

低功率射頻電機技術規範測試報告 (WLAN)

報告編號:

RT181121C36

申請者

汎德股份有限公司

產品名稱

行車紀錄器 (前鏡頭)

型號

66 21 2 457 032

系列型號

66 21 2 457 035

製造廠商

Mobile Appliance Inc.

商標或廠牌

BMW, MINI

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 108 年 2 月 25 日

報告簽署人簽章:

陳瓊美



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報告發行紀錄

Issue No.	Description	Date Issued
RT181121C36	Original release.	108 年 2 月 25 日

證 明 書

產 品 名 稱：行車紀錄器（前鏡頭）
商 標：BMW, MINI
型 號：66 21 2 457 032
系 列 型 號：66 21 2 457 035
申 請 者：汎德股份有限公司
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:66 21 2 457 032)，
收件日期 107 年 11 月 21 日，於 108 年 1 月 30 日至 31 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：

黃健琳

， 日 期：

108 年 2 月 25 日

黃健琳 / 專員

審 核 者：

陳瓊美

， 日 期：

108 年 2 月 25 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： 汎德股份有限公司

製造廠商： Mobile Appliance Inc.

申請廠商地址： 台北市內湖區行愛路 100 號 7 樓

廠牌： BMW, MINI

產品名稱： 行車紀錄器（前鏡頭）

型號： 66 21 2 457 032

系列型號： 66 21 2 457 035

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	註
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

註：此待測設備之電源供應僅使用車用電源，不會使用市電電源，故免測傳導干擾測試。

備註：量測結果之判定不考慮量測不確定度的貢獻。

2 一般敘述

2.1 待測設備 (WLAN)

產品名稱：	行車紀錄器（前鏡頭）
型號：	66 21 2 457 032
系列型號：	66 21 2 457 035
額定電源：	11~18Vdc
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 150Mbps
載波頻率：	2.412 ~ 2.462GHz
頻道數：	802.11b, 802.11g, 802.11n (HT20): 11 802.11n (HT40): 7
發射功率：	18.38 dBm
天線種類：	見註
電源線類別：	NA
信號線類別：	NA
配件：	T-flash card reader USB 2.0 x 1 Micro SD card x 1

註：

1. 同時發射條件如下

Condition	Technology	
1	WLAN	Radar (24GHz)

Note: The emission of the simultaneous operation has been evaluated and no non-compliance was found.

2. 此待測設備依銷售需求而設有下列型號及廠牌,詳列如下：

產品名稱	廠牌	型號	差異說明
行車紀錄器（前鏡頭）	BMW	66 21 2 457 032	1. 市場區隔
	MINI	66 21 2 457 035	2. 含有 WiFi, Radar (24GHz) 功能

From the above models, model: **66 21 2 457 032** was selected as representative model for the test and its data was recorded in this report.

3. 此待測設備天線規格,詳列如下：

WLAN					
Brand	Model	Antenna Net Gain (dBi)	Frequency Range (GHz)	Antenna Type	Connector Type
Partron	SDBTPTR3015	1.99	2.4~2.4835	Chip Antenna	NA
Radar (24GHz)					
Brand	Model	Antenna Net Gain (dBi)	Frequency Range (GHz)	Antenna Type	Connector Type
InnoSenT	IPM-365	9.5	24~24.25	planar microstrip antenna	NA

4. 此待測設備於輻射場強量測項目，以下列模式進行評估：

Pre-test 模式	描述
A	EUT (Front camera): X-plane
B	EUT (Front camera): Y-plane
C	EUT (Front camera): Z-plane

註：於場強輻射以模式 C 具較大干擾值，故以此擺放方式進行最終量測，並將測試結果紀錄。

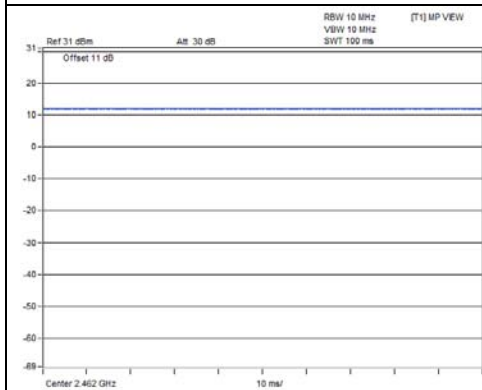
5. 此報告中，場強輻射量測經過評估後以下列測試模式進行最終量測。

量測項目	發射	接收
2.412 ~ 2.462GHz		
1GHz 以上量測	802.11b: Ch 1, 6, 11 802.11g: Ch 1, 6, 11 802.11n (HT20): Ch 1, 6, 11 802.11n (HT40): Ch 3, 6, 9	Ch 1, 6, 11
其它不必要之訊號	802.11n (HT40): Ch 3	Ch 3

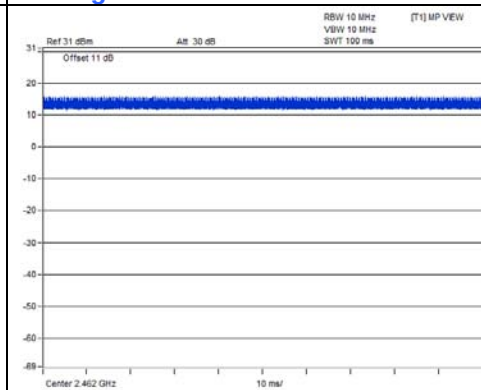
6. Duty cycle of test signal

Duty cycle of test signal is 100 %, duty factor is not required.

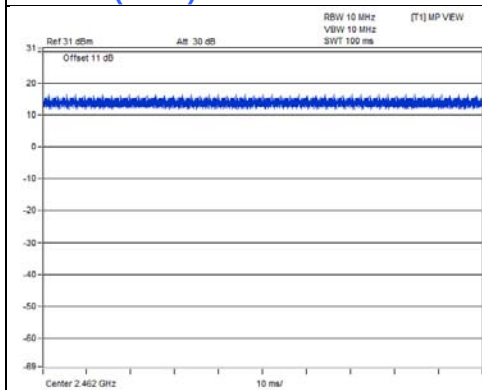
802.11b



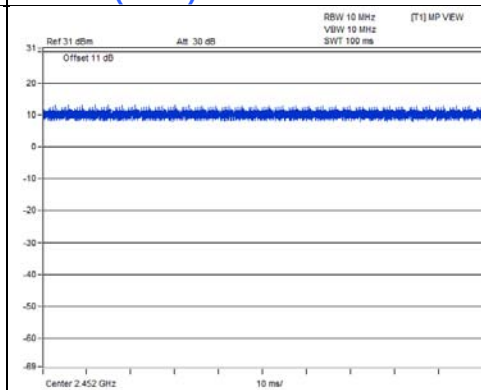
802.11g



802.11n (HT20)



802.11n (HT40)



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		

802.11n (HT40):

頻道	對應頻率 (MHz)	頻道	對應頻率 (MHz)
03	2422	07	2442
04	2427	08	2447
05	2432	09	2452
06	2437		

詳細之規格請參考使用說明書，產品的照片請參照 BV 編號: 181121C36-2

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。

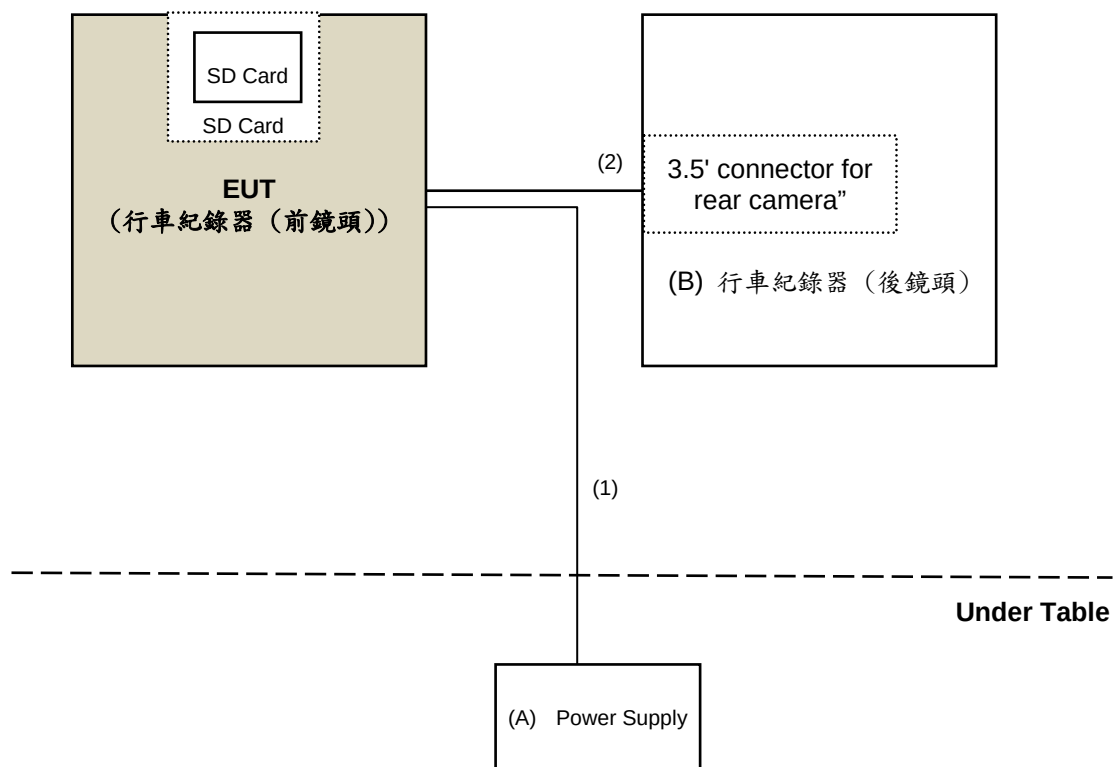
No.	Product	Brand	Model No.	Serial No.	FCC ID	Remark
A	Power Supply	GOOD WILL INSTRUMENT CO., LTD.	GPC-3030D	7700087	NA	Provided by Lab
B	行車紀錄器 (後鏡頭)	BMW	66 21 2 457 032	NA	NA	Supplied by client

NOTE:

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

No.	Cable	Qty.	Length (m)	Shielded (Yes/ No)	Cores (Number)	Remark
1	DC Cable	1	3	No	0	Supplied by client
2	Signal Cable	1	8	No	0	Supplied by client

2.3 測試架構圖



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。此外，落於 2.7 禁用頻段之輻射發射，應符合 2.8 之規定。

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

(I) 操作於 2.4000~2.4835 GHz band:

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 Agilent	N9038A	MY50010156	July 12, 2018	July 11, 2019
Pre-Amplifier EMCI	EMC001340	980142	Jan. 25, 2019	Jan. 24, 2020
Loop Antenna Electro-Metrics	EM-6879	269	Sep. 07, 2018	Sep. 06, 2019
RF Cable	NA	LOOPCAB-001	Jan. 14, 2019	Jan. 13, 2020
RF Cable	NA	LOOPCAB-002	Jan. 14, 2019	Jan. 13, 2020
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-05	May 05, 2018	May 04, 2019
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Nov. 22, 2018	Nov. 21, 2019
RF Cable	8D	966-3-1	Mar. 20, 2018	Mar. 19, 2019
RF Cable	8D	966-3-2	Mar. 20, 2018	Mar. 19, 2019
RF Cable	8D	966-3-3	Mar. 20, 2018	Mar. 19, 2019
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-3-01	Sep. 27, 2018	Sep. 26, 2019
Horn Antenna SCHWARZBECK	BBHA9120-D	9120D-406	Nov. 25, 2018	Nov. 24, 2019
Pre-Amplifier EMCI	EMC12630SE	980384	Jan. 28, 2019	Jan. 27, 2020
RF Cable	EMC104-SM-SM-1200	160922	Jan. 28, 2019	Jan. 27, 2020
RF Cable	EMC104-SM-SM-2000	180601	June 12, 2018	June 11, 2019
RF Cable	EMC104-SM-SM-6000	180602	June 12, 2018	June 11, 2019
Spectrum Analyzer Keysight	N9030A	MY54490679	July 23, 2018	July 22, 2019
Pre-Amplifier EMCI	EMC184045SE	980387	Jan. 28, 2019	Jan. 27, 2020
Horn Antenna SCHWARZBECK	BBHA 9170	BBHA9170519	Nov. 25, 2018	Nov. 24, 2019
RF Cable	EMC102-KM-KM-1200	160924	Jan. 28, 2019	Jan. 27, 2020
RF Cable	EMC102-KM-KM-1200	160925	Jan. 28, 2019	Jan. 27, 2020
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA

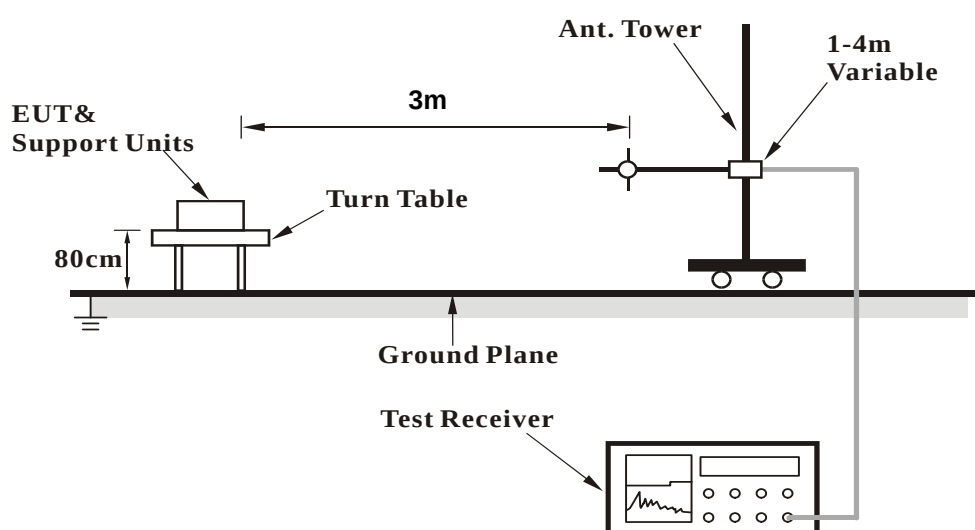
Note:

- The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
- The test was performed in 966 Chamber No. 3.
- The CANADA Site Registration No. is 20331-1
- Loop antenna was used for all emissions below 30 MHz.
- 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.

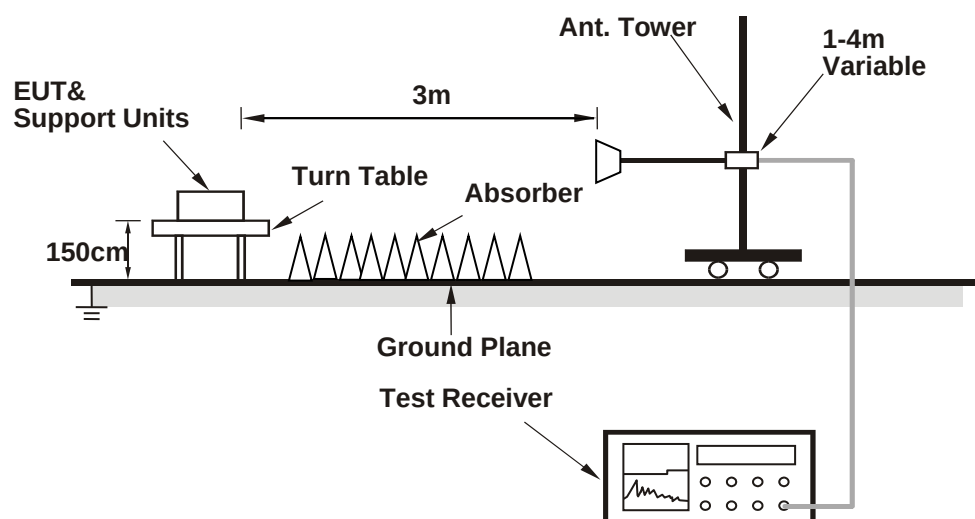
Measurement	Frequency	Uncertainty
Radiated emissions	30MHz ~ 1GHz	5.1dB
	1GHz ~6GHz	5.1dB
	6GHz ~ 18GHz	5.0dB
	18GHz ~ 40GHz	5.2dB

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

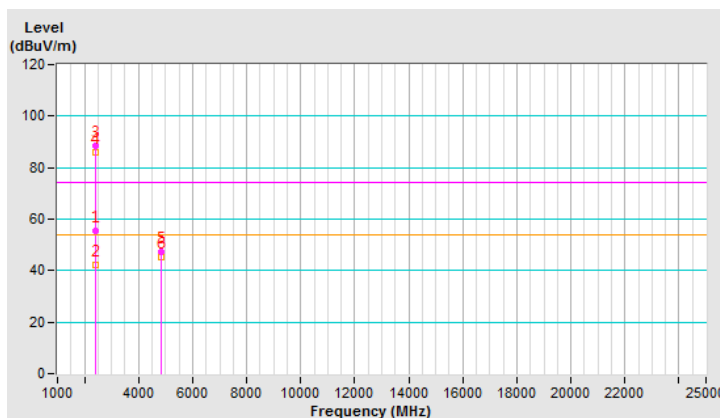
802.11b

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：	22°C	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	55.6 PK	74.0	-18.4	1.12 H	55	57.7	-2.1
2	2390.00	42.1 AV	54.0	-11.9	1.12 H	55	44.2	-2.1
3	*2412.00	88.4 PK			1.12 H	55	90.5	-2.1
4	*2412.00	86.1 AV			1.12 H	55	88.2	-2.1
5	4824.00	47.2 PK	74.0	-26.8	1.60 H	360	45.1	2.1
6	4824.00	45.2 AV	54.0	-8.8	1.60 H	360	43.1	2.1
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.

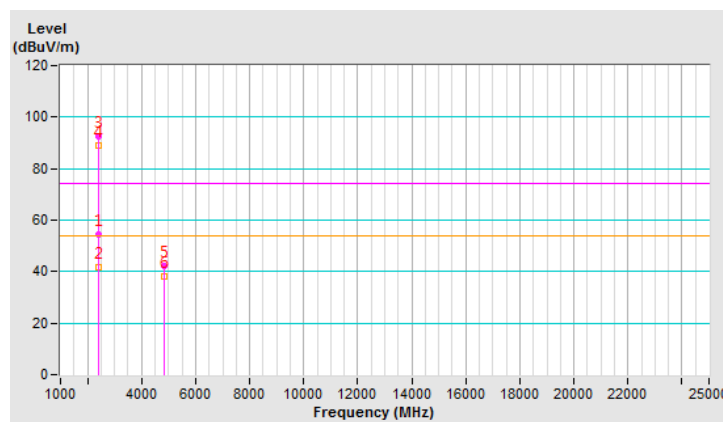


操作模式：	發射	調變技術：	DSSS
基本波頻率：	CH 1：2412 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	22℃	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	54.6 PK	74.0	-19.4	3.05 V	99	56.7	-2.1
2	2390.00	41.8 AV	54.0	-12.2	3.05 V	99	43.9	-2.1
3	*2412.00	92.7 PK			3.05 V	99	94.8	-2.1
4	*2412.00	89.2 AV			3.05 V	99	91.3	-2.1
5	4824.00	42.3 PK	74.0	-31.7	1.82 V	265	40.2	2.1
6	4824.00	38.0 AV	54.0	-16.0	1.82 V	265	35.9	2.1
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.

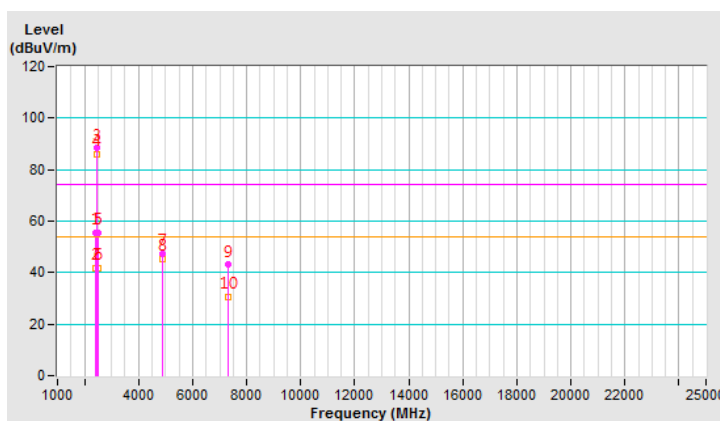


操作模式：	發射	調變技術：	DSSS
基本波頻率：	CH 6：2437 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	22°C	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	55.5 PK	74.0	-18.5	1.22 H	41	57.6	-2.1
2	2390.00	41.8 AV	54.0	-12.2	1.22 H	41	43.9	-2.1
3	*2437.00	88.3 PK			1.22 H	41	90.6	-2.3
4	*2437.00	86.0 AV			1.22 H	41	88.3	-2.3
5	2483.50	55.6 PK	74.0	-18.4	1.22 H	41	58.0	-2.4
6	2483.50	41.9 AV	54.0	-12.1	1.22 H	41	44.3	-2.4
7	4874.00	47.2 PK	74.0	-26.8	2.88 H	351	45.1	2.1
8	4874.00	45.5 AV	54.0	-8.5	2.88 H	351	43.4	2.1
9	7311.00	43.0 PK	74.0	-31.0	1.49 H	3	35.0	8.0
10	7311.00	30.5 AV	54.0	-23.5	1.49 H	3	22.5	8.0
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.

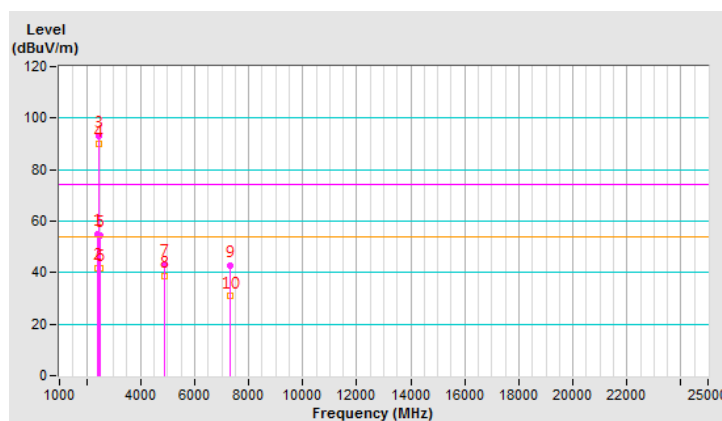


操作模式：	發射	調變技術：	DSSS
基本波頻率：	CH 6：2437 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	22°C	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	55.1 PK	74.0	-18.9	1.50 V	137	57.2	-2.1
2	2390.00	41.6 AV	54.0	-12.4	1.50 V	137	43.7	-2.1
3	*2437.00	93.2 PK			1.50 V	137	95.5	-2.3
4	*2437.00	89.8 AV			1.50 V	137	92.1	-2.3
5	2483.50	54.5 PK	74.0	-19.5	1.50 V	137	56.9	-2.4
6	2483.50	41.5 AV	54.0	-12.5	1.50 V	137	43.9	-2.4
7	4874.00	43.1 PK	74.0	-30.9	1.86 V	256	41.0	2.1
8	4874.00	38.5 AV	54.0	-15.5	1.86 V	256	36.4	2.1
9	7311.00	42.6 PK	74.0	-31.4	1.53 V	31	34.6	8.0
10	7311.00	30.8 AV	54.0	-23.2	1.53 V	31	22.8	8.0
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.

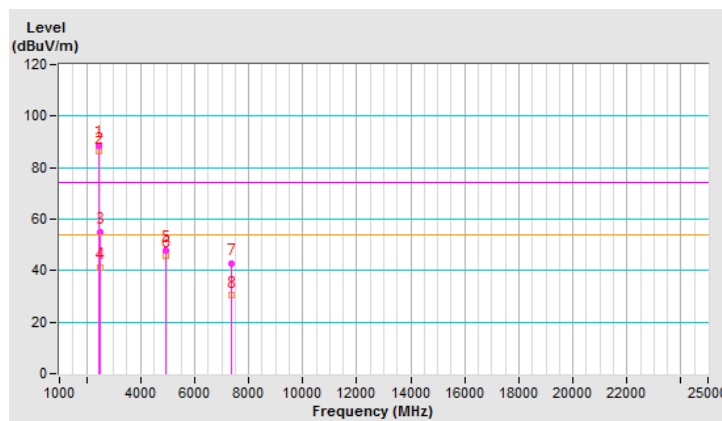


操作模式：	發射	調變技術：	DSSS
基本波頻率：	CH 11：2462 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	22°C	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	88.7 PK			1.16 H	44	91.0	-2.3
2	*2462.00	86.2 AV			1.16 H	44	88.5	-2.3
3	2483.50	55.0 PK	74.0	-19.0	1.16 H	44	57.4	-2.4
4	2483.50	41.3 AV	54.0	-12.7	1.16 H	44	43.7	-2.4
5	4924.00	47.8 PK	74.0	-26.2	2.94 H	360	45.5	2.3
6	4924.00	45.9 AV	54.0	-8.1	2.94 H	360	43.6	2.3
7	7386.00	42.8 PK	74.0	-31.2	1.50 H	2	34.7	8.1
8	7386.00	30.3 AV	54.0	-23.7	1.50 H	2	22.2	8.1
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.

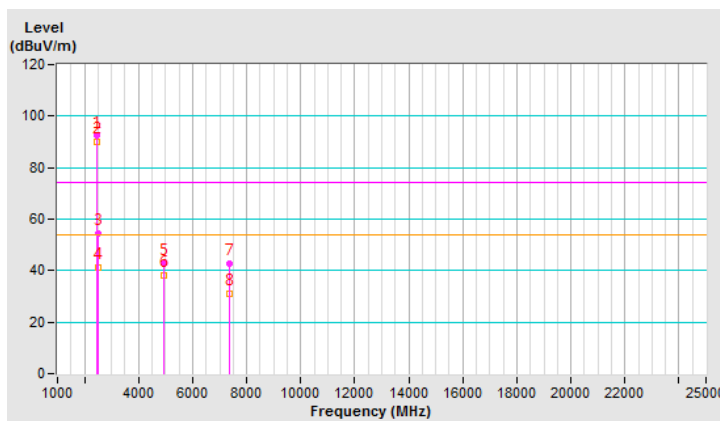


操作模式：	發射	調變技術：	DSSS
基本波頻率：	CH 11：2462 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	22℃	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	92.3 PK			1.52 V	135	94.6	-2.3
2	*2462.00	90.1 AV			1.52 V	135	92.4	-2.3
3	2483.50	54.6 PK	74.0	-19.4	1.52 V	135	57.0	-2.4
4	2483.50	41.4 AV	54.0	-12.6	1.52 V	135	43.8	-2.4
5	4924.00	42.6 PK	74.0	-31.4	1.86 V	264	40.3	2.3
6	4924.00	38.1 AV	54.0	-15.9	1.86 V	264	35.8	2.3
7	7386.00	42.9 PK	74.0	-31.1	1.50 V	42	34.8	8.1
8	7386.00	30.9 AV	54.0	-23.1	1.50 V	42	22.8	8.1
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.



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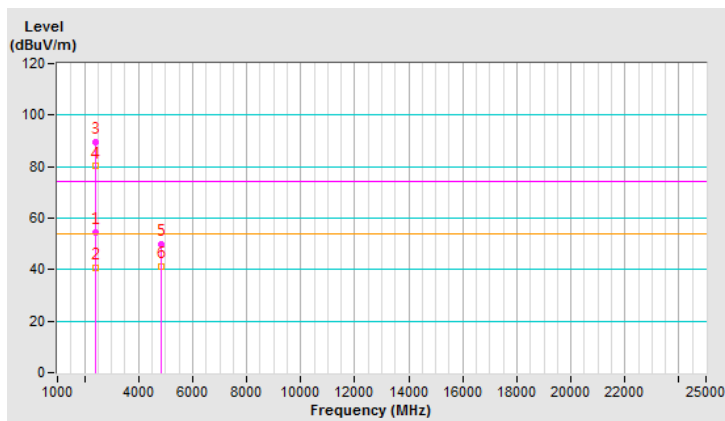
操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 1：2412 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	22°C	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	54.6 PK	74.0	-19.4	1.10 H	46	56.7	-2.1
2	2390.00	40.8 AV	54.0	-13.2	1.10 H	46	42.9	-2.1
3	*2412.00	89.5 PK			1.10 H	46	91.6	-2.1
4	*2412.00	80.1 AV			1.10 H	46	82.2	-2.1
5	4824.00	49.7 PK	74.0	-24.3	2.92 H	360	47.6	2.1
6	4824.00	41.2 AV	54.0	-12.8	2.92 H	360	39.1	2.1
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.

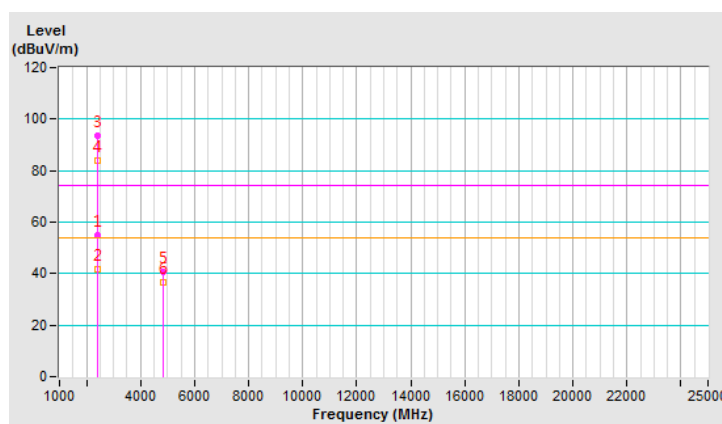


操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 1：2412 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	22℃	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	54.9 PK	74.0	-19.1	2.96 V	71	57.0	-2.1
2	2390.00	41.7 AV	54.0	-12.3	2.96 V	71	43.8	-2.1
3	*2412.00	93.5 PK			2.96 V	71	95.6	-2.1
4	*2412.00	83.8 AV			2.96 V	71	85.9	-2.1
5	4824.00	40.6 PK	74.0	-33.4	1.61 V	134	38.5	2.1
6	4824.00	36.5 AV	54.0	-17.5	1.61 V	134	34.4	2.1
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.

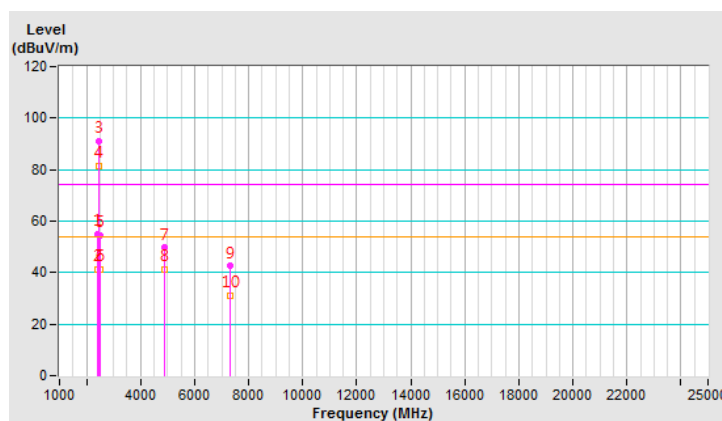


操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 6：2437 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	22°C	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	54.9 PK	74.0	-19.1	1.13 H	21	57.0	-2.1
2	2390.00	41.2 AV	54.0	-12.8	1.13 H	21	43.3	-2.1
3	*2437.00	91.0 PK			1.13 H	21	93.3	-2.3
4	*2437.00	81.6 AV			1.13 H	21	83.9	-2.3
5	2483.50	54.4 PK	74.0	-19.6	1.13 H	21	56.8	-2.4
6	2483.50	41.2 AV	54.0	-12.8	1.13 H	21	43.6	-2.4
7	4874.00	49.6 PK	74.0	-24.4	2.94 H	360	47.5	2.1
8	4874.00	41.2 AV	54.0	-12.8	2.94 H	360	39.1	2.1
9	7311.00	42.5 PK	74.0	-31.5	1.50 H	8	34.5	8.0
10	7311.00	30.9 AV	54.0	-23.1	1.50 H	8	22.9	8.0
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.

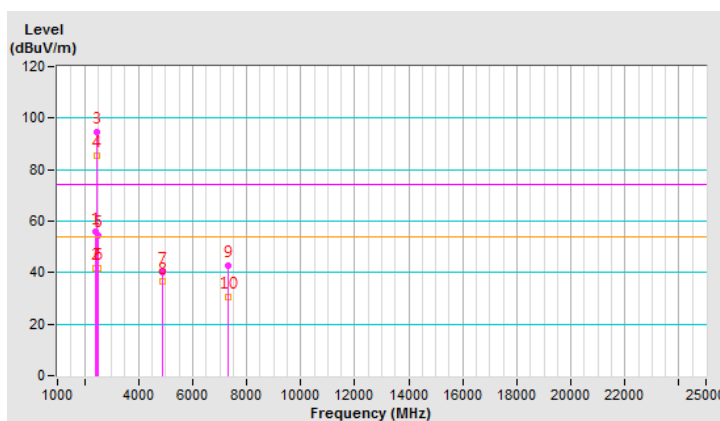


操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 6：2437 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	22°C	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	55.7 PK	74.0	-18.3	2.18 V	104	57.8	-2.1
2	2390.00	41.8 AV	54.0	-12.2	2.18 V	104	43.9	-2.1
3	*2437.00	94.8 PK			2.18 V	104	97.1	-2.3
4	*2437.00	85.3 AV			2.18 V	104	87.6	-2.3
5	2483.50	54.5 PK	74.0	-19.5	2.18 V	104	56.9	-2.4
6	2483.50	41.7 AV	54.0	-12.3	2.18 V	104	44.1	-2.4
7	4874.00	40.3 PK	74.0	-33.7	1.53 V	142	38.2	2.1
8	4874.00	36.4 AV	54.0	-17.6	1.53 V	142	34.3	2.1
9	7311.00	42.9 PK	74.0	-31.1	1.54 V	232	34.9	8.0
10	7311.00	30.7 AV	54.0	-23.3	1.54 V	232	22.7	8.0
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.



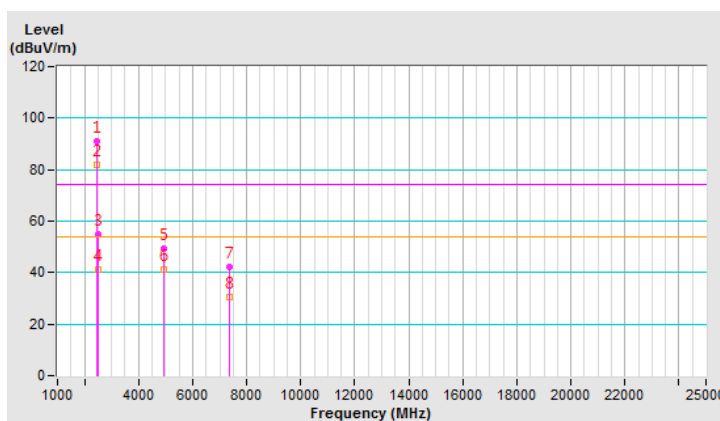
操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 11：2462 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	22℃	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	91.2 PK			1.15 H	33	93.5	-2.3
2	*2462.00	81.8 AV			1.15 H	33	84.1	-2.3
3	2483.50	55.1 PK	74.0	-18.9	1.15 H	33	57.5	-2.4
4	2483.50	41.3 AV	54.0	-12.7	1.15 H	33	43.7	-2.4
5	4924.00	49.5 PK	74.0	-24.5	2.93 H	360	47.2	2.3
6	4924.00	41.1 AV	54.0	-12.9	2.93 H	360	38.8	2.3
7	7386.00	42.4 PK	74.0	-31.6	1.48 H	18	34.3	8.1
8	7386.00	30.5 AV	54.0	-23.5	1.48 H	18	22.4	8.1
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.

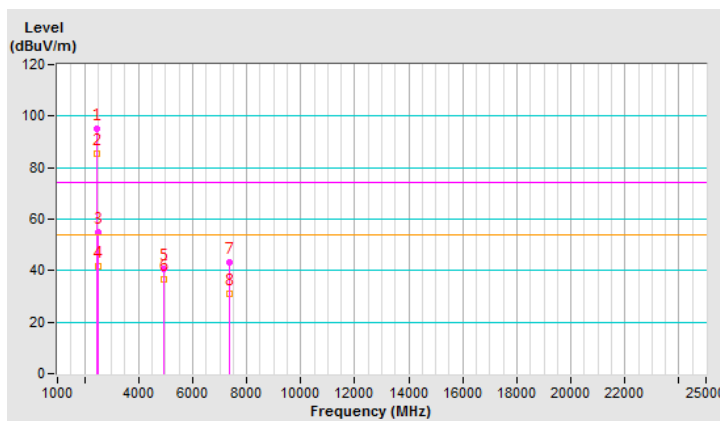


操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 11：2462 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	22℃	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	95.1 PK			1.50 V	132	97.4	-2.3
2	*2462.00	85.6 AV			1.50 V	132	87.9	-2.3
3	2483.50	54.9 PK	74.0	-19.1	1.50 V	132	57.3	-2.4
4	2483.50	41.9 AV	54.0	-12.1	1.50 V	132	44.3	-2.4
5	4924.00	40.8 PK	74.0	-33.2	1.56 V	128	38.5	2.3
6	4924.00	36.6 AV	54.0	-17.4	1.56 V	128	34.3	2.3
7	7386.00	43.2 PK	74.0	-30.8	1.52 V	225	35.1	8.1
8	7386.00	31.1 AV	54.0	-22.9	1.52 V	225	23.0	8.1
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)

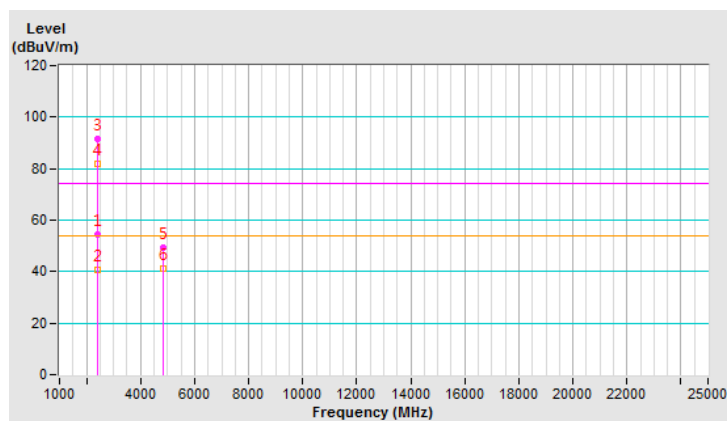
操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 1：2412 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	22°C	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	54.6 PK	74.0	-19.4	1.17 H	28	56.7	-2.1
2	2390.00	40.9 AV	54.0	-13.1	1.17 H	28	43.0	-2.1
3	*2412.00	91.5 PK			1.17 H	28	93.6	-2.1
4	*2412.00	82.0 AV			1.17 H	28	84.1	-2.1
5	4824.00	49.4 PK	74.0	-24.6	2.88 H	360	47.3	2.1
6	4824.00	41.3 AV	54.0	-12.7	2.88 H	360	39.2	2.1
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.

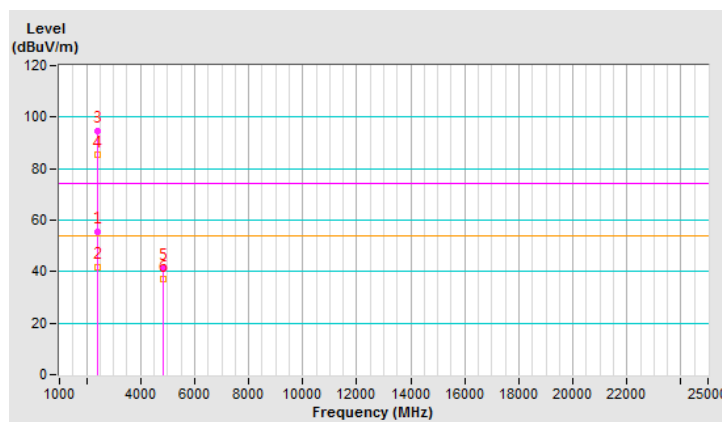


操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 1：2412 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	22℃	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	55.3 PK	74.0	-18.7	2.71 V	100	57.4	-2.1
2	2390.00	41.9 AV	54.0	-12.1	2.71 V	100	44.0	-2.1
3	*2412.00	94.6 PK			2.71 V	100	96.7	-2.1
4	*2412.00	85.2 AV			2.71 V	100	87.3	-2.1
5	4824.00	41.3 PK	74.0	-32.7	1.62 V	139	39.2	2.1
6	4824.00	36.9 AV	54.0	-17.1	1.62 V	139	34.8	2.1
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.

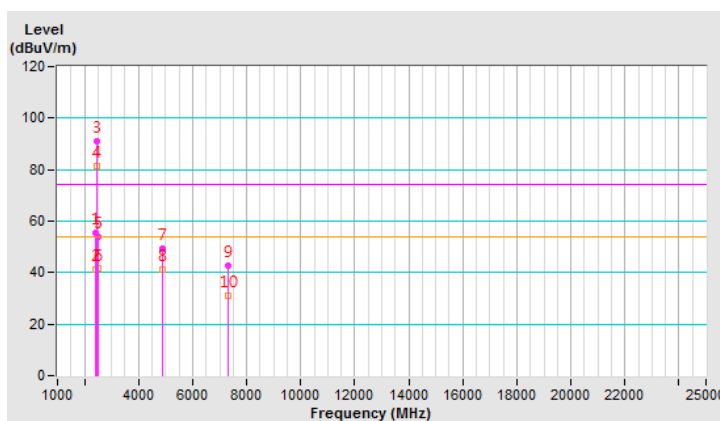


操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 6：2437 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	22°C	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	55.3 PK	74.0	-18.7	1.12 H	19	57.4	-2.1
2	2390.00	41.3 AV	54.0	-12.7	1.12 H	19	43.4	-2.1
3	*2437.00	91.1 PK			1.12 H	19	93.4	-2.3
4	*2437.00	81.5 AV			1.12 H	19	83.8	-2.3
5	2483.50	54.1 PK	74.0	-19.9	1.12 H	19	56.5	-2.4
6	2483.50	41.5 AV	54.0	-12.5	1.12 H	19	43.9	-2.4
7	4874.00	49.3 PK	74.0	-24.7	2.95 H	360	47.2	2.1
8	4874.00	41.1 AV	54.0	-12.9	2.95 H	360	39.0	2.1
9	7311.00	42.7 PK	74.0	-31.3	1.43 H	22	34.7	8.0
10	7311.00	30.9 AV	54.0	-23.1	1.43 H	22	22.9	8.0
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.

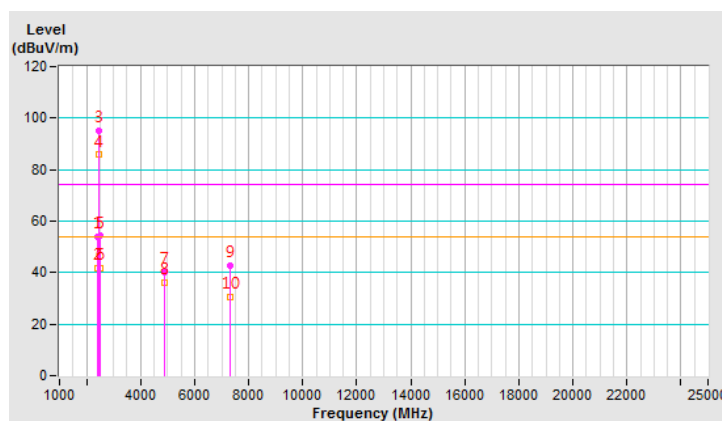


操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 6：2437 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	22℃	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	54.1 PK	74.0	-19.9	2.71 V	101	56.2	-2.1
2	2390.00	41.8 AV	54.0	-12.2	2.71 V	101	43.9	-2.1
3	*2437.00	95.0 PK			2.71 V	101	97.3	-2.3
4	*2437.00	85.7 AV			2.71 V	101	88.0	-2.3
5	2483.50	54.2 PK	74.0	-19.8	2.71 V	101	56.6	-2.4
6	2483.50	41.7 AV	54.0	-12.3	2.71 V	101	44.1	-2.4
7	4874.00	40.3 PK	74.0	-33.7	1.57 V	125	38.2	2.1
8	4874.00	36.1 AV	54.0	-17.9	1.57 V	125	34.0	2.1
9	7311.00	42.9 PK	74.0	-31.1	1.49 V	219	34.9	8.0
10	7311.00	30.7 AV	54.0	-23.3	1.49 V	219	22.7	8.0
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.

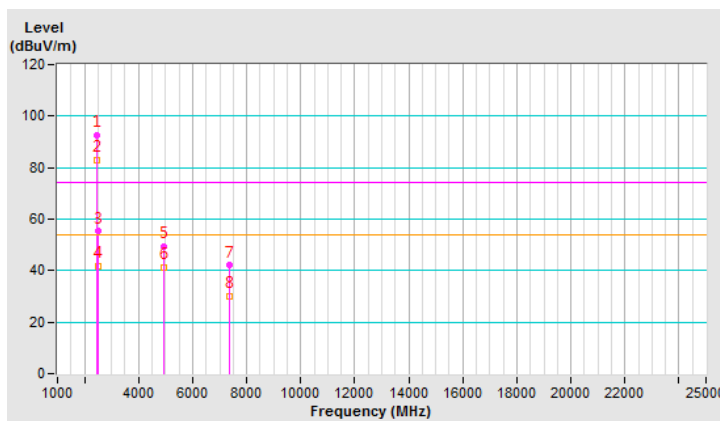


操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 11：2462 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	22℃	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	92.5 PK			1.19 H	22	94.8	-2.3
2	*2462.00	82.8 AV			1.19 H	22	85.1	-2.3
3	2483.50	55.2 PK	74.0	-18.8	1.19 H	22	57.6	-2.4
4	2483.50	41.6 AV	54.0	-12.4	1.19 H	22	44.0	-2.4
5	4924.00	49.5 PK	74.0	-24.5	2.92 H	360	47.2	2.3
6	4924.00	41.3 AV	54.0	-12.7	2.92 H	360	39.0	2.3
7	7386.00	42.0 PK	74.0	-32.0	1.49 H	17	33.9	8.1
8	7386.00	30.2 AV	54.0	-23.8	1.49 H	17	22.1	8.1
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.

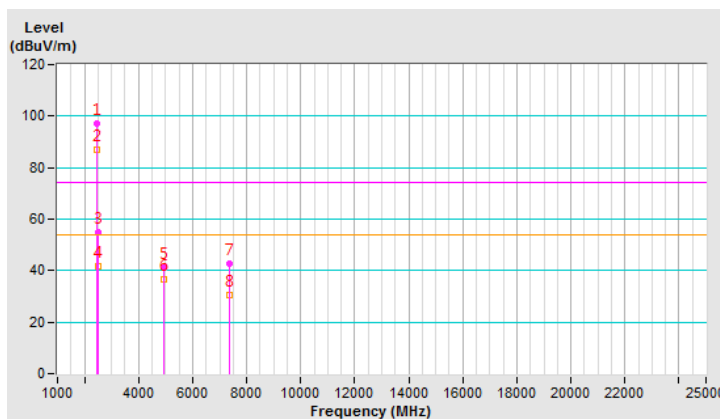


操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 11：2462 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	22℃	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	97.3 PK			2.67 V	100	99.6	-2.3
2	*2462.00	87.1 AV			2.67 V	100	89.4	-2.3
3	2483.50	54.8 PK	74.0	-19.2	2.67 V	100	57.2	-2.4
4	2483.50	41.9 AV	54.0	-12.1	2.67 V	100	44.3	-2.4
5	4924.00	41.2 PK	74.0	-32.8	1.56 V	115	38.9	2.3
6	4924.00	36.8 AV	54.0	-17.2	1.56 V	115	34.5	2.3
7	7386.00	42.7 PK	74.0	-31.3	1.49 V	215	34.6	8.1
8	7386.00	30.6 AV	54.0	-23.4	1.49 V	215	22.5	8.1
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 (HT40)

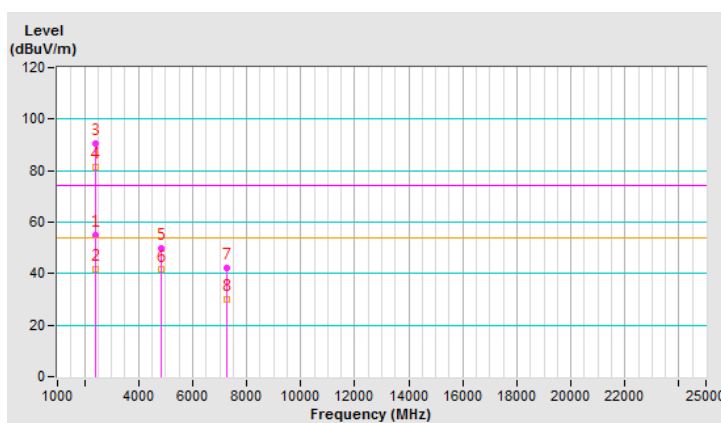
操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 3 : 2422 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	22°C	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	55.0 PK	74.0	-19.0	1.23 H	17	57.1	-2.1
2	2390.00	41.6 AV	54.0	-12.4	1.23 H	17	43.7	-2.1
3	*2422.00	90.6 PK			1.23 H	17	92.8	-2.2
4	*2422.00	81.3 AV			1.23 H	17	83.5	-2.2
5	4844.00	50.0 PK	74.0	-24.0	2.98 H	360	47.9	2.1
6	4844.00	41.5 AV	54.0	-12.5	2.98 H	360	39.4	2.1
7	7266.00	42.1 PK	74.0	-31.9	1.49 H	14	33.9	8.2
8	7266.00	30.1 AV	54.0	-23.9	1.49 H	14	21.9	8.2
9	#9688.00	-	-	-	-	-	-	-
10	12110.00	-	-	-	-	-	-	-
11	#14532.00	-	-	-	-	-	-	-
12	#16954.00	-	-	-	-	-	-	-
13	19376.00	-	-	-	-	-	-	-
14	#21798.00	-	-	-	-	-	-	-
15	#24220.00	-	-	-	-	-	-	-

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.

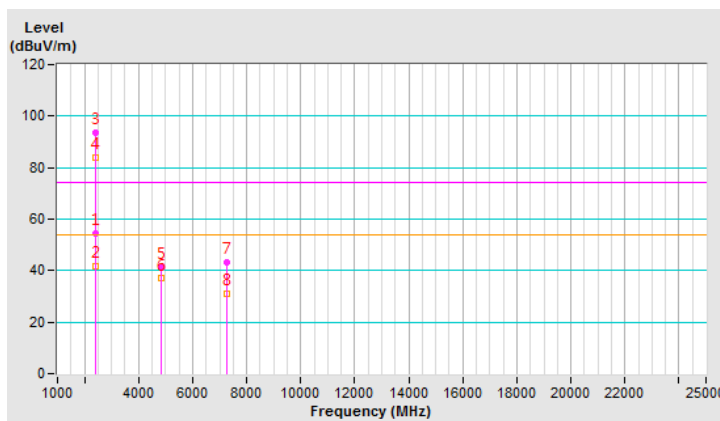


操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 3：2422 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	22℃	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	54.4 PK	74.0	-19.6	2.69 V	57	56.5	-2.1
2	2390.00	41.9 AV	54.0	-12.1	2.69 V	57	44.0	-2.1
3	*2422.00	93.4 PK			2.69 V	57	95.6	-2.2
4	*2422.00	84.0 AV			2.69 V	57	86.2	-2.2
5	4844.00	41.3 PK	74.0	-32.7	1.50 V	129	39.2	2.1
6	4844.00	36.9 AV	54.0	-17.1	1.50 V	129	34.8	2.1
7	7266.00	43.4 PK	74.0	-30.6	1.48 V	215	35.2	8.2
8	7266.00	31.2 AV	54.0	-22.8	1.48 V	215	23.0	8.2
9	#9688.00	-	-	-	-	-	-	-
10	12110.00	-	-	-	-	-	-	-
11	#14532.00	-	-	-	-	-	-	-
12	#16954.00	-	-	-	-	-	-	-
13	19376.00	-	-	-	-	-	-	-
14	#21798.00	-	-	-	-	-	-	-
15	#24220.00	-	-	-	-	-	-	-

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.

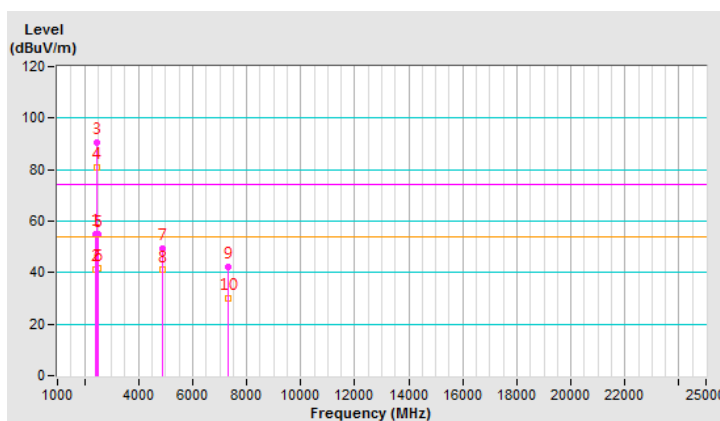


操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 6：2437 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	22℃	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	55.0 PK	74.0	-19.0	1.20 H	17	57.1	-2.1
2	2390.00	41.4 AV	54.0	-12.6	1.20 H	17	43.5	-2.1
3	*2437.00	90.4 PK			1.20 H	17	92.7	-2.3
4	*2437.00	80.9 AV			1.20 H	17	83.2	-2.3
5	2483.50	54.7 PK	74.0	-19.3	1.20 H	17	57.1	-2.4
6	2483.50	41.5 AV	54.0	-12.5	1.20 H	17	43.9	-2.4
7	4874.00	49.4 PK	74.0	-24.6	2.95 H	360	47.3	2.1
8	4874.00	41.0 AV	54.0	-13.0	2.95 H	360	38.9	2.1
9	7311.00	42.1 PK	74.0	-31.9	1.45 H	13	34.1	8.0
10	7311.00	30.2 AV	54.0	-23.8	1.45 H	13	22.2	8.0
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.

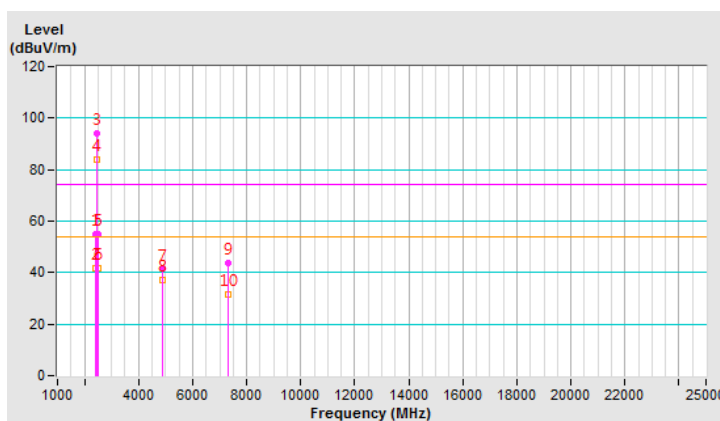


操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 6：2437 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	22°C	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	54.9 PK	74.0	-19.1	2.70 V	56	57.0	-2.1
2	2390.00	41.8 AV	54.0	-12.2	2.70 V	56	43.9	-2.1
3	*2437.00	93.9 PK			2.70 V	56	96.2	-2.3
4	*2437.00	83.8 AV			2.70 V	56	86.1	-2.3
5	2483.50	55.1 PK	74.0	-18.9	2.70 V	56	57.5	-2.4
6	2483.50	41.9 AV	54.0	-12.1	2.70 V	56	44.3	-2.4
7	4874.00	41.5 PK	74.0	-32.5	1.61 V	142	39.4	2.1
8	4874.00	37.1 AV	54.0	-16.9	1.61 V	142	35.0	2.1
9	7311.00	43.8 PK	74.0	-30.2	1.53 V	217	35.8	8.0
10	7311.00	31.5 AV	54.0	-22.5	1.53 V	217	23.5	8.0
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.

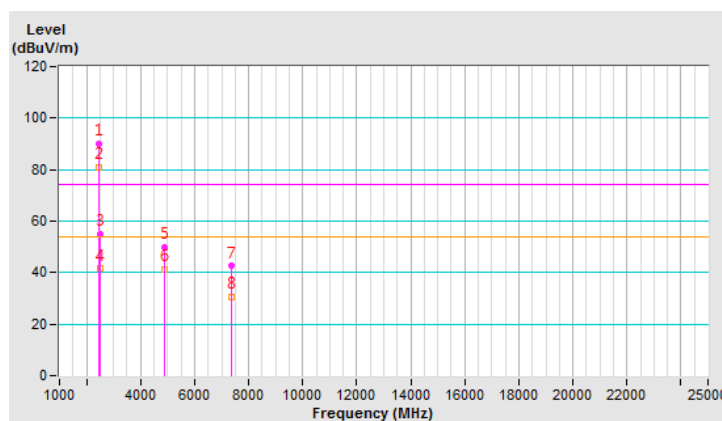


操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 9：2452 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	22℃	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	*2452.00	90.2 PK			1.25 H	28	92.5	-2.3
2	*2452.00	81.1 AV			1.25 H	28	83.4	-2.3
3	2483.50	54.8 PK	74.0	-19.2	1.25 H	28	57.2	-2.4
4	2483.50	41.5 AV	54.0	-12.5	1.25 H	28	43.9	-2.4
5	4904.00	49.7 PK	74.0	-24.3	2.96 H	360	47.5	2.2
6	4904.00	41.4 AV	54.0	-12.6	2.96 H	360	39.2	2.2
7	7356.00	42.5 PK	74.0	-31.5	1.50 H	24	34.4	8.1
8	7356.00	30.5 AV	54.0	-23.5	1.50 H	24	22.4	8.1
9	#9808.00	-	-	-	-	-	-	-
10	12260.00	-	-	-	-	-	-	-
11	#14712.00	-	-	-	-	-	-	-
12	#17164.00	-	-	-	-	-	-	-
13	19616.00	-	-	-	-	-	-	-
14	22068.00	-	-	-	-	-	-	-
15	#24520.00	-	-	-	-	-	-	-

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.

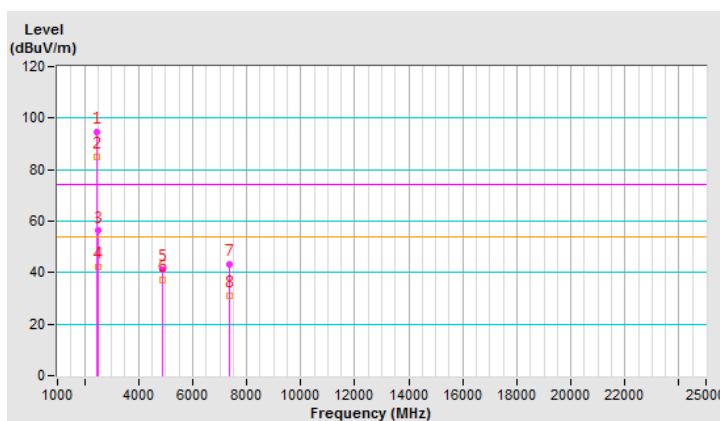


操作模式：	發射	調變技術：	OFDM
基本波頻率：	CH 9：2452 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=10Hz
量測場地溫度：	22℃	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	*2452.00	94.8 PK			2.95 V	58	97.1	-2.3
2	*2452.00	84.9 AV			2.95 V	58	87.2	-2.3
3	2483.50	56.2 PK	74.0	-17.8	2.95 V	58	58.6	-2.4
4	2483.50	42.3 AV	54.0	-11.7	2.95 V	58	44.7	-2.4
5	4904.00	41.1 PK	74.0	-32.9	1.54 V	129	38.9	2.2
6	4904.00	37.1 AV	54.0	-16.9	1.54 V	129	34.9	2.2
7	7356.00	43.3 PK	74.0	-30.7	1.58 V	223	35.2	8.1
8	7356.00	31.0 AV	54.0	-23.0	1.58 V	223	22.9	8.1
9	#9808.00	-	-	-	-	-	-	-
10	12260.00	-	-	-	-	-	-	-
11	#14712.00	-	-	-	-	-	-	-
12	#17164.00	-	-	-	-	-	-	-
13	19616.00	-	-	-	-	-	-	-
14	22068.00	-	-	-	-	-	-	-
15	#24520.00	-	-	-	-	-	-	-

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.



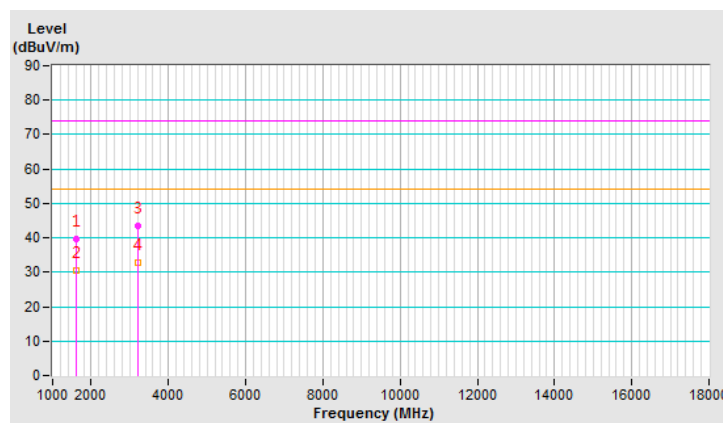
4.6.2 接收諧波

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：	22°C	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	39.8 PK	74.0	-34.2	1.80 H	139	44.7	-4.9
2	1608.00	30.4 AV	54.0	-23.6	1.80 H	139	35.3	-4.9
3	3216.00	43.5 PK	74.0	-30.5	1.80 H	84	44.5	-1.0
4	3216.00	32.8 AV	54.0	-21.2	1.80 H	84	33.8	-1.0

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

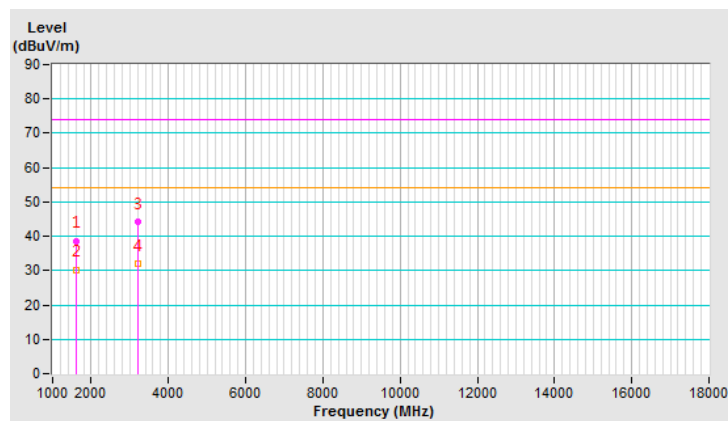


操作模式：	接收		
基本波頻率：	CH 1：2412 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	38.7 PK	74.0	-35.3	2.22 V	307	43.6	-4.9
2	1608.00	30.3 AV	54.0	-23.7	2.22 V	307	35.2	-4.9
3	3216.00	44.2 PK	74.0	-29.8	1.53 V	98	45.2	-1.0
4	3216.00	32.0 AV	54.0	-22.0	1.53 V	98	33.0	-1.0

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

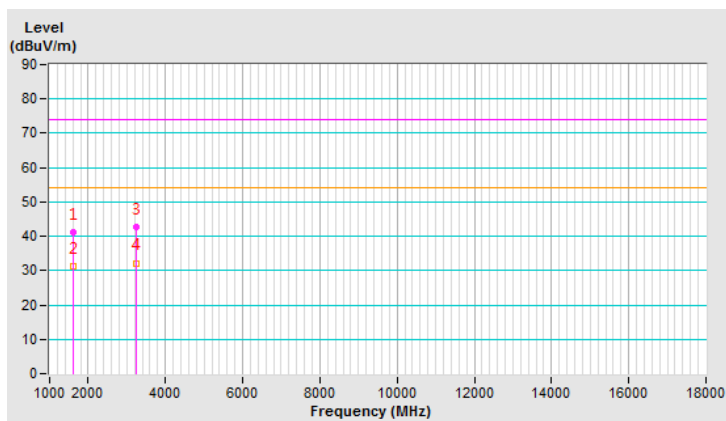


操作模式：	接收		
基本波頻率：	CH 6：2437 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	41.1 PK	74.0	-32.9	1.78 H	151	46.1	-5.0
2	1624.67	31.1 AV	54.0	-22.9	1.78 H	151	36.1	-5.0
3	3249.33	42.7 PK	74.0	-31.3	1.77 H	83	43.6	-0.9
4	3249.33	32.2 AV	54.0	-21.8	1.77 H	83	33.1	-0.9

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

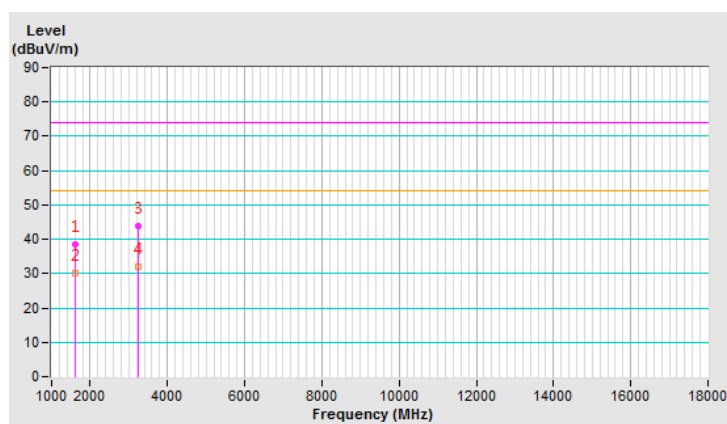


操作模式：	接收		
基本波頻率：	CH 6：2437 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	38.6 PK	74.0	-35.4	2.28 V	292	43.6	-5.0
2	1624.67	30.0 AV	54.0	-24.0	2.28 V	292	35.0	-5.0
3	3249.33	43.8 PK	74.0	-30.2	1.53 V	105	44.7	-0.9
4	3249.33	31.9 AV	54.0	-22.1	1.53 V	105	32.8	-0.9

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

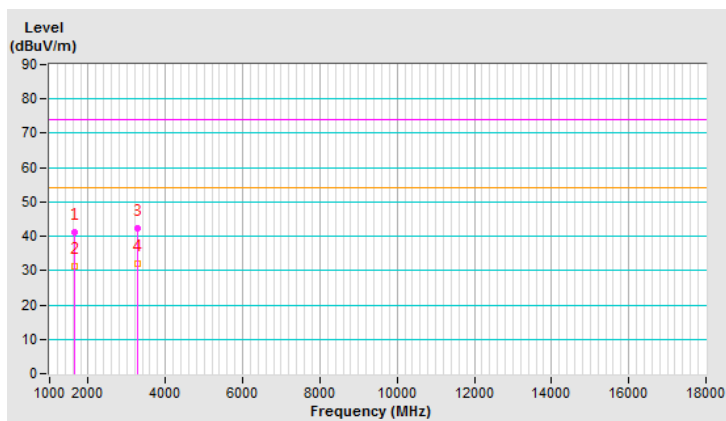


操作模式：	接收		
基本波頻率：	CH 11：2462 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	41.0 PK	74.0	-33.0	1.78 H	161	46.0	-5.0
2	1641.33	31.2 AV	54.0	-22.8	1.78 H	161	36.2	-5.0
3	3282.67	42.4 PK	74.0	-31.6	1.70 H	96	43.5	-1.1
4	3282.67	32.0 AV	54.0	-22.0	1.70 H	96	33.1	-1.1

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

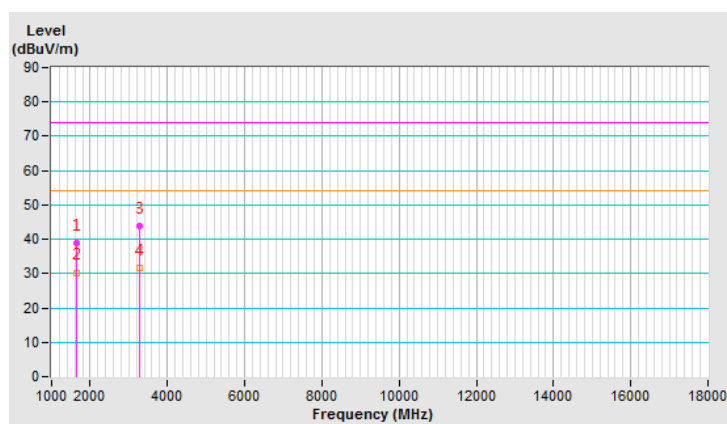


操作模式：	接收		
基本波頻率：	CH 11：2462 MHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	68%RH
測試日期：	108 年 1 月 31 日	測試者：	莊承舜

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	38.9 PK	74.0	-35.1	2.26 V	312	43.9	-5.0
2	1641.33	30.3 AV	54.0	-23.7	2.26 V	312	35.3	-5.0
3	3282.67	44.0 PK	74.0	-30.0	1.58 V	113	45.1	-1.1
4	3282.67	31.6 AV	54.0	-22.4	1.58 V	113	32.7	-1.1

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

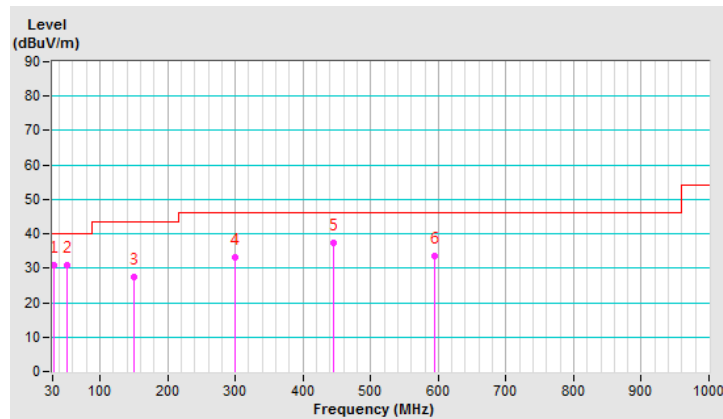
802.11n (HT40)

操作模式：	發射接收	調變技術：	OFDM
基本波頻率：	CH 3：2422 MHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	24℃	量測場地濕度：	71%RH
測試日期：	108 年 1 月 31 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	30.97	31.0 QP	40.0	-9.0	3.00 H	254	40.9	-9.9
2	50.37	30.8 QP	40.0	-9.2	2.00 H	224	39.6	-8.8
3	149.31	27.5 QP	43.5	-16.0	1.00 H	225	35.5	-8.0
4	299.66	33.1 QP	46.0	-12.9	2.00 H	138	40.3	-7.2
5	445.16	37.2 QP	46.0	-8.8	1.00 H	159	40.7	-3.5
6	593.57	33.5 QP	46.0	-12.5	1.00 H	309	33.6	-0.1

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.



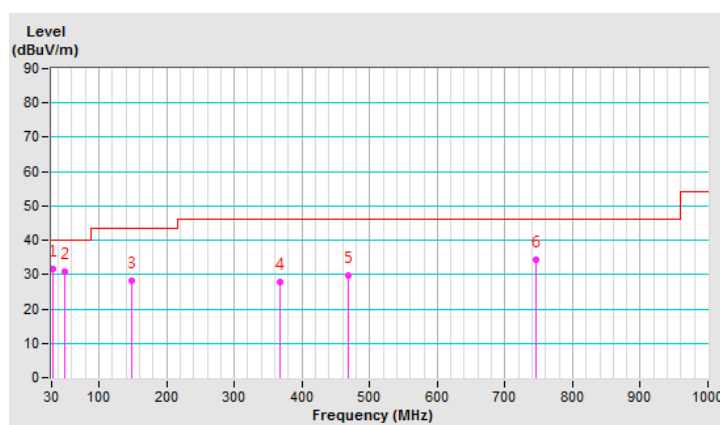
操作模式：	發射接收	調變技術：	OFDM
基本波頻率：	CH 3：2422 MHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	24℃	量測場地濕度：	71%RH
測試日期：	108 年 1 月 31 日	測試者：	何欣儒

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	30.97	31.6 QP	40.0	-8.4	1.00 V	22	41.5	-9.9
2	49.40	30.7 QP	40.0	-9.3	1.00 V	305	39.6	-8.9
3	148.34	28.2 QP	43.5	-15.3	1.50 V	264	36.3	-8.1
4	368.53	27.9 QP	46.0	-18.1	1.50 V	152	33.3	-5.4
5	467.47	29.8 QP	46.0	-16.2	1.50 V	208	32.8	-3.0
6	744.89	34.2 QP	46.0	-11.8	2.50 V	314	31.5	2.7

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 6 dB 頻寬之要求

5.1 適用標準

請見本報告 3.1 節第(5)項的規定。

5.2 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。

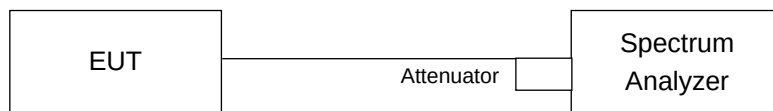
5.3 量測儀器

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSV40	100964	June 20, 2018	June 19, 2019
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 16, 2018	Apr. 15, 2019

NOTE:

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

5.4 測試配置



5.5 量測結果

操作模式	發射	測試日期	108 年 1 月 30 日
量測場地溫度	25°C	量測場地濕度	60%RH
測試者	林俊鈞		

802.11b

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	10.13	0.5	Pass
6	2437	10.11	0.5	Pass
11	2462	10.11	0.5	Pass

802.11g

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	16.64	0.5	Pass
6	2437	16.64	0.5	Pass
11	2462	16.64	0.5	Pass

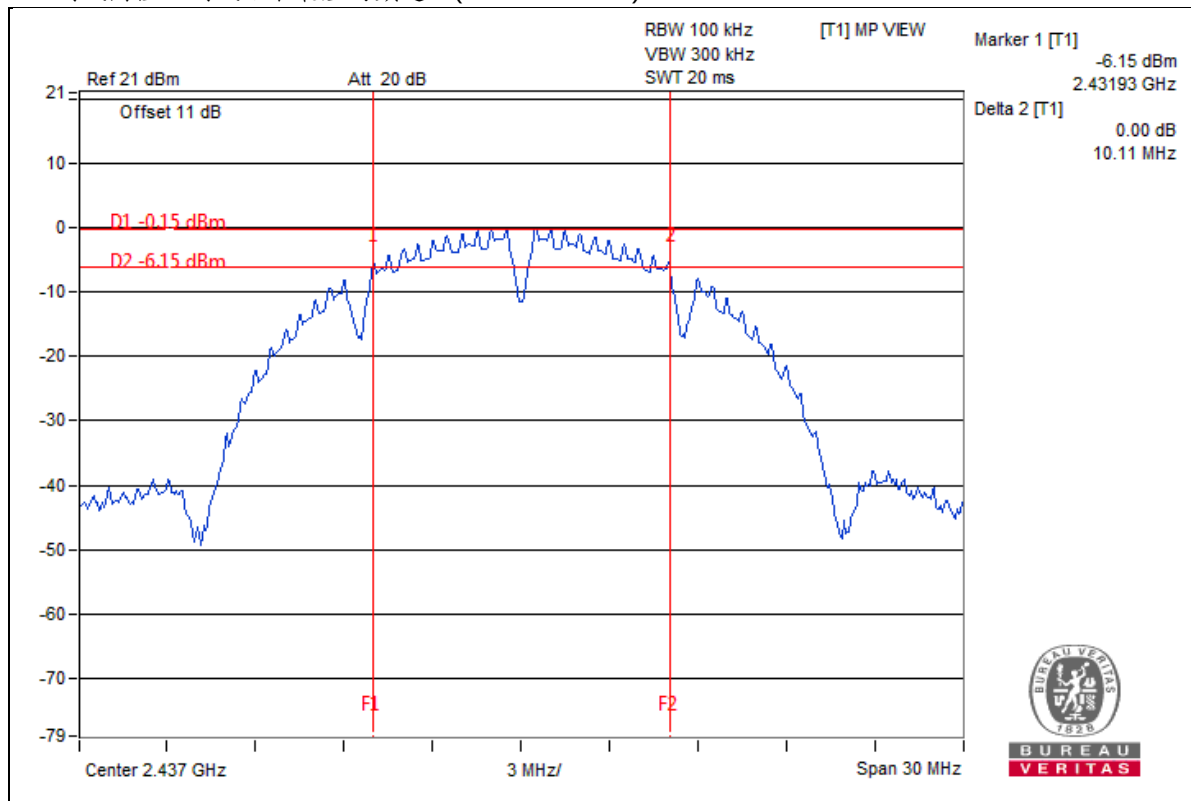
802.11n (HT20)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
1	2412	17.85	0.5	Pass
6	2437	17.84	0.5	Pass
11	2462	17.86	0.5	Pass

802.11n (HT40)

Channel	Frequency (MHz)	6dB Bandwidth (MHz)	Minimum Limit (MHz)	Pass / Fail
3	2422	36.56	0.5	Pass
6	2437	36.56	0.5	Pass
9	2452	36.57	0.5	Pass

**此測試圖僅放測試結果最差的頻道。(802.11b / CH6)



5.6 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。

6 峰值傳導輸出功率之量測

6.1 適用標準

請見本報告 3.1 節第(6)項的規定。

6.2 量測方法

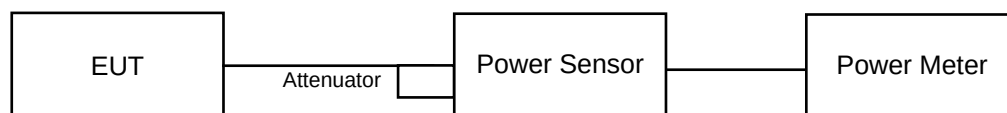
- a) 將待測物輸出經由衰減器接到功率計上。
- b) 設定待測物處於連續發射狀態。
- c) 計算其輸出功率峰值。

6.3 量測儀器

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Power meter Anritsu	ML2495A	1014008	May 09, 2018	May 08, 2019
Power sensor Anritsu	MA2411B	0917122	May 09, 2018	May 08, 2019
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 16, 2018	Apr. 15, 2019

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

操作模式	發射	測試日期	108 年 1 月 30 日
量測場地溫度	25°C	量測場地濕度	60%RH
測試者	林俊鈞		

802.11b

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
1	2412	17.498	12.43	30	Pass
6	2437	17.14	12.34	30	Pass
11	2462	16.482	12.17	30	Pass

802.11g

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
1	2412	56.885	17.55	30	Pass
6	2437	64.269	18.08	30	Pass
11	2462	44.771	16.51	30	Pass

802.11n (HT20)

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
1	2412	53.211	17.26	30	Pass
6	2437	58.614	17.68	30	Pass
11	2462	64.269	18.08	30	Pass

802.11n (HT40)

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass/Fail
3	2422	68.865	18.38	30	Pass
6	2437	62.517	17.96	30	Pass
9	2452	64.863	18.12	30	Pass

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 功率頻譜密度之量測

7.1 適用標準

請見本報告 3.1 節第(7)項的規定。

7.2 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。

7.3 量測儀器

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer R&S	FSV40	100964	June 20, 2018	June 19, 2019
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 16, 2018	Apr. 15, 2019

NOTE:

- The test was performed in Oven room 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

操作模式	發射	測試日期	108 年 1 月 30 日
量測場地溫度	25°C	量測場地濕度	60%RH
測試者	林俊鈞		

802.11b

Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-19.97	8	Pass
6	2437	-20.31	8	Pass
11	2462	-20.55	8	Pass

802.11g

Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-19.30	8	Pass
6	2437	-18.71	8	Pass
11	2462	-19.26	8	Pass

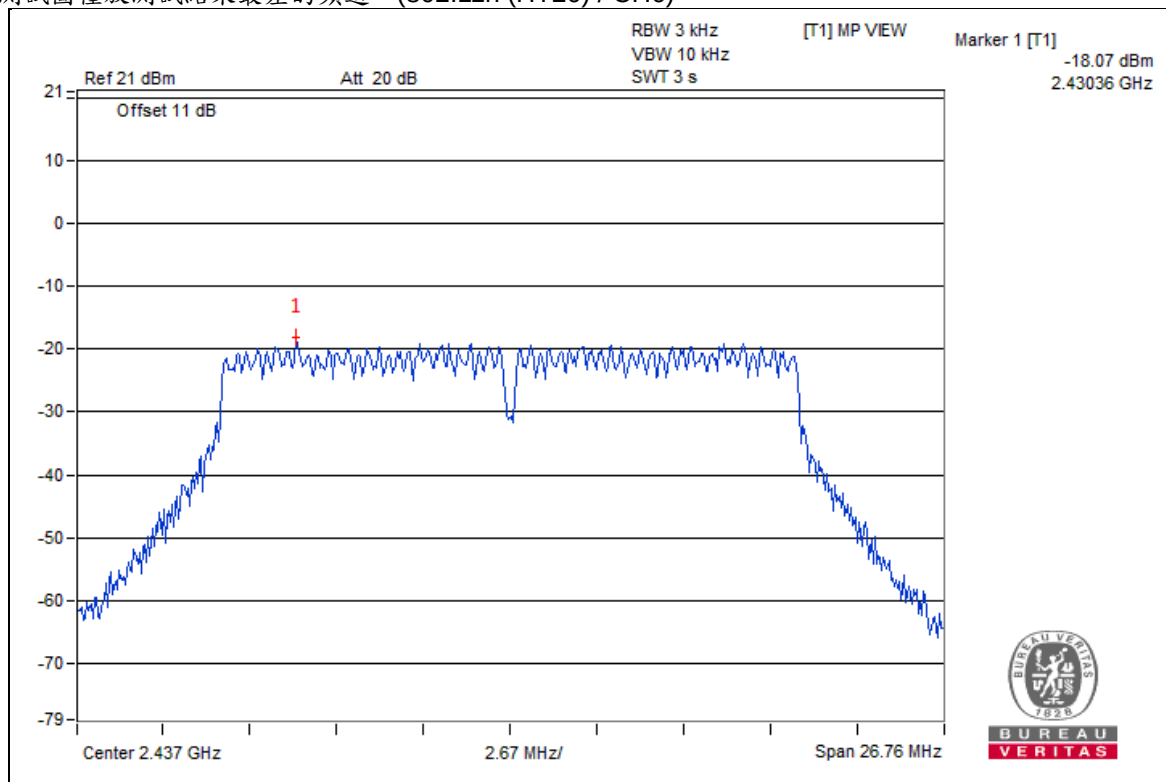
802.11n (HT20)

Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
1	2412	-18.83	8	Pass
6	2437	-18.07	8	Pass
11	2462	-18.30	8	Pass

802.11n (HT40)

Channel	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Pass /Fail
3	2422	-21.37	8	Pass
6	2437	-20.97	8	Pass
9	2452	-20.92	8	Pass

**此測試圖僅放測試結果最差的頻道。(802.11n (HT20) / CH6)



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 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。

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