

低功率射頻電機技術規範測試報告

報告編號:

RT180905E09

申請者

ADC Automotive Distance Control Systems GmbH

產品名稱

SRD for RTTT and other vehicle or fixed installation

型號

ARS5-B

製造廠商

ADC Automotive Distance Control Systems GmbH

商標或廠牌

Continental

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 06 月 03 日

報告簽署人簽章:

陳瓊美



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報告發行紀錄

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證 明 書

產 品 名 稱：SRD for RTTT and other vehicle or fixed installation
商 標：Continental
型 號：ARS5-B
申 請 者：ADC Automotive Distance Control Systems GmbH
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：ARS5-B），收件日期 107 年 09 月 05 日，於 107 年 09 月 18 日至 108 年 02 月 23 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：  , 日期： 108 年 06 月 03 日
辛 姿 伶 / 專員

審 核 者：  , 日期： 108 年 06 月 03 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：ADC Automotive Distance Control Systems GmbH

製造廠商：ADC Automotive Distance Control Systems GmbH

申請廠商地址：Peter-Dornier-Str.10, D-88131 Lindau, Germany

廠牌：Continental

產品名稱：SRD for RTTT and other vehicle or fixed installation

型號：ARS5-B

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

項次	量測項目	規 範	量測結果判定
1	發射功率密度	低功率射頻電機技術規範 3.14.1.2 節	合格
2	混附發射	低功率射頻電機技術規範 3.14.1.3 節及 2.8 節	合格
3	頻率穩定度	低功率射頻電機技術規範 3.14.1.4 節	合格
4	電源線傳導干擾	低功率射頻電機技術規範 2.3 節	註
5	天線之要求	低功率射頻電機技術規範 2.2 節	合格

註：此待測設備為車用設備，且無與個人電腦做任何連接，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

產品名稱：	SRD for RTTT and other vehicle or fixed installation
型號：	ARS5-B
額定電源：	DC12V
調變方式：	FM / CW / FMCW
載波頻率：	76~77GHz
峰值功率密度：	31.3 dBm
天線種類：	見註
電源線類別：	NA
信號線類別：	NA
配件：	NA

註：

- 此裝置為 SRD for RTTT and other vehicle or fixed installation，其發射頻率落於 76 至 77 GHz，本測報測試頻道的中心頻率如下：

Modulation: FM					
Bandwith: 168.4MHz		Bandwith: 234.9MHz		Bandwith: 407.9MHz	
Channel	對應頻率 (GHz)	Channel	對應頻率 (GHz)	Channel	對應頻率 (GHz)
1	76.2	1	76.2	1	76.25
2	76.25	2	76.25		
3	76.3	3	76.3		
Modulation: CW					
Channel	對應頻率 (GHz)	Channel	對應頻率 (GHz)	Channel	對應頻率 (GHz)
1	76.06	2	76.387	3	76.714
Modulation: FMCW Bandwith: 650.91MHz					
Channel	對應頻率 (GHz)				
1	76.36				

- 此待測設備天線規格,詳列如下:

Brand	Model	Frequency Range (GHz)	Antenna Net Gain (dBi)	Antenna Type	Connector Type
Unitech, Schweizer and BoardTek	A2-C752-4680-0	76~77	17.1614	Planar micro strip patch antenna	NA

- 此待測設備於場強輻射量測經評估三個正交軸方位評估測試擺設方式:平躺、直立、側放,其中 below 1GHz 以平躺擁有最大干擾值, above 1GHz 以側放擁有最大干擾值故以上述擺放方式進行最終量測,並將測試結果紀錄。

詳細之規格請參考使用說明書,產品的照片請參照 BV 編號: 180905E09。

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。

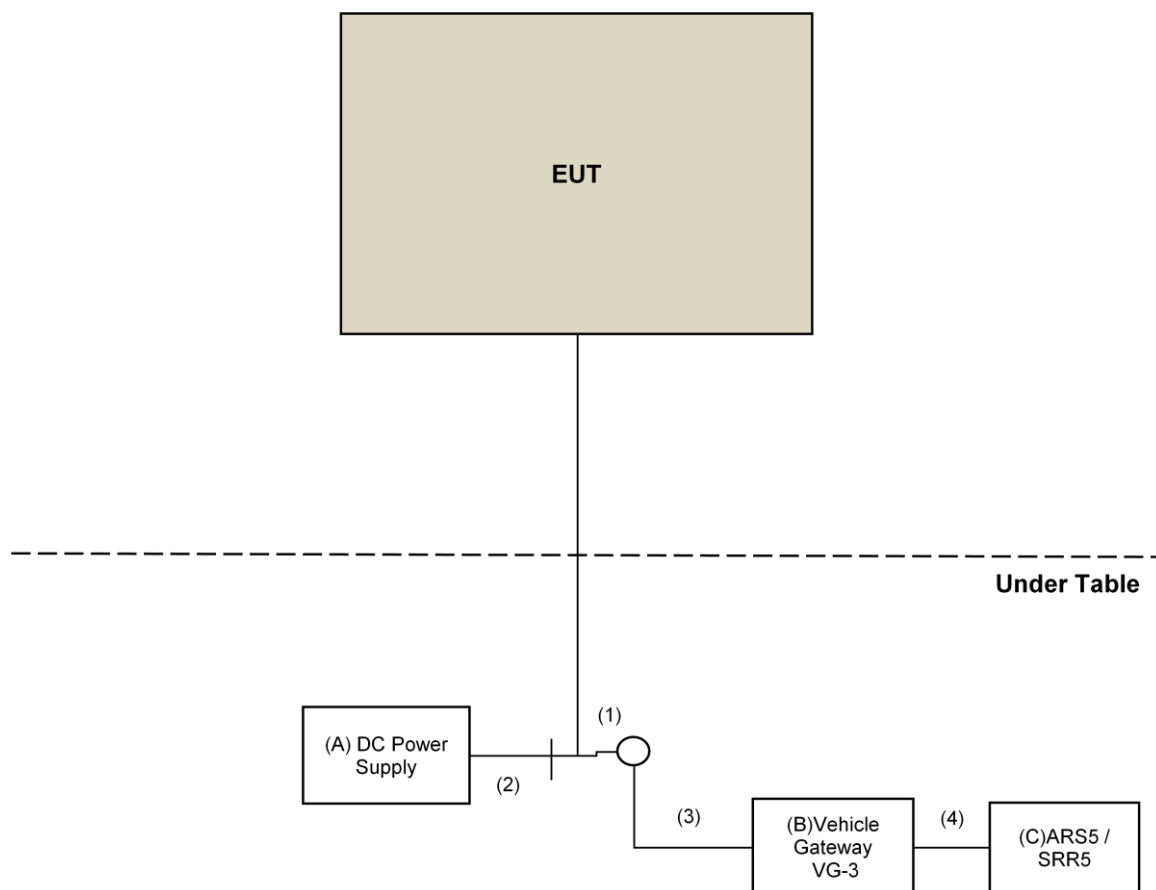
No.	Product	Brand	Model No.	Serial No.	FCC ID	Remark
A	DC PowerSupply	GOOD WILL INSTRUMENT CO., LTD	GPC-3030D	E847076	NA	Provided by Lab
B	Vehicle Gateway VG-3	NA	NA	NA	NA	Supplied by client
C	ARS5/SRR5	NA	NA	NA	NA	Supplied by client

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	Singal Cable	1	1.8	No	0	Supplied by client
2	DC Cable	1	1.6	No	0	Provided by Lab
3	VG3 Cable	1	0.6	No	0	Supplied by client
4	Sub D 15 Cable	1	0.5	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) 混附發射之規定

依據國家通訊傳播委員會低功率射頻電機技術規範 3.14.1.2 節(1)之要求，低於 40GHz 的輻射發射應符合 2.8 節之一般限制要求：

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

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

(4) 發射功率密度之要求

依據國家通訊傳播委員會低功率射頻電機技術規範之 3.14 節，工作頻率為 76 GHz~77 GHz。

低功率發射機，需符合規範 3.14.1.2 之規定如下：

發射限制值：距發射器表面 3 公尺處測量之任何發射，其平均功率密度 (power density) 應小於或等於 88 微瓦特/平方公分($\mu\text{W}/\text{cm}^2$)(EIRP 50 dBm)；峰值功率密度應小於或等於 $279 \mu\text{W}/\text{cm}^2$ (EIRP 55 dBm)。

(5) 混附發射之要求

依據國家通訊傳播委員會低功率射頻電機技術規範之 3.14.1.3 節之規定如下：

頻段外之任何頻率應僅有混附發射，其功率密度 (power density) 發射限制值如下：

(1) 低於 40 GHz 以下之任何發射，應符合 2.8 之規定。

(2) 介於 40 GHz~200 GHz 間任何發射，距發射器表面 3 公尺處測量，應小於或等於 $600 \text{ pW}/\text{cm}^2$ 。

(3) 高於 200 GHz 之發射，距發射器表面 3 公尺處測量，任何發射之功率密度 (power density) 應小於或等於 $1000 \text{ pW}/\text{cm}^2$ 。

(4) 頻譜之測量頻率應達 231 GHz。

(6) 頻率穩定度之要求

依據國家通訊傳播委員會低功率射頻電機技術規範 3.14.1.4 節之規定如下：

主要發射須包括此頻段之所有操作狀態。操作溫度範圍自 -20℃～50℃ 間變化，供應電壓在額定值之 ±15% 內變化。

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 混附波之量測

4.1 適用標準

請見本報告 3.1 節第(5)項的規定。

4.2 量測方法

<Frequency Range below 1GHz>

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。

<Frequency Range 1GHz ~ 18GHz>

將待測物置於 1.5 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。

<Frequency Range 18GHz ~ 231GHz>

將待測物置於 1.5 米高的非金屬桌面，使其操作在工作狀態。接收天線置於適當量測距離。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，以找出最大的輻射強度，接收天線分別置於水平、垂直極化各執行測試一次。

4.3 量測儀器

For below 1GHz test:

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	Feb. 09, 2018	Feb. 08, 2019
Loop Antenna Electro-Metrics	EM-6879	269	Sep. 07, 2018	Sep. 06, 2019
RF Cable	NA	LOOPCAB-001	Jan. 15, 2018	Jan. 14, 2019
RF Cable	NA	LOOPCAB-002	Jan. 15, 2018	Jan. 14, 2019
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-05	May 05, 2018	May 04, 2019
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Nov. 29, 2017	Nov. 28, 2018
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	Oct. 03, 2017	Oct. 02, 2018
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	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 test was performed in 966 Chamber No. 3.
3. The CANADA Site Registration No. is 20331-1
4. Loop antenna was used for all emissions below 30 MHz.
5. 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

For 1GHz~40GHz test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Test Receiver Agilent	N9038A	MY50010156	July 12, 2018	July 11, 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:

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 test was performed in 966 Chamber No. 3.
3. The CANADA Site Registration No. is 20331-1
4. Loop antenna was used for all emissions below 30 MHz.
5. 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	1 GHz ~ 6 GHz	5.1dB
	6GHz ~ 18GHz	5.0dB
	18GHz ~ 40GHz	5.2dB

For above 40GHz test:

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer Agilent	E4446A	MY48250254	Nov. 21, 2017	Nov. 20, 2018
*Harmonic Mixer (33~55GHz) OML	M22HWD	110215-1	Oct. 17, 2017	Oct. 16, 2019
*Horn Antenna (33~55GHz) OML	M22RH	110215-1	Oct. 17, 2017	Oct. 16, 2019
*Harmonic Mixer (50~75GHz) OML	M15RH	110215-1	Oct. 17, 2017	Oct. 16, 2019
*Horn Antenna (50~75GHz) OML	M15HWD	110215-1	Oct. 17, 2017	Oct. 16, 2019
*Harmonic Mixer (75~110GHz) OML	M10HWD	110215-1	Oct. 17, 2017	Oct. 16, 2019
*Horn Antenna (75~110GHz) OML	M10RH	110215-1	Oct. 17, 2017	Oct. 16, 2019
*Harmonic Mixer (110~170GHz) OML	M06RH	110215-1	Oct. 17, 2017	Oct. 16, 2019
*Horn Antenna(110~170GHz) OML	M06HWD	110215-1	Oct. 17, 2017	Oct. 16, 2019
*Harmonic Mixer (140~220GHz) OML	M05HWD	110215-1	Oct. 17, 2017	Oct. 16, 2019
*Horn Antenna (140~220GHz) OML	M05RH	110215-1	Oct. 17, 2017	Oct. 16, 2019
*Diplexer EMCI	DPL26	DPL26_01	Oct. 17, 2017	Oct. 16, 2019
*Diplexer EMCI	DPL26	DPL26_02	Oct. 17, 2017	Oct. 16, 2019
*Precision 30dB Attenuator Keysight	11708A	MY55260015	Oct. 17, 2017	Oct. 16, 2019
*Zero-Bias Detector (50~75GHz) Vdi	WR15ZBD	WR15R5 1-30	Oct. 17, 2017	Oct. 16, 2019
4CH Infiniivision Oscilloscope Keysight	DSOX6004A	MY55190202	Dec. 13, 2017	Dec. 12, 2018
*WR15CH Conical Horn Keysight	WR15CH	WR15CH-01	Oct. 17, 2017	Oct. 16, 2019
*WR10CH Conical Horn Keysight	WR10CH	WR10CH-01	Oct. 17, 2017	Oct. 16, 2019
*Millimeter-Wave Signal Generator Frequency Extension Module (50~75 GHz) Keysight	E8257DV15	US54250106	Oct. 17, 2017	Oct. 16, 2019

*Millimeter-Wave Signal Generator Frequency Extension Module (75~110 GHz) Keysight	E8257DV10	US53250009	Oct. 17, 2017	Oct. 16, 2019
PSG analog signal generator Keysight	E8257D	MY53401987	June 26, 2018	June 25, 2019
Antenna Tower & Turn Table CT	NA	NA	NA	NA

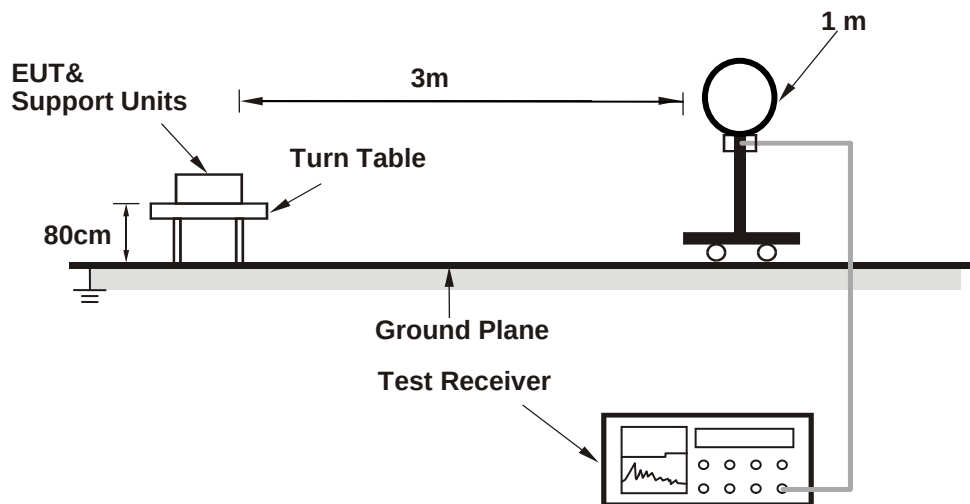
Note:

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. 3.
4. The CANADA Site Registration No. is 20331-1
5. 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.

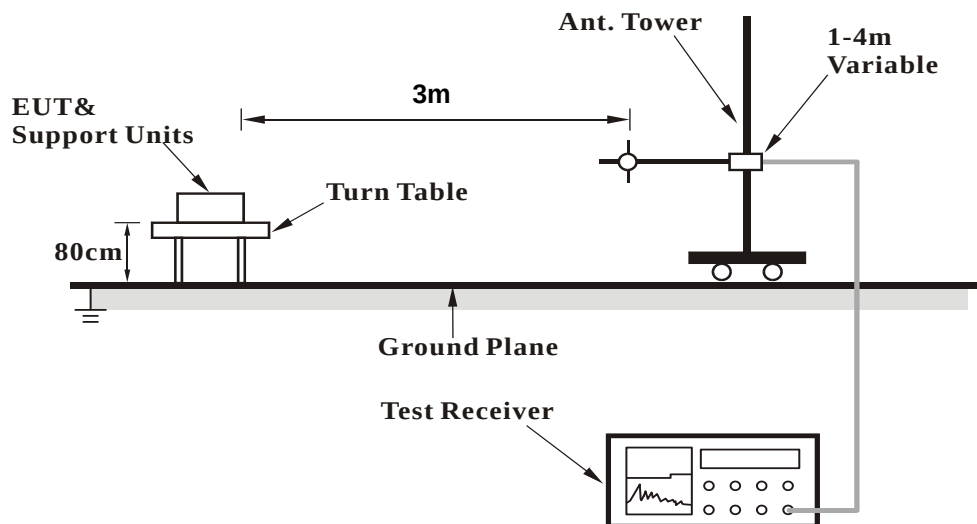
Measurement	Frequency	Uncertainty
Radiated emissions	40GHz ~ 231GHz	5.4 dB

4.4 測試配置

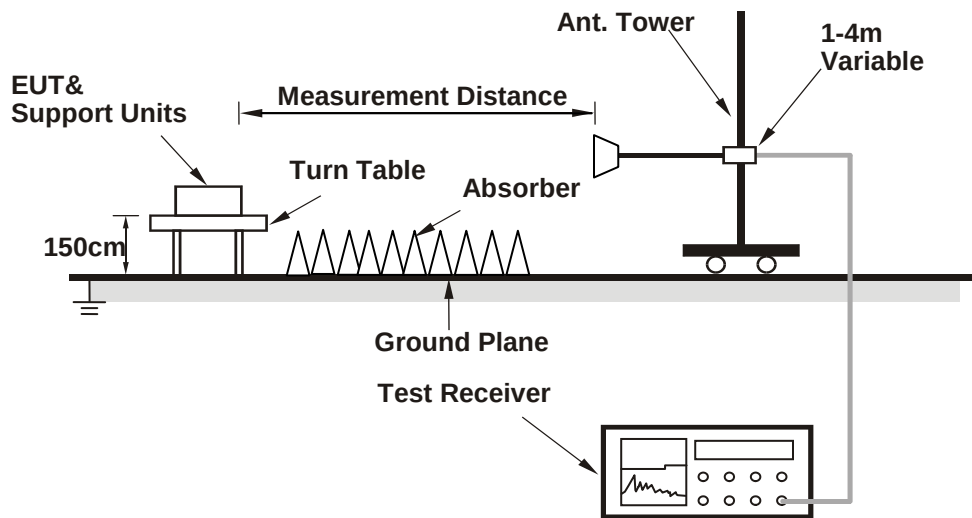
< Frequency Range below 30GHz >



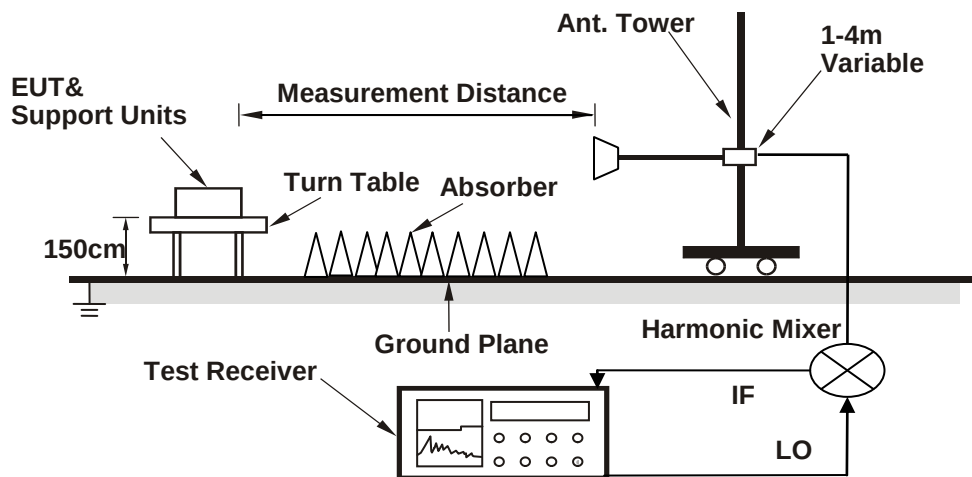
<Frequency Range below 1GHz>



<Frequency Range above 1GHz ~ 40GHz>



<Frequency Range above 40GHz>



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 (Modulation: FM – BW 168.4MHz)

4.6.1 混附發射

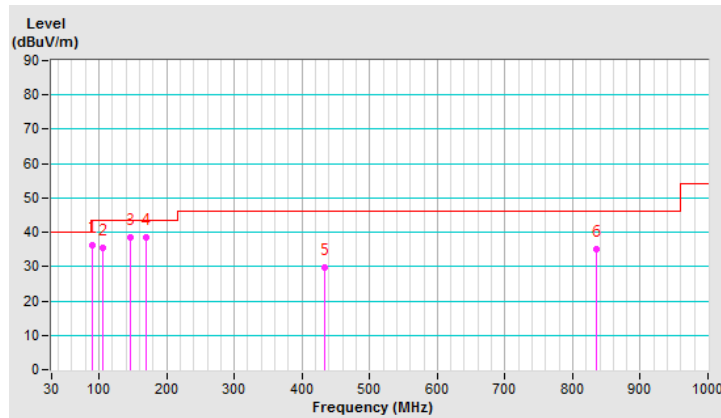
Below 1GHz Data

操作模式：	發射接收	頻率範圍：	30MHz ~ 1GHz
基本波頻率：	CH 1：76.2 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	23°C	量測場地濕度：	69%RH
測試日期：	107 年 9 月 18 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	89.49	36.2 QP	43.5	-7.3	2.00 H	81	49.8	-13.6
2	105.17	35.4 QP	43.5	-8.1	3.00 H	239	46.8	-11.4
3	146.16	38.6 QP	43.5	-4.9	2.00 H	85	46.4	-7.8
4	169.49	38.5 QP	43.5	-5.0	1.50 H	97	46.8	-8.3
5	432.99	29.6 QP	46.0	-16.4	1.50 H	0	32.8	-3.2
6	835.75	34.9 QP	46.0	-11.1	1.50 H	37	30.7	4.2

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.



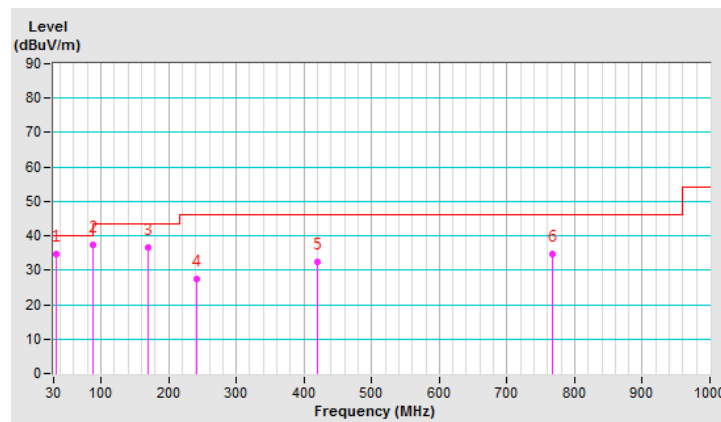
操作模式：	發射接收	頻率範圍：	30MHz ~ 1GHz
基本波頻率：	CH 1：76.2 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	23°C	量測場地濕度：	69%RH
測試日期：	107 年 9 月 18 日	測試者：	何欣儒

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	33.42	34.7 QP	40.0	-5.3	1.50 V	360	43.7	-9.0
2	88.83	37.3 QP	43.5	-6.2	1.50 V	335	51.1	-13.8
3	169.51	36.6 QP	43.5	-6.9	1.50 V	360	44.9	-8.3
4	242.09	27.3 QP	46.0	-18.7	1.00 V	30	36.4	-9.1
5	420.01	32.3 QP	46.0	-13.7	1.00 V	121	36.1	-3.8
6	767.98	34.7 QP	46.0	-11.3	1.00 V	62	31.1	3.6

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 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.



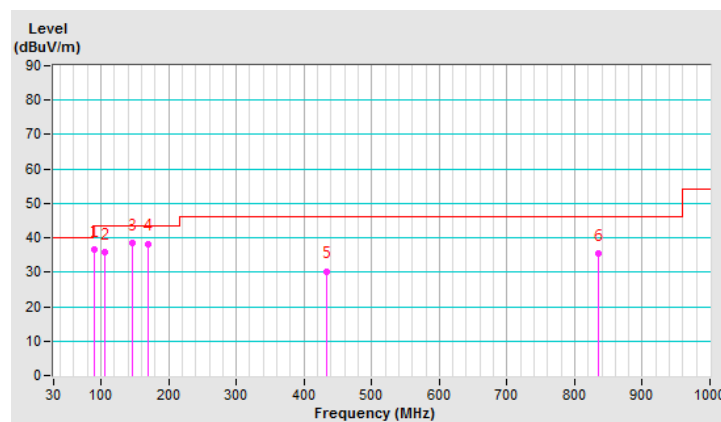
操作模式：	發射接收	頻率範圍：	30MHz ~ 1GHz
基本波頻率：	CH 2 : 76.25 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	23°C	量測場地濕度：	69%RH
測試日期：	107 年 9 月 18 日	測試者：	何欣儒

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	89.50	36.6 QP	43.5	-6.9	2.00 H	265	50.2	-13.6
2	105.17	35.8 QP	43.5	-7.7	2.50 H	311	47.2	-11.4
3	146.16	38.4 QP	43.5	-5.1	2.00 H	162	46.2	-7.8
4	169.50	38.3 QP	43.5	-5.2	1.50 H	138	46.6	-8.3
5	432.99	30.3 QP	46.0	-15.7	1.50 H	12	33.5	-3.2
6	835.75	35.6 QP	46.0	-10.4	1.50 H	13	31.4	4.2

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.



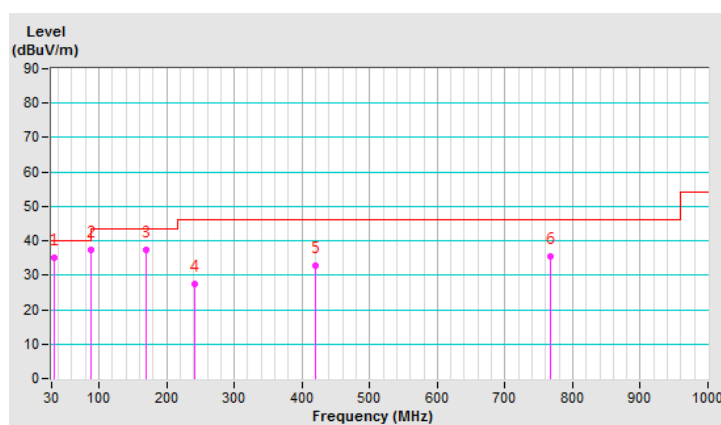
操作模式：	發射接收	頻率範圍：	30MHz ~ 1GHz
基本波頻率：	CH 2 : 76.25 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	23°C	量測場地濕度：	69%RH
測試日期：	107 年 9 月 18 日	測試者：	何欣儒

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	33.42	35.0 QP	40.0	-5.0	1.50 V	261	44.0	-9.0
2	88.83	37.5 QP	43.5	-6.0	1.51 V	264	51.3	-13.8
3	169.51	37.3 QP	43.5	-6.2	1.65 V	284	45.6	-8.3
4	242.09	27.6 QP	46.0	-18.4	1.10 V	163	36.7	-9.1
5	420.01	32.9 QP	46.0	-13.1	1.00 V	143	36.7	-3.8
6	767.98	35.3 QP	46.0	-10.7	1.00 V	254	31.7	3.6

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 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.



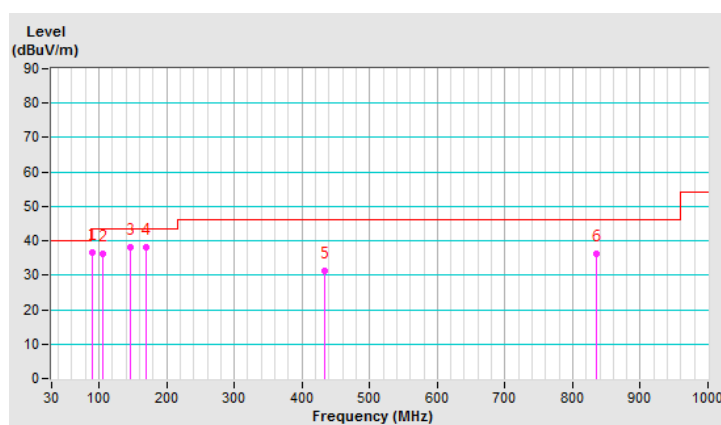
操作模式：	發射接收	頻率範圍：	30MHz ~ 1GHz
基本波頻率：	CH 3 : 76.3 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	23°C	量測場地濕度：	69%RH
測試日期：	107 年 9 月 18 日	測試者：	何欣儒

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	89.50	36.6 QP	43.5	-6.9	1.65 H	301	50.2	-13.6
2	105.17	36.2 QP	43.5	-7.3	2.00 H	305	47.6	-11.4
3	146.15	38.2 QP	43.5	-5.3	1.50 H	302	46.0	-7.8
4	169.50	38.1 QP	43.5	-5.4	1.46 H	318	46.4	-8.3
5	432.99	31.2 QP	46.0	-14.8	1.65 H	301	34.4	-3.2
6	835.72	36.2 QP	46.0	-9.8	1.48 H	261	32.0	4.2

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.



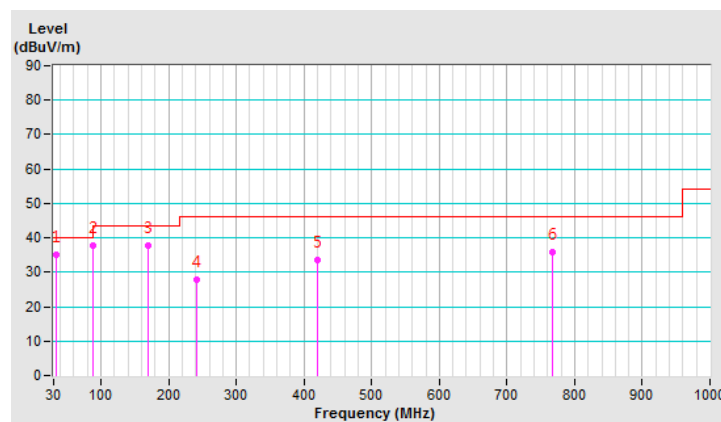
操作模式：	發射接收	頻率範圍：	30MHz ~ 1GHz
基本波頻率：	CH 3 : 76.3 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	23°C	量測場地濕度：	69%RH
測試日期：	107 年 9 月 18 日	測試者：	何欣儒

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	33.42	35.2 QP	40.0	-4.8	1.49 V	118	44.2	-9.0
2	88.83	37.7 QP	43.5	-5.8	1.50 V	312	51.5	-13.8
3	169.50	37.6 QP	43.5	-5.9	2.00 V	136	45.9	-8.3
4	242.09	27.8 QP	46.0	-18.2	1.50 V	212	36.9	-9.1
5	420.01	33.4 QP	46.0	-12.6	1.00 V	269	37.2	-3.8
6	767.98	35.9 QP	46.0	-10.1	1.00 V	134	32.3	3.6

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 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.



Above 1GHz Data

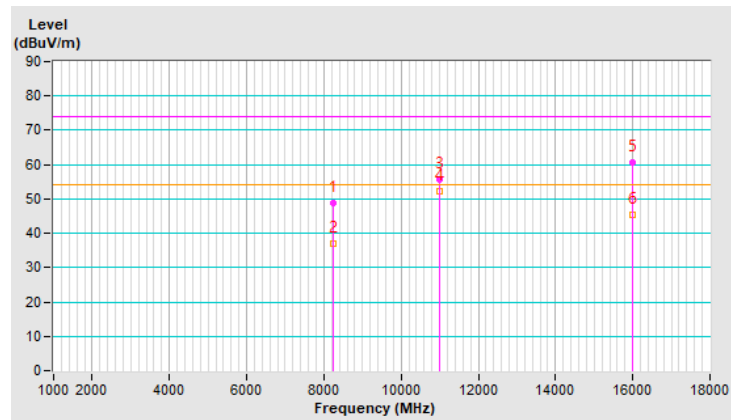
操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 1 : 76.2 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	8250.00	48.9 PK	74.0	-25.1	2.12 H	166	40.3	8.6
2	8250.00	37.1 AV	54.0	-16.9	2.12 H	166	28.5	8.6
3	10996.00	55.8 PK	74.0	-18.2	3.00 H	88	42.8	13.0
4	10996.00	52.2 AV	54.0	-1.8	3.00 H	88	39.2	13.0
5	16007.30	60.6 PK	74.0	-13.4	1.64 H	130	48.1	12.5
6	16007.30	45.5 AV	54.0	-8.5	1.64 H	130	33.0	12.5

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

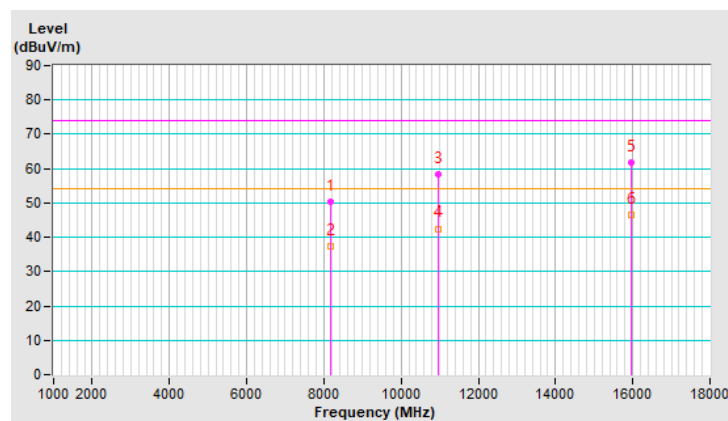


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 1 : 76.2 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	8160.80	50.3 PK	74.0	-23.7	1.62 V	215	41.3	9.0
2	8160.80	37.5 AV	54.0	-16.5	1.62 V	215	28.5	9.0
3	10961.40	58.3 PK	74.0	-15.7	1.99 V	302	45.1	13.2
4	10961.40	42.5 AV	54.0	-11.5	1.99 V	302	29.3	13.2
5	15973.50	61.8 PK	74.0	-12.2	2.10 V	302	49.4	12.4
6	15973.50	46.6 AV	54.0	-7.4	2.10 V	302	34.2	12.4

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

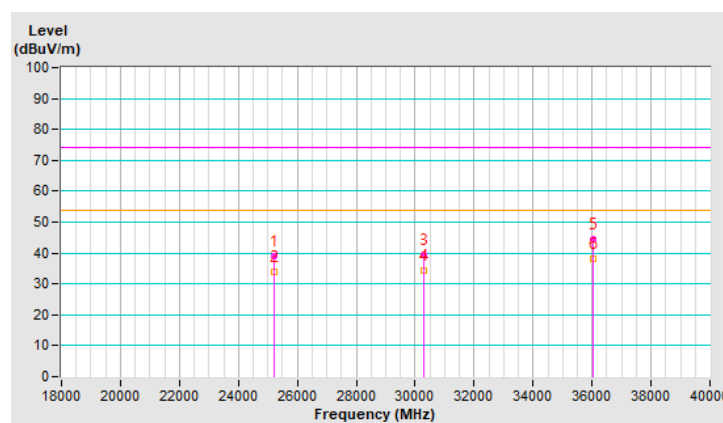


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 1 : 76.2 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	66%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	25230.05	39.1 PK	74.0	-34.9	1.21 H	342	46.0	-6.9
2	25230.05	33.8 AV	54.0	-20.2	1.21 H	342	40.7	-6.9
3	30274.42	39.6 PK	74.0	-34.4	1.00 H	265	47.0	-7.4
4	30274.42	34.5 AV	54.0	-19.5	1.00 H	265	41.9	-7.4
5	36057.15	44.5 PK	74.0	-29.5	1.53 H	179	51.2	-6.7
6	36057.15	38.1 AV	54.0	-15.9	1.53 H	179	44.8	-6.7

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.
4. Margin value = Emission Level – Limit value

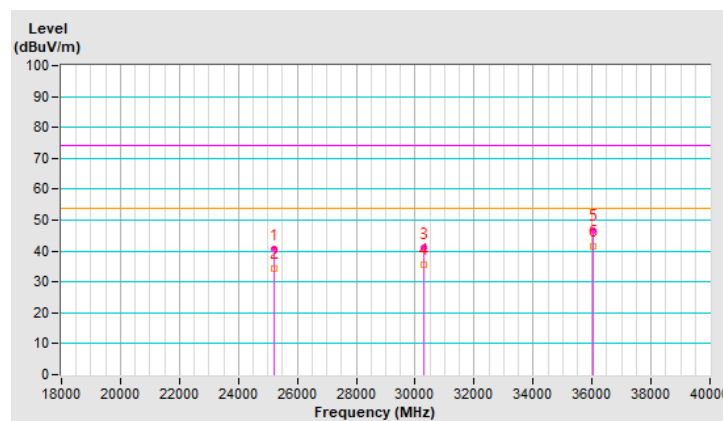


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 1 : 76.2 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	66%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	25230.05	40.5 PK	74.0	-33.5	1.50 V	142	47.4	-6.9
2	25230.05	34.2 AV	54.0	-19.8	1.50 V	142	41.1	-6.9
3	30274.42	40.9 PK	74.0	-33.1	1.56 V	238	48.3	-7.4
4	30274.42	35.6 AV	54.0	-18.4	1.56 V	238	43.0	-7.4
5	36057.15	46.5 PK	74.0	-27.5	1.98 V	265	53.2	-6.7
6	36057.15	41.4 AV	54.0	-12.6	1.98 V	265	48.1	-6.7

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.
4. Margin value = Emission Level – Limit value



操作模式：	發射	頻率範圍：	40GHz ~ 231GHz
基本波頻率：	CH 1：76.2 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz
量測場地溫度：	24°C	量測場地濕度：	63%RH
測試日期：	107 年 9 月 27 日	測試者：	羅益偉

ANTENNA POLARITY: HORIZONTAL						
NO.	Frequency (GHz)	EIRP Level (dBm/MHz)	Raw Value (dBm/MHz)	Receiver Antenna Gain (dBi)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)
1	152.4	-8.2	-60.6	23.7	133.832 PK	600
2	231	-0.2	-56.3	23.6	844.424 PK	1000
ANTENNA POLARITY: VERTICAL						
NO.	Frequency (GHz)	EIRP Level (dBm/MHz)	Raw Value (dBm/MHz)	Receiver Antenna Gain (dBi)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)
1	152.4	-9.9	-62.3	23.7	90.482 PK	600
2	231	-0.7	-56.8	23.6	752.593 PK	1000

REMARKS:

1. The measured power level is converted to EIRP using the equation:

$$\text{EIRP} = \text{Raw Value} - \text{Receiver Antenna Gain} + 20 \cdot \log(4 \cdot 3.1416 \cdot D / \lambda)$$

where:

D is the measurement distance

λ is the wavelength

*Measurements made at 1 meter distance.

2. Power density formula as follows:

$$\text{Power density} = \text{EIRP} / (4 \cdot \pi \cdot r^2)$$

r is the test distance

3. The far-field boundary is given in ANSI 63.10 as:

$$R \text{ far field} = (2 \cdot L^2) / \lambda$$

L is the Largest Antenna Dimension, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.2	0.025	0.00394	0.317

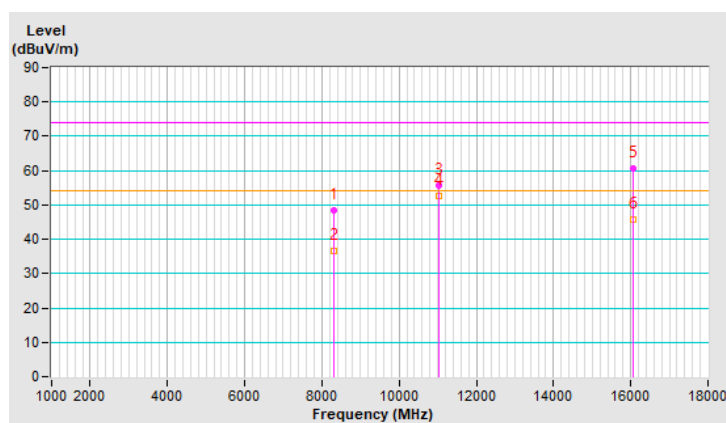
操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 2 : 76.25 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	8321.40	48.3 PK	74.0	-25.7	2.17 H	154	39.6	8.7
2	8321.40	36.6 AV	54.0	-17.4	2.17 H	154	27.9	8.7
3	11024.40	55.8 PK	74.0	-18.2	3.04 H	94	42.9	12.9
4	11024.40	52.5 AV	54.0	-1.5	3.04 H	94	39.6	12.9
5	16069.40	60.5 PK	74.0	-13.5	1.59 H	134	47.6	12.9
6	16069.40	45.6 AV	54.0	-8.4	1.59 H	134	32.7	12.9

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

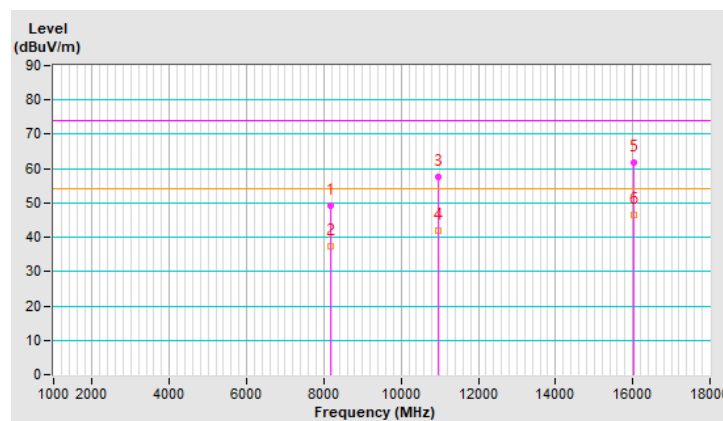


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 2 : 76.25 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	8166.20	49.3 PK	74.0	-24.7	1.59 V	202	40.4	8.9
2	8166.20	37.4 AV	54.0	-16.6	1.59 V	202	28.5	8.9
3	10970.50	57.7 PK	74.0	-16.3	2.05 V	291	44.5	13.2
4	10970.50	41.9 AV	54.0	-12.1	2.05 V	291	28.7	13.2
5	16011.90	61.8 PK	74.0	-12.2	2.11 V	308	49.3	12.5
6	16011.90	46.4 AV	54.0	-7.6	2.11 V	308	33.9	12.5

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



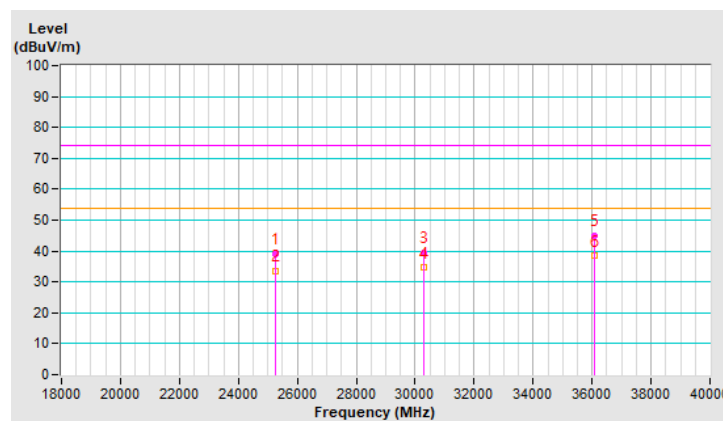
操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 2 : 76.25 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	66%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	25255.10	39.0 PK	74.0	-35.0	1.27 H	349	45.8	-6.8
2	25255.10	33.5 AV	54.0	-20.5	1.27 H	349	40.3	-6.8
3	30297.60	39.5 PK	74.0	-34.5	1.02 H	252	47.0	-7.5
4	30297.60	34.6 AV	54.0	-19.4	1.02 H	252	42.1	-7.5
5	36079.30	44.9 PK	74.0	-29.1	1.54 H	182	51.6	-6.7
6	36079.30	38.4 AV	54.0	-15.6	1.54 H	182	45.1	-6.7

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.
4. Margin value = Emission Level – Limit value

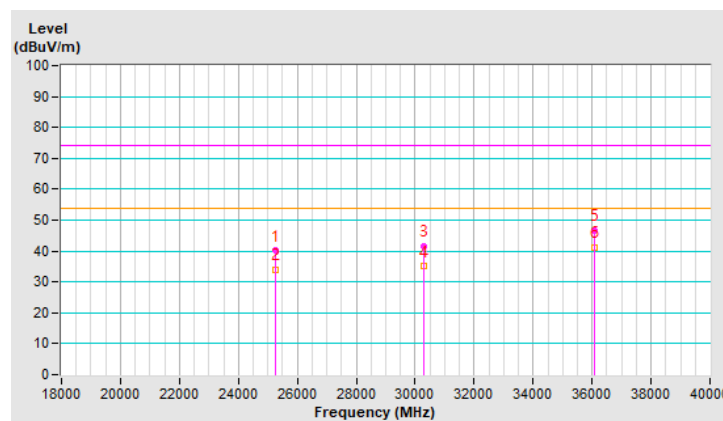


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 2 : 76.25 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	66%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	25260.90	40.1 PK	74.0	-33.9	1.45 V	135	46.9	-6.8
2	25260.90	34.1 AV	54.0	-19.9	1.45 V	135	40.9	-6.8
3	30277.70	41.4 PK	74.0	-32.6	1.54 V	233	48.8	-7.4
4	30277.70	35.0 AV	54.0	-19.0	1.54 V	233	42.4	-7.4
5	36089.20	46.6 PK	74.0	-27.4	1.96 V	253	53.3	-6.7
6	36089.20	41.2 AV	54.0	-12.8	1.96 V	253	47.9	-6.7

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.
4. Margin value = Emission Level – Limit value



操作模式：	發射	頻率範圍：	40GHz ~ 231GHz
基本波頻率：	CH 2 : 76.25 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz
量測場地溫度：	24°C	量測場地濕度：	63%RH
測試日期：	107 年 9 月 27 日	測試者：	羅益偉

ANTENNA POLARITY: HORIZONTAL						
NO.	Frequency (GHz)	EIRP Level (dBm/MHz)	Raw Value (dBm/MHz)	Receiver Antenna Gain (dBi)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)
1	152.5	-8.0	-60.4	23.7	140.139 PK	600
2	231	0.1	-56.0	23.6	904.816 PK	1000
ANTENNA POLARITY: VERTICAL						
NO.	Frequency (GHz)	EIRP Level (dBm/MHz)	Raw Value (dBm/MHz)	Receiver Antenna Gain (dBi)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)
1	152.5	-8.9	-61.3	23.7	113.91 PK	600
2	231	-2.2	-58.3	23.6	532.795 PK	1000

REMARKS:

1. The measured power level is converted to EIRP using the equation:

$$\text{EIRP} = \text{Raw Value} - \text{Receiver Antenna Gain} + 20 \cdot \log(4 \cdot 3.1416 \cdot D / \lambda)$$

where:

D is the measurement distance

λ is the wavelength

*Measurements made at 1 meter distance.

2. Power density formula as follows:

$$\text{Power density} = \text{EIRP} / (4 \cdot \pi \cdot r^2)$$

r is the test distance

3. The far-field boundary is given in ANSI 63.10 as:

$$R \text{ far field} = (2 \cdot L^2) / \lambda$$

L is the Largest Antenna Dimension, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.25	0.025	0.00393	0.318

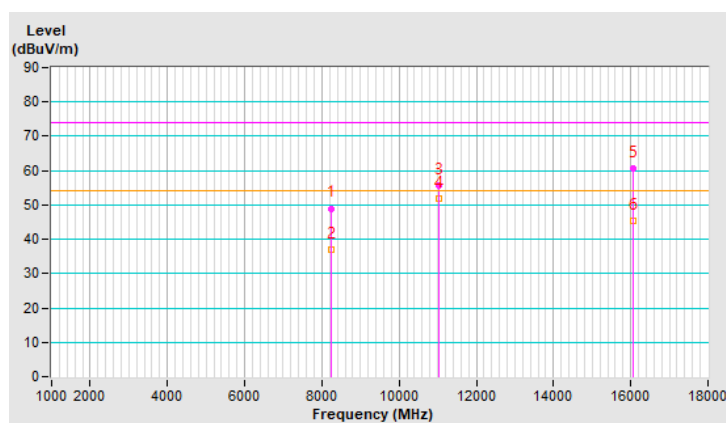
操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 3 : 76.3 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	8251.20	49.0 PK	74.0	-25.0	2.13 H	157	40.4	8.6
2	8251.20	37.0 AV	54.0	-17.0	2.13 H	157	28.4	8.6
3	11016.70	55.5 PK	74.0	-18.5	3.01 H	95	42.6	12.9
4	11016.70	51.9 AV	54.0	-2.1	3.01 H	95	39.0	12.9
5	16065.80	60.5 PK	74.0	-13.5	1.61 H	139	47.6	12.9
6	16065.80	45.2 AV	54.0	-8.8	1.61 H	139	32.3	12.9

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

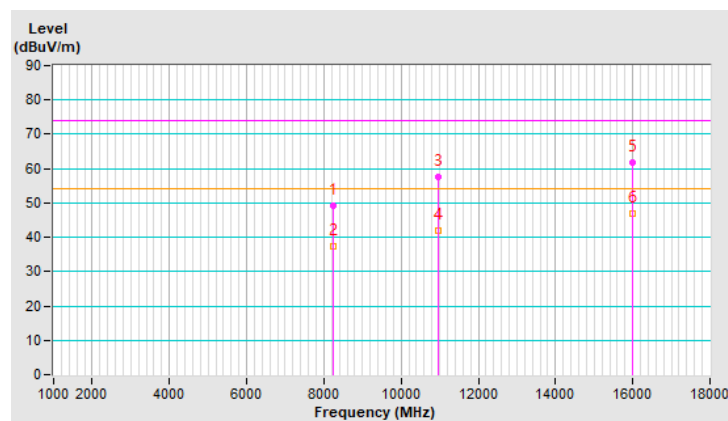


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 3 : 76.3 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	8258.40	49.3 PK	74.0	-24.7	1.67 V	217	40.7	8.6
2	8258.40	37.4 AV	54.0	-16.6	1.67 V	217	28.8	8.6
3	10967.90	57.7 PK	74.0	-16.3	1.95 V	288	44.5	13.2
4	10967.90	41.9 AV	54.0	-12.1	1.95 V	288	28.7	13.2
5	15977.90	61.8 PK	74.0	-12.2	2.12 V	310	49.4	12.4
6	15977.90	46.8 AV	54.0	-7.2	2.12 V	310	34.4	12.4

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



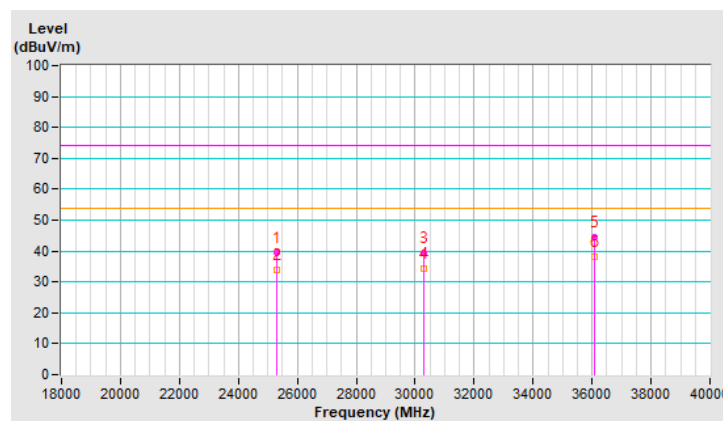
操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 3 : 76.3 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	66%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	25312.30	39.5 PK	74.0	-34.5	1.18 H	342	46.2	-6.7
2	25312.30	34.1 AV	54.0	-19.9	1.18 H	342	40.8	-6.7
3	30285.90	39.5 PK	74.0	-34.5	1.00 H	258	47.0	-7.5
4	30285.90	34.5 AV	54.0	-19.5	1.00 H	258	42.0	-7.5
5	36093.90	44.5 PK	74.0	-29.5	1.56 H	191	51.2	-6.7
6	36093.90	38.3 AV	54.0	-15.7	1.56 H	191	45.0	-6.7

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.
4. Margin value = Emission Level – Limit value

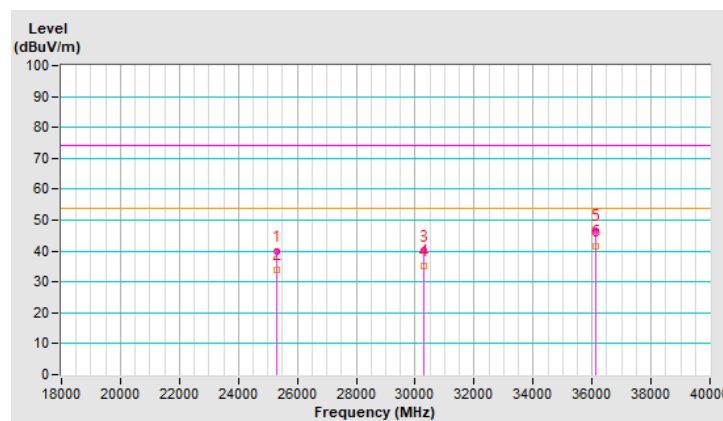


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 3 : 76.3 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	66%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	25283.90	39.8 PK	74.0	-34.2	1.54 V	137	46.5	-6.7
2	25283.90	33.9 AV	54.0	-20.1	1.54 V	137	40.6	-6.7
3	30297.90	40.1 PK	74.0	-33.9	1.61 V	226	47.6	-7.5
4	30297.90	35.1 AV	54.0	-18.9	1.61 V	226	42.6	-7.5
5	36127.10	46.7 PK	74.0	-27.3	2.03 V	277	53.4	-6.7
6	36127.10	41.6 AV	54.0	-12.4	2.03 V	277	48.3	-6.7

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.
4. Margin value = Emission Level – Limit value



操作模式：	發射	頻率範圍：	40GHz ~ 231GHz
基本波頻率：	CH 3 : 76.3 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz
量測場地溫度：	24°C	量測場地濕度：	63%RH
測試日期：	107 年 9 月 27 日	測試者：	羅益偉

ANTENNA POLARITY: HORIZONTAL						
NO.	Frequency (GHz)	EIRP Level (dBm/MHz)	Raw Value (dBm/MHz)	Receiver Antenna Gain (dBi)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)
1	152.6	-7.8	-60.2	23.7	146.744 PK	600
2	231	-0.1	-56.2	23.6	864.093 PK	1000
ANTENNA POLARITY: VERTICAL						
NO.	Frequency (GHz)	EIRP Level (dBm/MHz)	Raw Value (dBm/MHz)	Receiver Antenna Gain (dBi)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)
1	152.6	-8.9	-61.3	23.7	113.91 PK	600
2	231	-1.0	-57.1	23.6	702.361 PK	1000

REMARKS:

1. The measured power level is converted to EIRP using the equation:

$$\text{EIRP} = \text{Raw Value} - \text{Receiver Antenna Gain} + 20 \cdot \log(4 \cdot 3.1416 \cdot D / \lambda)$$

where:

D is the measurement distance

λ is the wavelength

*Measurements made at 1 meter distance.

2. Power density formula as follows:

$$\text{Power density} = \text{EIRP} / (4 \cdot \pi \cdot r^2)$$

r is the test distance

3. The far-field boundary is given in ANSI 63.10 as:

$$R \text{ far field} = (2 \cdot L^2) / \lambda$$

L is the Largest Antenna Dimension, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.3	0.025	0.00393	0.318

4.7 量測結果 (Modulation: FM – BW 234.9MHz)

4.7.1 混附發射

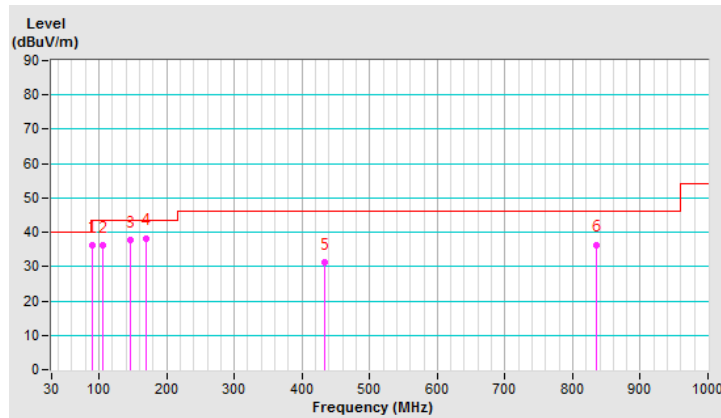
Below 1GHz Data

操作模式：	發射接收	頻率範圍：	30MHz ~ 1GHz
基本波頻率：	CH 1：76.2 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	23°C	量測場地濕度：	69%RH
測試日期：	107 年 9 月 18 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	89.50	36.2 QP	43.5	-7.3	1.70 H	132	49.8	-13.6
2	105.17	36.1 QP	43.5	-7.4	1.50 H	282	47.5	-11.4
3	146.15	37.9 QP	43.5	-5.6	1.50 H	143	45.7	-7.8
4	169.50	38.3 QP	43.5	-5.2	1.55 H	263	46.6	-8.3
5	432.99	31.4 QP	46.0	-14.6	1.63 H	79	34.6	-3.2
6	835.72	36.4 QP	46.0	-9.6	1.52 H	269	32.2	4.2

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.



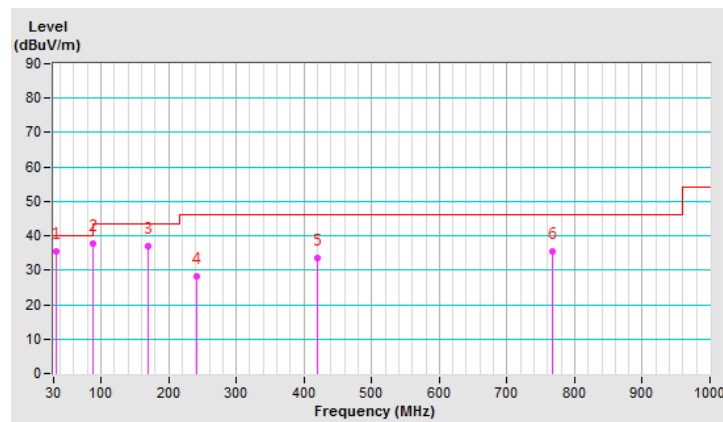
操作模式：	發射接收	頻率範圍：	30MHz ~ 1GHz
基本波頻率：	CH 1：76.2 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	23°C	量測場地濕度：	69%RH
測試日期：	107 年 9 月 18 日	測試者：	何欣儒

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	33.40	35.3 QP	40.0	-4.7	1.12 V	351	44.3	-9.0
2	88.85	37.9 QP	43.5	-5.6	1.54 V	318	51.7	-13.8
3	169.50	37.1 QP	43.5	-6.4	2.00 V	318	45.4	-8.3
4	242.10	28.2 QP	46.0	-17.8	1.00 V	305	37.3	-9.1
5	420.01	33.6 QP	46.0	-12.4	1.62 V	301	37.4	-3.8
6	767.98	35.5 QP	46.0	-10.5	1.00 V	118	31.9	3.6

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 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.



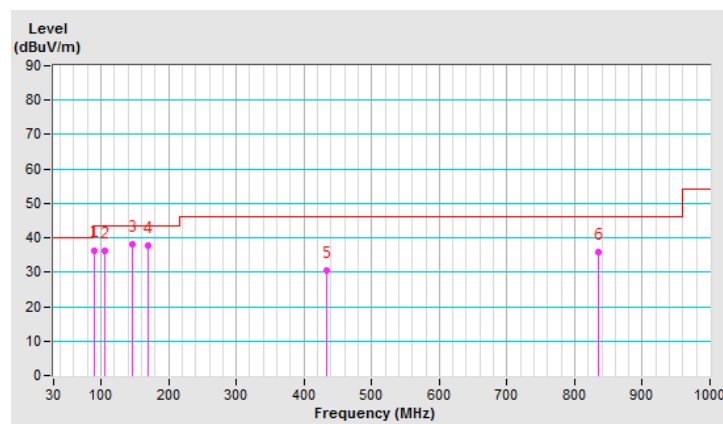
操作模式：	發射接收	頻率範圍：	30MHz ~ 1GHz
基本波頻率：	CH 2 : 76.25 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	23°C	量測場地濕度：	69%RH
測試日期：	107 年 9 月 18 日	測試者：	何欣儒

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	89.51	36.4 QP	43.5	-7.1	2.11 H	319	50.0	-13.6
2	105.16	36.2 QP	43.5	-7.3	2.43 H	105	47.6	-11.4
3	146.16	38.2 QP	43.5	-5.3	1.98 H	315	46.0	-7.8
4	169.50	37.6 QP	43.5	-5.9	1.46 H	225	45.9	-8.3
5	433.00	30.6 QP	46.0	-15.4	1.43 H	226	33.8	-3.2
6	835.75	35.8 QP	46.0	-10.2	1.64 H	205	31.6	4.2

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.



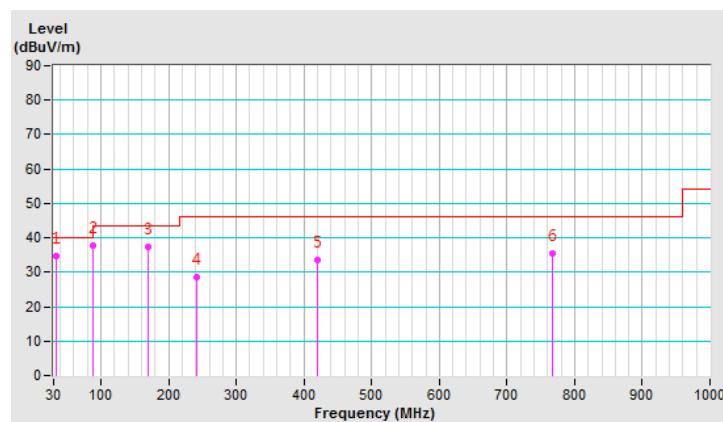
操作模式：	發射接收	頻率範圍：	30MHz ~ 1GHz
基本波頻率：	CH 2 : 76.25 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	23°C	量測場地濕度：	69%RH
測試日期：	107 年 9 月 18 日	測試者：	何欣儒

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	33.40	34.8 QP	40.0	-5.2	1.23 V	289	43.8	-9.0
2	88.85	37.6 QP	43.5	-5.9	1.46 V	219	51.4	-13.8
3	169.50	37.2 QP	43.5	-6.3	1.98 V	162	45.5	-8.3
4	242.10	28.6 QP	46.0	-17.4	1.09 V	315	37.7	-9.1
5	420.01	33.4 QP	46.0	-12.6	1.53 V	284	37.2	-3.8
6	767.98	35.3 QP	46.0	-10.7	1.00 V	263	31.7	3.6

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 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.



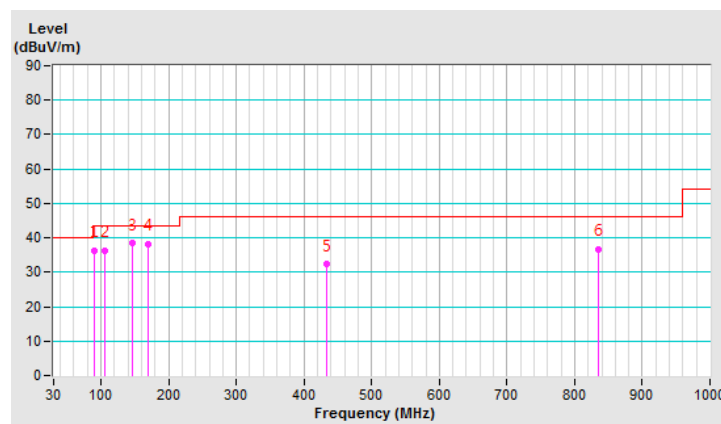
操作模式：	發射接收	頻率範圍：	30MHz ~ 1GHz
基本波頻率：	CH 3 : 76.3 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	23°C	量測場地濕度：	69%RH
測試日期：	107 年 9 月 18 日	測試者：	何欣儒

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	89.50	36.4 QP	43.5	-7.1	1.53 H	288	50.0	-13.6
2	105.15	36.4 QP	43.5	-7.1	1.96 H	312	47.8	-11.4
3	146.15	38.6 QP	43.5	-4.9	1.63 H	184	46.4	-7.8
4	169.50	38.3 QP	43.5	-5.2	1.52 H	305	46.6	-8.3
5	432.99	32.4 QP	46.0	-13.6	1.53 H	187	35.6	-3.2
6	835.72	36.8 QP	46.0	-9.2	1.56 H	193	32.6	4.2

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.



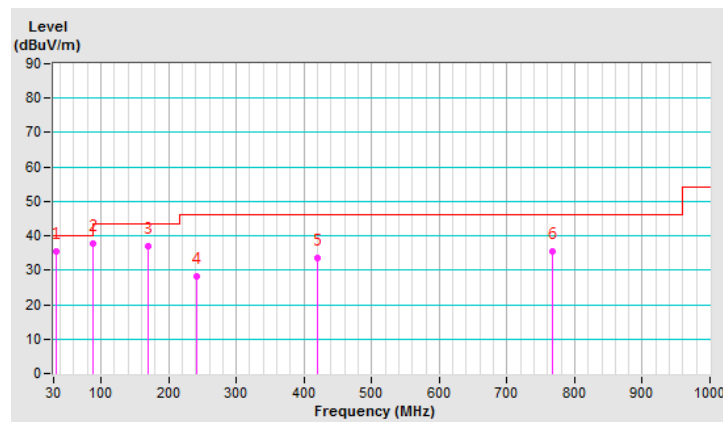
操作模式：	發射接收	頻率範圍：	30MHz ~ 1GHz
基本波頻率：	CH 3 : 76.3 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	23°C	量測場地濕度：	69%RH
測試日期：	107 年 9 月 18 日	測試者：	何欣儒

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	33.40	35.3 QP	40.0	-4.7	1.12 V	351	44.3	-9.0
2	88.85	37.9 QP	43.5	-5.6	1.54 V	318	51.7	-13.8
3	169.50	37.1 QP	43.5	-6.4	2.00 V	318	45.4	-8.3
4	242.10	28.2 QP	46.0	-17.8	1.00 V	305	37.3	-9.1
5	420.01	33.6 QP	46.0	-12.4	1.62 V	301	37.4	-3.8
6	767.98	35.5 QP	46.0	-10.5	1.00 V	118	31.9	3.6

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 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.



Above 1GHz Data

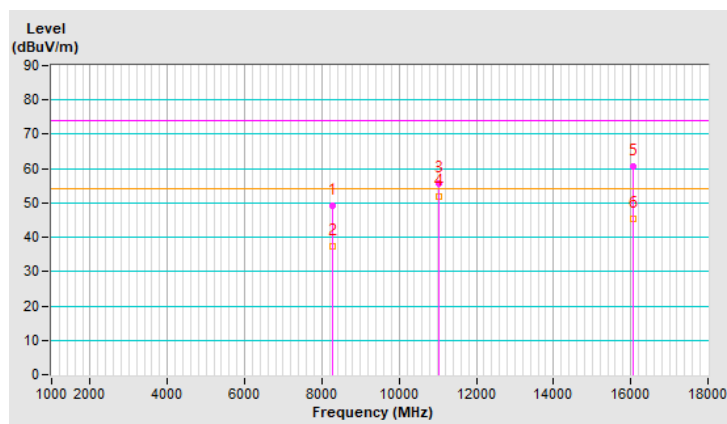
操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 1 : 76.2 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	8271.30	49.3 PK	74.0	-24.7	2.17 H	156	40.8	8.5
2	8271.30	37.2 AV	54.0	-16.8	2.17 H	156	28.7	8.5
3	11022.30	55.6 PK	74.0	-18.4	3.02 H	97	42.7	12.9
4	11022.30	51.8 AV	54.0	-2.2	3.02 H	97	38.9	12.9
5	16066.70	60.7 PK	74.0	-13.3	1.68 H	119	47.8	12.9
6	16066.70	45.3 AV	54.0	-8.7	1.68 H	119	32.4	12.9

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

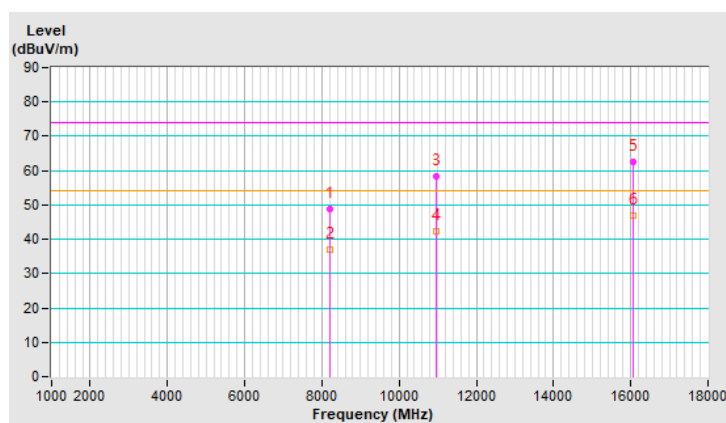


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 1：76.2 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	8216.70	48.9 PK	74.0	-25.1	1.58 V	225	40.2	8.7
2	8216.70	37.0 AV	54.0	-17.0	1.58 V	225	28.3	8.7
3	10978.80	58.2 PK	74.0	-15.8	1.95 V	308	45.1	13.1
4	10978.80	42.3 AV	54.0	-11.7	1.95 V	308	29.2	13.1
5	16054.60	62.5 PK	74.0	-11.5	2.12 V	309	49.8	12.7
6	16054.60	47.0 AV	54.0	-7.0	2.12 V	309	34.3	12.7

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.
4. Margin value = Emission Level – Limit value

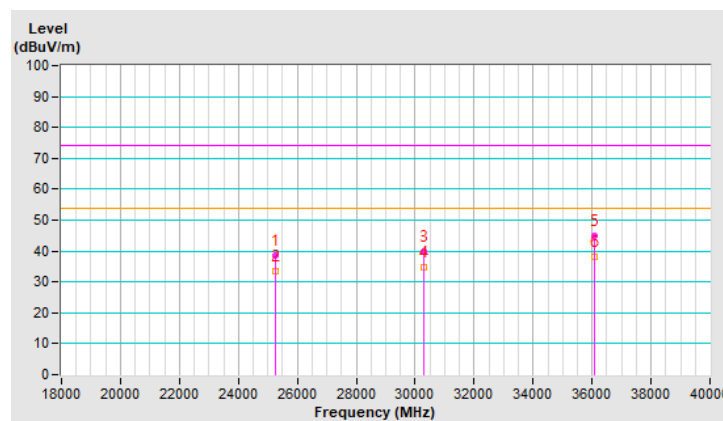


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 1 : 76.2 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	66%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	25247.70	38.5 PK	74.0	-35.5	1.24 H	353	45.4	-6.9
2	25247.70	33.5 AV	54.0	-20.5	1.24 H	353	40.4	-6.9
3	30275.30	40.0 PK	74.0	-34.0	1.00 H	279	47.4	-7.4
4	30275.30	34.9 AV	54.0	-19.1	1.00 H	279	42.3	-7.4
5	36090.40	44.8 PK	74.0	-29.2	1.52 H	191	51.5	-6.7
6	36090.40	38.1 AV	54.0	-15.9	1.52 H	191	44.8	-6.7

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.
4. Margin value = Emission Level – Limit value



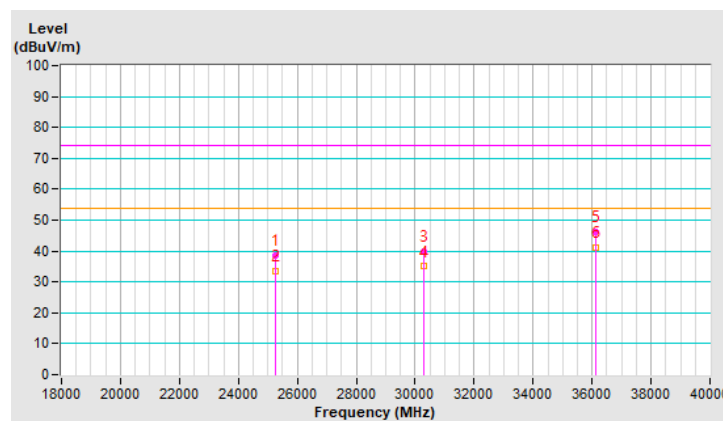
操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 1：76.2 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	66%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	25262.20	38.6 PK	74.0	-35.4	1.54 V	128	45.4	-6.8
2	25262.20	33.6 AV	54.0	-20.4	1.54 V	128	40.4	-6.8
3	30293.30	40.0 PK	74.0	-34.0	1.54 V	230	47.5	-7.5
4	30293.30	35.0 AV	54.0	-19.0	1.54 V	230	42.5	-7.5
5	36129.10	46.2 PK	74.0	-27.8	1.93 V	250	52.9	-6.7
6	36129.10	41.1 AV	54.0	-12.9	1.93 V	250	47.8	-6.7

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.
4. Margin value = Emission Level – Limit value



操作模式：	發射	頻率範圍：	40GHz ~ 231GHz
基本波頻率：	CH 1：76.2 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz
量測場地溫度：	24°C	量測場地濕度：	63%RH
測試日期：	107 年 9 月 27 日	測試者：	羅益偉

ANTENNA POLARITY: HORIZONTAL						
NO.	Frequency (GHz)	EIRP Level (dBm/MHz)	Raw Value (dBm/MHz)	Receiver Antenna Gain (dBi)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)
1	152.4	-7.9	-60.3	23.7	143.404 PK	600
2	231	-0.1	-56.2	23.6	864.093 PK	1000
ANTENNA POLARITY: VERTICAL						
NO.	Frequency (GHz)	EIRP Level (dBm/MHz)	Raw Value (dBm/MHz)	Receiver Antenna Gain (dBi)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)
1	152.4	-8.0	-60.4	23.7	140.139 PK	600
2	231	-1.4	-57.5	23.6	640.561 PK	1000

REMARKS:

1. The measured power level is converted to EIRP using the equation:

$$\text{EIRP} = \text{Raw Value} - \text{Receiver Antenna Gain} + 20 \cdot \log(4 \cdot 3.1416 \cdot D / \lambda)$$

where:

D is the measurement distance

λ is the wavelength

*Measurements made at 1 meter distance.

2. Power density formula as follows:

$$\text{Power density} = \text{EIRP} / (4 \cdot \pi \cdot r^2)$$

r is the test distance

3. The far-field boundary is given in ANSI 63.10 as:

$$R \text{ far field} = (2 \cdot L^2) / \lambda$$

L is the Largest Antenna Dimension, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.2	0.025	0.00394	0.317

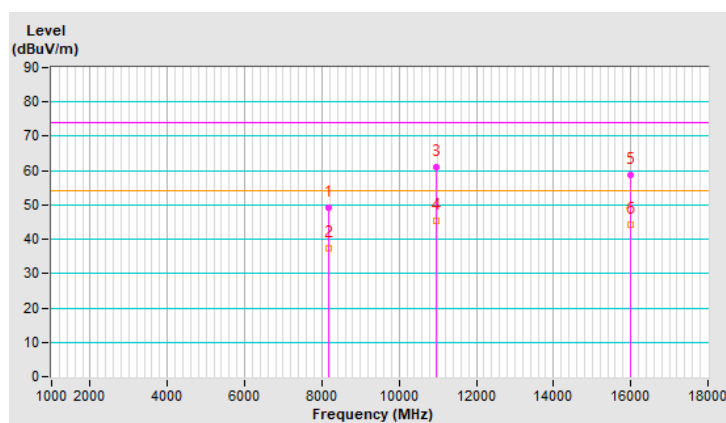
操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 2 : 76.25 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	8164.20	49.3 PK	74.0	-24.7	2.15 H	161	40.4	8.9
2	8164.20	37.3 AV	54.0	-16.7	2.15 H	161	28.4	8.9
3	10972.90	60.9 PK	74.0	-13.1	3.03 H	89	47.7	13.2
4	10972.90	45.4 AV	54.0	-8.6	3.03 H	89	32.2	13.2
5	15995.40	58.7 PK	74.0	-15.3	1.78 H	119	46.3	12.4
6	15995.40	44.3 AV	54.0	-9.7	1.78 H	119	31.9	12.4

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



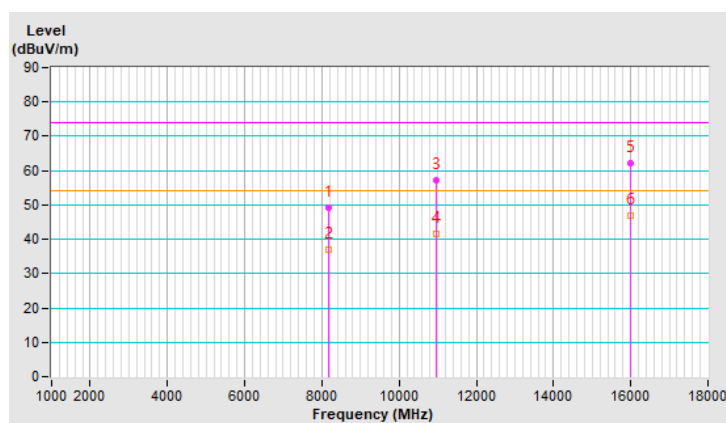
操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 2 : 76.25 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	8164.20	49.1 PK	74.0	-24.9	1.60 V	211	40.2	8.9
2	8164.20	37.1 AV	54.0	-16.9	1.60 V	211	28.2	8.9
3	10972.90	57.2 PK	74.0	-16.8	1.99 V	302	44.0	13.2
4	10972.90	41.6 AV	54.0	-12.4	1.99 V	302	28.4	13.2
5	15995.40	62.0 PK	74.0	-12.0	2.11 V	295	49.6	12.4
6	15995.40	47.0 AV	54.0	-7.0	2.11 V	295	34.6	12.4

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



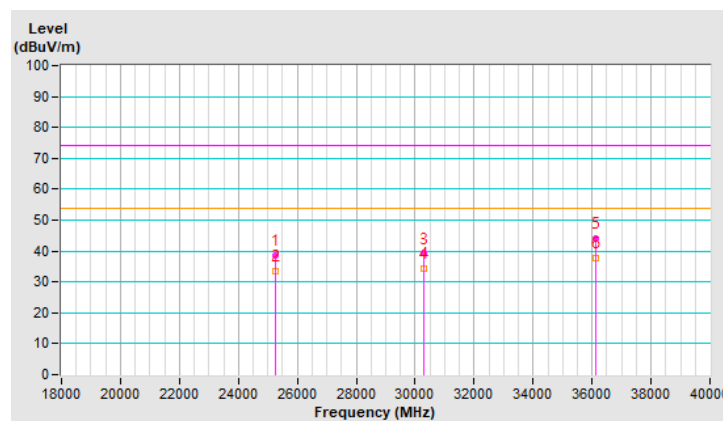
操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 2 : 76.25 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	66%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	25238.60	38.6 PK	74.0	-35.4	1.22 H	328	45.5	-6.9
2	25238.60	33.6 AV	54.0	-20.4	1.22 H	328	40.5	-6.9
3	30274.70	39.2 PK	74.0	-34.8	1.00 H	254	46.6	-7.4
4	30274.70	34.2 AV	54.0	-19.8	1.00 H	254	41.6	-7.4
5	36138.80	44.2 PK	74.0	-29.8	1.59 H	164	50.9	-6.7
6	36138.80	37.7 AV	54.0	-16.3	1.59 H	164	44.4	-6.7

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.
4. Margin value = Emission Level – Limit value

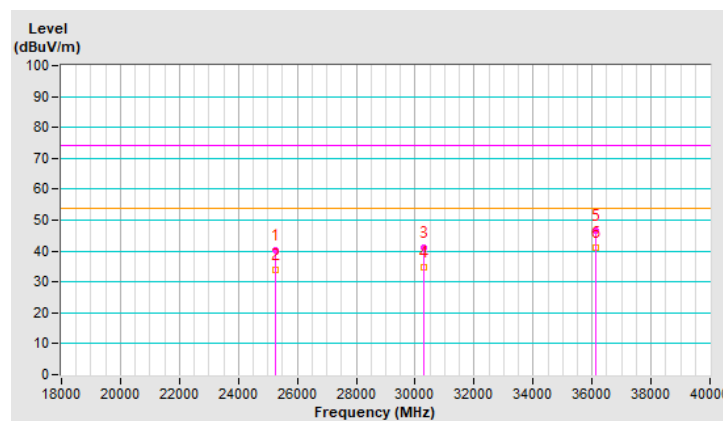


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 2 : 76.25 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	66%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	25250.40	40.2 PK	74.0	-33.8	1.51 V	133	47.0	-6.8
2	25250.40	34.1 AV	54.0	-19.9	1.51 V	133	40.9	-6.8
3	30291.40	41.1 PK	74.0	-32.9	1.52 V	238	48.6	-7.5
4	30291.40	34.8 AV	54.0	-19.2	1.52 V	238	42.3	-7.5
5	36124.90	46.7 PK	74.0	-27.3	2.00 V	266	53.4	-6.7
6	36124.90	41.3 AV	54.0	-12.7	2.00 V	266	48.0	-6.7

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.
4. Margin value = Emission Level – Limit value



操作模式：	發射	頻率範圍：	40GHz ~ 231GHz
基本波頻率：	CH 2 : 76.25 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz
量測場地溫度：	24°C	量測場地濕度：	63%RH
測試日期：	107 年 9 月 27 日	測試者：	羅益偉

ANTENNA POLARITY: HORIZONTAL						
NO.	Frequency (GHz)	EIRP Level (dBm/MHz)	Raw Value (dBm/MHz)	Receiver Antenna Gain (dBi)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)
1	152.5	-8.1	-60.5	23.7	136.949 PK	600
2	231	-0.2	-56.3	23.6	844.424 PK	1000
ANTENNA POLARITY: VERTICAL						
NO.	Frequency (GHz)	EIRP Level (dBm/MHz)	Raw Value (dBm/MHz)	Receiver Antenna Gain (dBi)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)
1	152.5	-8.8	-61.2	23.7	116.563 PK	600
2	231	-1.2	-57.3	23.6	670.75 PK	1000

REMARKS:

1. The measured power level is converted to EIRP using the equation:

$$\text{EIRP} = \text{Raw Value} - \text{Receiver Antenna Gain} + 20 \cdot \log(4 \cdot 3.1416 \cdot D / \lambda)$$

where:

D is the measurement distance

λ is the wavelength

*Measurements made at 1 meter distance.

2. Power density formula as follows:

$$\text{Power density} = \text{EIRP} / (4 \cdot \pi \cdot r^2)$$

r is the test distance

3. The far-field boundary is given in ANSI 63.10 as:

$$R \text{ far field} = (2 \cdot L^2) / \lambda$$

L is the Largest Antenna Dimension, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.25	0.025	0.00393	0.318

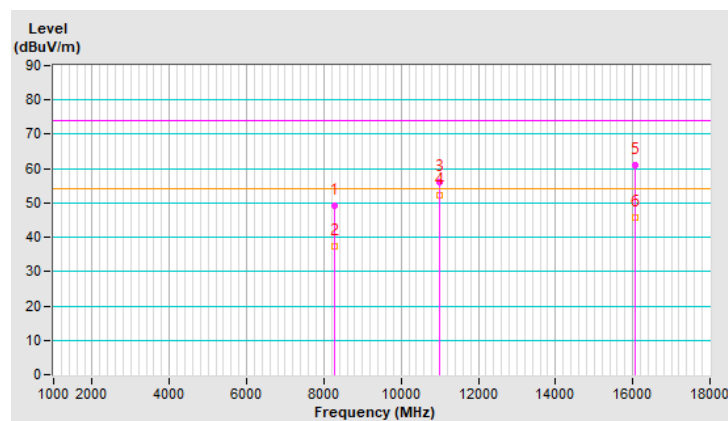
操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 3 : 76.3 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	8285.90	49.1 PK	74.0	-24.9	2.17 H	158	40.6	8.5
2	8285.90	37.2 AV	54.0	-16.8	2.17 H	158	28.7	8.5
3	11008.20	56.0 PK	74.0	-18.0	3.02 H	93	43.0	13.0
4	11008.20	52.2 AV	54.0	-1.8	3.02 H	93	39.2	13.0
5	16064.30	61.0 PK	74.0	-13.0	1.61 H	129	48.1	12.9
6	16064.30	45.7 AV	54.0	-8.3	1.61 H	129	32.8	12.9

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

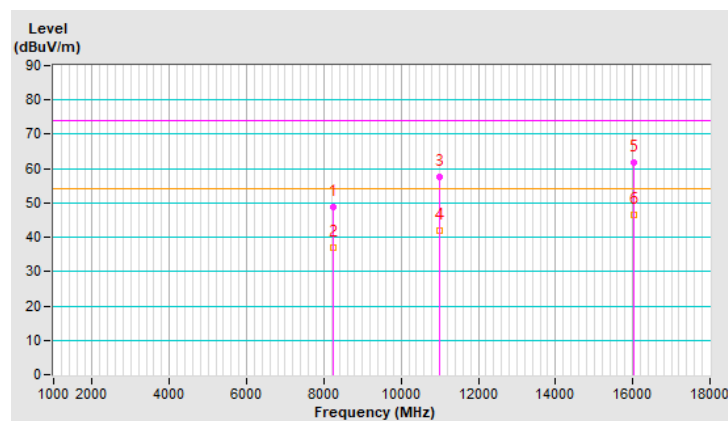


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 3 : 76.3 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	8234.00	48.9 PK	74.0	-25.1	1.57 V	211	40.2	8.7
2	8234.00	36.9 AV	54.0	-17.1	1.57 V	211	28.2	8.7
3	10984.40	57.5 PK	74.0	-16.5	2.04 V	297	44.4	13.1
4	10984.40	42.0 AV	54.0	-12.0	2.04 V	297	28.9	13.1
5	16024.90	61.7 PK	74.0	-12.3	2.15 V	300	49.2	12.5
6	16024.90	46.4 AV	54.0	-7.6	2.15 V	300	33.9	12.5

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



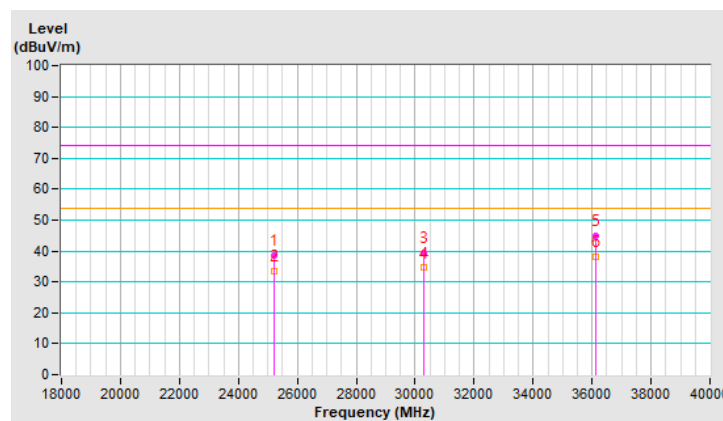
操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 3 : 76.3 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	66%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	25234.80	38.6 PK	74.0	-35.4	1.17 H	332	45.5	-6.9
2	25234.80	33.4 AV	54.0	-20.6	1.17 H	332	40.3	-6.9
3	30280.50	39.5 PK	74.0	-34.5	1.00 H	269	46.9	-7.4
4	30280.50	34.6 AV	54.0	-19.4	1.00 H	269	42.0	-7.4
5	36127.10	44.8 PK	74.0	-29.2	1.51 H	188	51.5	-6.7
6	36127.10	38.3 AV	54.0	-15.7	1.51 H	188	45.0	-6.7

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.
4. Margin value = Emission Level – Limit value

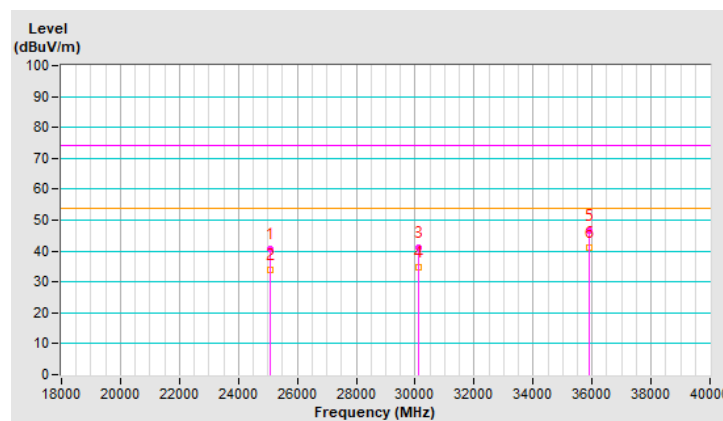


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 3 : 76.3 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	66%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	25082.05	40.8 PK	74.0	-33.2	1.55 V	147	48.0	-7.2
2	25082.05	34.1 AV	54.0	-19.9	1.55 V	147	41.3	-7.2
3	30126.42	41.0 PK	74.0	-33.0	1.51 V	237	48.6	-7.6
4	30126.42	34.9 AV	54.0	-19.1	1.51 V	237	42.5	-7.6
5	35909.15	46.5 PK	74.0	-27.5	1.98 V	263	53.3	-6.8
6	35909.15	41.2 AV	54.0	-12.8	1.98 V	263	48.0	-6.8

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：	發射	頻率範圍：	40GHz ~ 231GHz
基本波頻率：	CH 3 : 76.3 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz
量測場地溫度：	24°C	量測場地濕度：	63%RH
測試日期：	107 年 9 月 27 日	測試者：	羅益偉

ANTENNA POLARITY: HORIZONTAL						
NO.	Frequency (GHz)	EIRP Level (dBm/MHz)	Raw Value (dBm/MHz)	Receiver Antenna Gain (dBi)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)
1	152.6	-8.0	-60.4	23.7	140.139 PK	600
2	231	0.1	-56.0	23.6	904.816 PK	1000
ANTENNA POLARITY: VERTICAL						
NO.	Frequency (GHz)	EIRP Level (dBm/MHz)	Raw Value (dBm/MHz)	Receiver Antenna Gain (dBi)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)
1	152.6	-8.6	-61.0	23.7	122.056 PK	600
2	231	-1.0	-57.1	23.6	702.361 PK	1000

REMARKS:

1. The measured power level is converted to EIRP using the equation:

$$\text{EIRP} = \text{Raw Value} - \text{Receiver Antenna Gain} + 20 \cdot \log(4 \cdot 3.1416 \cdot D / \lambda)$$

where:

D is the measurement distance

λ is the wavelength

*Measurements made at 1 meter distance.

2. Power density formula as follows:

$$\text{Power density} = \text{EIRP} / (4 \cdot \pi \cdot r^2)$$

r is the test distance

3. The far-field boundary is given in ANSI 63.10 as:

$$R \text{ far field} = (2 \cdot L^2) / \lambda$$

L is the Largest Antenna Dimension, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.3	0.025	0.00393	0.318

4.8 量測結果 (Modulation: FM – BW 407.9MHz)

4.8.1 混附發射

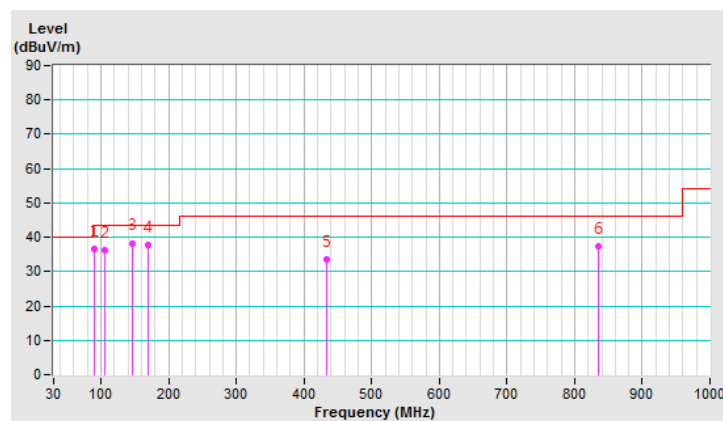
Below 1GHz Data

操作模式：	發射接收	頻率範圍：	30MHz ~ 1GHz
基本波頻率：	CH 1：76.25 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	23°C	量測場地濕度：	69%RH
測試日期：	107 年 9 月 18 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	89.50	36.6 QP	43.5	-6.9	1.64 H	339	50.2	-13.6
2	105.15	36.1 QP	43.5	-7.4	1.54 H	287	47.5	-11.4
3	146.15	38.3 QP	43.5	-5.2	1.51 H	224	46.1	-7.8
4	169.50	37.6 QP	43.5	-5.9	1.46 H	318	45.9	-8.3
5	433.00	33.5 QP	46.0	-12.5	1.65 H	209	36.7	-3.2
6	835.72	37.2 QP	46.0	-8.8	1.43 H	264	33.0	4.2

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.



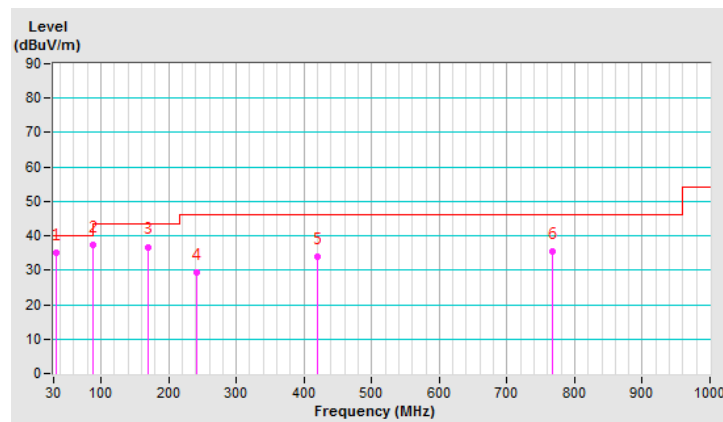
操作模式：	發射接收	頻率範圍：	30MHz ~ 1GHz
基本波頻率：	CH 1 : 76.25 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	23°C	量測場地濕度：	69%RH
測試日期：	107 年 9 月 18 日	測試者：	何欣儒

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	33.40	35.1 QP	40.0	-4.9	1.16 V	243	44.1	-9.0
2	88.85	37.2 QP	43.5	-6.3	1.51 V	272	51.0	-13.8
3	169.50	36.8 QP	43.5	-6.7	1.50 V	231	45.1	-8.3
4	242.10	29.2 QP	46.0	-16.8	1.16 V	58	38.3	-9.1
5	420.01	33.8 QP	46.0	-12.2	1.50 V	172	37.6	-3.8
6	767.98	35.6 QP	46.0	-10.4	1.24 V	202	32.0	3.6

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 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.



Above 1GHz Data

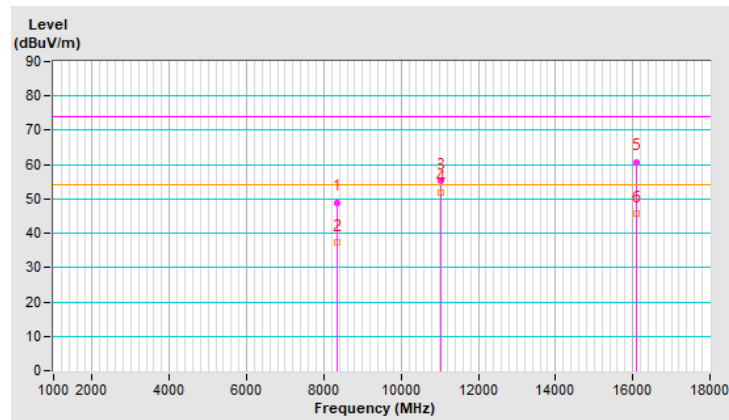
操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 1 : 76.25 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	8348.50	49.0 PK	74.0	-25.0	2.11 H	168	40.3	8.7
2	8348.50	37.5 AV	54.0	-16.5	2.11 H	168	28.8	8.7
3	11019.20	55.3 PK	74.0	-18.7	2.95 H	84	42.4	12.9
4	11019.20	51.9 AV	54.0	-2.1	2.95 H	84	39.0	12.9
5	16104.60	60.8 PK	74.0	-13.2	1.64 H	128	47.8	13.0
6	16104.60	45.8 AV	54.0	-8.2	1.64 H	128	32.8	13.0

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

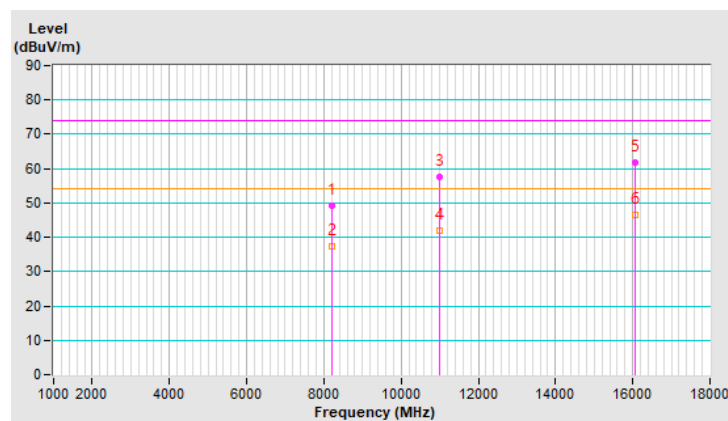


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 1 : 76.25 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	8193.30	49.3 PK	74.0	-24.7	1.64 V	201	40.5	8.8
2	8193.30	37.3 AV	54.0	-16.7	1.64 V	201	28.5	8.8
3	10979.80	57.6 PK	74.0	-16.4	1.99 V	307	44.5	13.1
4	10979.80	42.0 AV	54.0	-12.0	1.99 V	307	28.9	13.1
5	16064.40	61.7 PK	74.0	-12.3	2.10 V	287	48.8	12.9
6	16064.40	46.5 AV	54.0	-7.5	2.10 V	287	33.6	12.9

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



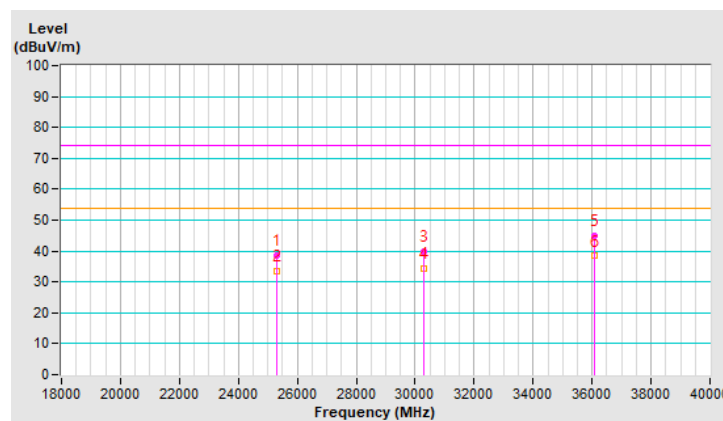
操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 1 : 76.25 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	66%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	25284.90	38.5 PK	74.0	-35.5	1.20 H	350	45.2	-6.7
2	25284.90	33.5 AV	54.0	-20.5	1.20 H	350	40.2	-6.7
3	30297.40	39.8 PK	74.0	-34.2	1.05 H	262	47.3	-7.5
4	30297.40	34.5 AV	54.0	-19.5	1.05 H	262	42.0	-7.5
5	36070.40	44.8 PK	74.0	-29.2	1.56 H	170	51.5	-6.7
6	36070.40	38.4 AV	54.0	-15.6	1.56 H	170	45.1	-6.7

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.
4. Margin value = Emission Level – Limit value



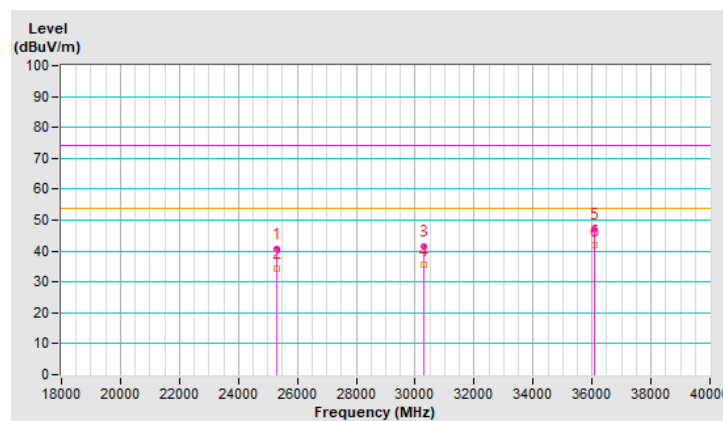
操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 1 : 76.25 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	66%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	25311.80	40.6 PK	74.0	-33.4	1.51 V	139	47.3	-6.7
2	25311.80	34.2 AV	54.0	-19.8	1.51 V	139	40.9	-6.7
3	30290.20	41.6 PK	74.0	-32.4	1.57 V	248	49.1	-7.5
4	30290.20	35.4 AV	54.0	-18.6	1.57 V	248	42.9	-7.5
5	36091.80	47.2 PK	74.0	-26.8	1.93 V	263	53.9	-6.7
6	36091.80	41.8 AV	54.0	-12.2	1.93 V	263	48.5	-6.7

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.
4. Margin value = Emission Level – Limit value



操作模式：	發射	頻率範圍：	40GHz ~ 231GHz
基本波頻率：	CH 1：76.25 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz
量測場地溫度：	24°C	量測場地濕度：	63%RH
測試日期：	107 年 9 月 27 日	測試者：	羅益偉

ANTENNA POLARITY: HORIZONTAL						
NO.	Frequency (GHz)	EIRP Level (dBm/MHz)	Raw Value (dBm/MHz)	Receiver Antenna Gain (dBi)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)
1	152.5	-7.8	-60.2	23.7	146.744 PK	600
2	231	-0.2	-56.3	23.6	844.424 PK	1000
ANTENNA POLARITY: VERTICAL						
NO.	Frequency (GHz)	EIRP Level (dBm/MHz)	Raw Value (dBm/MHz)	Receiver Antenna Gain (dBi)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)
1	152.5	-8.2	-60.6	23.7	133.832 PK	600
2	231	-1.3	-57.4	23.6	655.481 PK	1000

REMARKS:

1. The measured power level is converted to EIRP using the equation:

$$\text{EIRP} = \text{Raw Value} - \text{Receiver Antenna Gain} + 20 \cdot \log(4 \cdot 3.1416 \cdot D / \lambda)$$

where:

D is the measurement distance

λ is the wavelength

*Measurements made at 1 meter distance.

2. Power density formula as follows:

$$\text{Power density} = \text{EIRP} / (4 \cdot \pi \cdot r^2)$$

r is the test distance

3. The far-field boundary is given in ANSI 63.10 as:

$$R \text{ far field} = (2 \cdot L^2) / \lambda$$

L is the Largest Antenna Dimension, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.25	0.025	0.00393	0.318

4.9 量測結果 (Modulation: CW)

4.9.1 混附發射

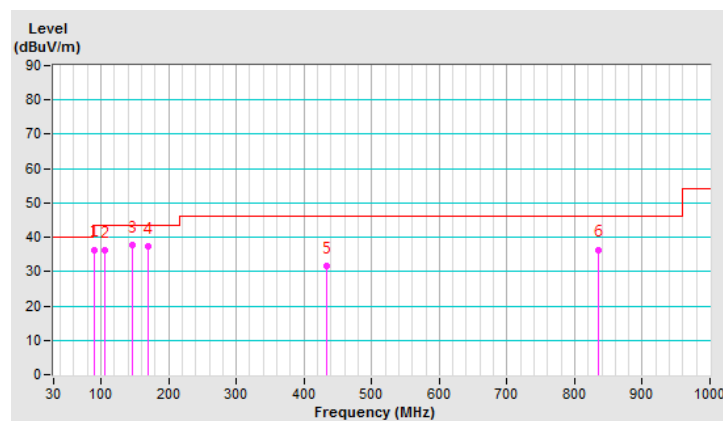
Below 1GHz Data

操作模式：	發射接收	頻率範圍：	30MHz ~ 1GHz
基本波頻率：	CH 1：76.06 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	23°C	量測場地濕度：	69%RH
測試日期：	107 年 9 月 18 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	89.49	36.4 QP	43.5	-7.1	1.51 H	225	50.0	-13.6
2	105.17	36.3 QP	43.5	-7.2	1.98 H	306	47.7	-11.4
3	146.15	37.8 QP	43.5	-5.7	1.61 H	146	45.6	-7.8
4	169.50	37.5 QP	43.5	-6.0	1.53 H	206	45.8	-8.3
5	432.99	31.8 QP	46.0	-14.2	1.52 H	206	35.0	-3.2
6	835.72	36.4 QP	46.0	-9.6	1.54 H	179	32.2	4.2

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.



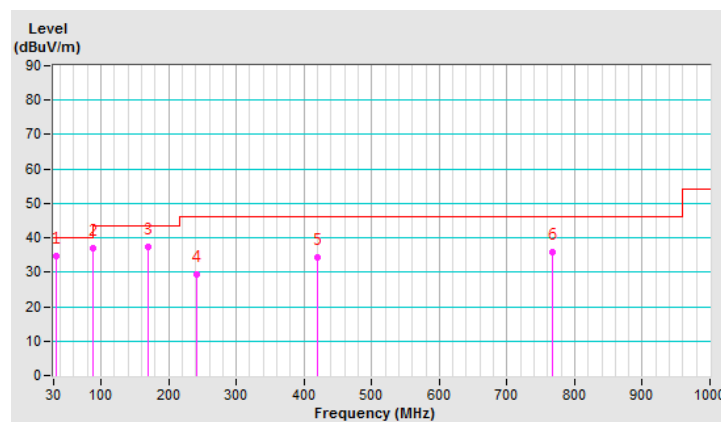
操作模式：	發射接收	頻率範圍：	30MHz ~ 1GHz
基本波頻率：	CH 1：76.06 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	23°C	量測場地濕度：	69%RH
測試日期：	107 年 9 月 18 日	測試者：	何欣儒

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	33.40	34.8 QP	40.0	-5.2	1.20 V	338	43.8	-9.0
2	88.85	37.1 QP	43.5	-6.4	1.52 V	306	50.9	-13.8
3	169.50	37.4 QP	43.5	-6.1	1.64 V	330	45.7	-8.3
4	242.10	29.4 QP	46.0	-16.6	1.20 V	302	38.5	-9.1
5	420.01	34.2 QP	46.0	-11.8	1.46 V	231	38.0	-3.8
6	767.98	35.8 QP	46.0	-10.2	1.20 V	339	32.2	3.6

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 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.



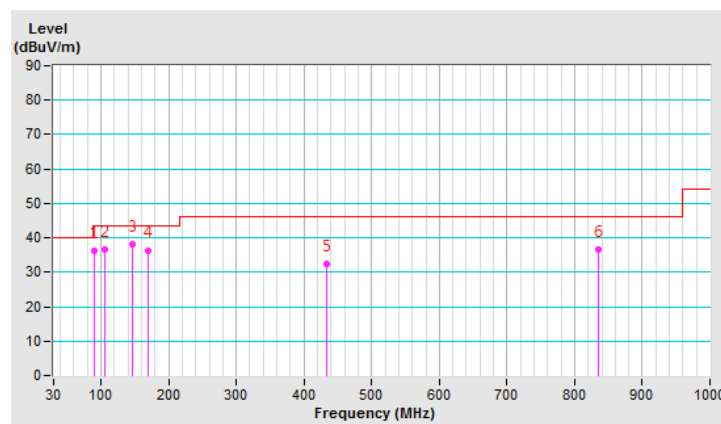
操作模式：	發射接收	頻率範圍：	30MHz ~ 1GHz
基本波頻率：	CH 2 : 76.387 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	23°C	量測場地濕度：	69%RH
測試日期：	107 年 9 月 18 日	測試者：	何欣儒

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	89.49	36.2 QP	43.5	-7.3	1.39 H	117	49.8	-13.6
2	105.17	36.6 QP	43.5	-6.9	2.02 H	46	48.0	-11.4
3	146.15	38.2 QP	43.5	-5.3	1.54 H	269	46.0	-7.8
4	169.50	36.4 QP	43.5	-7.1	1.55 H	138	44.7	-8.3
5	432.99	32.3 QP	46.0	-13.7	1.50 H	42	35.5	-3.2
6	835.70	36.6 QP	46.0	-9.4	1.41 H	225	32.4	4.2

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.



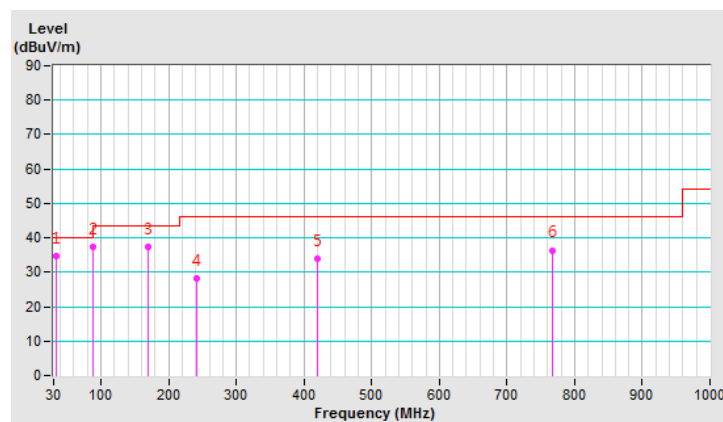
操作模式：	發射接收	頻率範圍：	30MHz ~ 1GHz
基本波頻率：	CH 2 : 76.387 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	23°C	量測場地濕度：	69%RH
測試日期：	107 年 9 月 18 日	測試者：	何欣儒

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	33.42	34.7 QP	40.0	-5.3	1.51 V	265	43.7	-9.0
2	88.85	37.4 QP	43.5	-6.1	1.31 V	113	51.2	-13.8
3	169.50	37.3 QP	43.5	-6.2	2.00 V	243	45.6	-8.3
4	242.09	28.1 QP	46.0	-17.9	1.64 V	192	37.2	-9.1
5	420.01	33.8 QP	46.0	-12.2	1.00 V	239	37.6	-3.8
6	767.98	36.4 QP	46.0	-9.6	1.00 V	152	32.8	3.6

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 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.



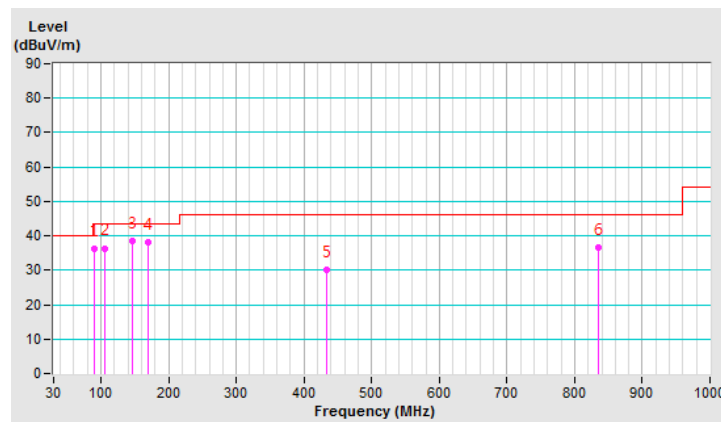
操作模式：	發射接收	頻率範圍：	30MHz ~ 1GHz
基本波頻率：	CH 3 : 76.714 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	23°C	量測場地濕度：	69%RH
測試日期：	107 年 9 月 18 日	測試者：	何欣儒

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	89.50	36.2 QP	43.5	-7.3	1.15 H	142	49.8	-13.6
2	105.16	36.4 QP	43.5	-7.1	2.00 H	138	47.8	-11.4
3	146.15	38.6 QP	43.5	-4.9	1.55 H	242	46.4	-7.8
4	169.50	38.1 QP	43.5	-5.4	1.41 H	253	46.4	-8.3
5	433.00	30.1 QP	46.0	-15.9	1.24 H	318	33.3	-3.2
6	835.75	36.5 QP	46.0	-9.5	1.48 H	201	32.3	4.2

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.



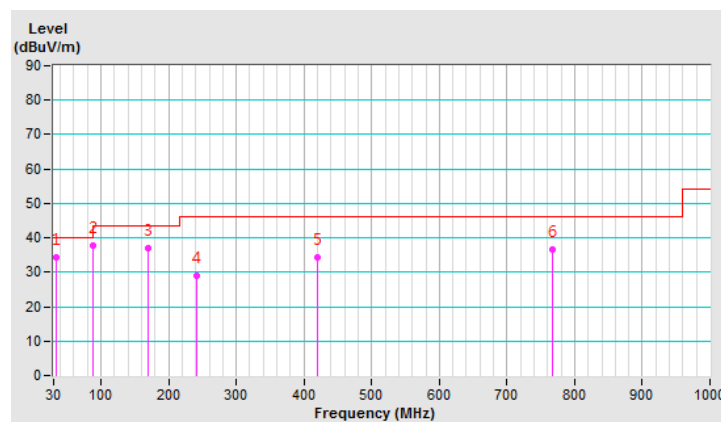
操作模式：	發射接收	頻率範圍：	30MHz ~ 1GHz
基本波頻率：	CH 3 : 76.714 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	23°C	量測場地濕度：	69%RH
測試日期：	107 年 9 月 18 日	測試者：	何欣儒

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	33.45	34.3 QP	40.0	-5.7	1.46 V	172	43.3	-9.0
2	88.85	37.6 QP	43.5	-5.9	1.57 V	289	51.4	-13.8
3	169.50	37.1 QP	43.5	-6.4	1.64 V	92	45.4	-8.3
4	242.09	28.8 QP	46.0	-17.2	1.53 V	241	37.9	-9.1
5	420.01	34.2 QP	46.0	-11.8	1.10 V	142	38.0	-3.8
6	767.98	36.5 QP	46.0	-9.5	1.00 V	138	32.9	3.6

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 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.



Above 1GHz Data

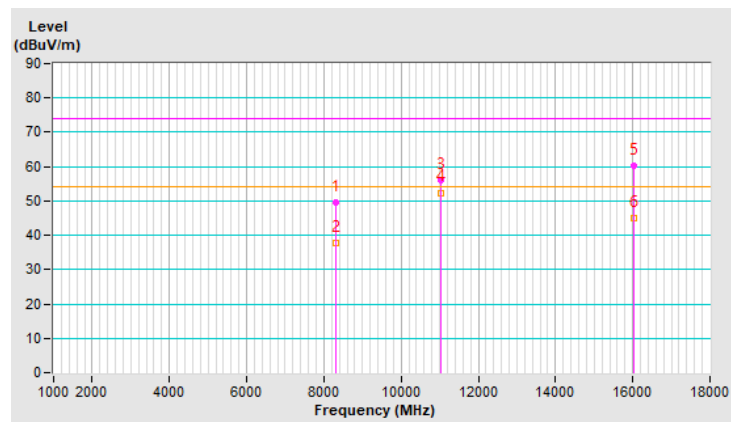
操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 1 : 76.06 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	8317.20	49.4 PK	74.0	-24.6	2.17 H	169	40.9	8.5
2	8317.20	37.6 AV	54.0	-16.4	2.17 H	169	29.1	8.5
3	11022.20	56.1 PK	74.0	-17.9	2.98 H	95	43.2	12.9
4	11022.20	52.4 AV	54.0	-1.6	2.98 H	95	39.5	12.9
5	16033.60	60.4 PK	74.0	-13.6	1.65 H	121	47.8	12.6
6	16033.60	45.1 AV	54.0	-8.9	1.65 H	121	32.5	12.6

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

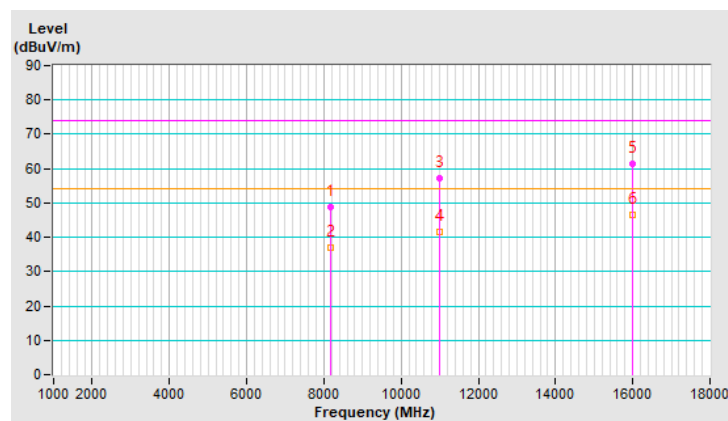


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 1 : 76.06 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	8165.20	48.8 PK	74.0	-25.2	1.64 V	229	39.9	8.9
2	8165.20	36.9 AV	54.0	-17.1	1.64 V	229	28.0	8.9
3	10979.70	57.2 PK	74.0	-16.8	1.95 V	291	44.1	13.1
4	10979.70	41.6 AV	54.0	-12.4	1.95 V	291	28.5	13.1
5	15986.00	61.3 PK	74.0	-12.7	2.13 V	300	48.9	12.4
6	15986.00	46.4 AV	54.0	-7.6	2.13 V	300	34.0	12.4

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



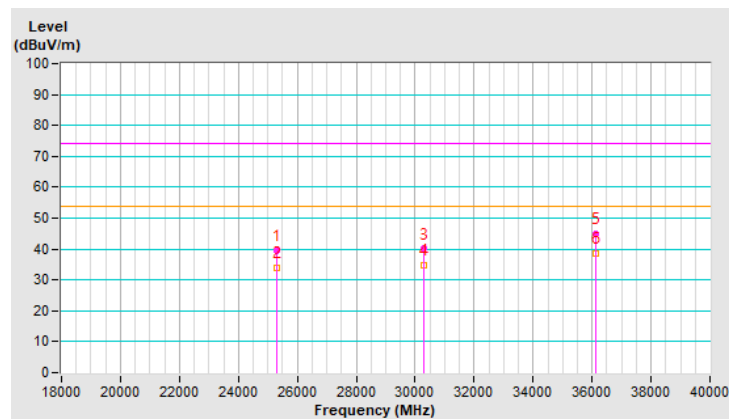
操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 1 : 76.06 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	66%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	25319.20	39.4 PK	74.0	-34.6	1.26 H	329	46.1	-6.7
2	25319.20	34.0 AV	54.0	-20.0	1.26 H	329	40.7	-6.7
3	30275.00	40.1 PK	74.0	-33.9	1.04 H	267	47.5	-7.4
4	30275.00	34.7 AV	54.0	-19.3	1.04 H	267	42.1	-7.4
5	36138.70	45.0 PK	74.0	-29.0	1.52 H	175	51.7	-6.7
6	36138.70	38.5 AV	54.0	-15.5	1.52 H	175	45.2	-6.7

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.
4. Margin value = Emission Level – Limit value

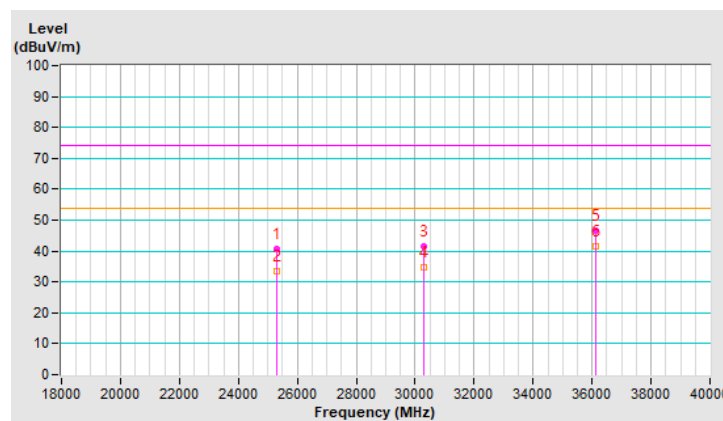


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 1 : 76.06 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	66%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	25311.20	40.6 PK	74.0	-33.4	1.55 V	156	47.3	-6.7
2	25311.20	33.6 AV	54.0	-20.4	1.55 V	156	40.3	-6.7
3	30303.20	41.4 PK	74.0	-32.6	1.54 V	230	48.9	-7.5
4	30303.20	34.8 AV	54.0	-19.2	1.54 V	230	42.3	-7.5
5	36114.50	46.5 PK	74.0	-27.5	1.96 V	257	53.2	-6.7
6	36114.50	41.6 AV	54.0	-12.4	1.96 V	257	48.3	-6.7

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.
4. Margin value = Emission Level – Limit value



操作模式：	發射	頻率範圍：	40GHz ~ 231GHz
基本波頻率：	CH 1：76.06 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz
量測場地溫度：	24°C	量測場地濕度：	63%RH
測試日期：	107 年 9 月 27 日	測試者：	羅益偉

ANTENNA POLARITY: HORIZONTAL						
NO.	Frequency (GHz)	EIRP Level (dBm/MHz)	Raw Value (dBm/MHz)	Receiver Antenna Gain (dBi)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)
1	152.12	-8.4	-60.8	23.7	127.809 PK	600
2	231	-0.2	-56.3	23.6	844.424 PK	1000
ANTENNA POLARITY: VERTICAL						
NO.	Frequency (GHz)	EIRP Level (dBm/MHz)	Raw Value (dBm/MHz)	Receiver Antenna Gain (dBi)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)
1	152.12	-8.8	-61.2	23.7	116.563 PK	600
2	231	-1.1	-57.2	23.6	686.373 PK	1000

REMARKS:

1. The measured power level is converted to EIRP using the equation:

$$\text{EIRP} = \text{Raw Value} - \text{Receiver Antenna Gain} + 20 \cdot \log(4 \cdot 3.1416 \cdot D / \lambda)$$

where:

D is the measurement distance

λ is the wavelength

*Measurements made at 1 meter distance.

2. Power density formula as follows:

$$\text{Power density} = \text{EIRP} / (4 \cdot \pi \cdot r^2)$$

r is the test distance

3. The far-field boundary is given in ANSI 63.10 as:

$$R \text{ far field} = (2 \cdot L^2) / \lambda$$

L is the Largest Antenna Dimension, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.06	0.025	0.00394	0.317

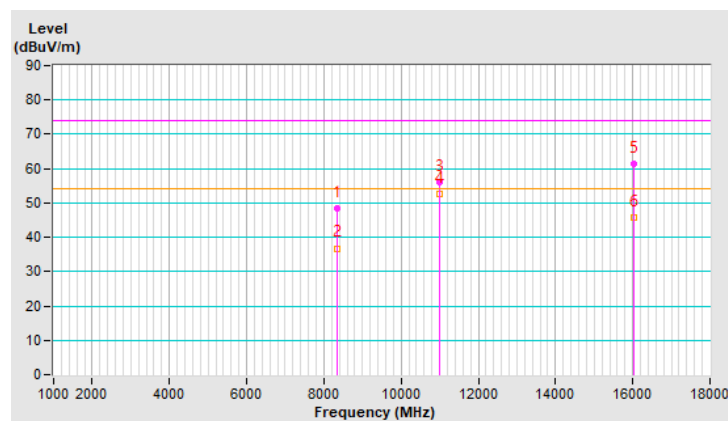
操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 2 : 76.387 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	8343.60	48.3 PK	74.0	-25.7	2.10 H	180	39.6	8.7
2	8343.60	36.8 AV	54.0	-17.2	2.10 H	180	28.1	8.7
3	11003.40	56.1 PK	74.0	-17.9	2.97 H	79	43.1	13.0
4	11003.40	52.6 AV	54.0	-1.4	2.97 H	79	39.6	13.0
5	16041.90	61.3 PK	74.0	-12.7	1.62 H	126	48.6	12.7
6	16041.90	45.9 AV	54.0	-8.1	1.62 H	126	33.2	12.7

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.
4. Margin value = Emission Level – Limit value

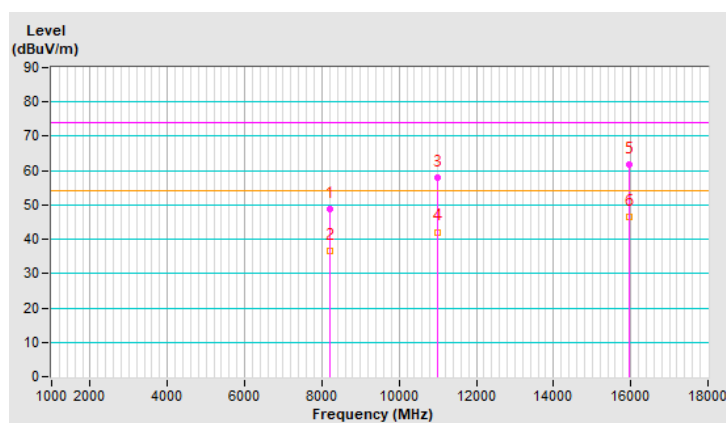


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 2 : 76.387 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	8194.00	48.7 PK	74.0	-25.3	1.64 V	224	39.9	8.8
2	8194.00	36.7 AV	54.0	-17.3	1.64 V	224	27.9	8.8
3	10986.70	57.9 PK	74.0	-16.1	2.00 V	299	44.8	13.1
4	10986.70	42.1 AV	54.0	-11.9	2.00 V	299	29.0	13.1
5	15973.40	61.9 PK	74.0	-12.1	2.14 V	295	49.5	12.4
6	15973.40	46.6 AV	54.0	-7.4	2.14 V	295	34.2	12.4

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



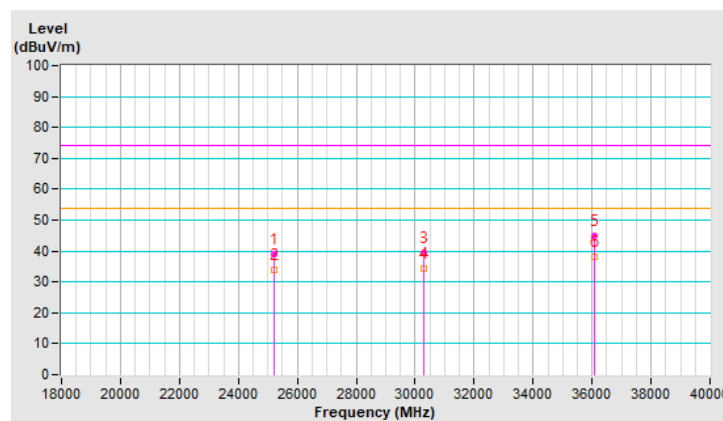
操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 2 : 76.387 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	66%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	25234.40	38.9 PK	74.0	-35.1	1.21 H	346	45.8	-6.9
2	25234.40	33.8 AV	54.0	-20.2	1.21 H	346	40.7	-6.9
3	30277.50	39.5 PK	74.0	-34.5	1.02 H	256	46.9	-7.4
4	30277.50	34.3 AV	54.0	-19.7	1.02 H	256	41.7	-7.4
5	36101.60	44.8 PK	74.0	-29.2	1.51 H	194	51.5	-6.7
6	36101.60	38.3 AV	54.0	-15.7	1.51 H	194	45.0	-6.7

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.
4. Margin value = Emission Level – Limit value



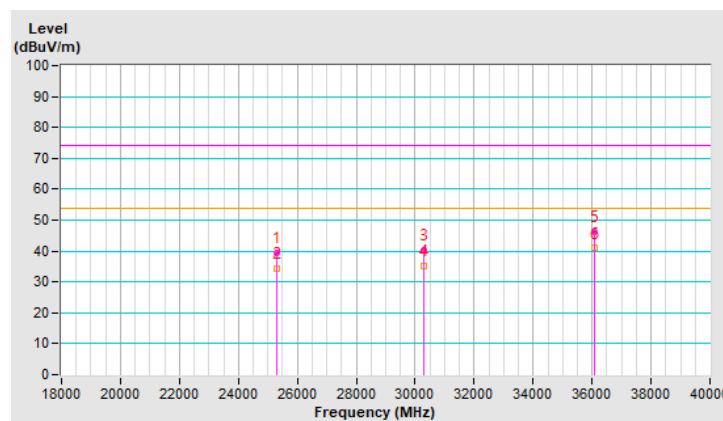
操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 2 : 76.387 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	66%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	25310.20	39.6 PK	74.0	-34.4	1.49 V	155	46.2	-6.6
2	25310.20	34.2 AV	54.0	-19.8	1.49 V	155	40.8	-6.6
3	30295.30	40.4 PK	74.0	-33.6	1.58 V	249	47.9	-7.5
4	30295.30	35.1 AV	54.0	-18.9	1.58 V	249	42.6	-7.5
5	36081.30	46.2 PK	74.0	-27.8	1.98 V	275	52.9	-6.7
6	36081.30	40.9 AV	54.0	-13.1	1.98 V	275	47.6	-6.7

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.
4. Margin value = Emission Level – Limit value



操作模式：	發射	頻率範圍：	40GHz ~ 231GHz
基本波頻率：	CH 2 : 76.387 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz
量測場地溫度：	24°C	量測場地濕度：	63%RH
測試日期：	107 年 9 月 27 日	測試者：	羅益偉

ANTENNA POLARITY: HORIZONTAL						
NO.	Frequency (GHz)	EIRP Level (dBm/MHz)	Raw Value (dBm/MHz)	Receiver Antenna Gain (dBi)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)
1	152.774	-7.9	-60.3	23.7	143.404 PK	600
2	231	-0.2	-56.3	23.6	844.424 PK	1000
ANTENNA POLARITY: VERTICAL						
NO.	Frequency (GHz)	EIRP Level (dBm/MHz)	Raw Value (dBm/MHz)	Receiver Antenna Gain (dBi)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)
1	152.774	-8.8	-61.2	23.7	116.563 PK	600
2	231	-1.1	-57.2	23.6	686.373 PK	1000

REMARKS:

1. The measured power level is converted to EIRP using the equation:

$$\text{EIRP} = \text{Raw Value} - \text{Receiver Antenna Gain} + 20 \cdot \log(4 \cdot 3.1416 \cdot D / \lambda)$$

where:

D is the measurement distance

λ is the wavelength

*Measurements made at 1 meter distance.

2. Power density formula as follows:

$$\text{Power density} = \text{EIRP} / (4 \cdot \pi \cdot r^2)$$

r is the test distance

3. The far-field boundary is given in ANSI 63.10 as:

$$R \text{ far field} = (2 \cdot L^2) / \lambda$$

L is the Largest Antenna Dimension, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.387	0.025	0.00393	0.318

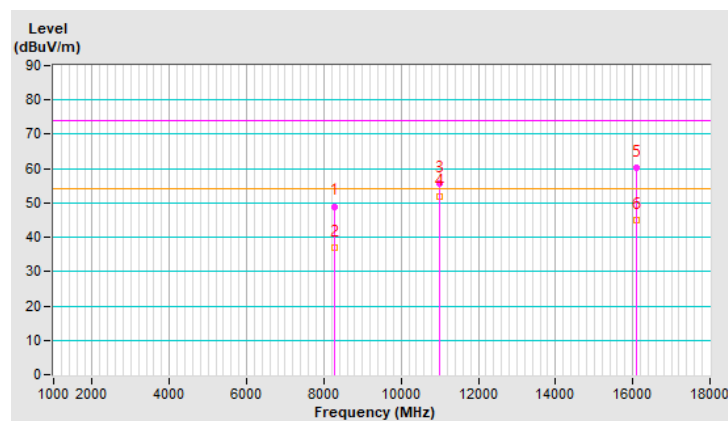
操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 3 : 76.714 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	8264.50	49.0 PK	74.0	-25.0	2.11 H	169	40.4	8.6
2	8264.50	37.1 AV	54.0	-16.9	2.11 H	169	28.5	8.6
3	11003.90	55.5 PK	74.0	-18.5	3.03 H	75	42.5	13.0
4	11003.90	51.9 AV	54.0	-2.1	3.03 H	75	38.9	13.0
5	16104.60	60.4 PK	74.0	-13.6	1.63 H	116	47.4	13.0
6	16104.60	45.1 AV	54.0	-8.9	1.63 H	116	32.1	13.0

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

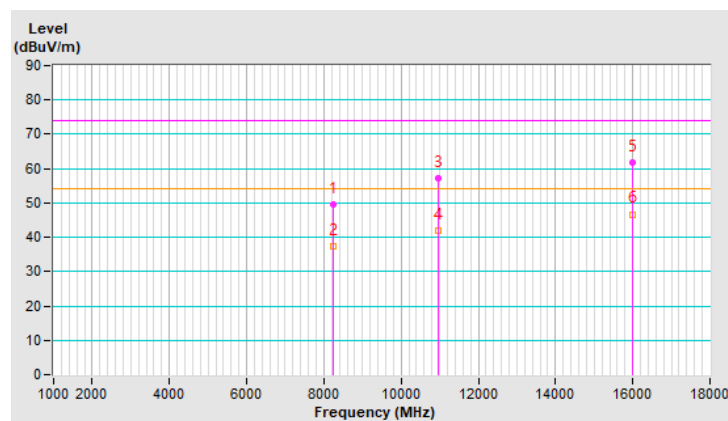


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 3 : 76.714 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	8225.90	49.5 PK	74.0	-24.5	1.60 V	211	40.8	8.7
2	8225.90	37.5 AV	54.0	-16.5	1.60 V	211	28.8	8.7
3	10964.90	57.3 PK	74.0	-16.7	1.95 V	286	44.1	13.2
4	10964.90	41.8 AV	54.0	-12.2	1.95 V	286	28.6	13.2
5	16002.40	61.9 PK	74.0	-12.1	2.15 V	288	49.5	12.4
6	16002.40	46.7 AV	54.0	-7.3	2.15 V	288	34.3	12.4

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



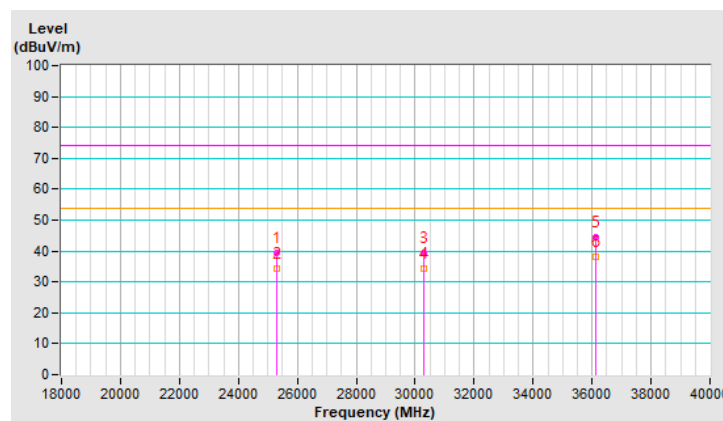
操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 3 : 76.714 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	66%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	25304.30	39.3 PK	74.0	-34.7	1.15 H	349	45.9	-6.6
2	25304.30	34.2 AV	54.0	-19.8	1.15 H	349	40.8	-6.6
3	30285.90	39.5 PK	74.0	-34.5	1.00 H	273	47.0	-7.5
4	30285.90	34.3 AV	54.0	-19.7	1.00 H	273	41.8	-7.5
5	36138.70	44.7 PK	74.0	-29.3	1.51 H	194	51.4	-6.7
6	36138.70	38.2 AV	54.0	-15.8	1.51 H	194	44.9	-6.7

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.
4. Margin value = Emission Level – Limit value

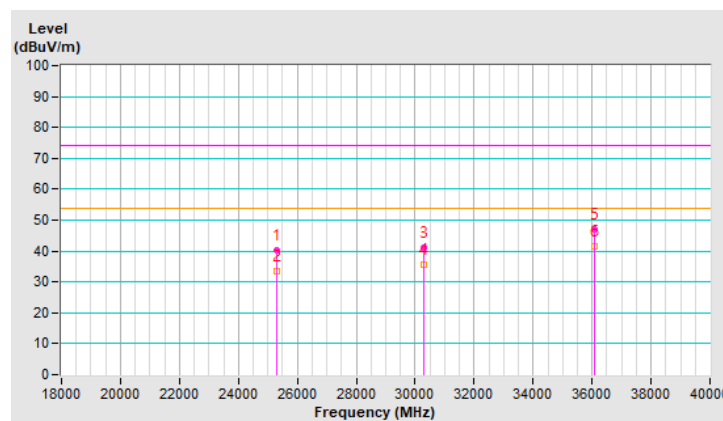


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 3 : 76.714 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	66%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	25324.40	40.2 PK	74.0	-33.8	1.47 V	150	46.9	-6.7
2	25324.40	33.6 AV	54.0	-20.4	1.47 V	150	40.3	-6.7
3	30294.40	41.1 PK	74.0	-32.9	1.53 V	229	48.6	-7.5
4	30294.40	35.6 AV	54.0	-18.4	1.53 V	229	43.1	-7.5
5	36070.30	47.0 PK	74.0	-27.0	1.94 V	257	53.7	-6.7
6	36070.30	41.6 AV	54.0	-12.4	1.94 V	257	48.3	-6.7

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.
4. Margin value = Emission Level – Limit value



操作模式：	發射	頻率範圍：	40GHz ~ 231GHz
基本波頻率：	CH 3 : 76.714 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz
量測場地溫度：	24°C	量測場地濕度：	63%RH
測試日期：	107 年 9 月 27 日	測試者：	羅益偉

ANTENNA POLARITY: HORIZONTAL						
NO.	Frequency (GHz)	EIRP Level (dBm/MHz)	Raw Value (dBm/MHz)	Receiver Antenna Gain (dBi)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)
1	153.428	-8.2	-60.7	23.7	133.832 PK	600
2	231	-0.1	-56.2	23.6	864.093 PK	1000
ANTENNA POLARITY: VERTICAL						
NO.	Frequency (GHz)	EIRP Level (dBm/MHz)	Raw Value (dBm/MHz)	Receiver Antenna Gain (dBi)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)
1	153.428	-8.6	-61.1	23.7	122.056 PK	600
2	231	-1.0	-57.1	23.6	702.361 PK	1000

REMARKS:

1. The measured power level is converted to EIRP using the equation:

$$\text{EIRP} = \text{Raw Value} - \text{Receiver Antenna Gain} + 20 \cdot \log(4 \cdot 3.1416 \cdot D / \lambda)$$

where:

D is the measurement distance

λ is the wavelength

*Measurements made at 1 meter distance.

2. Power density formula as follows:

$$\text{Power density} = \text{EIRP} / (4 \cdot \pi \cdot r^2)$$

r is the test distance

3. The far-field boundary is given in ANSI 63.10 as:

$$R \text{ far field} = (2 \cdot L^2) / \lambda$$

L is the Largest Antenna Dimension, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.714	0.025	0.00391	0.32

4.10 量測結果 (Modulation: FMCW)

4.10.1 混附發射

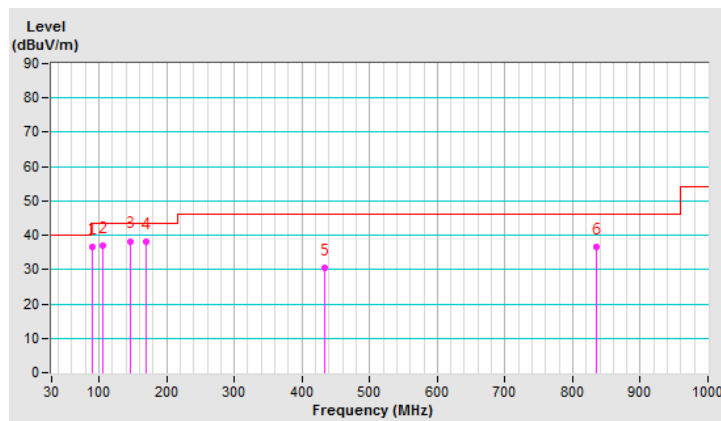
Below 1GHz Data

操作模式：	發射接收	頻率範圍：	30MHz ~ 1GHz
基本波頻率：	CH 1 : 76.36 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	23°C	量測場地濕度：	69%RH
測試日期：	107 年 9 月 18 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	89.50	36.5 QP	43.5	-7.0	1.62 H	206	50.1	-13.6
2	105.15	36.9 QP	43.5	-6.6	1.50 H	201	48.3	-11.4
3	146.15	38.3 QP	43.5	-5.2	1.58 H	174	46.1	-7.8
4	169.50	38.2 QP	43.5	-5.3	1.52 H	312	46.5	-8.3
5	433.00	30.6 QP	46.0	-15.4	1.50 H	261	33.8	-3.2
6	835.75	36.6 QP	46.0	-9.4	1.53 H	204	32.4	4.2

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.



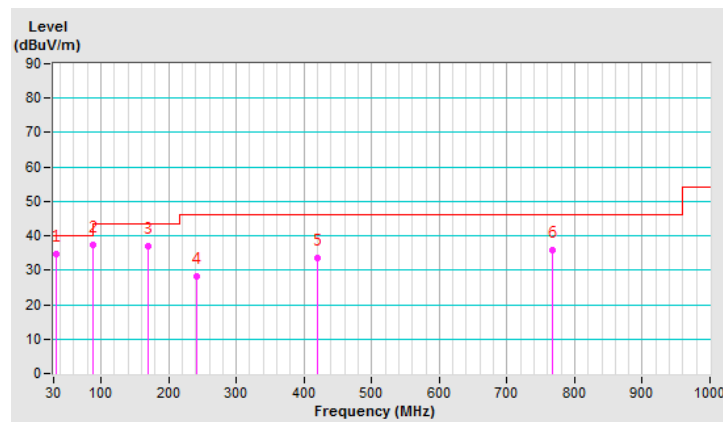
操作模式：	發射接收	頻率範圍：	30MHz ~ 1GHz
基本波頻率：	CH 1 : 76.36 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	23°C	量測場地濕度：	69%RH
測試日期：	107 年 9 月 18 日	測試者：	何欣儒

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	33.40	34.6 QP	40.0	-5.4	1.42 V	331	43.6	-9.0
2	88.85	37.4 QP	43.5	-6.1	1.52 V	308	51.2	-13.8
3	169.50	36.9 QP	43.5	-6.6	1.50 V	302	45.2	-8.3
4	242.10	28.2 QP	46.0	-17.8	1.24 V	156	37.3	-9.1
5	420.00	33.6 QP	46.0	-12.4	1.43 V	161	37.4	-3.8
6	767.98	35.7 QP	46.0	-10.3	1.11 V	204	32.1	3.6

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 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.



Above 1GHz Data

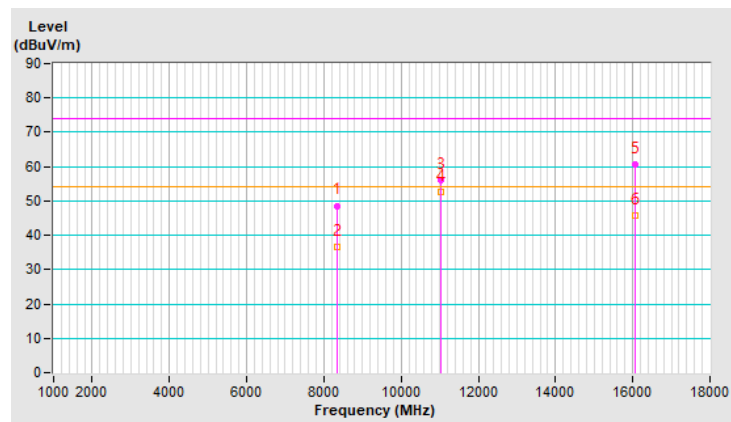
操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 1 : 76.36 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	8335.70	48.6 PK	74.0	-25.4	2.15 H	150	39.9	8.7
2	8335.70	36.7 AV	54.0	-17.3	2.15 H	150	28.0	8.7
3	11019.60	55.9 PK	74.0	-18.1	3.03 H	102	43.0	12.9
4	11019.60	52.5 AV	54.0	-1.5	3.03 H	102	39.6	12.9
5	16054.00	60.7 PK	74.0	-13.3	1.67 H	135	48.0	12.7
6	16054.00	45.8 AV	54.0	-8.2	1.67 H	135	33.1	12.7

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.
4. Margin value = Emission Level – Limit value



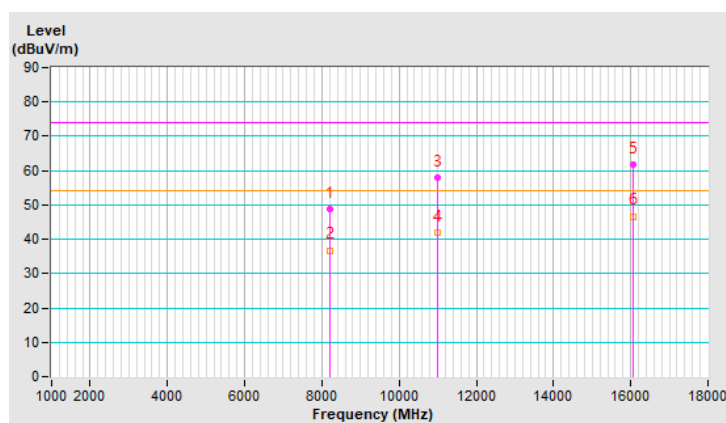
操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 1 : 76.36 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	65%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	8221.40	48.7 PK	74.0	-25.3	1.65 V	224	40.0	8.7
2	8221.40	36.8 AV	54.0	-17.2	1.65 V	224	28.1	8.7
3	10986.90	57.8 PK	74.0	-16.2	2.03 V	317	44.7	13.1
4	10986.90	41.8 AV	54.0	-12.2	2.03 V	317	28.7	13.1
5	16058.90	61.6 PK	74.0	-12.4	2.09 V	301	48.8	12.8
6	16058.90	46.7 AV	54.0	-7.3	2.09 V	301	33.9	12.8

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

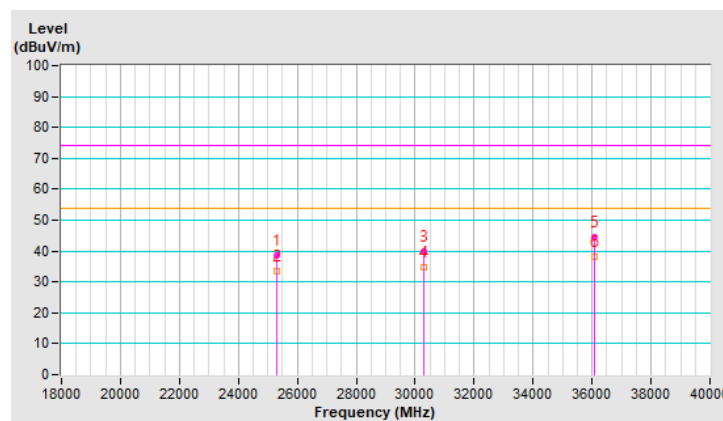


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 1 : 76.36 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	66%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	25296.70	38.7 PK	74.0	-35.3	1.19 H	327	45.3	-6.6
2	25296.70	33.4 AV	54.0	-20.6	1.19 H	327	40.0	-6.6
3	30274.80	40.0 PK	74.0	-34.0	1.00 H	268	47.4	-7.4
4	30274.80	34.9 AV	54.0	-19.1	1.00 H	268	42.3	-7.4
5	36088.70	44.6 PK	74.0	-29.4	1.57 H	187	51.3	-6.7
6	36088.70	38.1 AV	54.0	-15.9	1.57 H	187	44.8	-6.7

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.
4. Margin value = Emission Level – Limit value

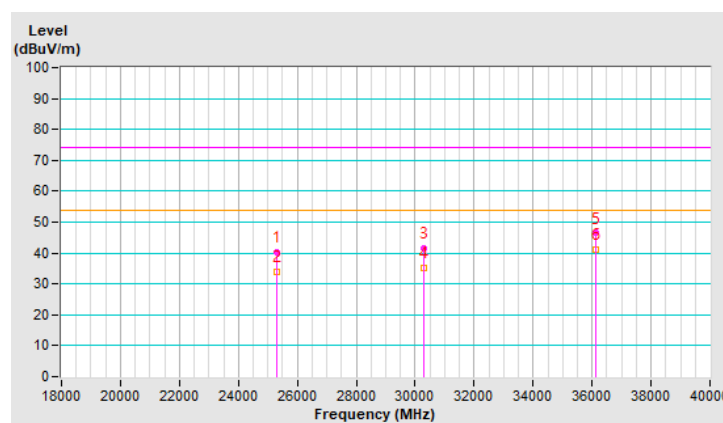


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 1 : 76.36 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	22°C	量測場地濕度：	66%RH
測試日期：	108 年 2 月 23 日	測試者：	鄭樹營

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	25295.70	40.3 PK	74.0	-33.7	1.45 V	138	46.9	-6.6
2	25295.70	33.9 AV	54.0	-20.1	1.45 V	138	40.5	-6.6
3	30279.80	41.5 PK	74.0	-32.5	1.51 V	234	48.9	-7.4
4	30279.80	35.1 AV	54.0	-18.9	1.51 V	234	42.5	-7.4
5	36132.10	46.4 PK	74.0	-27.6	2.01 V	268	53.1	-6.7
6	36132.10	41.3 AV	54.0	-12.7	2.01 V	268	48.0	-6.7

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.
4. Margin value = Emission Level – Limit value



操作模式：	發射	頻率範圍：	40GHz ~ 231GHz
基本波頻率：	CH 1：76.36 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz
量測場地溫度：	24°C	量測場地濕度：	63%RH
測試日期：	107 年 9 月 27 日	測試者：	羅益偉

ANTENNA POLARITY: HORIZONTAL						
NO.	Frequency (GHz)	EIRP Level (dBm/MHz)	Raw Value (dBm/MHz)	Receiver Antenna Gain (dBi)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)
1	152.72	-8.8	-61.2	23.7	116.563 PK	600
2	231	-0.2	-56.3	23.6	844.424 PK	1000
ANTENNA POLARITY: VERTICAL						
NO.	Frequency (GHz)	EIRP Level (dBm/MHz)	Raw Value (dBm/MHz)	Receiver Antenna Gain (dBi)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)
1	152.72	-9.9	-62.3	23.7	90.482 PK	600
2	231	-2.5	-58.6	23.6	497.234 PK	1000

REMARKS:

1. The measured power level is converted to EIRP using the equation:

$$\text{EIRP} = \text{Raw Value} - \text{Receiver Antenna Gain} + 20 \cdot \log(4 \cdot 3.1416 \cdot D / \lambda)$$

where:

D is the measurement distance

λ is the wavelength

*Measurements made at 1 meter distance.

2. Power density formula as follows:

$$\text{Power density} = \text{EIRP} / (4 \cdot \pi \cdot r^2)$$

r is the test distance

3. The far-field boundary is given in ANSI 63.10 as:

$$R \text{ far field} = (2 \cdot L^2) / \lambda$$

L is the Largest Antenna Dimension, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.36	0.025	0.00393	0.318

4.11 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。

4.12 配置照片

請參照 Test Setup Photos

5 發射功率密度之量測

5.1 適用標準

請見本報告 3.1 節第(4)項的規定。

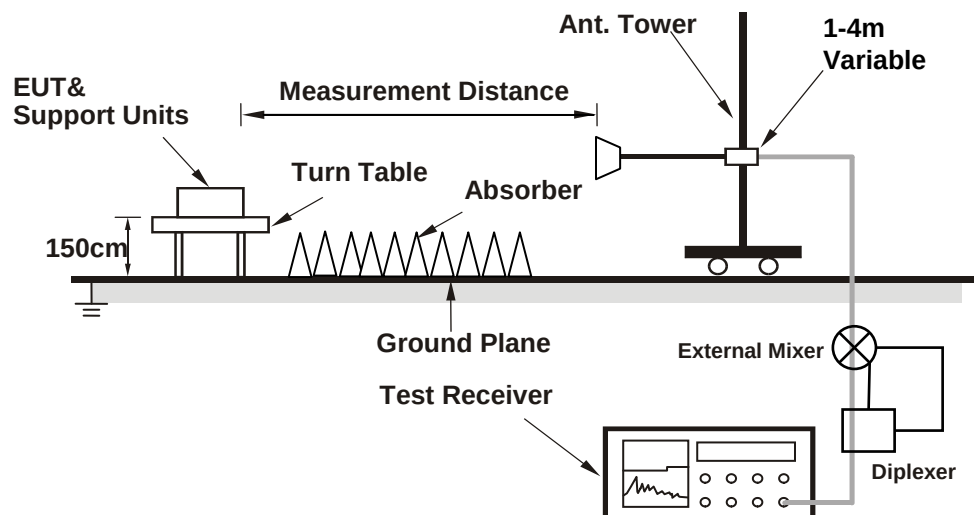
5.2 量測方法

將待測物置於 1.5 米高的非金屬桌面，使其操作在工作狀態。接收天線置於適當量測距離。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，以找出最大的發射功率密度強度，接收天線分別置於水平、垂直極化各執行測試一次。

5.3 量測儀器

同 4.3 節

5.4 測試配置



5.5 量測結果 (Modulation: FM – BW 168.4MHz)

操作模式	發射	測試日期	107 年 9 月 27 日
基本波頻率	CH 1 : 76.2 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	24°C	測試者	羅益偉
量測場地濕度	63%RH		

Antenna Polarity: Horizontal						
No.	Frequency (GHz)	EIRP Level (dBm)	Raw Value (dBm)	Receiver Antenna Gain (dBi)	Power Density Limit (dBm)	Pass/Fail
1	76.2	29.6 PK	-17.0	23.5	55	Pass
2	76.2	29.1 AV	-17.5	23.5	50	Pass

Antenna Polarity: Vertical						
No.	Frequency (GHz)	EIRP Level (dBm)	Raw Value (dBm)	Receiver Antenna Gain (dBi)	Power Density Limit (dBm)	Pass/Fail
1	76.2	7.2 PK	-39.4	23.5	55	Pass
2	76.2	6.5 AV	-40.0	23.5	50	Pass

REMARKS:

1. The measured power level is converted to EIRP using the equation:

$$\text{EIRP} = \text{Raw Value} - \text{Receiver Antenna Gain} + 20 \cdot \log(4 \cdot 3.1416 \cdot D / \lambda)$$

where:

D is the measurement distance

λ is the wavelength

*Measurements made at 1 meter distance.

2. The far-field boundary is given in ANSI 63.10 as:

$$R \text{ far field} = (2 \cdot L^2) / \lambda$$

L is the Largest Antenna Dimension, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.2	0.025	0.00394	0.317

操作模式	發射	測試日期	107 年 9 月 27 日
基本波頻率	CH 2 : 76.25 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	24°C	測試者	羅益偉
量測場地濕度	63%RH		

Antenna Polarity: Horizontal						
No.	Frequency (GHz)	EIRP Level (dBm)	Raw Value (dBm)	Receiver Antenna Gain (dBi)	Power Density Limit (dBm)	Pass/Fail
1	76.25	31.3 PK	-15.3	23.5	55	Pass
2	76.25	29.4 AV	-17.2	23.5	50	Pass

Antenna Polarity: Vertical						
No.	Frequency (GHz)	EIRP Level (dBm)	Raw Value (dBm)	Receiver Antenna Gain (dBi)	Power Density Limit (dBm)	Pass/Fail
1	76.25	8.5 PK	-38.1	23.5	55	Pass
2	76.25	7.3 AV	-39.3	23.5	50	Pass

REMARKS:

1.The measured power level is converted to EIRP using the equation:

$$\text{EIRP} = \text{Raw Value} - \text{Receiver Antenna Gain} + 20 \cdot \log(4 \cdot 3.1416 \cdot D / \lambda)$$

where:

D is the measurement distance

λ is the wavelength

*Measurements made at 1 meter distance.

2. The far-field boundary is given in ANSI 63.10 as:

$$R \text{ far field} = (2 \cdot L^2) / \lambda$$

L is the Largest Antenna Dimension, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.25	0.025	0.00393	0.318

操作模式	發射	測試日期	107 年 9 月 27 日
基本波頻率	CH 3 : 76.3 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	24°C	測試者	羅益偉
量測場地濕度	63%RH		

Antenna Polarity: Horizontal						
No.	Frequency (GHz)	EIRP Level (dBm)	Raw Value (dBm)	Receiver Antenna Gain (dBi)	Power Density Limit (dBm)	Pass/Fail
1	76.3	29.8 PK	-16.8	23.5	55	Pass
2	76.3	29.4 AV	-17.2	23.5	50	Pass

Antenna Polarity: Vertical						
No.	Frequency (GHz)	EIRP Level (dBm)	Raw Value (dBm)	Receiver Antenna Gain (dBi)	Power Density Limit (dBm)	Pass/Fail
1	76.3	4.7 PK	-41.9	23.5	55	Pass
2	76.3	4.4 AV	-42.2	23.5	50	Pass

REMARKS:

1. The measured power level is converted to EIRP using the equation:

$$\text{EIRP} = \text{Raw Value} - \text{Receiver Antenna Gain} + 20 \cdot \log(4 \cdot 3.1416 \cdot D / \lambda)$$

where:

D is the measurement distance

λ is the wavelength

*Measurements made at 1 meter distance.

2. The far-field boundary is given in ANSI 63.10 as:

$$R \text{ far field} = (2 \cdot L^2) / \lambda$$

L is the Largest Antenna Dimension, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.3	0.025	0.00393	0.318

5.6 量測結果 (Modulation: FM – BW 234.9MHz)

操作模式	發射	測試日期	107 年 9 月 27 日
基本波頻率	CH 1 : 76.2 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	24°C	測試者	羅益偉
量測場地濕度	63%RH		

Antenna Polarity: Horizontal						
No.	Frequency (GHz)	EIRP Level (dBm)	Raw Value (dBm)	Receiver Antenna Gain (dBi)	Power Density Limit (dBm)	Pass/Fail
1	76.2	29.6 PK	-17.0	23.5	55	Pass
2	76.2	29.2 AV	-17.4	23.5	50	Pass

Antenna Polarity: Vertical						
No.	Frequency (GHz)	EIRP Level (dBm)	Raw Value (dBm)	Receiver Antenna Gain (dBi)	Power Density Limit (dBm)	Pass/Fail
1	76.2	5.3 PK	-41.3	23.5	55	Pass
2	76.2	4.9 AV	-41.7	23.5	50	Pass

REMARKS:

1. The measured power level is converted to EIRP using the equation:

$$\text{EIRP} = \text{Raw Value} - \text{Receiver Antenna Gain} + 20 \cdot \log(4 \cdot 3.1416 \cdot D / \lambda)$$

where:

D is the measurement distance

λ is the wavelength

*Measurements made at 1 meter distance.

2. The far-field boundary is given in ANSI 63.10 as:

$$R \text{ far field} = (2 \cdot L^2) / \lambda$$

L is the Largest Antenna Dimension, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.2	0.025	0.00394	0.317

操作模式	發射	測試日期	107 年 9 月 27 日
基本波頻率	CH 2 : 76.25 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	24°C	測試者	羅益偉
量測場地濕度	63%RH		

Antenna Polarity: Horizontal						
No.	Frequency (GHz)	EIRP Level (dBm)	Raw Value (dBm)	Receiver Antenna Gain (dBi)	Power Density Limit (dBm)	Pass/Fail
1	76.25	29.6 PK	-17.0	23.5	55	Pass
2	76.25	29.3 AV	-17.2	23.5	50	Pass

Antenna Polarity: Vertical						
No.	Frequency (GHz)	EIRP Level (dBm)	Raw Value (dBm)	Receiver Antenna Gain (dBi)	Power Density Limit (dBm)	Pass/Fail
1	76.25	4.8 PK	-41.8	23.5	55	Pass
2	76.25	4.1 AV	-42.4	23.5	50	Pass

REMARKS:

1.The measured power level is converted to EIRP using the equation:

$$\text{EIRP} = \text{Raw Value} - \text{Receiver Antenna Gain} + 20 \cdot \log(4 \cdot 3.1416 \cdot D / \lambda)$$

where:

D is the measurement distance

λ is the wavelength

*Measurements made at 1 meter distance.

2. The far-field boundary is given in ANSI 63.10 as:

$$R \text{ far field} = (2 \cdot L^2) / \lambda$$

L is the Largest Antenna Dimension, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.25	0.025	0.00393	0.318

操作模式	發射	測試日期	107 年 9 月 27 日
基本波頻率	CH 3 : 76.3 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	24°C	測試者	羅益偉
量測場地濕度	63%RH		

Antenna Polarity: Horizontal						
No.	Frequency (GHz)	EIRP Level (dBm)	Raw Value (dBm)	Receiver Antenna Gain (dBi)	Power Density Limit (dBm)	Pass/Fail
1	76.3	30.4 PK	-16.2	23.5	55	Pass
2	76.3	29.4 AV	-17.2	23.5	50	Pass

Antenna Polarity: Vertical						
No.	Frequency (GHz)	EIRP Level (dBm)	Raw Value (dBm)	Receiver Antenna Gain (dBi)	Power Density Limit (dBm)	Pass/Fail
1	76.3	5.2 PK	-41.4	23.5	55	Pass
2	76.3	4.9 AV	-41.7	23.5	50	Pass

REMARKS:

1.The measured power level is converted to EIRP using the equation:

$$\text{EIRP} = \text{Raw Value} - \text{Receiver Antenna Gain} + 20 \cdot \log(4 \cdot 3.1416 \cdot D / \lambda)$$

where:

D is the measurement distance

λ is the wavelength

*Measurements made at 1 meter distance.

2. The far-field boundary is given in ANSI 63.10 as:

$$R \text{ far field} = (2 \cdot L^2) / \lambda$$

L is the Largest Antenna Dimension, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.3	0.025	0.00393	0.318

5.7 量測結果 (Modulation: FM – BW 407.9MHz)

操作模式	發射	測試日期	107 年 9 月 27 日
基本波頻率	CH 1 : 76.25 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	24°C	測試者	羅益偉
量測場地濕度	63%RH		

Antenna Polarity: Horizontal						
No.	Frequency (GHz)	EIRP Level (dBm)	Raw Value (dBm)	Receiver Antenna Gain (dBi)	Power Density Limit (dBm)	Pass/Fail
1	76.25	29.0 PK	-17.6	23.5	55	Pass
2	76.25	28.2 AV	-18.4	23.5	50	Pass

Antenna Polarity: Vertical						
No.	Frequency (GHz)	EIRP Level (dBm)	Raw Value (dBm)	Receiver Antenna Gain (dBi)	Power Density Limit (dBm)	Pass/Fail
1	76.25	4.5 PK	-42.1	23.5	55	Pass
2	76.25	4.3 AV	-42.3	23.5	50	Pass

REMARKS:

1. The measured power level is converted to EIRP using the equation:

$$\text{EIRP} = \text{Raw Value} - \text{Receiver Antenna Gain} + 20 \cdot \log(4 \cdot 3.1416 \cdot D / \lambda)$$

where:

D is the measurement distance

λ is the wavelength

*Measurements made at 1 meter distance.

2. The far-field boundary is given in ANSI 63.10 as:

$$R \text{ far field} = (2 \cdot L^2) / \lambda$$

L is the Largest Antenna Dimension, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.25	0.025	0.00393	0.318

5.8 量測結果 (Modulation: CW)

操作模式	發射	測試日期	107 年 9 月 27 日
基本波頻率	CH 1 : 76.06 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	24°C	測試者	羅益偉
量測場地濕度	63%RH		

Antenna Polarity: Horizontal						
No.	Frequency (GHz)	EIRP Level (dBm)	Raw Value (dBm)	Receiver Antenna Gain (dBi)	Power Density Limit (dBm)	Pass/Fail
1	76.06	30.7 PK	-15.9	23.5	55	Pass
2	76.06	29.6 AV	-16.9	23.5	50	Pass

Antenna Polarity: Vertical						
No.	Frequency (GHz)	EIRP Level (dBm)	Raw Value (dBm)	Receiver Antenna Gain (dBi)	Power Density Limit (dBm)	Pass/Fail
1	76.06	8.2 PK	-38.4	23.5	55	Pass
2	76.06	7.0 AV	-39.6	23.5	50	Pass

REMARKS:

1. The measured power level is converted to EIRP using the equation:

$$\text{EIRP} = \text{Raw Value} - \text{Receiver Antenna Gain} + 20 \cdot \log(4 \cdot 3.1416 \cdot D / \lambda)$$

where:

D is the measurement distance

λ is the wavelength

*Measurements made at 1 meter distance.

2. The far-field boundary is given in ANSI 63.10 as:

$$R \text{ far field} = (2 \cdot L^2) / \lambda$$

L is the Largest Antenna Dimension, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.06	0.025	0.00394	0.317

操作模式	發射	測試日期	107 年 9 月 27 日
基本波頻率	CH 2 : 76.387 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	24°C	測試者	羅益偉
量測場地濕度	63%RH		

Antenna Polarity: Horizontal						
No.	Frequency (GHz)	EIRP Level (dBm)	Raw Value (dBm)	Receiver Antenna Gain (dBi)	Power Density Limit (dBm)	Pass/Fail
1	76.387	29.0 PK	-17.6	23.5	55	Pass
2	76.387	28.3 AV	-18.3	23.5	50	Pass

Antenna Polarity: Vertical						
No.	Frequency (GHz)	EIRP Level (dBm)	Raw Value (dBm)	Receiver Antenna Gain (dBi)	Power Density Limit (dBm)	Pass/Fail
1	76.387	10.8 PK	-35.8	23.5	55	Pass
2	76.387	10.5 AV	-36.1	23.5	50	Pass

REMARKS:

1.The measured power level is converted to EIRP using the equation:

$$\text{EIRP} = \text{Raw Value} - \text{Receiver Antenna Gain} + 20 \cdot \log(4 \cdot 3.1416 \cdot D / \lambda)$$

where:

D is the measurement distance

λ is the wavelength

*Measurements made at 1 meter distance.

2. The far-field boundary is given in ANSI 63.10 as:

$$R \text{ far field} = (2 \cdot L^2) / \lambda$$

L is the Largest Antenna Dimension, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.387	0.025	0.00393	0.318

操作模式	發射	測試日期	107 年 9 月 27 日
基本波頻率	CH 3 : 76.714 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	24°C	測試者	羅益偉
量測場地濕度	63%RH		

Antenna Polarity: Horizontal						
No.	Frequency (GHz)	EIRP Level (dBm)	Raw Value (dBm)	Receiver Antenna Gain (dBi)	Power Density Limit (dBm)	Pass/Fail
1	76.714	30.4 PK	-16.1	23.6	55	Pass
2	76.714	28.6 AV	-17.9	23.6	50	Pass

Antenna Polarity: Vertical						
No.	Frequency (GHz)	EIRP Level (dBm)	Raw Value (dBm)	Receiver Antenna Gain (dBi)	Power Density Limit (dBm)	Pass/Fail
1	76.714	10.9 PK	-35.6	23.6	55	Pass
2	76.714	10.2 AV	-36.3	23.6	50	Pass

REMARKS:

1.The measured power level is converted to EIRP using the equation:

$$\text{EIRP} = \text{Raw Value} - \text{Receiver Antenna Gain} + 20 \cdot \log(4 \cdot 3.1416 \cdot D / \lambda)$$

where:

D is the measurement distance

λ is the wavelength

*Measurements made at 1 meter distance.

2. The far-field boundary is given in ANSI 63.10 as:

$$R \text{ far field} = (2 \cdot L^2) / \lambda$$

L is the Largest Antenna Dimension, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.714	0.025	0.00391	0.32

5.9 量測結果 (Modulation: FMCW)

操作模式	發射	測試日期	107 年 9 月 27 日
基本波頻率	CH 1 : 76.36 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	24°C	測試者	羅益偉
量測場地濕度	63%RH		

Antenna Polarity: Horizontal						
No.	Frequency (GHz)	EIRP Level (dBm)	Raw Value (dBm)	Receiver Antenna Gain (dBi)	Power Density Limit (dBm)	Pass/Fail
1	76.36	28.8 PK	-17.8	23.5	55	Pass
2	76.36	29.4 AV	-17.2	23.5	50	Pass

Antenna Polarity: Vertical						
No.	Frequency (GHz)	EIRP Level (dBm)	Raw Value (dBm)	Receiver Antenna Gain (dBi)	Power Density Limit (dBm)	Pass/Fail
1	76.36	13.6 PK	-33.0	23.5	55	Pass
2	76.36	7.0 AV	-39.6	23.5	50	Pass

REMARKS:

1. The measured power level is converted to EIRP using the equation:

$$\text{EIRP} = \text{Raw Value} - \text{Receiver Antenna Gain} + 20 \cdot \log(4 \cdot 3.1416 \cdot D / \lambda)$$

where:

D is the measurement distance

λ is the wavelength

*Measurements made at 1 meter distance.

2. The far-field boundary is given in ANSI 63.10 as:

$$R \text{ far field} = (2 \cdot L^2) / \lambda$$

L is the Largest Antenna Dimension, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.36	0.025	0.00393	0.318

5.10 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 頻率穩定度之量測

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) 將待測物之天線對準接收天線並連至測試儀器。
- b) 設定待測物為無調變狀況,設定解析頻寬為 10 kHz,視訊頻寬大於解析頻寬。
- c) 觀察其頻率飄移的狀況。
- d) 依不同溫度和電壓變化狀況,依上面步驟重覆測試。
- e) 將所測的頻率飄移狀況記錄於報告內。

6.3 量測儀器

Modulation: FM (BW 168.4MHz)

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer Agilent	E4446A	MY48250254	Nov. 21, 2017	Nov. 20, 2018
DC Power Supply Topward	6603D	795558	NA	NA
Temperature & Humidity Chamber Giant Force	GTH-150-40-SP-AR	MAA0812-008	Jan. 10, 2018	Jan. 09, 2019
True RMS Clamp Meter FLUKE	325	31130711WS	May 22, 2018	May 21, 2019
*Harmonic Mixer (75~110GHz) OML	M10HWD	110215-1	Oct. 17, 2017	Oct. 16, 2019
*Horn Antenna (75~110GHz) OML	M10RH	110215-1	Oct. 17, 2017	Oct. 16, 2019
*Diplexer EMCI	DPL26	DPL26_01	Oct. 17, 2017	Oct. 16, 2019

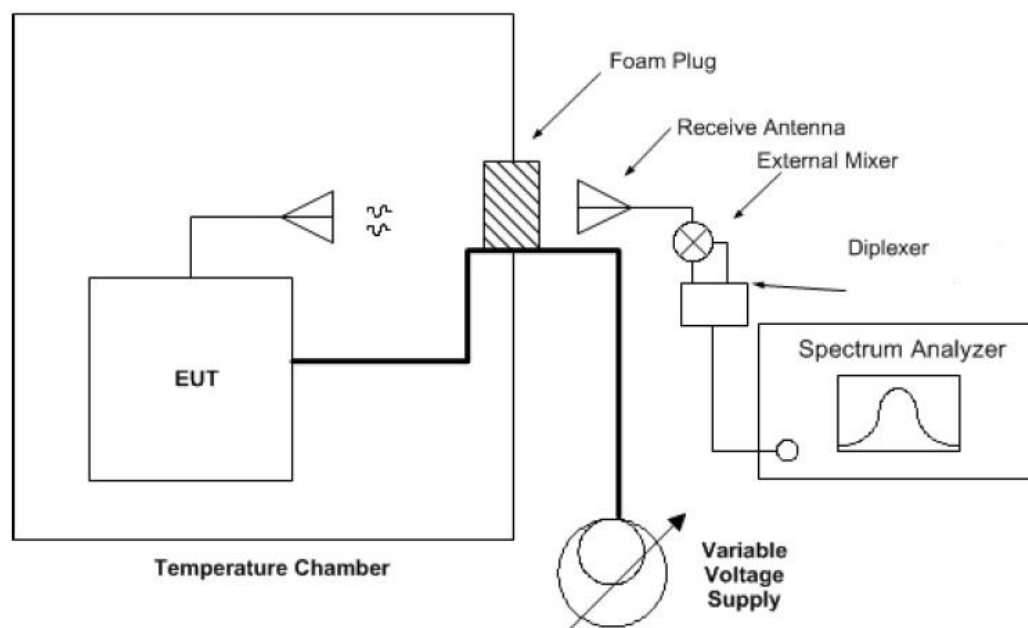
NOTE: 1. The test was performed in Oven room 2.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

Modulation: FM (BW 234.9MHz, BW 407.9MHz) & CW & FMCW

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
Spectrum Analyzer Agilent	E4446A	MY48250254	Nov. 14, 2018	Nov. 13, 2019
DC Power Supply Topward	6603D	795558	NA	NA
Temperature & Humidity Chamber Giant Force	GTH-150-40-SP-AR	MAA0812-008	Jan. 09, 2019	Jan. 08, 2020
True RMS Clamp Meter FLUKE	325	31130711WS	May 22, 2018	May 21, 2019
*Harmonic Mixer (75~110GHz) OML	M10HWD	110215-1	Oct. 17, 2017	Oct. 16, 2019
*Horn Antenna (75~110GHz) OML	M10RH	110215-1	Oct. 17, 2017	Oct. 16, 2019
*Diplexer EMCI	DPL26	DPL26_01	Oct. 17, 2017	Oct. 16, 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 (Modulation: FM)

操 作 模 式 :	發射	測 試 日 期 :	107 年 10 月 03 日
量 測 場 地 溫 度 :	24℃	量 測 場 地 濕 度 :	62%RH
測 試 者 :	羅益偉		

Frequency Stability Versus Temp.									
Operating Frequency: 76.2GHz									
TEMP. (°C)	Power Supply (Vdc)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Reading (MHz)	Pass/Fail	Reading (MHz)	Pass/Fail	Reading (MHz)	Pass/Fail	Reading (MHz)	Pass/Fail
50	12	76199.6122	Pass	76199.6481	Pass	76199.6396	Pass	76199.6486	Pass
40	12	76200.3324	Pass	76200.3314	Pass	76200.3485	Pass	76200.3264	Pass
30	12	76199.9502	Pass	76200.0157	Pass	76199.9602	Pass	76199.9463	Pass
20	12	76199.7468	Pass	76199.6967	Pass	76199.6918	Pass	76199.7481	Pass
10	12	76200.1758	Pass	76200.2402	Pass	76200.207	Pass	76200.1833	Pass
0	12	76200.3121	Pass	76200.3079	Pass	76200.3077	Pass	76200.342	Pass
-10	12	76200.0037	Pass	76200.0191	Pass	76200.0123	Pass	76200.0046	Pass
-20	12	76200.087	Pass	76200.1043	Pass	76200.12	Pass	76200.1326	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 76.2GHz									
TEMP. (°C)	Power Supply (Vdc)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Reading (MHz)	Pass/Fail	Reading (MHz)	Pass/Fail	Reading (MHz)	Pass/Fail	Reading (MHz)	Pass/Fail
20	13.8	76199.7498	Pass	76199.6853	Pass	76199.7024	Pass	76199.7471	Pass
	12	76199.7468	Pass	76199.6967	Pass	76199.6918	Pass	76199.7481	Pass
	10.2	76199.7322	Pass	76199.6853	Pass	76199.6906	Pass	76199.7438	Pass

6.6 量測結果 (Modulation: CW)

操 作 模 式 :	發射	測 試 日 期 :	108 年 02 月 23 日
量 測 場 地 溫 度 :	24℃	量 測 場 地 濕 度 :	62%RH
測 試 者 :	羅益偉		

Frequency Stability Versus Temp.									
Operating Frequency: 76.387GHz									
TEMP. (°C)	Power Supply (Vdc)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Reading (MHz)	Pass/Fail	Reading (MHz)	Pass/Fail	Reading (MHz)	Pass/Fail	Reading (MHz)	Pass/Fail
50	12	76386.6953	Pass	76386.6271	Pass	76386.6244	Pass	76386.6959	Pass
40	12	76387.0577	Pass	76387.0666	Pass	76387.0383	Pass	76387.0464	Pass
30	12	76386.7965	Pass	76386.78	Pass	76386.7692	Pass	76386.7677	Pass
20	12	76387.2854	Pass	76387.3048	Pass	76387.2951	Pass	76387.2886	Pass
10	12	76386.7161	Pass	76386.6649	Pass	76386.7294	Pass	76386.7027	Pass
0	12	76387.3926	Pass	76387.349	Pass	76387.3558	Pass	76387.3967	Pass
-10	12	76387.3005	Pass	76387.2848	Pass	76387.3034	Pass	76387.2707	Pass
-20	12	76387.2844	Pass	76387.2562	Pass	76387.2878	Pass	76387.3091	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 76.387GHz									
TEMP. (°C)	Power Supply (Vdc)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Reading (MHz)	Pass/Fail	Reading (MHz)	Pass/Fail	Reading (MHz)	Pass/Fail	Reading (MHz)	Pass/Fail
20	13.8	76387.2748	Pass	76387.301	Pass	76387.2924	Pass	76387.2858	Pass
	12	76387.2854	Pass	76387.3048	Pass	76387.2951	Pass	76387.2886	Pass
	10.2	76387.295	Pass	76387.3046	Pass	76387.3041	Pass	76387.2951	Pass

6.7 量測結果 (Modulation: FMCW)

操 作 模 式 :	發射	測 試 日 期 :	108 年 02 月 23 日
量 測 場 地 溫 度 :	24℃	量 測 場 地 濕 度 :	62%RH
測 試 者 :	羅益偉		

Frequency Stability Versus Temp.									
Operating Frequency: 76.36GHz									
TEMP. (°C)	Power Supply (Vdc)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Reading (MHz)	Pass/Fail	Reading (MHz)	Pass/Fail	Reading (MHz)	Pass/Fail	Reading (MHz)	Pass/Fail
50	12	76360.374	Pass	76360.3547	Pass	76360.3668	Pass	76360.3679	Pass
40	12	76359.7608	Pass	76359.7264	Pass	76359.7115	Pass	76359.7238	Pass
30	12	76359.7333	Pass	76359.7459	Pass	76359.7353	Pass	76359.7764	Pass
20	12	76359.853	Pass	76359.8789	Pass	76359.8403	Pass	76359.8717	Pass
10	12	76359.8916	Pass	76359.9304	Pass	76359.9104	Pass	76359.9631	Pass
0	12	76359.6885	Pass	76359.7521	Pass	76359.7074	Pass	76359.7037	Pass
-10	12	76359.696	Pass	76359.6649	Pass	76359.7267	Pass	76359.7271	Pass
-20	12	76359.6743	Pass	76359.6356	Pass	76359.6559	Pass	76359.6101	Pass

Frequency Stability Versus Voltage									
Operating Frequency: 76.36GHz									
TEMP. (°C)	Power Supply (Vdc)	0 Minute		2 Minutes		5 Minutes		10 Minutes	
		Reading (MHz)	Pass/Fail	Reading (MHz)	Pass/Fail	Reading (MHz)	Pass/Fail	Reading (MHz)	Pass/Fail
20	13.8	76359.8676	Pass	76359.8767	Pass	76359.8415	Pass	76359.8766	Pass
	12	76359.853	Pass	76359.8789	Pass	76359.8403	Pass	76359.8717	Pass
	10.2	76359.8653	Pass	76359.8757	Pass	76359.8523	Pass	76359.8657	Pass

6.8 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 天線之要求

7.1 適用標準

請見本報告 3.1 節第(3)項的規定。

7.2 天線之規定

此待測物搭配 Planar micro strip patch antenna，無使用天線接頭。

7.3 結果判定

符合低功率射頻電機技術規範之要求，請參照附件之天線規格。

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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