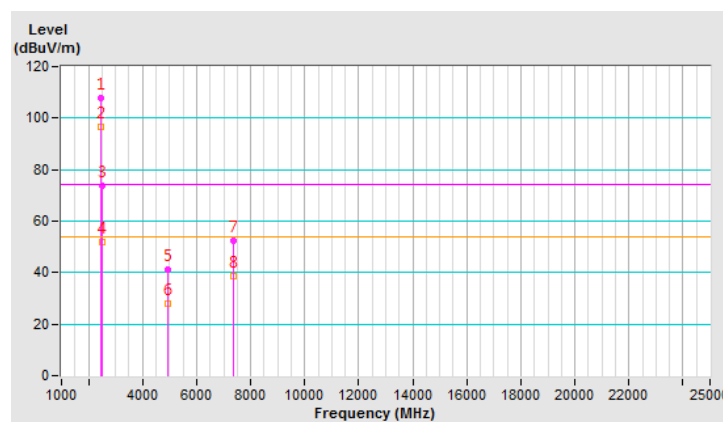
操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 11：2462 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	23°C	量測場地濕度：	71%RH
測試日期：	106 年 11 月 30 日	測試者：	羅益偉

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	107.7 PK			1.14 H	316	108.8	-1.1
2	*2462.00	96.8 AV			1.14 H	316	97.9	-1.1
3	2483.50	73.7 PK	74.0	-0.3	1.14 H	316	74.7	-1.0
4	2483.50	52.0 AV	54.0	-2.0	1.14 H	316	53.0	-1.0
5	4924.00	41.3 PK	74.0	-32.7	1.03 H	5	37.8	3.5
6	4924.00	28.0 AV	54.0	-26.0	1.03 H	5	24.5	3.5
7	7386.00	52.5 PK	74.0	-21.5	1.00 H	128	42.6	9.9
8	7386.00	38.5 AV	54.0	-15.5	1.00 H	128	28.6	9.9
9	#9848.00	-	-	-	-	-	-	-
10	12310.00	-	-	-	-	-	-	-
11	#14772.00	-	-	-	-	-	-	-
12	#17234.00	-	-	-	-	-	-	-
13	19696.00	-	-	-	-	-	-	-
14	22158.00	-	-	-	-	-	-	-
15	#24620.00	-	-	-	-	-	-	-

REMARKS:

- Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
- Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
- The other emission levels were very low against the limit.
- Margin value = Emission Level – Limit value
- " * ": Fundamental frequency (主頻).
- " # ": The radiated frequency is out of the restricted band.
- " - ": The emission levels were too low to be detected.
- The blank is not available, the limit of fundamental frequency was restricted at the output power.

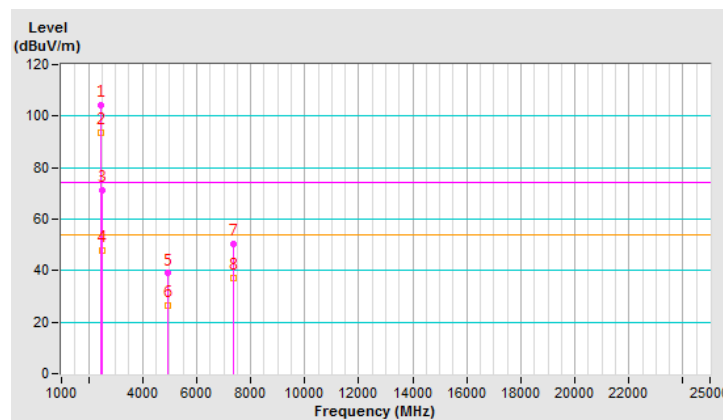


操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 11：2462 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	23°C	量測場地濕度：	71%RH
測試日期：	106 年 11 月 30 日	測試者：	羅益偉

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	104.4 PK			2.70 V	88	105.5	-1.1
2	*2462.00	93.5 AV			2.70 V	88	94.6	-1.1
3	2483.50	71.4 PK	74.0	-2.6	2.70 V	88	72.4	-1.0
4	2483.50	47.9 AV	54.0	-6.1	2.70 V	88	48.9	-1.0
5	4924.00	38.9 PK	74.0	-35.1	1.06 V	316	35.4	3.5
6	4924.00	26.5 AV	54.0	-27.5	1.06 V	316	23.0	3.5
7	7386.00	50.3 PK	74.0	-23.7	1.09 V	128	40.4	9.9
8	7386.00	37.2 AV	54.0	-16.8	1.09 V	128	27.3	9.9
9	#9848.00	-	-	-	-	-	-	-
10	12310.00	-	-	-	-	-	-	-
11	#14772.00	-	-	-	-	-	-	-
12	#17234.00	-	-	-	-	-	-	-
13	19696.00	-	-	-	-	-	-	-
14	22158.00	-	-	-	-	-	-	-
15	#24620.00	-	-	-	-	-	-	-

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency (主頻).
6. " # ": The radiated frequency is out of the restricted band.
7. " - ": The emission levels were too low to be detected.
8. The blank is not available, the limit of fundamental frequency was restricted at the output power.



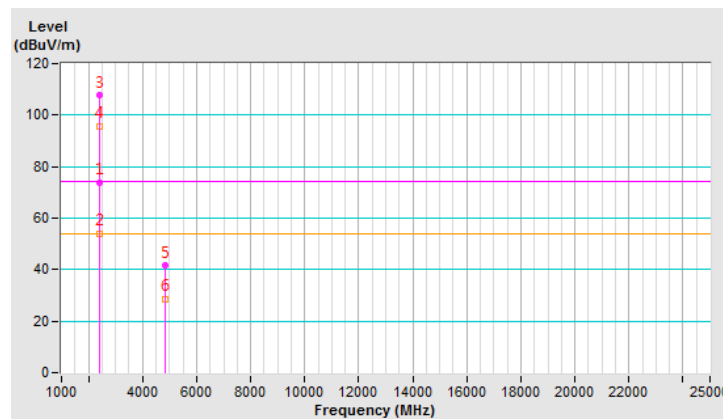
802.11n (HT20)

操 作 模 式 :	發射	調 變 技 術 :	OFDM
基 本 波 頻 率 :	CH 1 : 2412 MHz	測 試 儀 器 :	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度 :	23°C	量測場地濕度 :	71%RH
測 試 日 期 :	106 年 11 月 30 日	測 試 者 :	羅益偉

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	73.9 PK	74.0	-0.1	1.14 H	316	75.2	-1.3
2	2390.00	53.9 AV	54.0	-0.1	1.14 H	316	55.2	-1.3
3	*2412.00	107.6 PK			1.14 H	316	108.7	-1.1
4	*2412.00	95.7 AV			1.14 H	316	96.8	-1.1
5	4824.00	41.5 PK	74.0	-32.5	1.00 H	17	38.3	3.2
6	4824.00	28.6 AV	54.0	-25.4	1.00 H	17	25.4	3.2
7	#7236.00	-	-	-	-	-	-	-
8	#9648.00	-	-	-	-	-	-	-
9	12060.00	-	-	-	-	-	-	-
10	14472.00	-	-	-	-	-	-	-
11	#16884.00	-	-	-	-	-	-	-
12	19296.00	-	-	-	-	-	-	-
13	#21708.00	-	-	-	-	-	-	-
14	#24120.00	-	-	-	-	-	-	-

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency (主頻).
6. " # ": The radiated frequency is out of the restricted band.
7. " - ": The emission levels were too low to be detected.
8. The blank is not available, the limit of fundamental frequency was restricted at the output power.



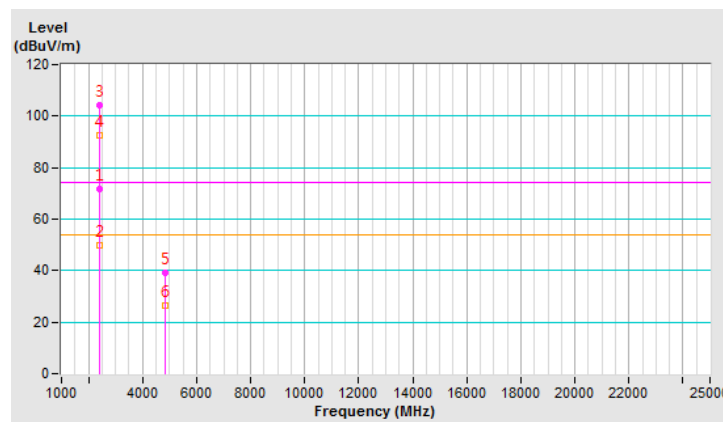
操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 1：2412 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	23°C	量測場地濕度：	71%RH
測試日期：	106 年 11 月 30 日	測試者：	羅益偉

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	71.6 PK	74.0	-2.4	2.67 V	100	72.9	-1.3
2	2390.00	49.8 AV	54.0	-4.2	2.67 V	100	51.1	-1.3
3	*2412.00	104.3 PK			2.67 V	100	105.4	-1.1
4	*2412.00	92.4 AV			2.67 V	100	93.5	-1.1
5	4824.00	39.0 PK	74.0	-35.0	1.00 V	315	35.8	3.2
6	4824.00	26.6 AV	54.0	-27.4	1.00 V	315	23.4	3.2
7	#7236.00	-	-	-	-	-	-	-
8	#9648.00	-	-	-	-	-	-	-
9	12060.00	-	-	-	-	-	-	-
10	14472.00	-	-	-	-	-	-	-
11	#16884.00	-	-	-	-	-	-	-
12	19296.00	-	-	-	-	-	-	-
13	#21708.00	-	-	-	-	-	-	-
14	#24120.00	-	-	-	-	-	-	-

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency (主頻).
6. " # ": The radiated frequency is out of the restricted band.
7. " - ": The emission levels were too low to be detected.
8. The blank is not available, the limit of fundamental frequency was restricted at the output power.



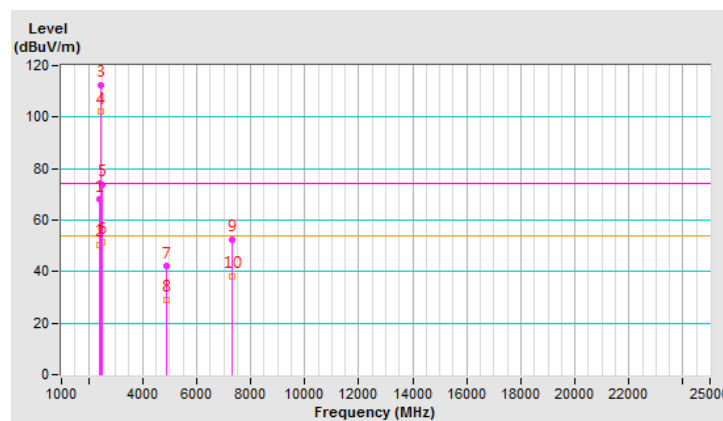
操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 6：2437 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	23°C	量測場地濕度：	71%RH
測試日期：	106 年 11 月 30 日	測試者：	羅益偉

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	67.9 PK	74.0	-6.1	1.16 H	316	69.2	-1.3
2	2390.00	50.2 AV	54.0	-3.8	1.16 H	316	51.5	-1.3
3	*2437.00	112.6 PK			1.16 H	316	113.8	-1.2
4	*2437.00	102.0 AV			1.16 H	316	103.2	-1.2
5	2483.50	73.7 PK	74.0	-0.3	1.16 H	316	74.7	-1.0
6	2483.50	51.3 AV	54.0	-2.7	1.16 H	316	52.3	-1.0
7	4874.00	42.0 PK	74.0	-32.0	1.04 H	6	38.7	3.3
8	4874.00	28.9 AV	54.0	-25.1	1.04 H	6	25.6	3.3
9	7311.00	52.3 PK	74.0	-21.7	1.04 H	131	42.5	9.8
10	7311.00	38.1 AV	54.0	-15.9	1.04 H	131	28.3	9.8
11	#9748.00	-	-	-	-	-	-	-
12	12185.00	-	-	-	-	-	-	-
13	#14622.00	-	-	-	-	-	-	-
14	#17059.00	-	-	-	-	-	-	-
15	19496.00	-	-	-	-	-	-	-
16	#21933.00	-	-	-	-	-	-	-
17	#24370.00	-	-	-	-	-	-	-

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency (主頻).
6. " # ": The radiated frequency is out of the restricted band.
7. " - ": The emission levels were too low to be detected.
8. The blank is not available, the limit of fundamental frequency was restricted at the output power.

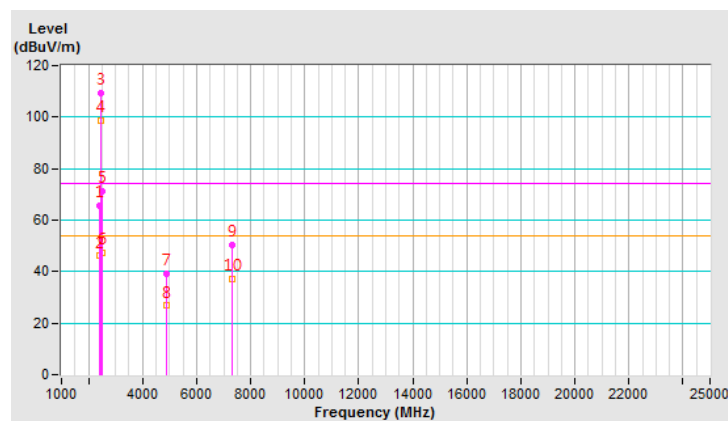


操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 6：2437 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	23°C	量測場地濕度：	71%RH
測試日期：	106 年 11 月 30 日	測試者：	羅益偉

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	2390.00	65.6 PK	74.0	-8.4	2.62 V	114	66.9	-1.3
2	2390.00	46.1 AV	54.0	-7.9	2.62 V	114	47.4	-1.3
3	*2437.00	109.3 PK			2.62 V	114	110.5	-1.2
4	*2437.00	98.7 AV			2.62 V	114	99.9	-1.2
5	2483.50	71.4 PK	74.0	-2.6	2.62 V	114	72.4	-1.0
6	2483.50	47.2 AV	54.0	-6.8	2.62 V	114	48.2	-1.0
7	4874.00	39.1 PK	74.0	-34.9	1.03 V	311	35.8	3.3
8	4874.00	26.7 AV	54.0	-27.3	1.03 V	311	23.4	3.3
9	7311.00	50.3 PK	74.0	-23.7	1.10 V	137	40.5	9.8
10	7311.00	37.0 AV	54.0	-17.0	1.10 V	137	27.2	9.8
11	#9748.00	-	-	-	-	-	-	-
12	12185.00	-	-	-	-	-	-	-
13	#14622.00	-	-	-	-	-	-	-
14	#17059.00	-	-	-	-	-	-	-
15	19496.00	-	-	-	-	-	-	-
16	#21933.00	-	-	-	-	-	-	-
17	#24370.00	-	-	-	-	-	-	-

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency (主頻).
6. " # ": The radiated frequency is out of the restricted band.
7. " - ": The emission levels were too low to be detected.
8. The blank is not available, the limit of fundamental frequency was restricted at the output power.



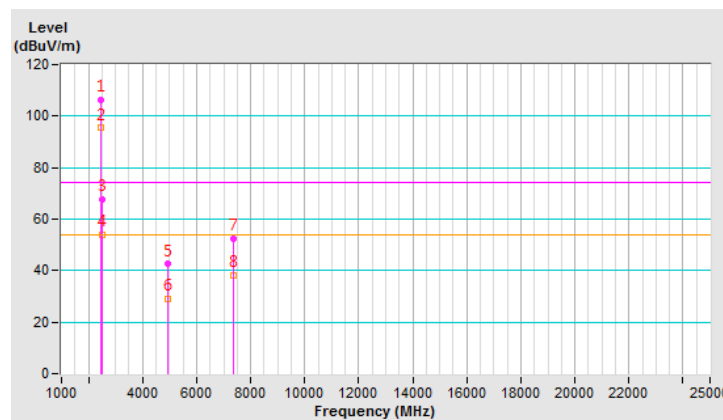
操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 11：2462 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	23°C	量測場地濕度：	71%RH
測試日期：	106 年 11 月 30 日	測試者：	羅益偉

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	106.5 PK			1.12 H	316	107.6	-1.1
2	*2462.00	95.4 AV			1.12 H	316	96.5	-1.1
3	2483.50	67.6 PK	74.0	-6.4	1.12 H	316	68.6	-1.0
4	2483.50	53.9 AV	54.0	-0.1	1.12 H	316	54.9	-1.0
5	4924.00	42.5 PK	74.0	-31.5	1.09 H	6	39.0	3.5
6	4924.00	29.2 AV	54.0	-24.8	1.09 H	6	25.7	3.5
7	7386.00	52.5 PK	74.0	-21.5	1.08 H	131	42.6	9.9
8	7386.00	38.1 AV	54.0	-15.9	1.08 H	131	28.2	9.9
9	#9848.00	-	-	-	-	-	-	-
10	12310.00	-	-	-	-	-	-	-
11	#14772.00	-	-	-	-	-	-	-
12	#17234.00	-	-	-	-	-	-	-
13	19696.00	-	-	-	-	-	-	-
14	22158.00	-	-	-	-	-	-	-
15	#24620.00	-	-	-	-	-	-	-

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency (主頻).
6. " # ": The radiated frequency is out of the restricted band.
7. " - ": The emission levels were too low to be detected.
8. The blank is not available, the limit of fundamental frequency was restricted at the output power.



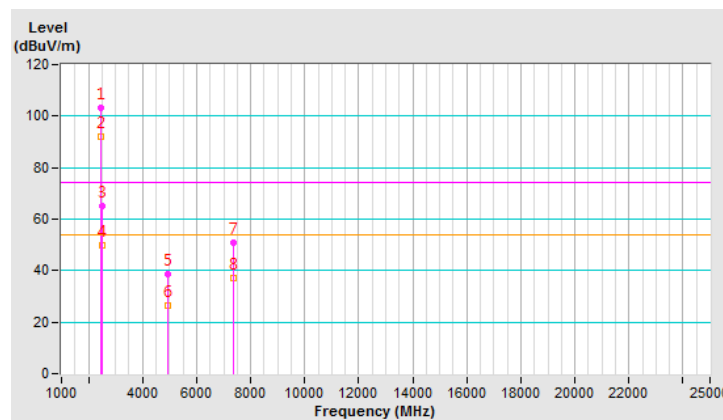
操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 11：2462 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	23°C	量測場地濕度：	71%RH
測試日期：	106 年 11 月 30 日	測試者：	羅益偉

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	*2462.00	103.2 PK			2.57 V	104	104.3	-1.1
2	*2462.00	92.1 AV			2.57 V	104	93.2	-1.1
3	2483.50	65.3 PK	74.0	-8.7	2.57 V	104	66.3	-1.0
4	2483.50	49.8 AV	54.0	-4.2	2.57 V	104	50.8	-1.0
5	4924.00	38.7 PK	74.0	-35.3	1.05 V	325	35.2	3.5
6	4924.00	26.3 AV	54.0	-27.7	1.05 V	325	22.8	3.5
7	7386.00	50.8 PK	74.0	-23.2	1.09 V	147	40.9	9.9
8	7386.00	37.3 AV	54.0	-16.7	1.09 V	147	27.4	9.9
9	#9848.00	-	-	-	-	-	-	-
10	12310.00	-	-	-	-	-	-	-
11	#14772.00	-	-	-	-	-	-	-
12	#17234.00	-	-	-	-	-	-	-
13	19696.00	-	-	-	-	-	-	-
14	22158.00	-	-	-	-	-	-	-
15	#24620.00	-	-	-	-	-	-	-

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value
5. " * ": Fundamental frequency (主頻).
6. " # ": The radiated frequency is out of the restricted band.
7. " - ": The emission levels were too low to be detected.
8. The blank is not available, the limit of fundamental frequency was restricted at the output power.



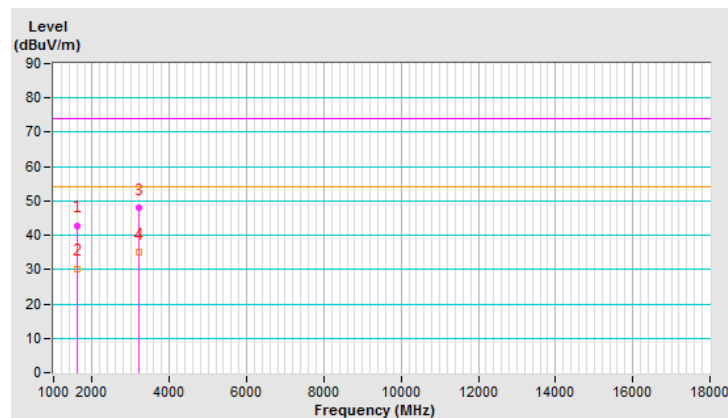
4.6.2 接收諧波

操作模式：	接收		
基本波頻率：	CH 1：2412 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	23°C	量測場地濕度：	71%RH
測試日期：	106 年 11 月 30 日	測試者：	何欣儒

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1608.00	42.9 PK	74.0	-31.1	1.61 H	173	47.3	-4.4
2	1608.00	30.3 AV	54.0	-23.7	1.61 H	173	34.7	-4.4
3	3216.00	47.9 PK	74.0	-26.1	1.51 H	79	47.5	0.4
4	3216.00	35.0 AV	54.0	-19.0	1.51 H	79	34.6	0.4

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

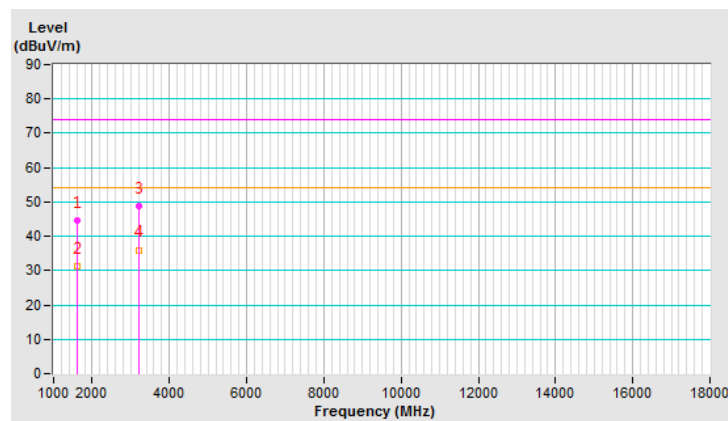


操作模式：	接收		
基本波頻率：	CH 1：2412 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	23℃	量測場地濕度：	71%RH
測試日期：	106 年 11 月 30 日	測試者：	何欣儒

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1608.00	44.6 PK	74.0	-29.4	1.55 V	171	49.0	-4.4
2	1608.00	31.4 AV	54.0	-22.6	1.55 V	171	35.8	-4.4
3	3216.00	48.8 PK	74.0	-25.2	1.79 V	204	48.4	0.4
4	3216.00	36.0 AV	54.0	-18.0	1.79 V	204	35.6	0.4

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



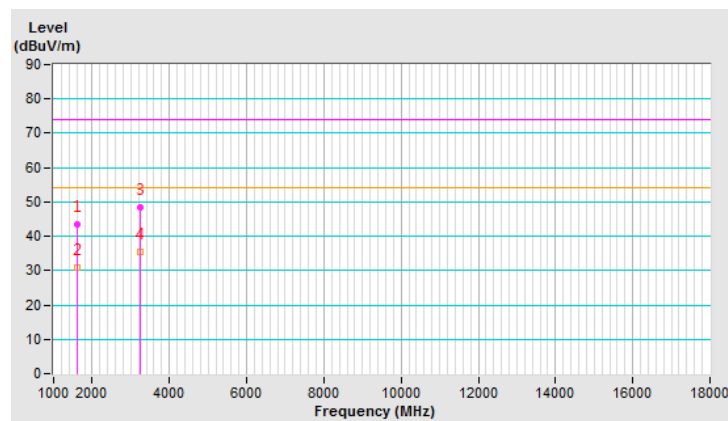
操作模式：	接收		
基本波頻率：	CH 6：2437 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	23°C	量測場地濕度：	71%RH
測試日期：	106 年 11 月 30 日	測試者：	何欣儒

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1624.67	43.3 PK	74.0	-30.7	1.62 H	173	47.5	-4.2
2	1624.67	30.9 AV	54.0	-23.1	1.62 H	173	35.1	-4.2
3	3249.33	48.5 PK	74.0	-25.5	1.49 H	83	48.0	0.5
4	3249.33	35.4 AV	54.0	-18.6	1.49 H	83	34.9	0.5

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

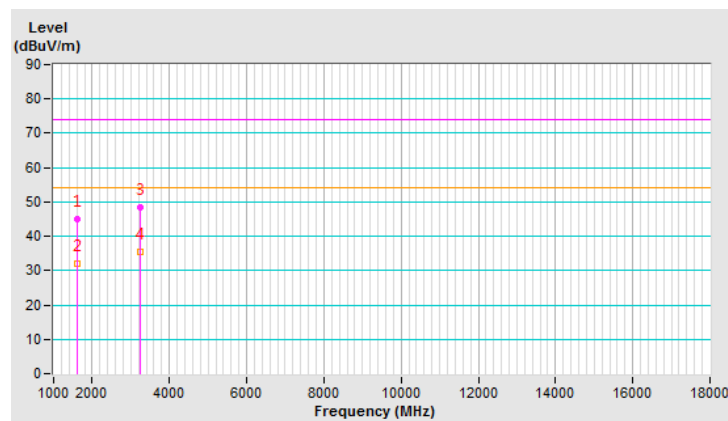


操作模式：	接收		
基本波頻率：	CH 6：2437 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	23°C	量測場地濕度：	71%RH
測試日期：	106 年 11 月 30 日	測試者：	何欣儒

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1624.67	45.1 PK	74.0	-28.9	1.46 V	186	49.3	-4.2
2	1624.67	32.0 AV	54.0	-22.0	1.46 V	186	36.2	-4.2
3	3249.33	48.4 PK	74.0	-25.6	1.76 V	174	47.9	0.5
4	3249.33	35.4 AV	54.0	-18.6	1.76 V	174	34.9	0.5

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



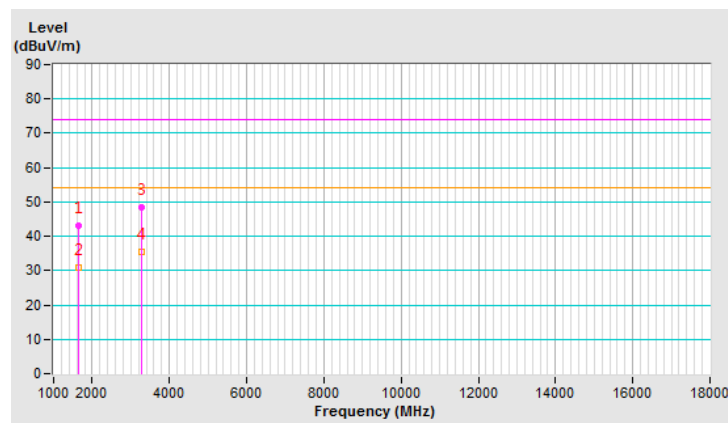
操作模式：	接收		
基本波頻率：	CH 11：2462 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	23°C	量測場地濕度：	71%RH
測試日期：	106 年 11 月 30 日	測試者：	何欣儒

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1641.33	43.0 PK	74.0	-31.0	1.60 H	153	47.2	-4.2
2	1641.33	30.7 AV	54.0	-23.3	1.60 H	153	34.9	-4.2
3	3282.67	48.3 PK	74.0	-25.7	1.53 H	90	47.7	0.6
4	3282.67	35.4 AV	54.0	-18.6	1.53 H	90	34.8	0.6

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value

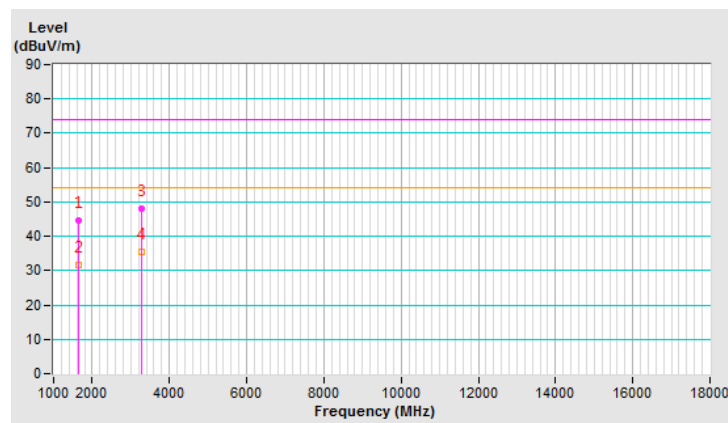


操作模式：	接收		
基本波頻率：	CH 11：2462 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	23℃	量測場地濕度：	71%RH
測試日期：	106 年 11 月 30 日	測試者：	何欣儒

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1641.33	44.7 PK	74.0	-29.3	1.50 V	196	48.9	-4.2
2	1641.33	31.5 AV	54.0	-22.5	1.50 V	196	35.7	-4.2
3	3282.67	48.0 PK	74.0	-26.0	1.78 V	186	47.4	0.6
4	3282.67	35.5 AV	54.0	-18.5	1.78 V	186	34.9	0.6

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit.
4. Margin value = Emission Level – Limit value



4.6.3 其它不必要之訊號

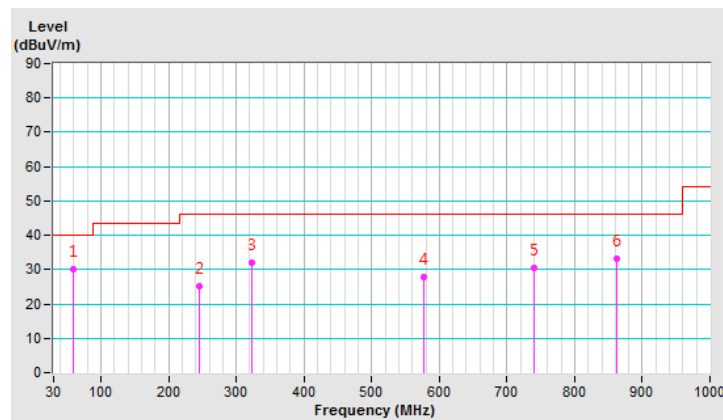
802.11b

操作模式：	發射接收	調變技術：	DSSS
基本波頻率：	CH 6：2437 MHz	測試儀器：	(QP) RB=VB=120kHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	106 年 11 月 30 日	測試者：	曾嘉震

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	59.95	30.1 QP	40.0	-9.9	3.00 H	221	38.6	-8.5
2	245.15	25.1 QP	46.0	-20.9	2.00 H	123	34.6	-9.5
3	322.38	32.1 QP	46.0	-13.9	1.00 H	274	38.9	-6.8
4	577.59	27.7 QP	46.0	-18.3	3.00 H	45	28.7	-1.0
5	740.57	30.6 QP	46.0	-15.4	2.50 H	35	28.6	2.0
6	862.04	33.1 QP	46.0	-12.9	1.00 H	32	29.7	3.4

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
4. Margin value = Emission Level – Limit value
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz.

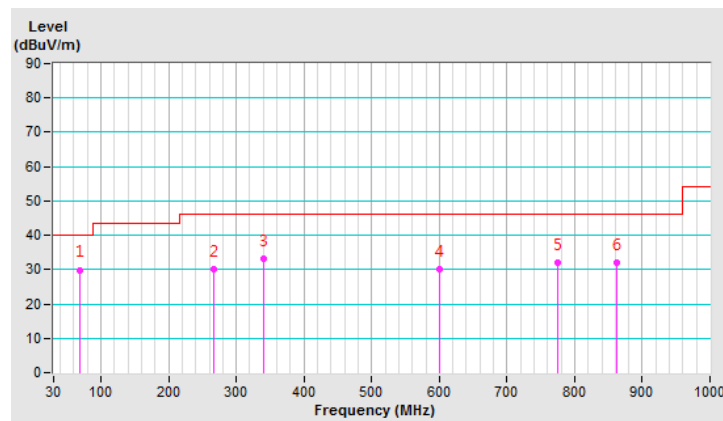


操作模式：	發射接收	調變技術：	DSSS
基本波頻率：	CH 6：2437 MHz	測試儀器：	(QP) RB=VB=120kHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	106 年 11 月 30 日	測試者：	曾嘉震

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	67.89	29.9 QP	40.0	-10.1	2.50 V	214	39.4	-9.5
2	266.31	30.1 QP	46.0	-15.9	1.00 V	61	38.8	-8.7
3	341.29	33.2 QP	46.0	-12.8	1.50 V	189	39.5	-6.3
4	600.15	30.2 QP	46.0	-15.8	2.50 V	24	30.3	-0.1
5	774.59	31.9 QP	46.0	-14.1	1.50 V	198	29.7	2.2
6	861.53	31.9 QP	46.0	-14.1	1.00 V	32	28.5	3.4

REMARKS:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
4. Margin value = Emission Level – Limit value
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz.



4.7 量測結果判定

依據測試數據結果，符合低功率射頻電機技術規範之要求。

4.8 配置照片

請參照 Test Setup Photos

5 電源線傳導干擾之量測

5.1 適用標準

請見本報告 3.1 節第 1 項的規定。

5.2 量測方法

將待測物置於 0.8 米高的非金屬桌面，使其操作在工作狀態，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。

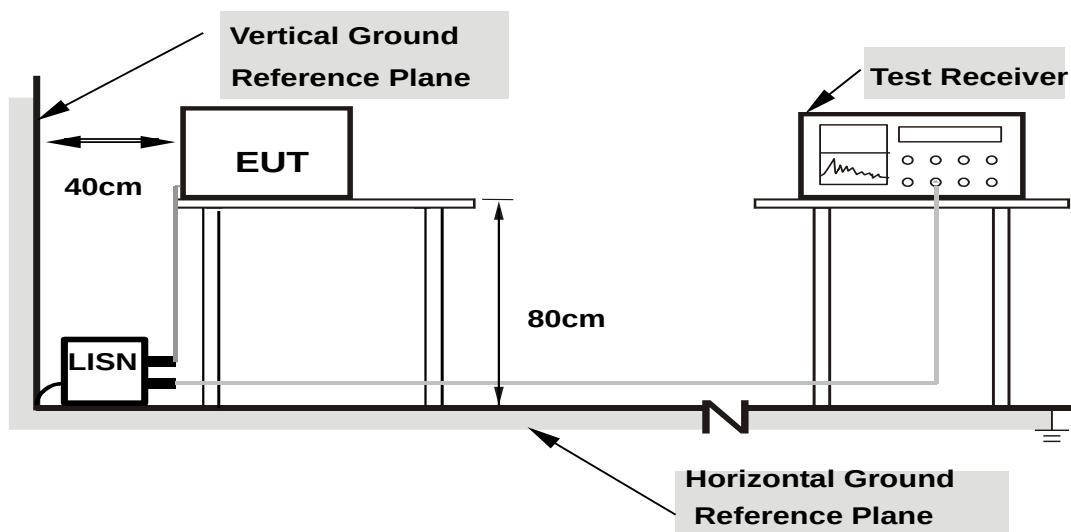
5.3 量測儀器

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver R&S	ESCS 30	847124/029	Nov. 01, 2017	Oct. 31, 2018
Line-Impedance Stabilization Network (for EUT) R&S	ESH3-Z5	848773/004	Nov. 15, 2016	Nov. 14, 2018
Line-Impedance Stabilization Network (for Peripheral) R&S	ENV216	100072	June 03, 2017	June 02, 2018
50 ohms Terminator	N/A	EMC-02	Sep. 22, 2017	Sep. 21, 2018
RF Cable	5D-FB	COCCAB-001	Sep. 29, 2017	Sep. 28, 2018
10 dB PAD Mini-Circuits	HAT-10+	CONATT-004	June 18, 2017	June 17, 2018
Software BVADT	BVADT_Cond_ V7.3.7.4	NA	NA	NA

Note:

1. The calibration interval of the above test instruments are 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in Shielded Room No. 1.
3. The measurement uncertainty is 2.98 dB, which is calculated as per the document CISPR 16-4-2 This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

5.4 測試配置



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

5.5 干擾值之計算

餘裕度 Margin(dB)= 結果值 Emission level (dBuV)-限制值 Limit value (dBuV)

電源傳導干擾電壓之計算公式如下

結果值 Emission level (dBuV)=校正因子 Correction Factor (dB)+儀器讀值 Reading value (dBuV)

其中校正因子 Correction Factor (dB)為：

饋線損失+電源阻抗模擬網路損失

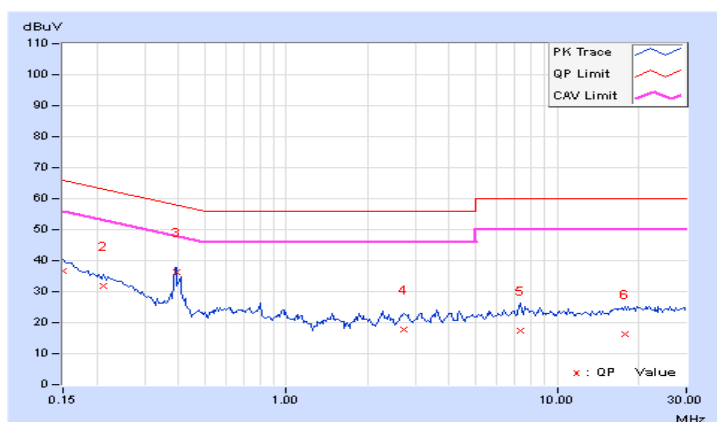
5.6 量測結果 (模式一)

操作模式	發射	測試日期	106 年 11 月 30 日
基本波頻率	CH 6: 2437MHz	量測場地溫度	24°C
調變技術	DSSS	量測場地濕度	76%RH
測試者	何欣儒		

		6 dB Bandwidth: 9kHz				PHASE: LINE (L)			
輻射頻率	校正因子	儀器讀值		結果值		限制值		餘裕度	
[MHz]	[dB]	[dB (uV)]		[dB (uV)]		[dB (uV)]		[dB]	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.15000	10.09	26.55	12.93	36.64	23.02	66.00	56.00	-29.36	-32.98
0.21250	10.07	21.77	7.76	31.84	17.83	63.11	53.11	-31.27	-35.28
0.39219	10.12	26.13	21.75	36.25	31.87	58.02	48.02	-21.77	-16.15
2.70703	10.24	7.66	5.33	17.90	15.57	56.00	46.00	-38.10	-30.43
7.31641	10.60	6.88	4.15	17.48	14.75	60.00	50.00	-42.52	-35.25
17.76953	11.42	4.70	2.35	16.12	13.77	60.00	50.00	-43.88	-36.23

NOTE:

- 1.Q.P. and AV. are abbreviations of quasi-peak and average individually.
- 2.The emission levels of other frequencies were very low against the limit.
- 3.Margin value = Emission level - Limit value
- 4.Correction factor = Insertion loss + Cable loss
- 5.Emission Level = Correction Factor + Reading Value.

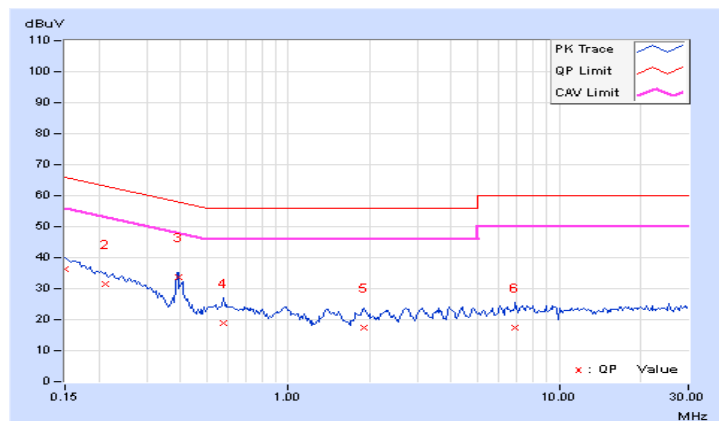


操作模式	發射	測試日期	106 年 11 月 30 日
基本波頻率	CH 6: 2437MHz	量測場地溫度	24°C
調變技術	DSSS	量測場地濕度	76%RH
測試者	何欣儒		

		6 dB Bandwidth: 9kHz				PHASE: NEUTRAL (N)			
輻射頻率	校正因子	儀器讀值		結果值		限制值		餘裕度	
[MHz]	[dB]	[dB (uV)]		[dB (uV)]		[dB (uV)]		[dB]	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.15000	10.08	26.37	12.44	36.45	22.52	66.00	56.00	-29.55	-33.48
0.21250	10.05	21.61	5.53	31.66	15.58	63.11	53.11	-31.45	-37.53
0.39219	10.12	23.55	20.52	33.67	30.64	58.02	48.02	-24.35	-17.38
0.57578	10.12	8.81	2.93	18.93	13.05	56.00	46.00	-37.07	-32.95
1.91406	10.20	7.34	3.84	17.54	14.04	56.00	46.00	-38.46	-31.96
6.91406	10.48	6.98	4.67	17.46	15.15	60.00	50.00	-42.54	-34.85

NOTE:

- 1.Q.P. and AV. are abbreviations of quasi-peak and average individually.
- 2.The emission levels of other frequencies were very low against the limit.
- 3.Margin value = Emission level - Limit value
- 4.Correction factor = Insertion loss + Cable loss
- 5.Emission Level = Correction Factor + Reading Value.



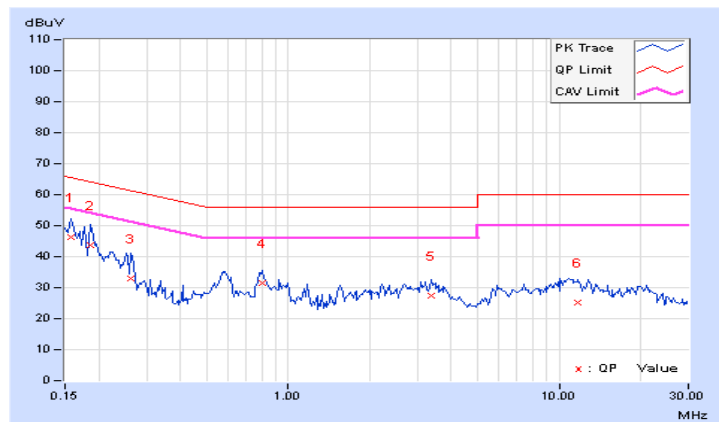
5.7 量測結果 (模式二)

操作模式	發射	測試日期	106 年 11 月 30 日
基本波頻率	CH 6: 2437MHz	量測場地溫度	24°C
調變技術	DSSS	量測場地濕度	76%RH
測試者	何欣儒		

		6 dB Bandwidth: 9kHz				PHASE: LINE (L)			
輻射頻率	校正因子	儀器讀值		結果值		限制值		餘裕度	
[MHz]	[dB]	[dB (uV)]		[dB (uV)]		[dB (uV)]		[dB]	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.15781	10.07	36.06	21.67	46.13	31.74	65.58	55.58	-19.45	-23.84
0.18516	10.06	33.62	20.20	43.68	30.26	64.25	54.25	-20.57	-23.99
0.26328	10.08	22.94	9.47	33.02	19.55	61.33	51.33	-28.31	-31.78
0.80625	10.14	21.18	9.26	31.32	19.40	56.00	46.00	-24.68	-26.60
3.37891	10.24	17.20	12.01	27.44	22.25	56.00	46.00	-28.56	-23.75
11.74609	10.74	14.49	9.23	25.23	19.97	60.00	50.00	-34.77	-30.03

NOTE:

- 1.Q.P. and AV. are abbreviations of quasi-peak and average individually.
- 2.The emission levels of other frequencies were very low against the limit.
- 3.Margin value = Emission level - Limit value
- 4.Correction factor = Insertion loss + Cable loss
- 5.Emission Level = Correction Factor + Reading Value.

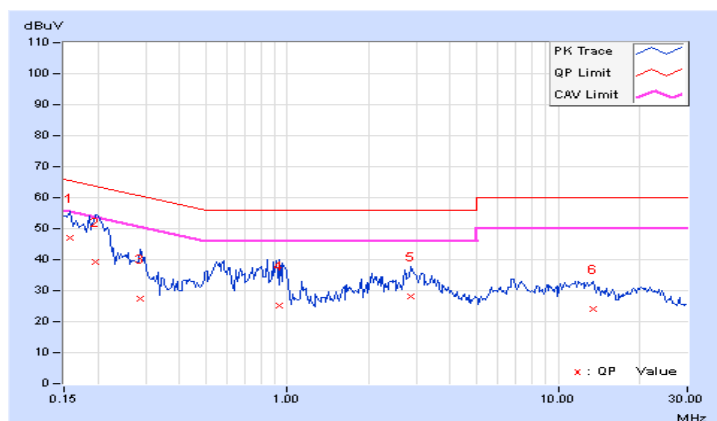


操作模式	發射	測試日期	106 年 11 月 30 日
基本波頻率	CH 6: 2437MHz	量測場地溫度	24°C
調變技術	DSSS	量測場地濕度	76%RH
測試者	何欣儒		

		6 dB Bandwidth: 9kHz				PHASE: NEUTRAL (N)			
輻射頻率	校正因子	儀器讀值		結果值		限制值		餘裕度	
[MHz]	[dB]	[dB (uV)]		[dB (uV)]		[dB (uV)]		[dB]	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.15781	10.06	37.13	22.67	47.19	32.73	65.58	55.58	-18.39	-22.85
0.19687	10.03	29.41	18.31	39.44	28.34	63.74	53.74	-24.30	-25.40
0.28672	10.06	17.29	8.47	27.35	18.53	60.62	50.62	-33.27	-32.09
0.93906	10.12	15.21	9.77	25.33	19.89	56.00	46.00	-30.67	-26.11
2.84375	10.19	18.10	12.79	28.29	22.98	56.00	46.00	-27.71	-23.02
13.49609	10.73	13.20	6.68	23.93	17.41	60.00	50.00	-36.07	-32.59

NOTE:

- 1.Q.P. and AV. are abbreviations of quasi-peak and average individually.
- 2.The emission levels of other frequencies were very low against the limit.
- 3.Margin value = Emission level - Limit value
- 4.Correction factor = Insertion loss + Cable loss
- 5.Emission Level = Correction Factor + Reading Value.



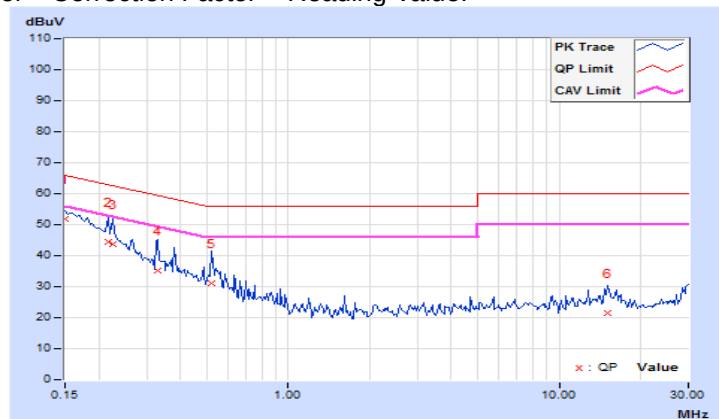
5.8 量測結果 (模式三)

操作模式	發射	測試日期	107 年 03 月 30 日
基本波頻率	CH 6: 2437MHz	量測場地溫度	25°C
調變技術	DSSS	量測場地濕度	75%RH
測試者	何欣儒		

		6 dB Bandwidth: 9kHz				PHASE: LINE (L)			
輻射頻率	校正因子	儀器讀值		結果值		限制值		餘裕度	
[MHz]	[dB]	[dB (uV)]		[dB (uV)]		[dB (uV)]		[dB]	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.15000	10.05	41.67	27.56	51.72	37.61	66.00	56.00	-14.28	-18.39
0.21641	10.07	34.27	20.93	44.34	31.00	62.96	52.96	-18.62	-21.96
0.22422	10.08	33.62	20.12	43.70	30.20	62.66	52.66	-18.96	-22.46
0.32969	10.10	25.05	13.45	35.15	23.55	59.46	49.46	-24.31	-25.91
0.52109	10.13	20.91	12.65	31.04	22.78	56.00	46.00	-24.96	-23.22
15.11328	11.07	10.24	3.36	21.31	14.43	60.00	50.00	-38.69	-35.57

NOTE:

- 1.Q.P. and AV. are abbreviations of quasi-peak and average individually.
- 2.The emission levels of other frequencies were very low against the limit.
- 3.Margin value = Emission level - Limit value
- 4.Correction factor = Insertion loss + Cable loss
- 5.Emission Level = Correction Factor + Reading Value.

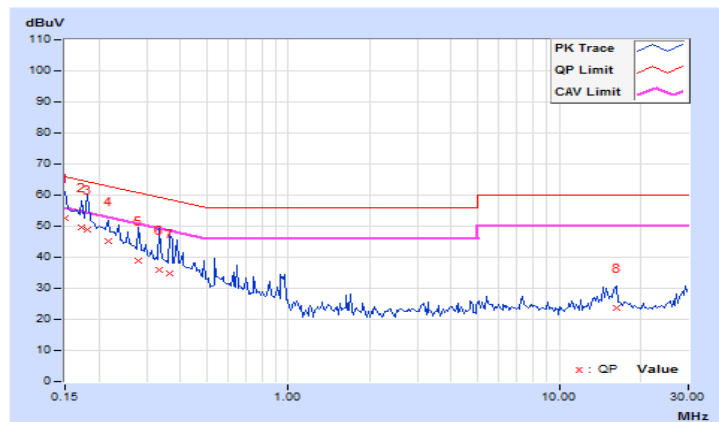


操作模式	發射	測試日期	107 年 03 月 30 日
基本波頻率	CH 6: 2437MHz	量測場地溫度	25°C
調變技術	DSSS	量測場地濕度	75%RH
測試者	何欣儒		

		6 dB Bandwidth: 9kHz				PHASE: NEUTRAL (N)			
輻射頻率	校正因子	儀器讀值		結果值		限制值		餘裕度	
[MHz]	[dB]	[dB (uV)]		[dB (uV)]		[dB (uV)]		[dB]	
		Q.P.	AV.	Q.P.	AV.	Q.P.	AV.	Q.P.	AV.
0.15000	9.95	42.71	27.85	52.66	37.80	66.00	56.00	-13.34	-18.20
0.17344	9.96	39.81	25.15	49.77	35.11	64.79	54.79	-15.02	-19.68
0.18125	9.96	38.94	24.44	48.90	34.40	64.43	54.43	-15.53	-20.03
0.21641	9.97	35.12	20.34	45.09	30.31	62.96	52.96	-17.87	-22.65
0.27891	9.99	28.98	14.48	38.97	24.47	60.85	50.85	-21.88	-26.38
0.33359	10.00	25.86	11.79	35.86	21.79	59.36	49.36	-23.50	-27.57
0.36484	10.01	24.97	10.61	34.98	20.62	58.62	48.62	-23.64	-28.00
16.20703	10.94	12.94	5.14	23.88	16.08	60.00	50.00	-36.12	-33.92

NOTE:

- 1.Q.P. and AV. are abbreviations of quasi-peak and average individually.
- 2.The emission levels of other frequencies were very low against the limit.
- 3.Margin value = Emission level - Limit value
- 4.Correction factor = Insertion loss + Cable loss
- 5.Emission Level = Correction Factor + Reading Value.



5.9 量測結果判定

依據測試數據結果，符合低功率射頻電機技術規範之要求。

5.10 配置照片

請參照 Test Setup Photos

6 6 dB 頻寬之要求

6.1 適用標準

請見本報告 3.1 節第 5 項(I)的規定。

6.2 量測方法

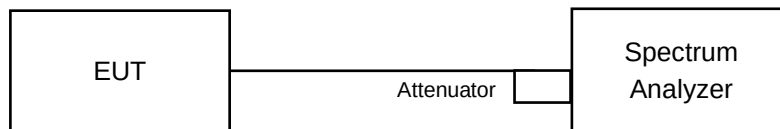
- 將待測物輸出經由衰減器接到頻譜分析儀上。
- 設定待測物處於連續發射狀態。
- 計算最大輸出功率峰值減 6dB 的最大頻率範圍。

6.3 量測儀器

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSV40	100964	July 1, 2017	June 30, 2018

NOTE: 1. The test was performed in Oven room 2.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

6.4 測試配置



6.5 量測結果 (模式一)

操作模式	發射	測試日期	106 年 11 月 30 日
量測場地溫度	25°C	量測場地濕度	60%RH
測試者	陳高逸		

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	8.10	0.5	Pass
6	2437	9.07	0.5	Pass
11	2462	9.55	0.5	Pass

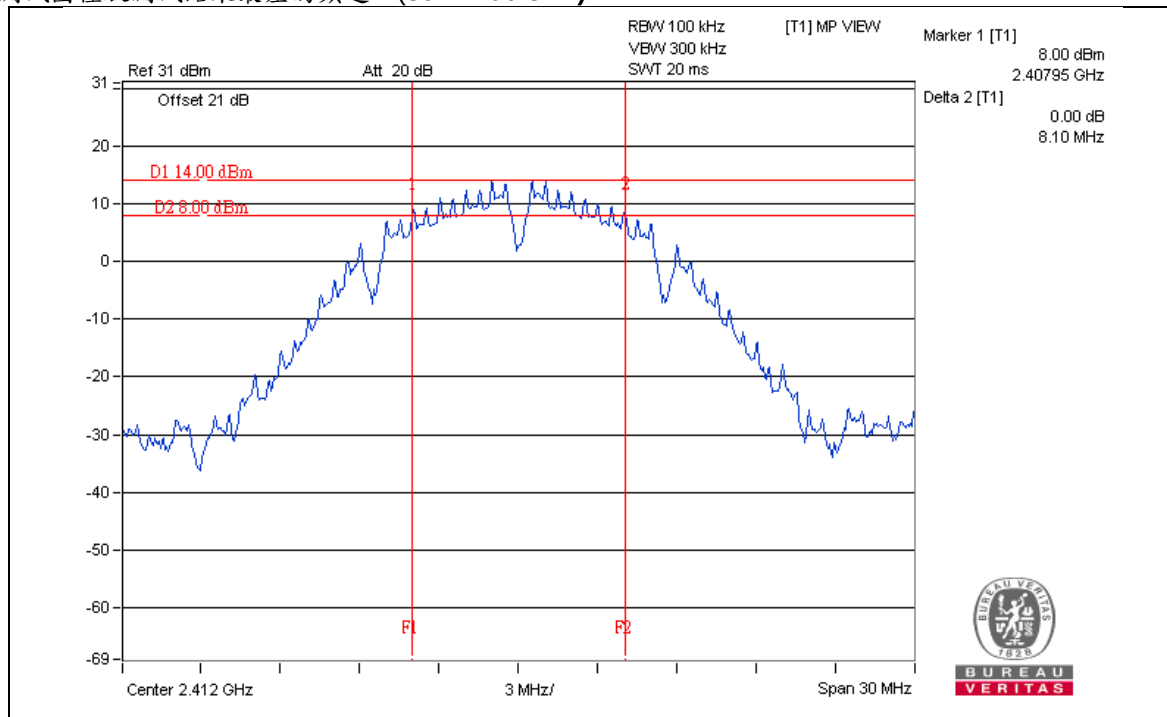
802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	16.50	0.5	Pass
6	2437	16.48	0.5	Pass
11	2462	16.57	0.5	Pass

802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	17.69	0.5	Pass
6	2437	17.72	0.5	Pass
11	2462	17.73	0.5	Pass

**此測試圖僅放測試結果最差的頻道。(802.11b / CH1)



6.6 量測結果判定

依據測試數據結果，符合低功率射頻電機技術規範之要求。

7 傳導輸出功率之量測

7.1 適用標準

請見本報告 3.1 節第 6 項(I)及 4 項(I)的規定。

7.2 量測方法

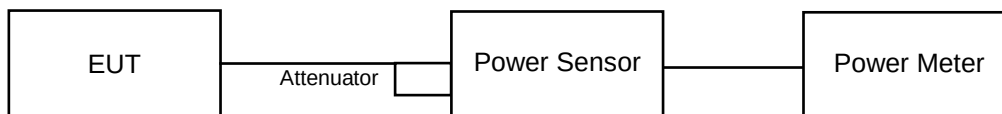
- 將待測物輸出經由衰減器接到功率計上。
- 設定待測物處於連續發射狀態。
- 計算其最大輸出功率。

7.3 量測儀器

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Power meter Anritsu	ML2495A	1014008	May 11, 2017	May 10, 2018
Power sensor Anritsu	MA2411B	0917122	May 11, 2017	May 10, 2018

NOTE: 1. The test was performed in Oven room 2.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

7.4 測試配置



7.5 量測結果 (模式一)

操作模式	發射	測試日期	106 年 11 月 30 日
量測場地溫度	25°C	量測場地濕度	60%RH
測試者	陳高逸		

FOR PEAK POWER

802.11b

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
1	2412	230.144	23.62	30	Pass
6	2437	268.534	24.29	30	Pass
11	2462	238.781	23.78	30	Pass

802.11g

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
1	2412	218.776	23.40	30	Pass
6	2437	295.801	24.71	30	Pass
11	2462	193.642	22.87	30	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
1	2412	172.982	22.38	30	Pass
6	2437	314.775	24.98	30	Pass
11	2462	157.761	21.98	30	Pass

7.6 量測結果判定

依據測試數據結果，符合低功率射頻電機技術規範之要求。

8 功率頻譜密度之量測

8.1 適用標準

請見本報告 3.1 節第 7 項(I)的規定。

8.2 量測方法

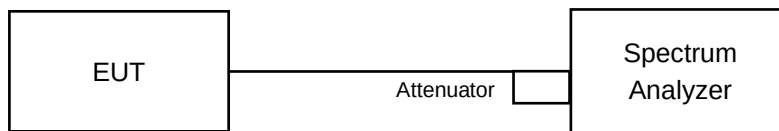
- 將待測物之天線埠連接至測試儀器。
- 設定解析頻寬為 3 kHz，視訊頻寬為 10kHz，掃描時間設為自動，直至掃描信號穩定。
- 使用峰值功能鍵,並找到最大的峰值準位。

8.3 量測儀器

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSV40	100964	July 1, 2017	June 30, 2018

NOTE: 1. The test was performed in Oven room 2.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

8.4 測試配置



8.5 量測結果 (模式一)

操作模式	發射	測試日期	106 年 11 月 30 日
量測場地溫度	25°C	量測場地濕度	60%RH
測試者	陳高逸		

802.11b

Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-1.07	8	Pass
6	2437	0.15	8	Pass
11	2462	-0.68	8	Pass

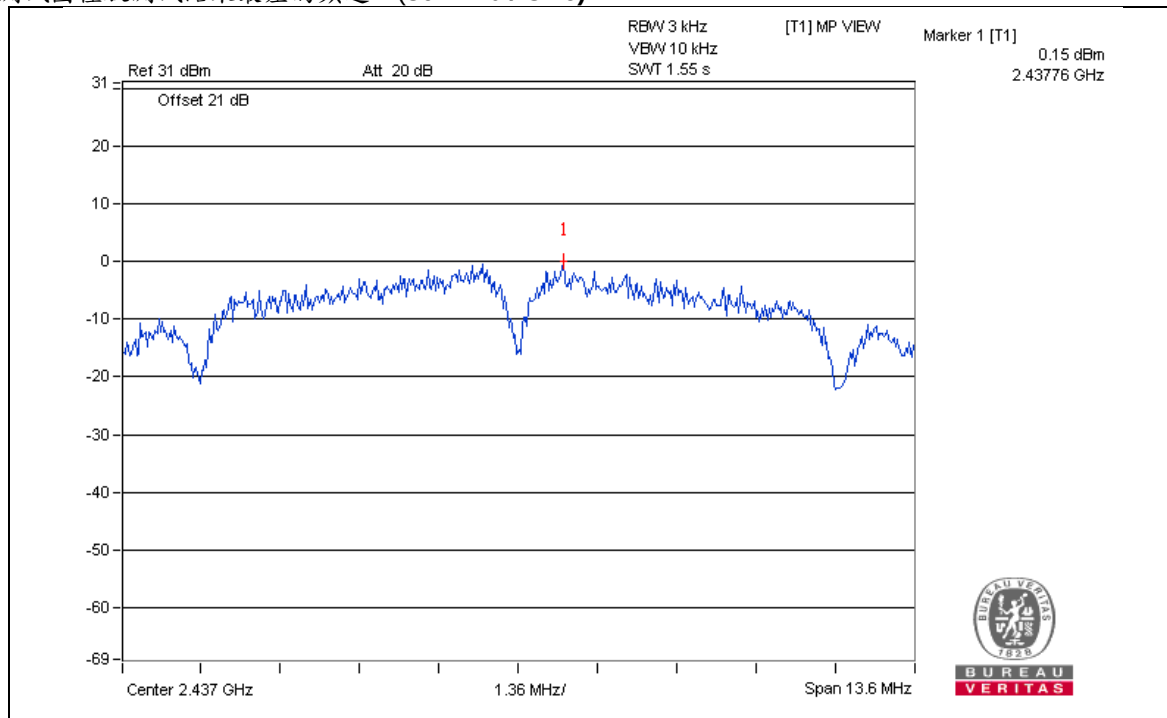
802.11g

Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-8.30	8	Pass
6	2437	-3.92	8	Pass
11	2462	-11.16	8	Pass

802.11n (HT20)

Channel	Freq. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-10.07	8	Pass
6	2437	-4.72	8	Pass
11	2462	-11.12	8	Pass

**此測試圖僅放測試結果最差的頻道。(802.11b / CH6)



8.6 量測結果判定

依據測試數據結果，符合低功率射頻電機技術規範之要求。

9 檢測實驗室基本資料

立德國際商品試驗有限公司桃園分公司提供產業界最佳的檢測以及諮詢服務。
本公司為 ISO/IEC 17025 認可實驗室。

如您有任何問題或建議，請與下列實驗室聯絡：

林口 EMC / RF 實驗室：

Tel: 886-2-26052180

Fax: 886-2-26051924

新竹 EMC / RF 及通訊實驗室：

Tel: 886-3-6668565

Fax: 886-3-6668323

華亞 EMC / RF / Safety 實驗室：

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

您也可以在我们的網站內找到各實驗室的地圖。

---END---