

低功率射頻器材技術規範測試報告

報告編號:

RTBHKU-WTW-P21070816

申請者

安昀商號

產品名稱

MRR3 Third Generation Medium Range Radar

型號

FC3TR

製造廠商

APTIV Services US LLC

商標或廠牌

APTIV

該產品樣品試驗

國家通訊傳播委員會低功率射頻器材技術規範

依據之試驗標準

109 年 7 月 1 日訂定

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 110 年 10 月 06 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： MRR3 Third Generation Medium Range Radar

商 標： APTIV

型 號： FC3TR

申 請 者： 安昀商號

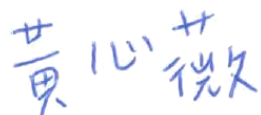
量 測 規 範： 低功率射頻器材技術規範 LP0002 (訂定日期：109 年 7 月 1 日)
ANSI C63.10-2013

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：FC3TR)，收件日期 110 年 7 月 22 日，於 110 年 9 月 13 日至 9 月 15 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“低功率射頻器材技術規範”及“電信管制射頻器材審驗管理辦法”製作測試結果報告。

特 此 證 明 ！

報告製作者：



黃 心 薇 / 專員

， 日 期： 110 年 10 月 06 日

審 核 者：



陳 瓊 美 / 經理

， 日 期： 110 年 10 月 06 日

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 低功率射頻器材量測記錄表

申請廠商：安昀商號

製造廠商：APTIV Services US LLC

申請廠商地址：新北市三重區六張街 126 巷 2 弄 7-3 號

廠牌：APTIV

產品名稱：MRR3 Third Generation Medium Range Radar

型號：FC3TR

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：低功率射頻器材技術規範 LP0002 (訂定日期：109 年 7 月 1 日)
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	低功率射頻器材技術規範 4.14.1.2 節	合格
2	混附發射	低功率射頻器材技術規範 4.14.1.3 節及 3.6 節	合格
3	頻率穩定度	低功率射頻器材技術規範 4.14.1.4 節	合格
4	電源線傳導干擾	低功率射頻器材技術規範 3.3 節	註
5	天線之要求	低功率射頻器材技術規範 3.2 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。

最大暴露允許值(Maximum Permissible Exposure, MPE)

項次	量測項目	規 範	量測結果判定
1	電波暴露量	低功率射頻器材技術規範 6.20.2 節	合格

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：	MRR3 Third Generation Medium Range Radar
型號：	FC3TR
額定電源：	12 Vdc
調變方式：	FMCW
工作頻率：	76 ~ 77 GHz
峰值功率密度：	34.43 dBm
天線種類：	見註
電源線類別：	NA
信號線類別：	NA
配件：	NA

註：

1. 此裝置為 MRR3 Third Generation Medium Range Radar / ground based vehicular radar，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：

模式	頻道	對應頻率 (GHz)	頻道	對應頻率 (GHz)	頻道	對應頻率 (GHz)
Narrow	1	76.11	2	76.51	3	76.90
Mid	1	76.18	2	76.53	3	76.83
Wide	1	76.2	2	76.54	3	76.82

2. 此待測設備天線規格,詳列如下:

Brand	Model	Antenna Gain (dBi)	Frequency Range (GHz)	Antenna Type	Connector Type
NA	NA	26	76~77	Integral patch arrays	None

3. 上述天線的規格資訊由申請者聲明，實驗室不承擔任何責任。
4. 此待測設備之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，其中以直立擁有最大干擾值，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: BHKU-WTW-P21070816。

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 Power Supply	Topward	6603D	795558	NA	Provided by Lab

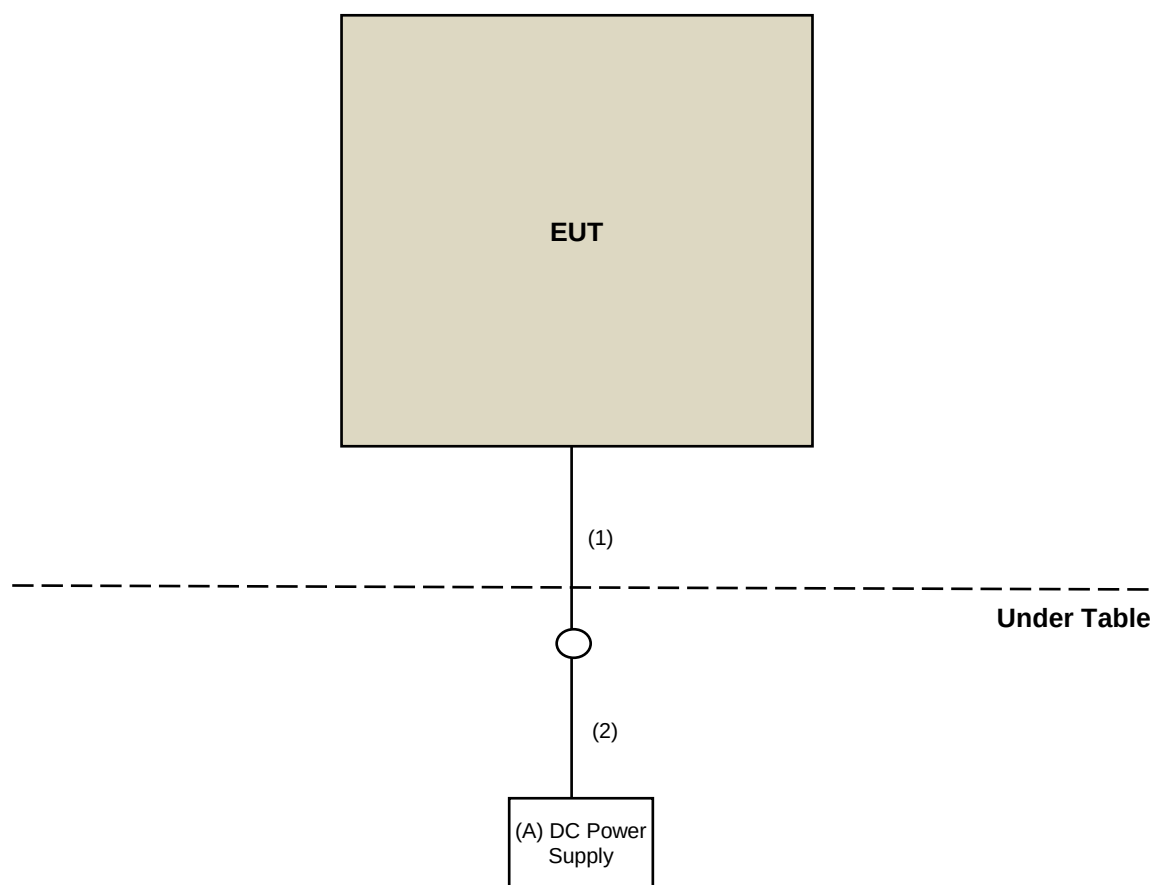
NOTE:

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

No.	Cable	Qty.	Length (m)	Shielded (Yes/ No)	Cores (Number)	Remark
1	DC Cable	1	1.2	No	0	Supplied by client (Brand:Annyu; Model:N/A)
2	DC Cable	1	1.5	No	0	Provided by Lab (Brand:AWM; Model:1015 VW-1)

註：本案經申請者切結器材不提供隨貨配件，測試時依申請者(或實驗室)提供的非隨貨配件併同檢驗。

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器材技術規範之 3.3 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器材技術規範 4.14.1.2 節(1)之要求，低於 40GHz 的輻射發射應符合 3.6 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)
$0.009 \leq f \leq 0.490$	$2,400/f(\text{kHz})$	300
$0.490 < f \leq 1.705$	$24,000/f(\text{kHz})$	30
$1.705 < f < 30$	30	30
$30 \leq f \leq 88$	100	3
$88 < f \leq 216$	150	3
$216 < f \leq 960$	200	3
$960 < f$	500	3

(3) 天線之規定

低功率射頻器材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器材技術規範之 4.14 節，工作頻率為 76 GHz~77 GHz。

低功率發射機，需符合規範 4.14.1.2 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器材技術規範之 4.14.1.3 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 3.6 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器材技術規範 4.14.1.4 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°C ~ 50°C 間變化，供應電壓在額定值之 $\pm 15\%$ 內變化。

(7) 電波暴露量之評估

依據國家通訊傳播委員會低功率射頻器材技術規範 6.20.2 節之規定，若受測物於正常操作模式下，其發射機距離人體 20 公分以上者，可測試最大暴露允許值(Maximum Permissible Exposure, MPE)以證明其符合電波暴露量之要求。

限制值如下：

(1) 職業性/可控制之暴露

頻率範圍 (MHz)	電場強度 (V/m)	磁場強度 (A/m)	功率密度 (mW/cm ²)	平均時間 (minutes)
0.3 - 3.0	614	1.63	*100	6
3 - 30	1842/f	4.89/f	*900/f ²	6
30 - 300	61.4	0.163	1.0	6
300 - 1,500	---	---	f/300	6
1,500 - 100,000	---	---	5.0	6

註 1：標記*表平面波等效功率密度。

註 2：f 表測試頻率，單位：MHz。

(2) 一般人/不可控制之暴露

頻率範圍 (MHz)	電場強度 (V/m)	磁場強度 (A/m)	功率密度 (mW/cm ²)	平均時間 (minutes)
0.3 - 1.34	614	1.63	*100	30
1.34 - 30	824/f	2.19/f	*180/f ²	30
30 - 300	27.5	0.073	0.2	30
300 - 1,500	---	---	f/1500	30
1,500 - 100,000	---	---	1.0	30

註 1：標記*表平面波等效功率密度。

註 2：f 表測試頻率，單位：MHz。

3.2 限制使用之頻帶

除本規範另有規定外，任何低功率射頻器材之主波皆不得使用下表所列各頻段之頻率；低功率射頻器材落於下表所列頻段之混附發射，其電場強度必須符合 3.6 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 ~ 40GHz>

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 40GHz ~ 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 40GHz test:

Description & Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Test Receiver Agilent	N9038A	MY50010156	2021/7/22	2022/7/21
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	NA	NA
Pre_Amplifier EMCI	EMC001340	980142	2021/5/24	2022/5/23
LOOP ANTENNA Electro-Metrics	EM-6879	264	2021/3/5	2022/3/4
RF Coaxial Cable JYEBO	5D-FB	LOOPCAB-001	2021/1/7	2022/1/6
RF Coaxial Cable JYEBO	5D-FB	LOOPCAB-002	2021/1/7	2022/1/6
Pre_Amplifier Mini-Circuits	ZFL-1000VH2	QA0838008	2020/10/20	2021/10/19
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	2020/11/5	2021/11/4
RF Coaxial Cable COMMATE/PEWC	8D	966-3-1	2021/3/16	2022/3/15
RF Coaxial Cable COMMATE/PEWC	8D	966-3-2	2021/3/16	2022/3/15
RF Coaxial Cable COMMATE/PEWC	8D	966-3-3	2021/3/16	2022/3/15
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-3-01	2020/9/24	2021/9/23
Horn Antenna Schwarzbeck	BBHA9120-D	9120D-406	2020/11/22	2021/11/21
Pre_Amplifier EMCI	EMC12630SE	980384	2021/1/11	2022/1/10
RF Coaxial Cable EMCI	EMC104-SM-SM-1500	180504	2021/4/26	2022/4/25
RF Coaxial Cable EMCI	EMC104-SM-SM-2000	180601	2021/6/8	2022/6/7
RF Coaxial Cable EMCI	EMC104-SM-SM-6000	210201	2021/5/13	2022/5/12
Fix tool for Boresight antenna tower LIOW GUU	FBA-01	FBA_SIP01	NA	NA
Spectrum Analyzer Keysight	N9030A	MY54490679	2021/7/9	2022/7/8
Pre_Amplifier EMCI	EMC184045SE	980387	2021/1/11	2022/1/10
Horn Antenna Schwarzbeck	BBHA 9170	BBHA9170519	2020/11/22	2021/11/21
RF Cable-Frequency range: 1-40GHz EMCI	EMC102-KM-KM-1200	160924	2021/1/11	2022/1/10
RF cable (40GHz) EMCI	EMC-KM-KM-4000	200214	2021/3/10	2022/3/9

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 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	5.4 dB
	1GHz ~ 18GHz	5.0 dB
	18GHz ~ 40GHz	5.3 dB

For above 40GHz test:

Description & Manufacturer	Model No.	Serial No.	Calibrated Date	Calibrated Until
Spectrum Analyzer Keysight	N9030A	MY55330160	2021/2/5	2022/2/4
Zero-Bias Detector Vdi	WR15ZBD	WR15R5 1-30	CoC	CoC
4CH Infiniivision Oscilloscope Keysight	DSOX6004A	MY55190202	2021/6/28	2022/6/27
*OXE89 Horn Antenna QuinStar	QWH-UCRR00	924200002	2020/1/20	2022/1/19
*50G~75G Conical Horn Antenna Keysight	WR15CH-Conical Horn Antenna	WR15CH_001	2020/1/20	2022/1/19
*75G~110G Conical Horn Antenna Keysight	WR10CH-Conical Horn Antenna	WR10CH_001	2020/1/20	2022/1/19
*110G~170G Conical Horn Antenna Keysight	WR6.5CH-Conical Horn Antenna	WR6.5CH_001	2020/1/20	2022/1/19
*140G~220G Conical Horn Antenna Keysight	WR5.1CH-Conical Horn Antenna	WR5.1CH_001	2019/12/9	2021/12/8
*200G~330G Conical Horn Antenna Keysight	WR3.4DH-Diagonal Horn Antenna	WR3.4DH_001	2019/12/9	2021/12/8
N9029AV15-DC9 - 50-75 GHz VDI Standard Downconverter with 9VDC supply Keysight	SA Extension WR15	SAX 381	CoC	CoC
N9029AV10-DC9 - 75-110 GHz VDI Standard Downconverter with 9VDC supply Keysight	SA Extension WR10	SAX 378	CoC	CoC
N9029AV06-DC9 - 110-170 GHz VDI Standard Downconverter with 9VDC supply Keysight	SA Extension WR6.5	SAX 377	CoC	CoC
*N9029AV05-DC9 - 140-220 GHz VDI Standard Downconverter with 9VDC supply Keysight	SA Extension WR5.1	SAX 375	2019/12/9	2021/12/8
*N9029AV03-DC9 - 220-330 GHz VDI Standard Downconverter with 9VDC supply Keysight	SA Extension	SAX 376	2019/12/9	2021/12/8
Millimeter-Wave Signal Generator Frequency Extension Module (50~75 GHz) Keysight	E8257DV15	SGX 050	CoC	CoC
Millimeter-Wave Signal Generator Frequency Extension Module (75~110 GHz) Keysight	E8257DV10	SGX 069	CoC	CoC
Millimeter-Wave Signal Generator Frequency Extension Module (110~170 GHz) Keysight	E8257DV06-DC9	SGX 223	CoC	CoC

PSG analog signal generator (from 250 kHz to 50 GHz) Keysight	E8257D	MY53401987	2021/6/18	2022/6/17
*Power Meter VDI	PM5	431V	2019/12/9	2021/12/8
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	NA	NA
Antenna Tower & Turn Table CT	NA	NA	NA	NA

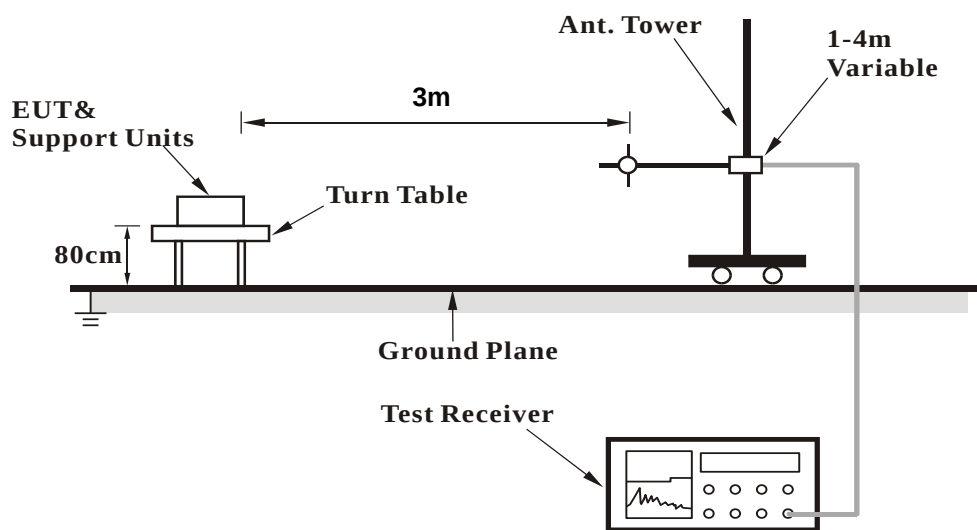
Note:

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. Certificate of Conformance (CoC) which is issued by manufacturer states that the product meets the specification.
4. The test was performed in 966 Chamber No. 6
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.

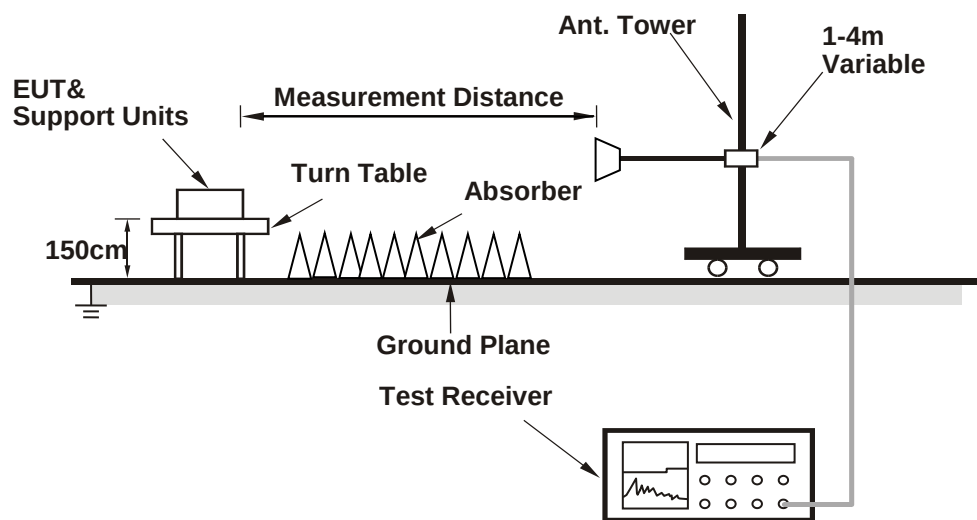
Measurement	Frequency	Uncertainty
Radiated emissions	40GHz ~ 231GHz	5.4 dB

4.4 測試配置

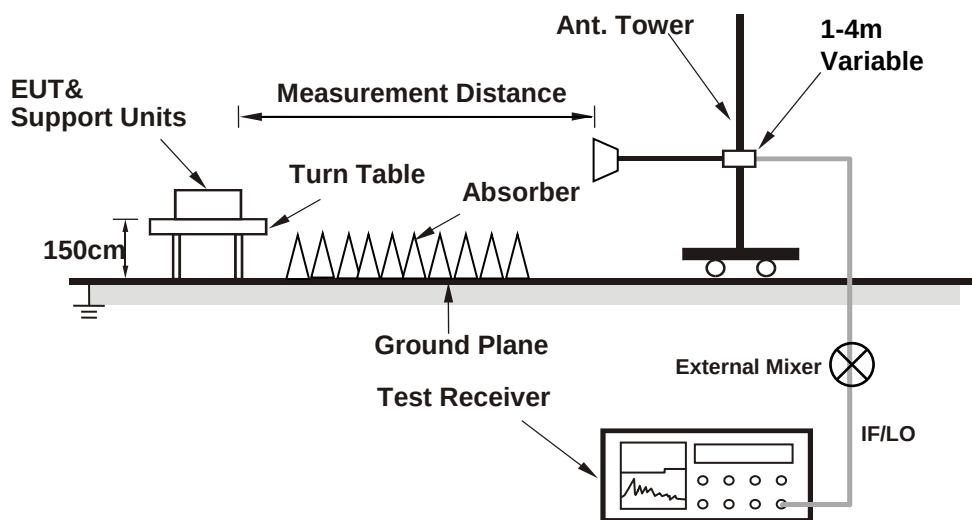
<Frequency Range below 1GHz>



<Frequency Range above 1GHz ~ 50GHz>



<Frequency Range above 50GHz>



4.5 量測結果 (Narrow 模式)

4.5.1 混附發射接收

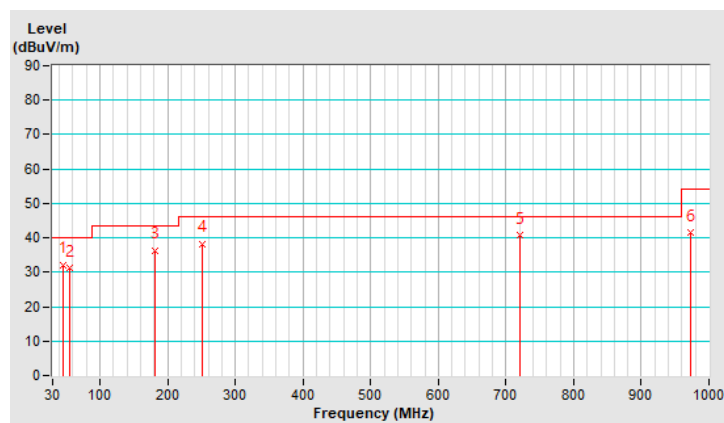
Below 1GHz Data

操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 1 : 76.11 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25 °C	量測場地濕度：	75% RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	45.42	32.2 QP	40.0	-7.8	1.00 H	235	40.4	-8.2
2	54.87	31.4 QP	40.0	-8.6	1.50 H	78	39.7	-8.3
3	180.62	36.4 QP	43.5	-7.1	1.00 H	142	45.6	-9.2
4	250.83	38.3 QP	46.0	-7.7	2.00 H	166	46.9	-8.6
5	720.44	40.7 QP	46.0	-5.3	2.00 H	246	37.4	3.3
6	972.75	41.5 QP	54.0	-12.5	1.50 H	97	33.6	7.9

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

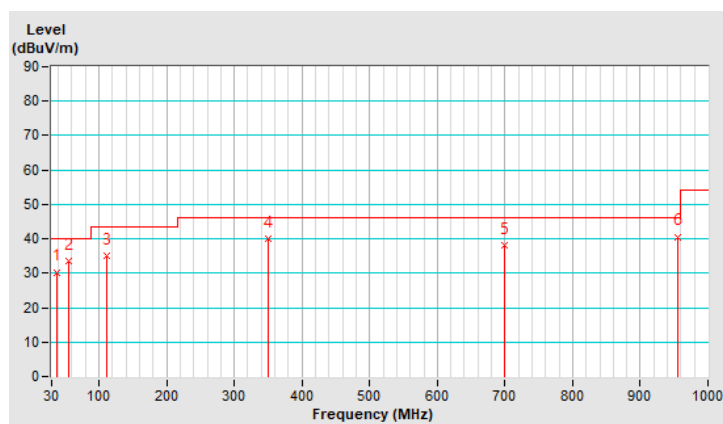


操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 1：76.11 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25 °C	量測場地濕度：	75% RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	37.57	30.3 QP	40.0	-9.7	1.00 V	146	39.2	-8.9
2	55.61	33.4 QP	40.0	-6.6	1.00 V	161	41.7	-8.3
3	110.63	35.1 QP	43.5	-8.4	1.00 V	67	45.9	-10.8
4	350.13	39.9 QP	46.0	-6.1	1.50 V	214	45.1	-5.2
5	699.76	38.1 QP	46.0	-7.9	2.00 V	73	35.0	3.1
6	955.14	40.6 QP	46.0	-5.4	1.00 V	241	32.8	7.8

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

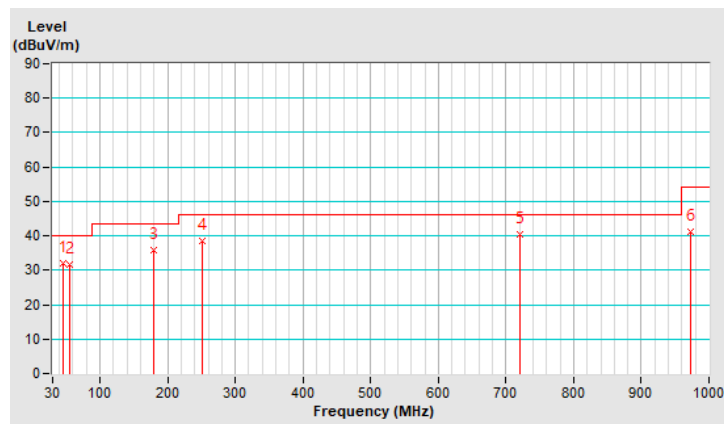


操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 2 : 76.51 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	45.58	32.1 QP	40.0	-7.9	1.00 H	245	40.3	-8.2
2	54.86	31.7 QP	40.0	-8.3	1.50 H	66	40.0	-8.3
3	179.83	35.9 QP	43.5	-7.6	1.00 H	139	45.0	-9.1
4	250.76	38.4 QP	46.0	-7.6	2.00 H	168	47.0	-8.6
5	720.57	40.4 QP	46.0	-5.6	2.00 H	237	37.1	3.3
6	972.49	41.3 QP	54.0	-12.7	1.50 H	94	33.4	7.9

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

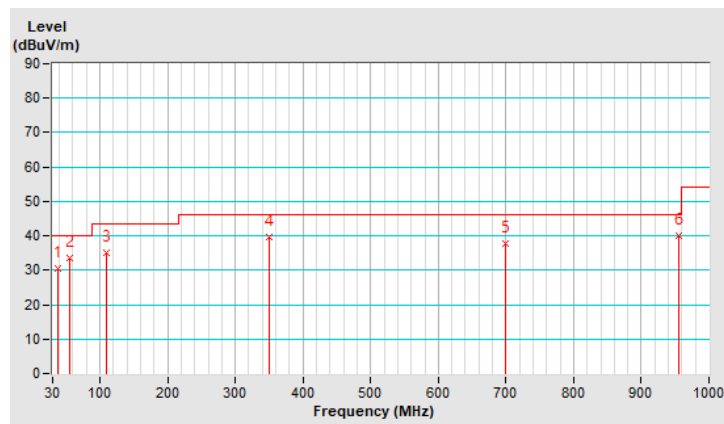


操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 2 : 76.51 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	37.35	30.5 QP	40.0	-9.5	1.00 V	140	39.4	-8.9
2	55.51	33.7 QP	40.0	-6.3	1.00 V	170	42.0	-8.3
3	110.01	35.0 QP	43.5	-8.5	1.00 V	60	45.9	-10.9
4	350.48	39.5 QP	46.0	-6.5	1.50 V	199	44.7	-5.2
5	699.69	37.9 QP	46.0	-8.1	2.00 V	70	34.8	3.1
6	955.47	40.1 QP	46.0	-5.9	1.00 V	245	32.3	7.8

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

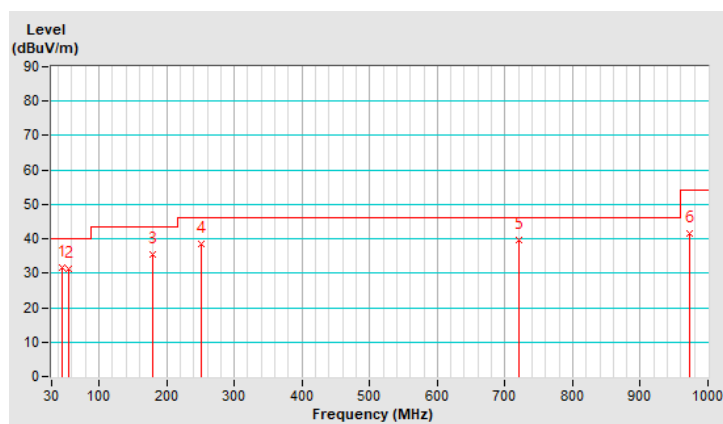


操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 3 : 76.90 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	45.89	31.8 QP	40.0	-8.2	1.00 H	222	39.9	-8.1
2	54.38	31.3 QP	40.0	-8.7	1.50 H	73	39.6	-8.3
3	179.92	35.6 QP	43.5	-7.9	1.00 H	153	44.7	-9.1
4	250.31	38.6 QP	46.0	-7.4	2.00 H	179	47.2	-8.6
5	720.19	39.8 QP	46.0	-6.2	2.00 H	239	36.5	3.3
6	972.93	41.4 QP	54.0	-12.6	1.50 H	91	33.5	7.9

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

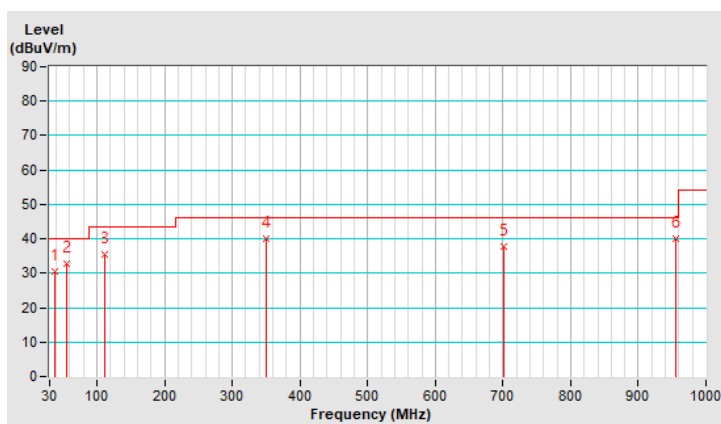


操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 3 : 76.90 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	37.82	30.5 QP	40.0	-9.5	1.00 V	148	39.4	-8.9
2	55.38	32.7 QP	40.0	-7.3	1.00 V	153	41.0	-8.3
3	110.56	35.4 QP	43.5	-8.1	1.00 V	70	46.2	-10.8
4	350.71	39.9 QP	46.0	-6.1	1.50 V	210	45.1	-5.2
5	700.44	37.7 QP	46.0	-8.3	2.00 V	59	34.6	3.1
6	955.49	39.9 QP	46.0	-6.1	1.00 V	235	32.1	7.8

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



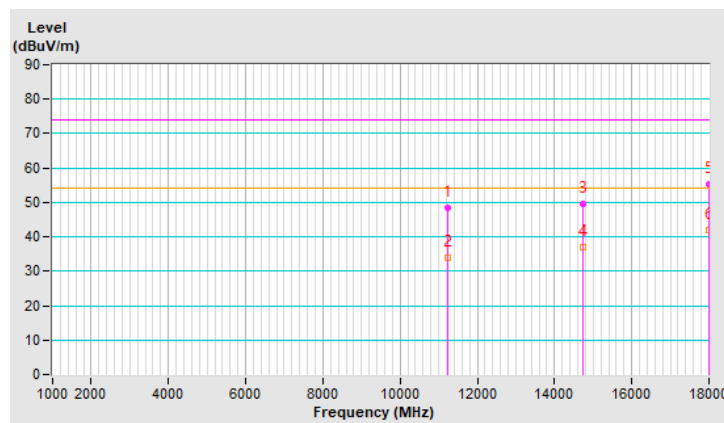
Above 1GHz Data

操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 1 : 76.11 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	11221.25	48.4 PK	74.0	-25.6	1.43 H	252	34.0	14.4
2	11221.25	33.9 AV	54.0	-20.1	1.43 H	252	19.5	14.4
3	14740.67	49.7 PK	74.0	-24.3	1.98 H	114	32.3	17.4
4	14740.67	36.9 AV	54.0	-17.1	1.98 H	114	19.5	17.4
5	17985.55	55.4 PK	74.0	-18.6	2.33 H	189	31.9	23.5
6	17985.55	41.8 AV	54.0	-12.2	2.33 H	189	18.3	23.5

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

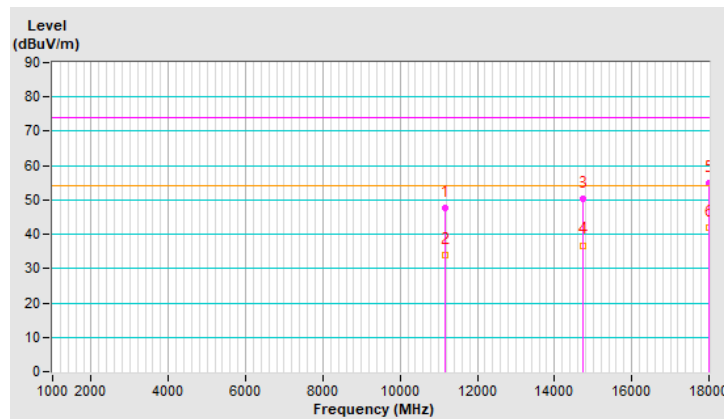


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 1 : 76.11 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	11161.51	47.5 PK	74.0	-26.5	1.73 V	239	33.3	14.2
2	11161.51	33.9 AV	54.0	-20.1	1.73 V	239	19.7	14.2
3	14748.16	50.3 PK	74.0	-23.7	2.25 V	314	33.0	17.3
4	14748.16	36.8 AV	54.0	-17.2	2.25 V	314	19.5	17.3
5	17993.28	54.8 PK	74.0	-19.2	1.98 V	236	31.2	23.6
6	17993.28	41.8 AV	54.0	-12.2	1.98 V	236	18.2	23.6

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

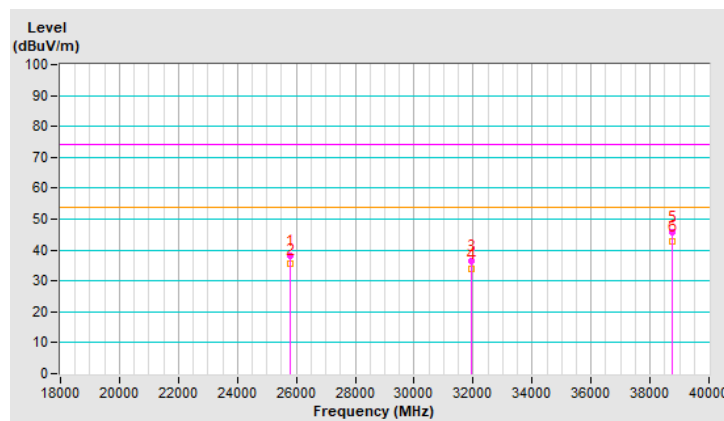


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 1 : 76.11 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	25812.92	38.3 PK	74.0	-35.7	1.35 H	249	39.0	-0.7
2	25812.92	35.4 AV	54.0	-18.6	1.35 H	249	36.1	-0.7
3	31922.58	36.4 PK	74.0	-37.6	2.01 H	163	37.5	-1.1
4	31922.58	34.0 AV	54.0	-20.0	2.01 H	163	35.1	-1.1
5	38761.98	45.9 PK	74.0	-28.1	2.55 H	129	41.0	4.9
6	38761.98	43.0 AV	54.0	-11.0	2.55 H	129	38.1	4.9

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

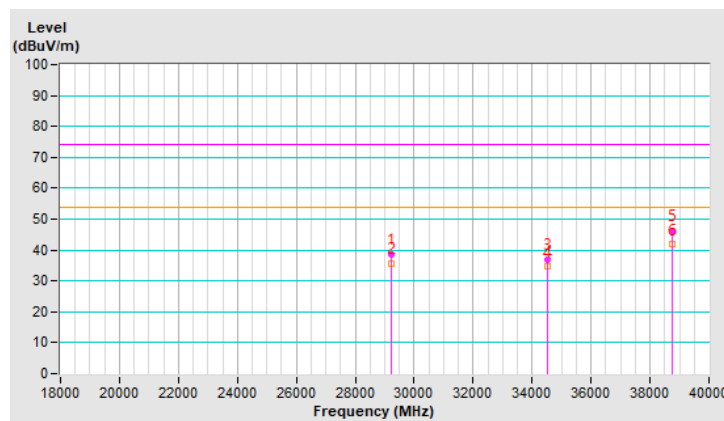


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 1：76.11 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	29219.88	38.5 PK	74.0	-35.5	2.08 V	81	40.1	-1.6
2	29219.88	35.6 AV	54.0	-18.4	2.08 V	81	37.2	-1.6
3	34505.25	36.8 PK	74.0	-37.2	1.53 V	235	38.5	-1.7
4	34505.25	34.6 AV	54.0	-19.4	1.53 V	235	36.3	-1.7
5	38772.43	46.1 PK	74.0	-27.9	1.19 V	286	41.1	5.0
6	38772.43	41.8 AV	54.0	-12.2	1.19 V	286	36.8	5.0

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

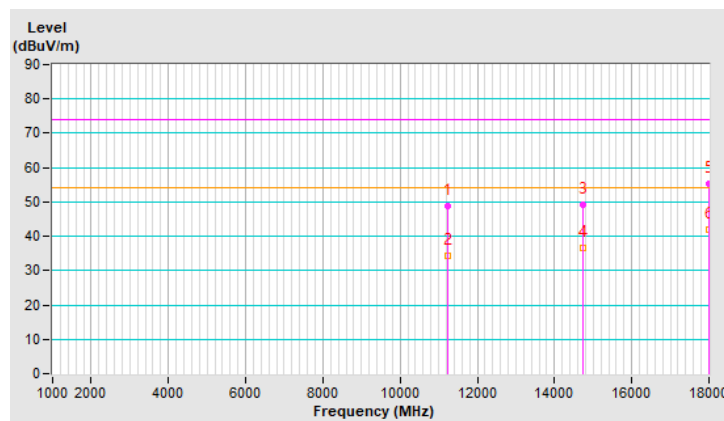


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 2 : 76.51 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	11221.25	48.9 PK	74.0	-25.1	1.46 H	246	34.5	14.4
2	11221.25	34.4 AV	54.0	-19.6	1.46 H	246	20.0	14.4
3	14740.67	49.1 PK	74.0	-24.9	2.02 H	113	31.7	17.4
4	14740.67	36.5 AV	54.0	-17.5	2.02 H	113	19.1	17.4
5	17985.55	55.3 PK	74.0	-18.7	2.33 H	195	31.8	23.5
6	17985.55	41.9 AV	54.0	-12.1	2.33 H	195	18.4	23.5

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

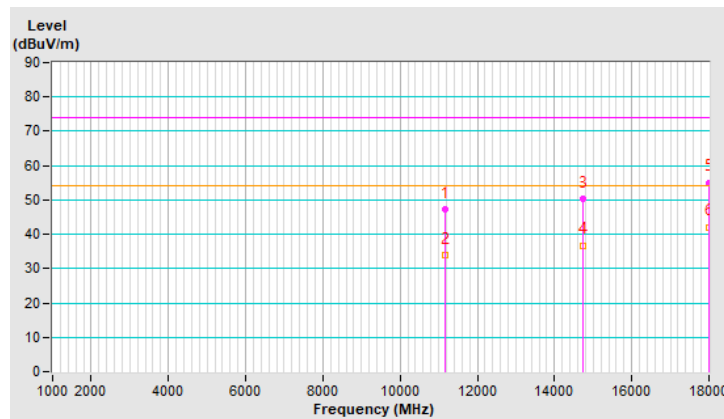


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 2 : 76.51 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	11162.66	47.4 PK	74.0	-26.6	1.70 V	250	33.1	14.3
2	11162.66	33.9 AV	54.0	-20.1	1.70 V	250	19.6	14.3
3	14743.26	50.3 PK	74.0	-23.7	2.20 V	306	32.9	17.4
4	14743.26	36.8 AV	54.0	-17.2	2.20 V	306	19.4	17.4
5	17992.12	55.1 PK	74.0	-18.9	1.97 V	241	31.6	23.5
6	17992.12	42.1 AV	54.0	-11.9	1.97 V	241	18.6	23.5

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

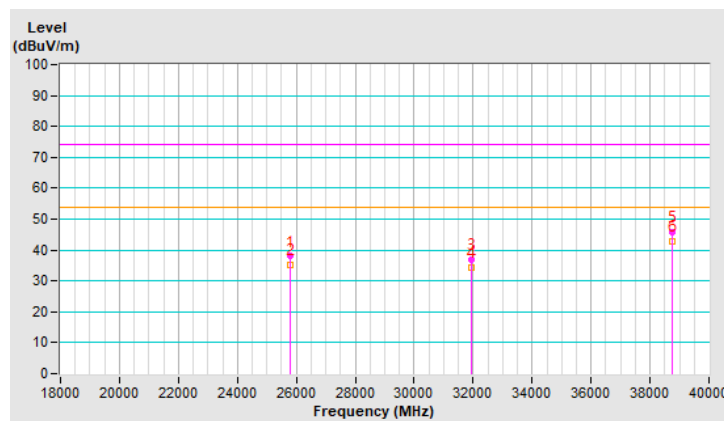


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 2 : 76.51 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	25813.05	38.0 PK	74.0	-36.0	1.33 H	243	38.7	-0.7
2	25813.05	35.2 AV	54.0	-18.8	1.33 H	243	35.9	-0.7
3	31923.29	37.0 PK	74.0	-37.0	1.97 H	160	38.1	-1.1
4	31923.29	34.5 AV	54.0	-19.5	1.97 H	160	35.6	-1.1
5	38761.89	45.7 PK	74.0	-28.3	2.56 H	132	40.8	4.9
6	38761.89	43.0 AV	54.0	-11.0	2.56 H	132	38.1	4.9

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

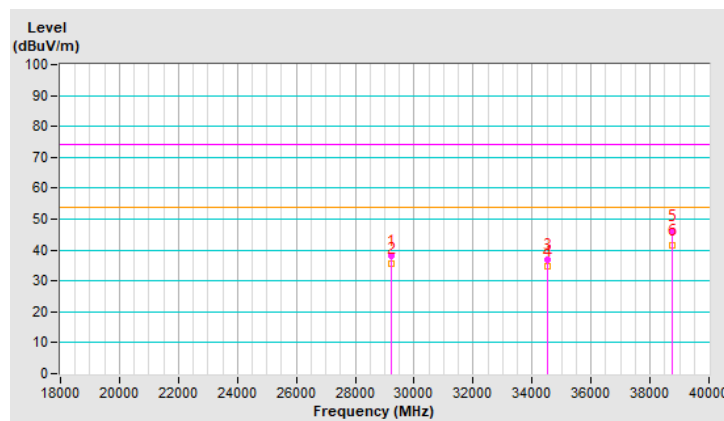


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 2 : 76.51 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	29220.06	38.3 PK	74.0	-35.7	2.08 V	65	39.8	-1.5
2	29220.06	35.5 AV	54.0	-18.5	2.08 V	65	37.0	-1.5
3	34505.33	37.0 PK	74.0	-37.0	1.54 V	236	38.7	-1.7
4	34505.33	34.9 AV	54.0	-19.1	1.54 V	236	36.6	-1.7
5	38773.19	46.1 PK	74.0	-27.9	1.27 V	302	41.1	5.0
6	38773.19	41.6 AV	54.0	-12.4	1.27 V	302	36.6	5.0

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

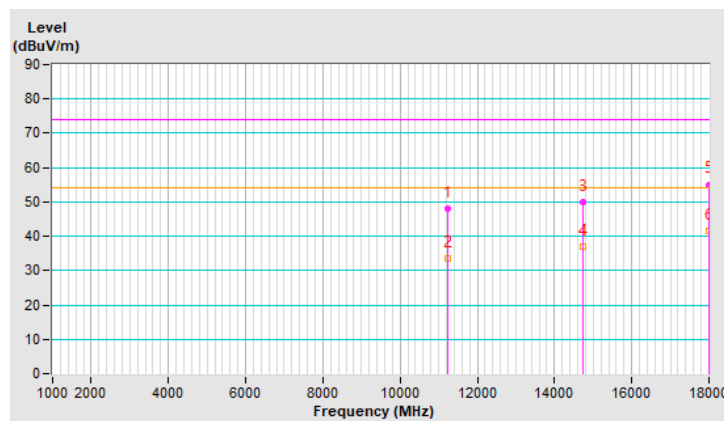


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 3 : 76.90 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	11221.25	47.9 PK	74.0	-26.1	1.44 H	254	33.5	14.4
2	11221.25	33.6 AV	54.0	-20.4	1.44 H	254	19.2	14.4
3	14740.67	49.9 PK	74.0	-24.1	2.04 H	112	32.5	17.4
4	14740.67	37.0 AV	54.0	-17.0	2.04 H	112	19.6	17.4
5	17985.55	55.1 PK	74.0	-18.9	2.35 H	183	31.6	23.5
6	17985.55	41.5 AV	54.0	-12.5	2.35 H	183	18.0	23.5

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

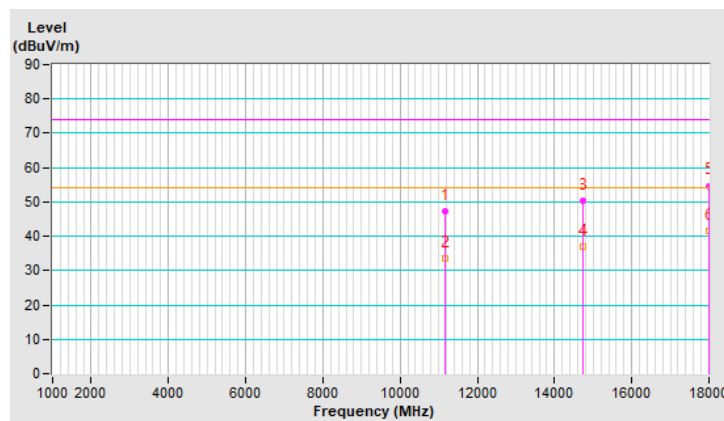


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 3 : 76.90 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	11162.96	47.1 PK	74.0	-26.9	1.70 V	243	32.8	14.3
2	11162.96	33.6 AV	54.0	-20.4	1.70 V	243	19.3	14.3
3	14744.81	50.4 PK	74.0	-23.6	2.22 V	329	33.0	17.4
4	14744.81	37.1 AV	54.0	-16.9	2.22 V	329	19.7	17.4
5	17993.77	54.7 PK	74.0	-19.3	1.93 V	244	31.1	23.6
6	17993.77	41.5 AV	54.0	-12.5	1.93 V	244	17.9	23.6

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

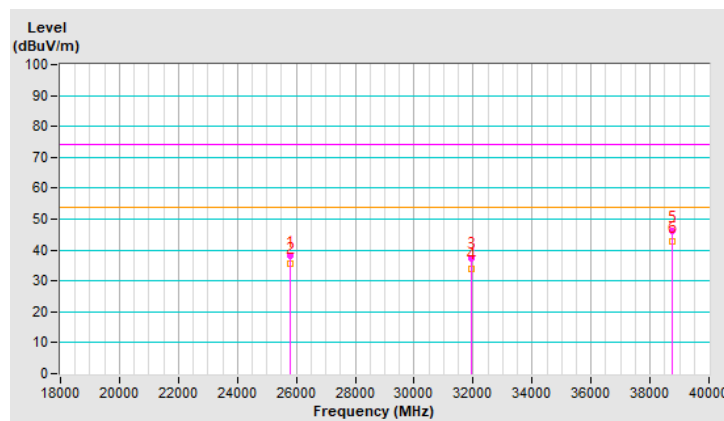


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 3 : 76.90 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	25812.71	38.0 PK	74.0	-36.0	1.36 H	252	38.7	-0.7
2	25812.71	35.8 AV	54.0	-18.2	1.36 H	252	36.5	-0.7
3	31923.28	37.3 PK	74.0	-36.7	2.00 H	178	38.4	-1.1
4	31923.28	34.1 AV	54.0	-19.9	2.00 H	178	35.2	-1.1
5	38762.59	46.0 PK	74.0	-28.0	2.50 H	128	41.1	4.9
6	38762.59	42.6 AV	54.0	-11.4	2.50 H	128	37.7	4.9

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

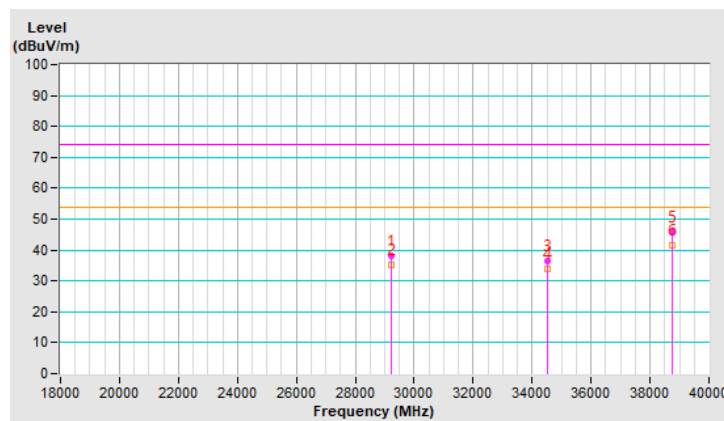


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 3 : 76.90 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	29220.47	38.1 PK	74.0	-35.9	1.97 V	59	39.6	-1.5
2	29220.47	35.2 AV	54.0	-18.8	1.97 V	59	36.7	-1.5
3	34504.63	36.4 PK	74.0	-37.6	1.46 V	220	38.1	-1.7
4	34504.63	34.0 AV	54.0	-20.0	1.46 V	220	35.7	-1.7
5	38773.17	45.9 PK	74.0	-28.1	1.17 V	292	40.9	5.0
6	38773.17	41.6 AV	54.0	-12.4	1.17 V	292	36.6	5.0

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.



操作模式：	發射接收	頻率範圍：	40GHz ~ 231GHz
基本波頻率：	CH 1：76.11 GHz	測試儀器：	(AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	66%RH
測試日期：	110 年 9 月 15 日	測試者：	廖偉鈺

Antenna Polarity: Horizontal										
No.	Frequency (GHz)	SA Value (dBm)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)	Margin (pW/cm ²)	PASS/FAIL
1	49.32	-56.19	-85.55	20.30	65.27	-39.43	0.10	600.00	-599.90	PASS
2	73.19	-92.75	-88.75	19.90	65.90	-38.80	0.12	600.00	-599.88	PASS
3	75.31	-92.47	-87.53	20.00	67.26	-37.44	0.16	600.00	-599.84	PASS
4	102.41	-92.48	-86.36	20.00	71.10	-33.60	0.39	600.00	-599.61	PASS
5	169.82	-93.05	-92.42	20.50	68.94	-35.76	0.23	600.00	-599.77	PASS
6	195.16	-92.80	-86.89	21.32	74.86	-29.84	0.92	600.00	-599.08	PASS
7	228.34	-96.14	-81.47	21.52	81.44	-23.26	4.17	1000.00	-995.83	PASS
Antenna Polarity: Vertical										
No.	Frequency (GHz)	SA Value (dBm)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)	Margin (pW/cm ²)	PASS/FAIL
1	49.23	-56.18	-85.65	20.30	65.15	-39.55	0.10	600.00	-599.90	PASS
2	73.18	-92.78	-88.78	19.90	65.87	-38.83	0.12	600.00	-599.88	PASS
3	75.33	-92.27	-87.61	20.00	67.19	-37.51	0.16	600.00	-599.84	PASS
4	102.28	-92.16	-86.37	20.00	71.08	-33.62	0.38	600.00	-599.62	PASS
5	169.45	-92.82	-92.38	20.50	68.96	-35.74	0.24	600.00	-599.76	PASS
6	195.23	-92.46	-87.13	21.32	74.62	-30.08	0.87	600.00	-599.13	PASS
7	228.09	-96.34	-82.11	21.52	80.79	-23.91	3.59	1000.00	-996.41	PASS

Remarks:

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

Follow ANSI 63.10 section 9.4 Equations to calculate and extrapolate field strength

$$E_{\text{Meas}} \text{ (dB}\mu\text{V/m)} = 126.8 - 20\log(\lambda) + P - G$$

where:

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

P is the power measured at the output of the test antenna, in dBm

λ is the wavelength of the emission under investigation [300/fMHz], in m

G is the gain of the test antenna, in dBi

Follow ANSI 63.10 section 9.5 Equations to calculate EIRP

$$\text{EIRP Level (dBm/MHz)} = E_{\text{Meas}} \text{ (dB}\mu\text{V/m)} + 20 \cdot \log(d_{\text{Meas}}) - 104.7$$

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

Measurements made at 1 meter distance.

2. Power density formula as follows

Follow ANSI 63.10 section 9.6 Equations to calculate power density

$$PD = EIRP_{\text{Linear}} / 4 \pi d^2$$

PD is the power density at the distance specified by the limit, in W/m²

EIRP_{Linear} is the equivalent isotropically radiated power, in watts

d is the 3m distance.

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

$$R_{\text{far field}} = (2 * L^2) / \lambda$$

L is the Largest Antenna Dimension of measurement antenna, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
40	0.03	0.0075	0.240
50	0.03	0.0060	0.300

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
50	0.025	0.0060	0.208
75	0.025	0.0040	0.313

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
75	0.018	0.0040	0.162
110	0.018	0.0027	0.238

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
110	0.012	0.0027	0.106
170	0.012	0.0018	0.163

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
170	0.008	0.0018	0.073
260	0.008	0.0012	0.111

操作模式：	發射接收	頻率範圍：	40GHz ~ 231GHz
基本波頻率：	CH 2 : 76.51 GHz	測試儀器：	(AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	66%RH
測試日期：	110 年 9 月 15 日	測試者：	廖偉釩

Antenna Polarity: Horizontal										
No.	Frequency (GHz)	SA Value (dBm)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)	Margin (pW/cm ²)	PASS/FAIL
1	49.31	-56.41	-85.46	20.30	65.36	-39.34	0.10	600.00	-599.90	PASS
2	73.46	-92.36	-88.65	19.90	66.03	-38.67	0.12	600.00	-599.88	PASS
3	75.36	-92.44	-87.59	20.00	67.21	-37.49	0.16	600.00	-599.84	PASS
4	102.33	-92.27	-86.50	20.00	70.96	-33.74	0.37	600.00	-599.63	PASS
5	169.73	-93.09	-92.56	20.50	68.79	-35.91	0.23	600.00	-599.77	PASS
6	194.96	-92.52	-87.11	21.32	74.63	-30.07	0.87	600.00	-599.13	PASS
7	228.03	-96.36	-81.75	21.52	81.15	-23.55	3.90	1000.00	-996.10	PASS
Antenna Polarity: Vertical										
No.	Frequency (GHz)	SA Value (dBm)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)	Margin (pW/cm ²)	PASS/FAIL
1	49.08	-56.43	-85.55	20.30	65.23	-39.47	0.10	600.00	-599.90	PASS
2	73.33	-92.33	-88.65	19.90	66.01	-38.69	0.12	600.00	-599.88	PASS
3	75.40	-92.31	-87.30	20.00	67.51	-37.19	0.17	600.00	-599.83	PASS
4	102.34	-92.22	-86.29	20.00	71.17	-33.53	0.39	600.00	-599.61	PASS
5	169.77	-93.14	-92.14	20.50	69.21	-35.49	0.25	600.00	-599.75	PASS
6	194.88	-92.52	-87.04	21.32	74.69	-30.01	0.88	600.00	-599.12	PASS
7	227.97	-96.44	-82.21	21.52	80.69	-24.01	3.51	1000.00	-996.49	PASS

Remarks:

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

Follow ANSI 63.10 section 9.4 Equations to calculate and extrapolate field strength

$$E_{\text{Meas}} (\text{dB}\mu\text{V/m}) = 126.8 - 20\log(\lambda) + P - G$$

where:

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

P is the power measured at the output of the test antenna, in dBm

λ is the wavelength of the emission under investigation [300/fMHz], in m

G is the gain of the test antenna, in dBi

Follow ANSI 63.10 section 9.5 Equations to calculate EIRP

$$\text{EIRP Level (dBm/MHz)} = E_{\text{Meas}} (\text{dB}\mu\text{V/m}) + 20 \cdot \log(d_{\text{Meas}}) - 104.7$$

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

Measurements made at 1 meter distance.

2. Power density formula as follows

Follow ANSI 63.10 section 9.6 Equations to calculate power density

$$PD = EIRP_{Linear} / 4 \pi d^2$$

PD is the power density at the distance specified by the limit, in W/m²

EIRP_{Linear} is the equivalent isotropically radiated power, in watts

d is the 3m distance.

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

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

L is the Largest Antenna Dimension of measurement antenna, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
40	0.03	0.0075	0.240
50	0.03	0.0060	0.300

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
50	0.025	0.0060	0.208
75	0.025	0.0040	0.313

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
75	0.018	0.0040	0.162
110	0.018	0.0027	0.238

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
110	0.012	0.0027	0.106
170	0.012	0.0018	0.163

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
170	0.008	0.0018	0.073
260	0.008	0.0012	0.111

操作模式：	發射接收	頻率範圍：	40GHz ~ 231GHz
基本波頻率：	CH 3 : 76.90 GHz	測試儀器：	(AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	66%RH
測試日期：	110 年 9 月 15 日	測試者：	廖偉鈞

Antenna Polarity: Horizontal										
No.	Frequency (GHz)	SA Value (dBm)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)	Margin (pW/cm ²)	PASS/FAIL
1	49.39	-56.22	-85.67	20.30	65.16	-39.54	0.10	600.00	-599.90	PASS
2	73.21	-92.50	-88.66	19.90	65.99	-38.71	0.12	600.00	-599.88	PASS
3	75.29	-92.47	-87.49	20.00	67.30	-37.40	0.16	600.00	-599.84	PASS
4	102.50	-92.41	-86.08	20.00	71.39	-33.31	0.41	600.00	-599.59	PASS
5	169.71	-93.09	-92.25	20.50	69.10	-35.60	0.24	600.00	-599.76	PASS
6	195.02	-92.67	-86.99	21.32	74.75	-29.95	0.89	600.00	-599.11	PASS
7	228.08	-96.01	-81.84	21.52	81.06	-23.64	3.82	1000.00	-996.18	PASS
Antenna Polarity: Vertical										
No.	Frequency (GHz)	SA Value (dBm)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)	Margin (pW/cm ²)	PASS/FAIL
1	49.38	-56.26	-85.76	20.30	65.07	-39.63	0.10	600.00	-599.90	PASS
2	73.56	-92.58	-88.42	19.90	66.27	-38.43	0.13	600.00	-599.87	PASS
3	75.42	-92.61	-87.59	20.00	67.22	-37.48	0.16	600.00	-599.84	PASS
4	102.21	-92.49	-86.30	20.00	71.15	-33.55	0.39	600.00	-599.61	PASS
5	169.63	-93.10	-92.49	20.50	68.86	-35.84	0.23	600.00	-599.77	PASS
6	194.94	-92.65	-86.82	21.32	74.92	-29.78	0.93	600.00	-599.07	PASS
7	227.74	-96.15	-82.01	21.52	80.88	-23.82	3.67	1000.00	-996.33	PASS

Remarks:

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

Follow ANSI 63.10 section 9.4 Equations to calculate and extrapolate field strength

$$E_{\text{Meas}} (\text{dB}\mu\text{V/m}) = 126.8 - 20\log(\lambda) + P - G$$

where:

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

P is the power measured at the output of the test antenna, in dBm

λ is the wavelength of the emission under investigation [300/fMHz], in m

G is the gain of the test antenna, in dBi

Follow ANSI 63.10 section 9.5 Equations to calculate EIRP

$$\text{EIRP Level (dBm/MHz)} = E_{\text{Meas}} (\text{dB}\mu\text{V/m}) + 20 \cdot \log(d_{\text{Meas}}) - 104.7$$

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

Measurements made at 1 meter distance.

2. Power density formula as follows

Follow ANSI 63.10 section 9.6 Equations to calculate power density

$$PD = EIRP_{\text{Linear}} / 4 \pi d^2$$

PD is the power density at the distance specified by the limit, in W/m²

EIRP_{Linear} is the equivalent isotropically radiated power, in watts

d is the 3m distance.

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

$$R_{\text{far field}} = (2 * L^2) / \lambda$$

L is the Largest Antenna Dimension of measurement antenna, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
40	0.03	0.0075	0.240
50	0.03	0.0060	0.300

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
50	0.025	0.0060	0.208
75	0.025	0.0040	0.313

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
75	0.018	0.0040	0.162
110	0.018	0.0027	0.238

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
110	0.012	0.0027	0.106
170	0.012	0.0018	0.163

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
170	0.008	0.0018	0.073
260	0.008	0.0012	0.111

4.6 量測結果 (Mid 模式)

4.6.1 混附發射接收

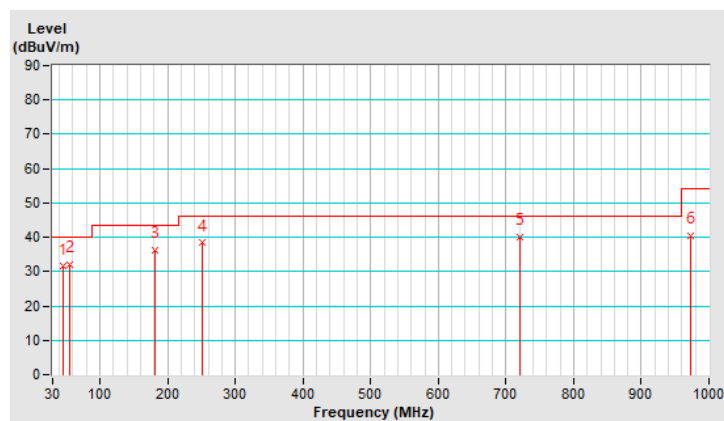
Below 1GHz Data

操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 1：76.18 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	44.96	31.8 QP	40.0	-8.2	1.00 H	250	40.0	-8.2
2	54.62	32.2 QP	40.0	-7.8	1.50 H	76	40.5	-8.3
3	180.38	36.4 QP	43.5	-7.1	1.00 H	131	45.6	-9.2
4	250.68	38.5 QP	46.0	-7.5	2.00 H	179	47.1	-8.6
5	720.03	40.2 QP	46.0	-5.8	2.00 H	244	36.9	3.3
6	972.27	40.6 QP	54.0	-13.4	1.50 H	106	32.7	7.9

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



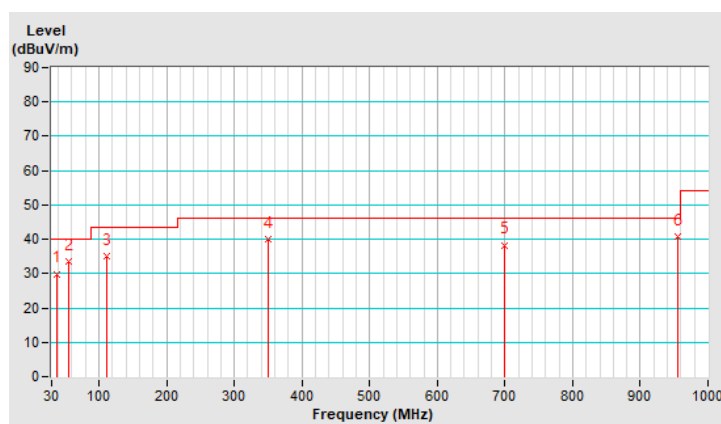
操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 1：76.18 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	37.93	29.9 QP	40.0	-10.1	1.00 V	140	38.8	-8.9
2	55.35	33.6 QP	40.0	-6.4	1.00 V	132	41.9	-8.3
3	110.58	34.9 QP	43.5	-8.6	1.00 V	75	45.7	-10.8
4	350.13	39.9 QP	46.0	-6.1	1.50 V	196	45.1	-5.2
5	699.74	38.3 QP	46.0	-7.7	2.00 V	105	35.2	3.1
6	955.78	40.9 QP	46.0	-5.1	1.00 V	219	33.1	7.8

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

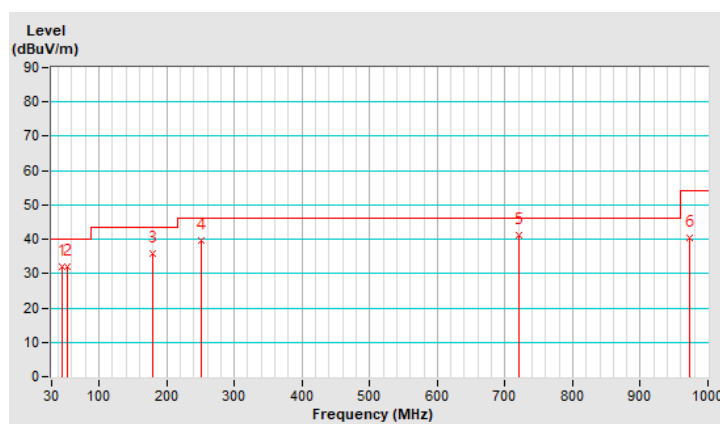


操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 2 : 76.53 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	45.79	32.1 QP	40.0	-7.9	1.00 H	248	40.2	-8.1
2	53.98	32.1 QP	40.0	-7.9	1.50 H	73	40.5	-8.4
3	180.28	35.9 QP	43.5	-7.6	1.00 H	131	45.1	-9.2
4	250.46	39.5 QP	46.0	-6.5	2.00 H	159	48.1	-8.6
5	720.54	41.1 QP	46.0	-4.9	2.00 H	260	37.8	3.3
6	972.82	40.4 QP	54.0	-13.6	1.50 H	95	32.5	7.9

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



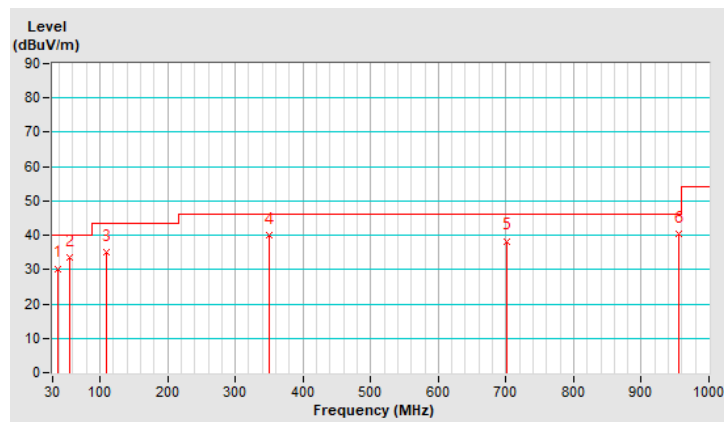
操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 2 : 76.53 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	36.86	30.3 QP	40.0	-9.7	1.00 V	132	39.2	-8.9
2	54.93	33.4 QP	40.0	-6.6	1.00 V	133	41.7	-8.3
3	109.79	35.2 QP	43.5	-8.3	1.00 V	83	46.1	-10.9
4	350.09	40.1 QP	46.0	-5.9	1.50 V	213	45.3	-5.2
5	700.46	38.3 QP	46.0	-7.7	2.00 V	93	35.2	3.1
6	954.81	40.4 QP	46.0	-5.6	1.00 V	248	32.7	7.7

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

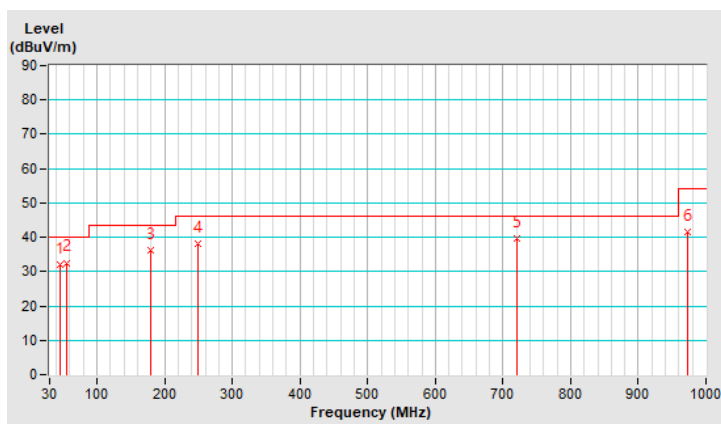


操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 3 : 76.83 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	45.61	32.1 QP	40.0	-7.9	1.00 H	245	40.2	-8.1
2	54.34	32.6 QP	40.0	-7.4	1.50 H	68	40.9	-8.3
3	179.68	36.3 QP	43.5	-7.2	1.00 H	133	45.4	-9.1
4	250.04	38.2 QP	46.0	-7.8	2.00 H	159	46.8	-8.6
5	719.91	39.7 QP	46.0	-6.3	2.00 H	258	36.4	3.3
6	972.32	41.5 QP	54.0	-12.5	1.50 H	81	33.6	7.9

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



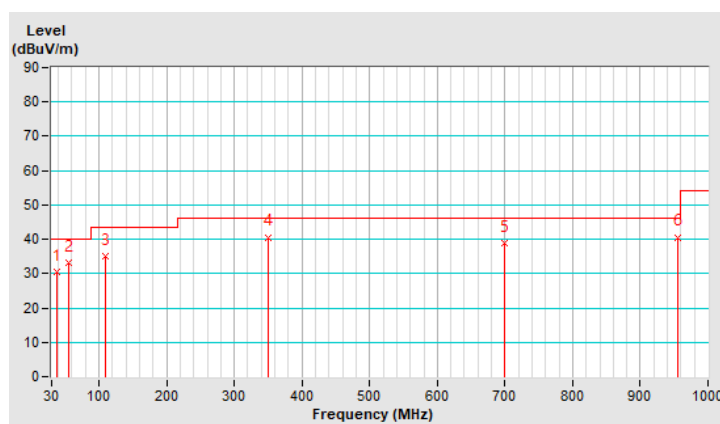
操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 3 : 76.83 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	37.01	30.6 QP	40.0	-9.4	1.00 V	138	39.5	-8.9
2	55.65	33.3 QP	40.0	-6.7	1.00 V	156	41.6	-8.3
3	110.41	35.2 QP	43.5	-8.3	1.00 V	106	46.0	-10.8
4	350.68	40.6 QP	46.0	-5.4	1.50 V	207	45.8	-5.2
5	699.45	38.8 QP	46.0	-7.2	2.00 V	94	35.7	3.1
6	955.09	40.6 QP	46.0	-5.4	1.00 V	232	32.8	7.8

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



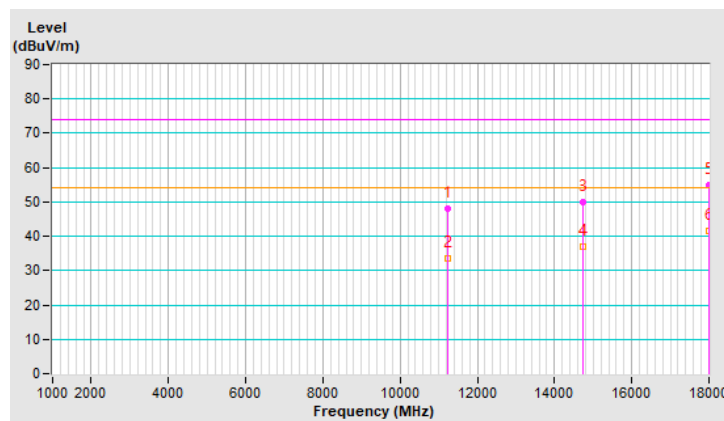
Above 1GHz Data

操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 1 : 76.18 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	11221.34	48.0 PK	74.0	-26.0	1.44 H	255	33.6	14.4
2	11221.34	33.6 AV	54.0	-20.4	1.44 H	255	19.2	14.4
3	14740.52	50.0 PK	74.0	-24.0	1.95 H	101	32.6	17.4
4	14740.52	37.0 AV	54.0	-17.0	1.95 H	101	19.6	17.4
5	17985.79	54.8 PK	74.0	-19.2	2.34 H	191	31.3	23.5
6	17985.79	41.5 AV	54.0	-12.5	2.34 H	191	18.0	23.5

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

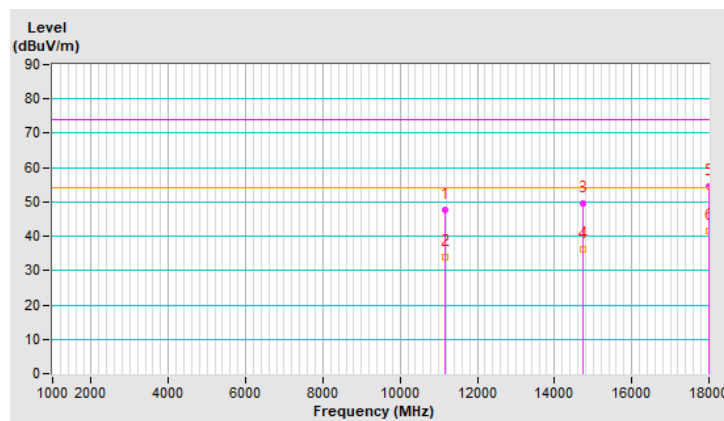


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 1 : 76.18 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	11163.21	47.5 PK	74.0	-26.5	1.76 V	226	33.2	14.3
2	11163.21	33.9 AV	54.0	-20.1	1.76 V	226	19.6	14.3
3	14738.25	49.6 PK	74.0	-24.4	2.29 V	303	32.2	17.4
4	14738.25	36.3 AV	54.0	-17.7	2.29 V	303	18.9	17.4
5	17994.39	54.6 PK	74.0	-19.4	1.93 V	241	31.0	23.6
6	17994.39	41.4 AV	54.0	-12.6	1.93 V	241	17.8	23.6

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

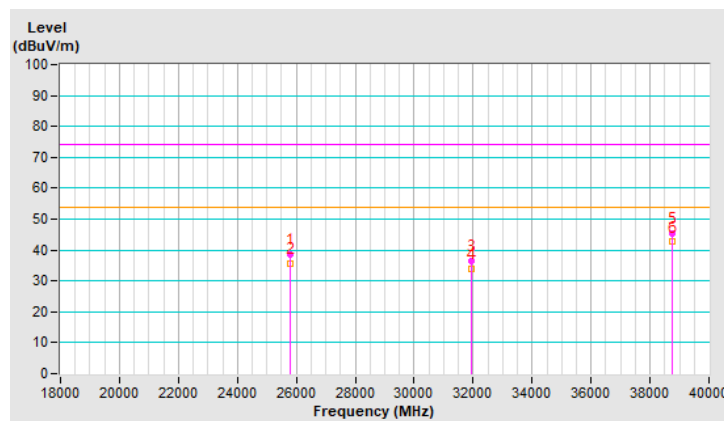


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 1 : 76.18 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	25813.07	38.5 PK	74.0	-35.5	1.34 H	262	39.2	-0.7
2	25813.07	35.8 AV	54.0	-18.2	1.34 H	262	36.5	-0.7
3	31922.91	36.6 PK	74.0	-37.4	2.02 H	154	37.7	-1.1
4	31922.91	34.0 AV	54.0	-20.0	2.02 H	154	35.1	-1.1
5	38762.11	45.4 PK	74.0	-28.6	2.56 H	120	40.5	4.9
6	38762.11	42.6 AV	54.0	-11.4	2.56 H	120	37.7	4.9

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

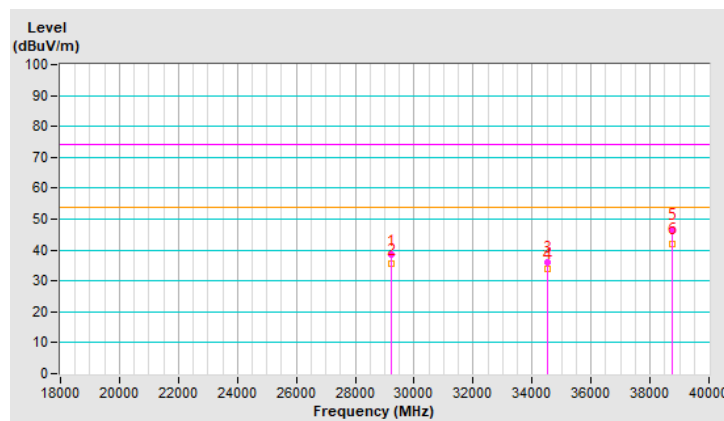


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 1：76.18 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	29220.43	38.4 PK	74.0	-35.6	2.05 V	74	39.9	-1.5
2	29220.43	35.4 AV	54.0	-18.6	2.05 V	74	36.9	-1.5
3	34504.72	36.1 PK	74.0	-37.9	1.47 V	232	37.8	-1.7
4	34504.72	34.0 AV	54.0	-20.0	1.47 V	232	35.7	-1.7
5	38773.53	46.5 PK	74.0	-27.5	1.25 V	301	41.5	5.0
6	38773.53	41.9 AV	54.0	-12.1	1.25 V	301	36.9	5.0

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

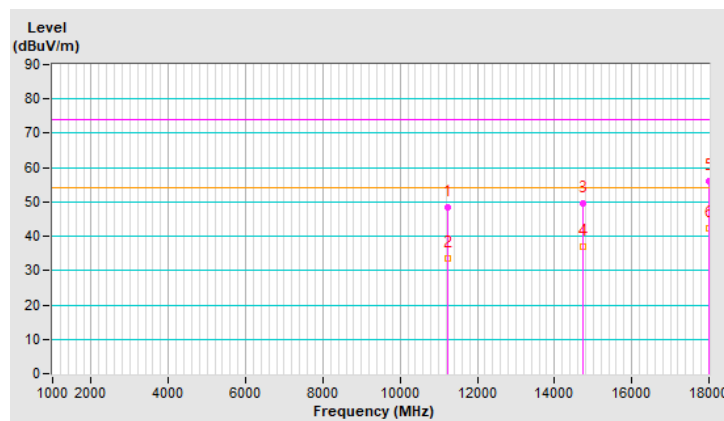


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 2 : 76.53 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	11221.27	48.3 PK	74.0	-25.7	1.39 H	257	33.9	14.4
2	11221.27	33.6 AV	54.0	-20.4	1.39 H	257	19.2	14.4
3	14740.21	49.4 PK	74.0	-24.6	1.93 H	122	32.0	17.4
4	14740.21	36.9 AV	54.0	-17.1	1.93 H	122	19.5	17.4
5	17985.51	56.1 PK	74.0	-17.9	2.37 H	179	32.6	23.5
6	17985.51	42.2 AV	54.0	-11.8	2.37 H	179	18.7	23.5

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

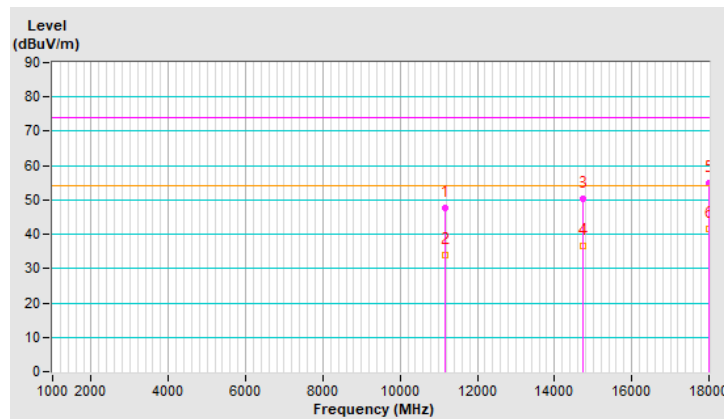


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 2 : 76.53 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	11164.15	47.6 PK	74.0	-26.4	1.67 V	248	33.3	14.3
2	11164.15	33.9 AV	54.0	-20.1	1.67 V	248	19.6	14.3
3	14738.47	50.2 PK	74.0	-23.8	2.30 V	313	32.8	17.4
4	14738.47	36.5 AV	54.0	-17.5	2.30 V	313	19.1	17.4
5	17994.21	54.8 PK	74.0	-19.2	2.01 V	243	31.2	23.6
6	17994.21	41.6 AV	54.0	-12.4	2.01 V	243	18.0	23.6

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

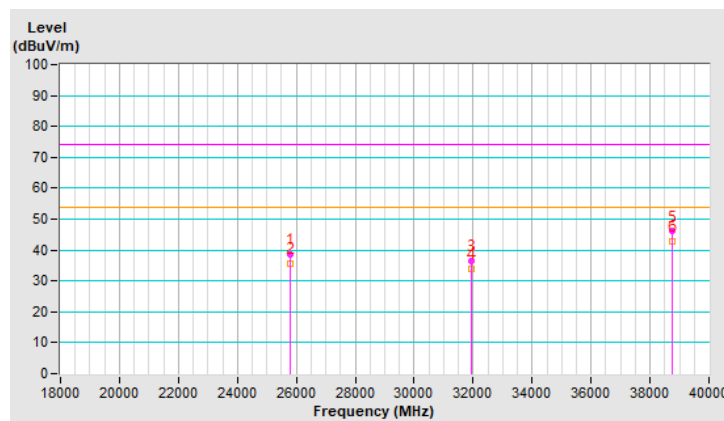


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 2 : 76.53 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	25812.39	38.7 PK	74.0	-35.3	1.37 H	236	39.5	-0.8
2	25812.39	35.6 AV	54.0	-18.4	1.37 H	236	36.4	-0.8
3	31922.93	36.5 PK	74.0	-37.5	2.06 H	160	37.6	-1.1
4	31922.93	34.1 AV	54.0	-19.9	2.06 H	160	35.2	-1.1
5	38761.35	46.0 PK	74.0	-28.0	2.53 H	135	41.1	4.9
6	38761.35	43.0 AV	54.0	-11.0	2.53 H	135	38.1	4.9

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

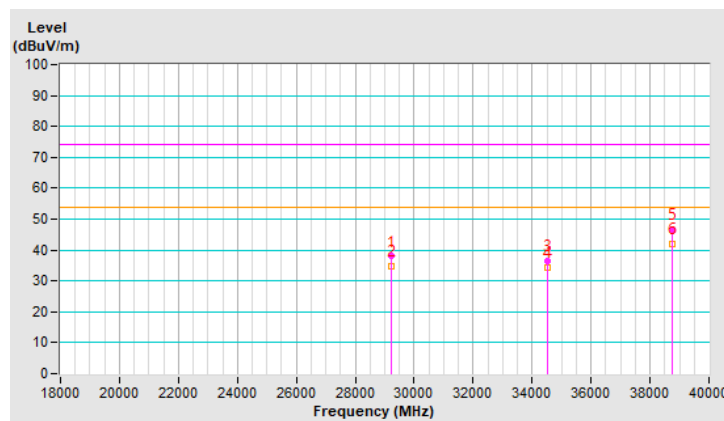


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 2 : 76.53 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	29220.14	38.0 PK	74.0	-36.0	2.05 V	64	39.5	-1.5
2	29220.14	34.7 AV	54.0	-19.3	2.05 V	64	36.2	-1.5
3	34504.53	36.4 PK	74.0	-37.6	1.46 V	207	38.1	-1.7
4	34504.53	34.2 AV	54.0	-19.8	1.46 V	207	35.9	-1.7
5	38773.57	46.6 PK	74.0	-27.4	1.24 V	281	41.6	5.0
6	38773.57	42.0 AV	54.0	-12.0	1.24 V	281	37.0	5.0

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

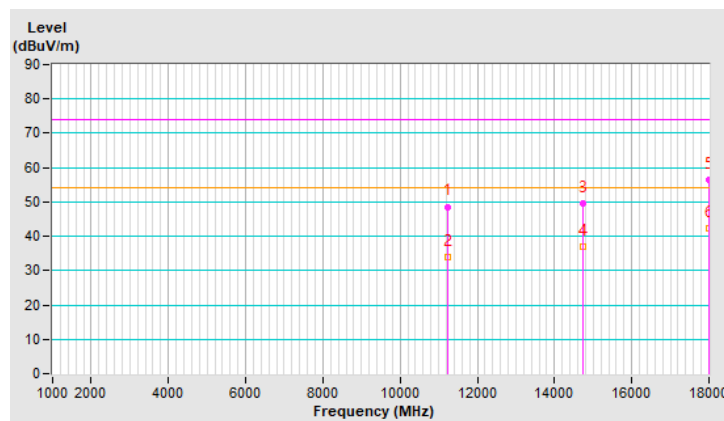


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 3 : 76.83 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	11221.12	48.6 PK	74.0	-25.4	1.43 H	239	34.2	14.4
2	11221.12	33.8 AV	54.0	-20.2	1.43 H	239	19.4	14.4
3	14740.48	49.6 PK	74.0	-24.4	2.00 H	118	32.2	17.4
4	14740.48	36.9 AV	54.0	-17.1	2.00 H	118	19.5	17.4
5	17985.67	56.4 PK	74.0	-17.6	2.34 H	174	32.9	23.5
6	17985.67	42.3 AV	54.0	-11.7	2.34 H	174	18.8	23.5

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

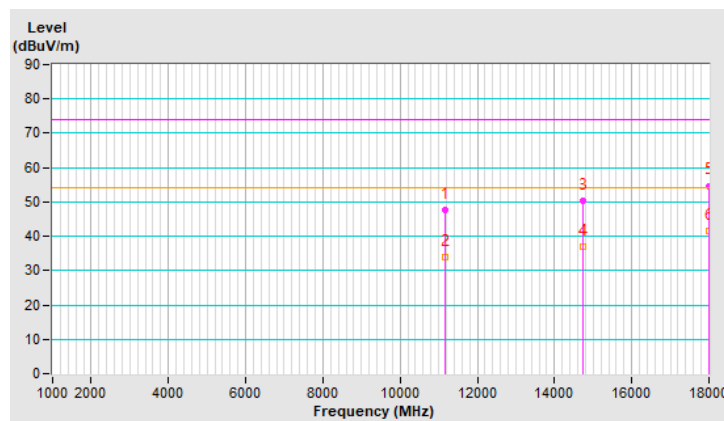


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 3 : 76.83 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	11164.33	47.6 PK	74.0	-26.4	1.70 V	236	33.3	14.3
2	11164.33	34.0 AV	54.0	-20.0	1.70 V	236	19.7	14.3
3	14738.54	50.4 PK	74.0	-23.6	2.26 V	322	33.0	17.4
4	14738.54	37.1 AV	54.0	-16.9	2.26 V	322	19.7	17.4
5	17994.83	54.7 PK	74.0	-19.3	2.02 V	231	31.1	23.6
6	17994.83	41.6 AV	54.0	-12.4	2.02 V	231	18.0	23.6

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

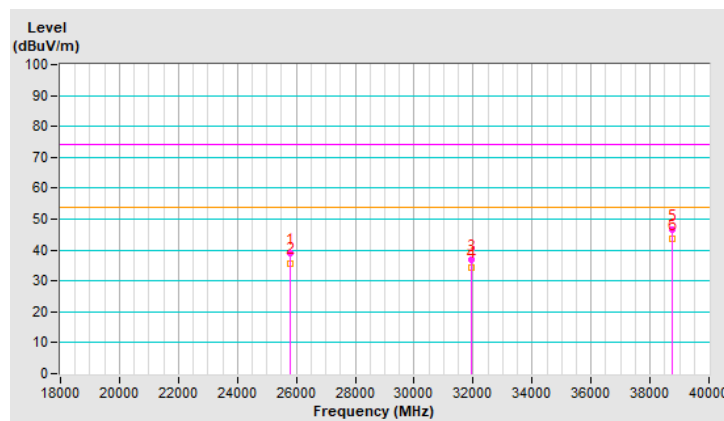


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 3 : 76.83 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	25812.98	38.8 PK	74.0	-35.2	1.36 H	260	39.5	-0.7
2	25812.98	35.8 AV	54.0	-18.2	1.36 H	260	36.5	-0.7
3	31923.62	36.7 PK	74.0	-37.3	2.02 H	149	37.8	-1.1
4	31923.62	34.4 AV	54.0	-19.6	2.02 H	149	35.5	-1.1
5	38761.56	46.4 PK	74.0	-27.6	2.61 H	122	41.5	4.9
6	38761.56	43.5 AV	54.0	-10.5	2.61 H	122	38.6	4.9

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

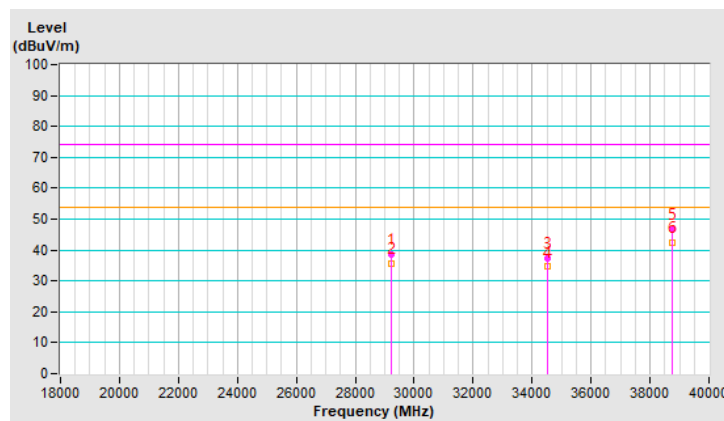


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 3 : 76.83 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	29219.72	38.6 PK	74.0	-35.4	2.03 V	81	40.2	-1.6
2	29219.72	35.6 AV	54.0	-18.4	2.03 V	81	37.2	-1.6
3	34505.29	37.2 PK	74.0	-36.8	1.46 V	228	38.9	-1.7
4	34505.29	34.6 AV	54.0	-19.4	1.46 V	228	36.3	-1.7
5	38772.68	46.7 PK	74.0	-27.3	1.18 V	291	41.7	5.0
6	38772.68	42.3 AV	54.0	-11.7	1.18 V	291	37.3	5.0

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.



操作模式：	發射接收	頻率範圍：	40GHz ~ 231GHz
基本波頻率：	CH 1：76.18 GHz	測試儀器：	(AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	66%RH
測試日期：	110 年 9 月 15 日	測試者：	廖偉鈞

Antenna Polarity: Horizontal										
No.	Frequency (GHz)	SA Value (dBm)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)	Margin (pW/cm ²)	PASS/FAIL
1	48.99	-56.27	-85.68	20.30	65.08	-39.62	0.10	600.00	-599.90	PASS
2	73.65	-92.61	-88.58	19.90	66.12	-38.58	0.12	600.00	-599.88	PASS
3	75.37	-92.50	-87.69	20.00	67.11	-37.59	0.15	600.00	-599.85	PASS
4	102.43	-92.27	-86.28	20.00	71.19	-33.51	0.39	600.00	-599.61	PASS
5	169.42	-92.93	-92.53	20.50	68.81	-35.89	0.23	600.00	-599.77	PASS
6	195.29	-92.80	-87.24	21.32	74.51	-30.19	0.85	600.00	-599.15	PASS
7	228.27	-96.28	-81.37	21.52	81.54	-23.16	4.27	1000.00	-995.73	PASS
Antenna Polarity: Vertical										
No.	Frequency (GHz)	SA Value (dBm)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)	Margin (pW/cm ²)	PASS/FAIL
1	49.30	-56.36	-85.77	20.30	65.04	-39.66	0.10	600.00	-599.90	PASS
2	73.24	-92.54	-88.74	19.90	65.91	-38.79	0.12	600.00	-599.88	PASS
3	75.28	-92.53	-87.51	20.00	67.28	-37.42	0.16	600.00	-599.84	PASS
4	102.30	-92.29	-86.45	20.00	71.01	-33.69	0.38	600.00	-599.62	PASS
5	169.42	-93.13	-92.20	20.50	69.14	-35.56	0.25	600.00	-599.75	PASS
6	195.27	-92.43	-87.04	21.32	74.71	-29.99	0.89	600.00	-599.11	PASS
7	228.10	-95.99	-82.21	21.52	80.69	-24.01	3.51	1000.00	-996.49	PASS

Remarks:

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

Follow ANSI 63.10 section 9.4 Equations to calculate and extrapolate field strength

$$E_{\text{Meas}} \text{ (dB}\mu\text{V/m)} = 126.8 - 20\log(\lambda) + P - G$$

where:

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

P is the power measured at the output of the test antenna, in dBm

λ is the wavelength of the emission under investigation [300/fMHz], in m

G is the gain of the test antenna, in dBi

Follow ANSI 63.10 section 9.5 Equations to calculate EIRP

$$\text{EIRP Level (dBm/MHz)} = E_{\text{Meas}} \text{ (dB}\mu\text{V/m)} + 20 \cdot \log(d_{\text{Meas}}) - 104.7$$

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

Measurements made at 1 meter distance.

2. Power density formula as follows

Follow ANSI 63.10 section 9.6 Equations to calculate power density

$$PD = EIRP_{\text{Linear}} / 4 \pi d^2$$

PD is the power density at the distance specified by the limit, in W/m²

EIRP_{Linear} is the equivalent isotropically radiated power, in watts

d is the 3m distance.

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

$$R_{\text{far field}} = (2 * L^2) / \lambda$$

L is the Largest Antenna Dimension of measurement antenna, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
40	0.03	0.0075	0.240
50	0.03	0.0060	0.300

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
50	0.025	0.0060	0.208
75	0.025	0.0040	0.313

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
75	0.018	0.0040	0.162
110	0.018	0.0027	0.238

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
110	0.012	0.0027	0.106
170	0.012	0.0018	0.163

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
170	0.008	0.0018	0.073
260	0.008	0.0012	0.111

操作模式：	發射接收	頻率範圍：	40GHz ~ 231GHz
基本波頻率：	CH 2 : 76.53 GHz	測試儀器：	(AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	66%RH
測試日期：	110 年 9 月 15 日	測試者：	廖偉鈞

Antenna Polarity: Horizontal										
No.	Frequency (GHz)	SA Value (dBm)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)	Margin (pW/cm ²)	PASS/FAIL
1	48.99	-56.41	-85.74	20.30	65.02	-39.68	0.10	600.00	-599.90	PASS
2	73.18	-92.71	-88.47	19.90	66.18	-38.52	0.12	600.00	-599.88	PASS
3	75.43	-92.58	-87.51	20.00	67.30	-37.40	0.16	600.00	-599.84	PASS
4	102.49	-92.37	-86.15	20.00	71.32	-33.38	0.41	600.00	-599.59	PASS
5	169.75	-93.04	-92.57	20.50	68.78	-35.92	0.23	600.00	-599.77	PASS
6	194.91	-92.76	-87.06	21.32	74.67	-30.03	0.88	600.00	-599.12	PASS
7	228.38	-96.25	-81.79	21.52	81.12	-23.58	3.88	1000.00	-996.12	PASS
Antenna Polarity: Vertical										
No.	Frequency (GHz)	SA Value (dBm)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)	Margin (pW/cm ²)	PASS/FAIL
1	49.14	-56.44	-85.70	20.30	65.09	-39.61	0.10	600.00	-599.90	PASS
2	73.31	-92.55	-88.61	19.90	66.05	-38.65	0.12	600.00	-599.88	PASS
3	75.04	-92.53	-87.21	20.00	67.55	-37.15	0.17	600.00	-599.83	PASS
4	102.27	-92.51	-86.40	20.00	71.05	-33.65	0.38	600.00	-599.62	PASS
5	169.51	-93.27	-92.54	20.50	68.80	-35.90	0.23	600.00	-599.77	PASS
6	195.26	-92.79	-86.86	21.32	74.89	-29.81	0.92	600.00	-599.08	PASS
7	227.88	-96.19	-82.06	21.52	80.83	-23.87	3.63	1000.00	-996.37	PASS

Remarks:

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

Follow ANSI 63.10 section 9.4 Equations to calculate and extrapolate field strength

$$E_{\text{Meas}} \text{ (dB}\mu\text{V/m)} = 126.8 - 20\log(\lambda) + P - G$$

where:

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

P is the power measured at the output of the test antenna, in dBm

λ is the wavelength of the emission under investigation [300/fMHz], in m

G is the gain of the test antenna, in dBi

Follow ANSI 63.10 section 9.5 Equations to calculate EIRP

$$\text{EIRP Level (dBm/MHz)} = E_{\text{Meas}} \text{ (dB}\mu\text{V/m)} + 20 \cdot \log(d_{\text{Meas}}) - 104.7$$

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

Measurements made at 1 meter distance.

2. Power density formula as follows

Follow ANSI 63.10 section 9.6 Equations to calculate power density

$$PD = EIRP_{\text{Linear}} / 4 \pi d^2$$

PD is the power density at the distance specified by the limit, in W/m²

EIRP_{Linear} is the equivalent isotropically radiated power, in watts

d is the 3m distance.

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

$$R_{\text{far field}} = (2 * L^2) / \lambda$$

L is the Largest Antenna Dimension of measurement antenna, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
40	0.03	0.0075	0.240
50	0.03	0.0060	0.300

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
50	0.025	0.0060	0.208
75	0.025	0.0040	0.313

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
75	0.018	0.0040	0.162
110	0.018	0.0027	0.238

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
110	0.012	0.0027	0.106
170	0.012	0.0018	0.163

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
170	0.008	0.0018	0.073
260	0.008	0.0012	0.111

操作模式：	發射接收	頻率範圍：	40GHz ~ 231GHz
基本波頻率：	CH 3 : 76.83 GHz	測試儀器：	(AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	66%RH
測試日期：	110 年 9 月 15 日	測試者：	廖偉鈞

Antenna Polarity: Horizontal										
No.	Frequency (GHz)	SA Value (dBm)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)	Margin (pW/cm ²)	PASS/FAIL
1	48.95	-56.21	-85.38	20.30	65.37	-39.33	0.10	600.00	-599.90	PASS
2	73.33	-92.56	-88.76	19.90	65.90	-38.80	0.12	600.00	-599.88	PASS
3	75.23	-92.64	-87.29	20.00	67.50	-37.20	0.17	600.00	-599.83	PASS
4	102.26	-92.09	-86.23	20.00	71.22	-33.48	0.40	600.00	-599.60	PASS
5	169.66	-93.18	-92.39	20.50	68.96	-35.74	0.24	600.00	-599.76	PASS
6	194.94	-92.71	-87.30	21.32	74.44	-30.26	0.83	600.00	-599.17	PASS
7	228.43	-95.90	-81.54	21.52	81.37	-23.33	4.11	1000.00	-995.89	PASS
Antenna Polarity: Vertical										
No.	Frequency (GHz)	SA Value (dBm)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)	Margin (pW/cm ²)	PASS/FAIL
1	49.36	-56.24	-85.43	20.30	65.40	-39.30	0.10	600.00	-599.90	PASS
2	73.52	-92.64	-88.62	19.90	66.07	-38.63	0.12	600.00	-599.88	PASS
3	75.46	-92.53	-87.40	20.00	67.41	-37.29	0.17	600.00	-599.83	PASS
4	102.56	-92.23	-86.46	20.00	71.02	-33.68	0.38	600.00	-599.62	PASS
5	169.45	-93.16	-92.46	20.50	68.88	-35.82	0.23	600.00	-599.77	PASS
6	195.09	-92.70	-86.90	21.32	74.84	-29.86	0.91	600.00	-599.09	PASS
7	228.09	-96.16	-82.25	21.52	80.65	-24.05	3.48	1000.00	-996.52	PASS

Remarks:

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

Follow ANSI 63.10 section 9.4 Equations to calculate and extrapolate field strength

$$E_{\text{Meas}} \text{ (dB}\mu\text{V/m)} = 126.8 - 20\log(\lambda) + P - G$$

where:

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

P is the power measured at the output of the test antenna, in dBm

λ is the wavelength of the emission under investigation [300/fMHz], in m

G is the gain of the test antenna, in dBi

Follow ANSI 63.10 section 9.5 Equations to calculate EIRP

$$\text{EIRP Level (dBm/MHz)} = E_{\text{Meas}} \text{ (dB}\mu\text{V/m)} + 20 \cdot \log(d_{\text{Meas}}) - 104.7$$

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

Measurements made at 1 meter distance.

2. Power density formula as follows

Follow ANSI 63.10 section 9.6 Equations to calculate power density

$$PD = EIRP_{\text{Linear}} / 4 \pi d^2$$

PD is the power density at the distance specified by the limit, in W/m²

EIRP_{Linear} is the equivalent isotropically radiated power, in watts

d is the 3m distance.

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

$$R_{\text{far field}} = (2 * L^2) / \lambda$$

L is the Largest Antenna Dimension of measurement antenna, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
40	0.03	0.0075	0.240
50	0.03	0.0060	0.300

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
50	0.025	0.0060	0.208
75	0.025	0.0040	0.313

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
75	0.018	0.0040	0.162
110	0.018	0.0027	0.238

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
110	0.012	0.0027	0.106
170	0.012	0.0018	0.163

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
170	0.008	0.0018	0.073
260	0.008	0.0012	0.111

4.7 量測結果 (Wide 模式)

4.7.1 混附發射接收

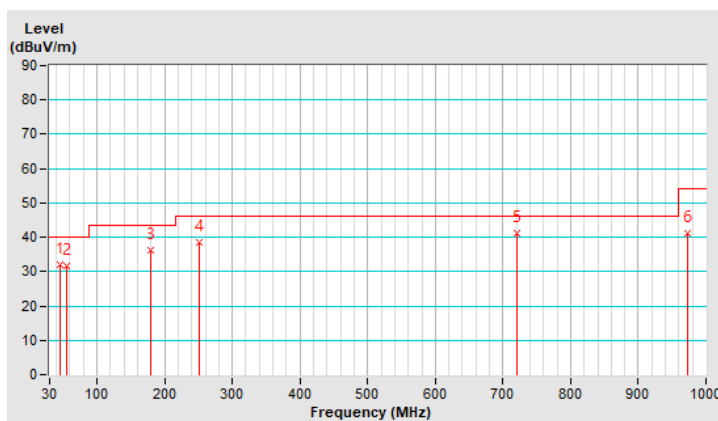
Below 1GHz Data

操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 1：76.2 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	45.73	31.9 QP	40.0	-8.1	1.00 H	220	40.0	-8.1
2	54.91	31.7 QP	40.0	-8.3	1.50 H	79	40.0	-8.3
3	179.98	36.2 QP	43.5	-7.3	1.00 H	129	45.3	-9.1
4	250.68	38.4 QP	46.0	-7.6	2.00 H	160	47.0	-8.6
5	720.94	41.1 QP	46.0	-4.9	2.00 H	242	37.8	3.3
6	972.32	41.1 QP	54.0	-12.9	1.50 H	85	33.2	7.9

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



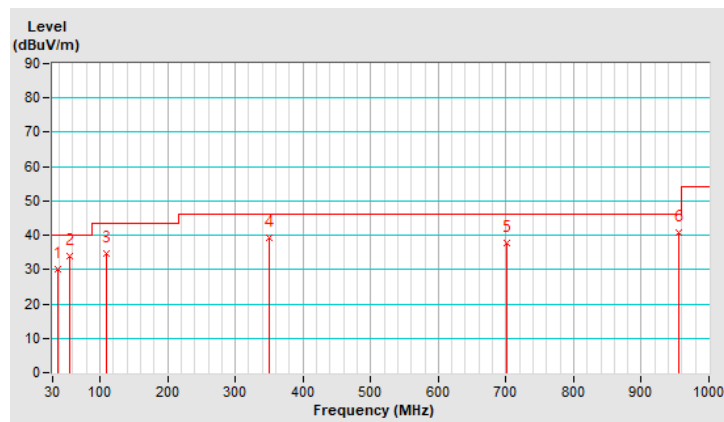
操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 1：76.2 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	37.16	30.0 QP	40.0	-10.0	1.00 V	136	38.9	-8.9
2	55.62	33.8 QP	40.0	-6.2	1.00 V	142	42.1	-8.3
3	109.81	34.6 QP	43.5	-8.9	1.00 V	90	45.5	-10.9
4	350.16	39.1 QP	46.0	-6.9	1.50 V	208	44.3	-5.2
5	700.54	37.6 QP	46.0	-8.4	2.00 V	90	34.5	3.1
6	955.34	40.8 QP	46.0	-5.2	1.00 V	234	33.0	7.8

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

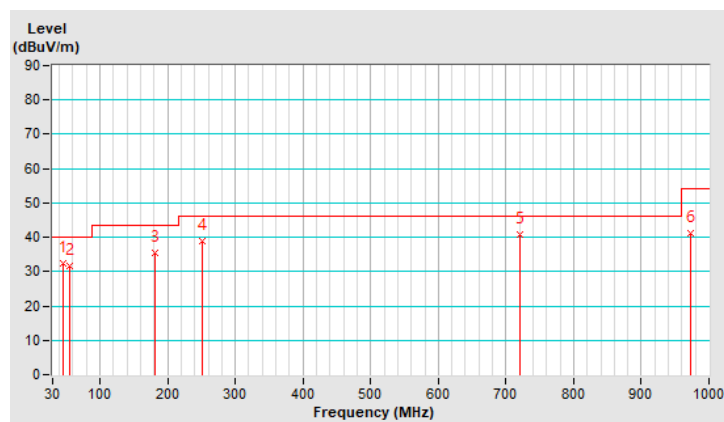


操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 2 : 76.54 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	45.94	32.4 QP	40.0	-7.6	1.00 H	228	40.5	-8.1
2	54.98	31.6 QP	40.0	-8.4	1.50 H	75	39.9	-8.3
3	180.55	35.6 QP	43.5	-7.9	1.00 H	155	44.8	-9.2
4	250.43	39.0 QP	46.0	-7.0	2.00 H	170	47.6	-8.6
5	720.93	40.9 QP	46.0	-5.1	2.00 H	255	37.6	3.3
6	972.67	41.3 QP	54.0	-12.7	1.50 H	98	33.4	7.9

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



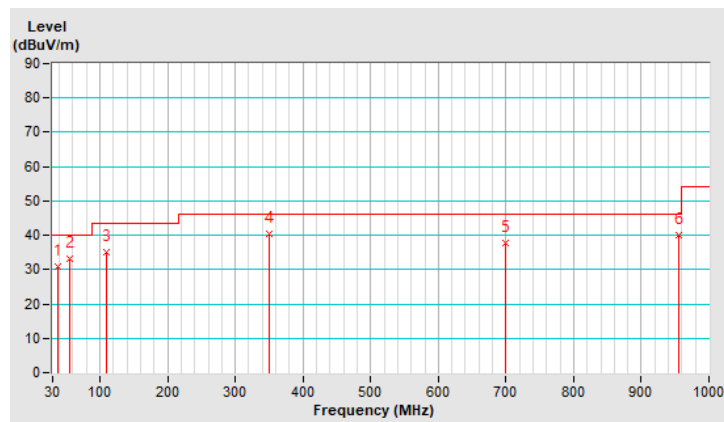
操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 2 : 76.54 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	36.79	30.7 QP	40.0	-9.3	1.00 V	138	39.6	-8.9
2	55.16	33.3 QP	40.0	-6.7	1.00 V	146	41.6	-8.3
3	110.37	35.0 QP	43.5	-8.5	1.00 V	98	45.8	-10.8
4	350.59	40.3 QP	46.0	-5.7	1.50 V	210	45.5	-5.2
5	700.12	37.9 QP	46.0	-8.1	2.00 V	95	34.8	3.1
6	955.35	40.0 QP	46.0	-6.0	1.00 V	224	32.2	7.8

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

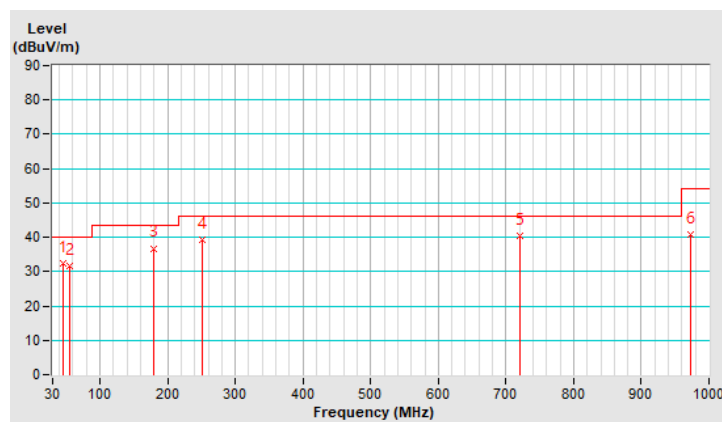


操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 3 : 76.82 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	45.48	32.3 QP	40.0	-7.7	1.00 H	220	40.5	-8.2
2	55.04	31.7 QP	40.0	-8.3	1.50 H	73	40.0	-8.3
3	180.15	36.8 QP	43.5	-6.7	1.00 H	151	46.0	-9.2
4	250.21	39.4 QP	46.0	-6.6	2.00 H	176	48.0	-8.6
5	720.24	40.5 QP	46.0	-5.5	2.00 H	260	37.2	3.3
6	971.95	40.9 QP	54.0	-13.1	1.50 H	98	33.0	7.9

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



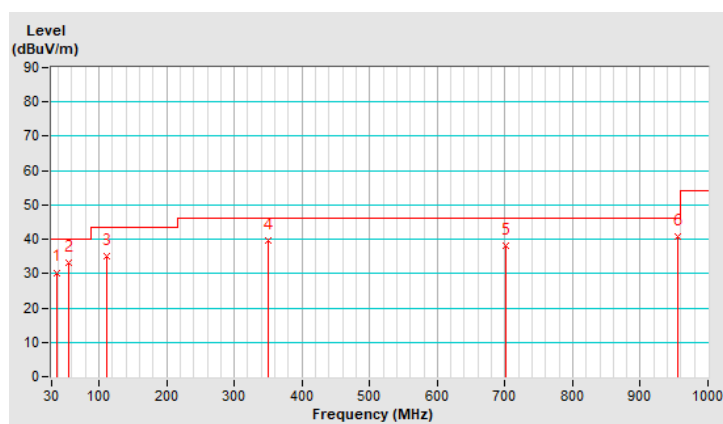
操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 3 : 76.82 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m

No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	37.82	30.3 QP	40.0	-9.7	1.00 V	124	39.2	-8.9
2	55.03	33.3 QP	40.0	-6.7	1.00 V	132	41.6	-8.3
3	110.97	35.1 QP	43.5	-8.4	1.00 V	77	45.9	-10.8
4	350.61	39.6 QP	46.0	-6.4	1.50 V	202	44.8	-5.2
5	700.78	38.0 QP	46.0	-8.0	2.00 V	75	34.9	3.1
6	955.76	40.8 QP	46.0	-5.2	1.00 V	218	33.0	7.8

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit of frequency range 30MHz~1000MHz.
5. The emission levels were very low against the limit of frequency range 9kHz~30MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



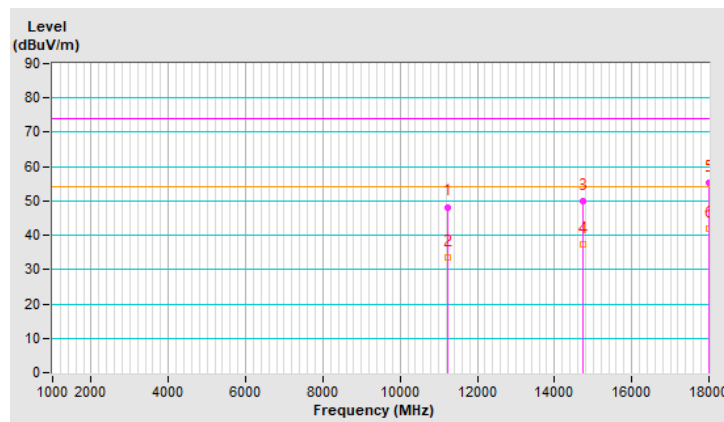
Above 1GHz Data

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：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	11221.38	48.2 PK	74.0	-25.8	1.48 H	242	33.8	14.4
2	11221.38	33.6 AV	54.0	-20.4	1.48 H	242	19.2	14.4
3	14740.07	50.1 PK	74.0	-23.9	1.93 H	126	32.7	17.4
4	14740.07	37.3 AV	54.0	-16.7	1.93 H	126	19.9	17.4
5	17985.36	55.4 PK	74.0	-18.6	2.37 H	190	31.9	23.5
6	17985.36	42.0 AV	54.0	-12.0	2.37 H	190	18.5	23.5

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

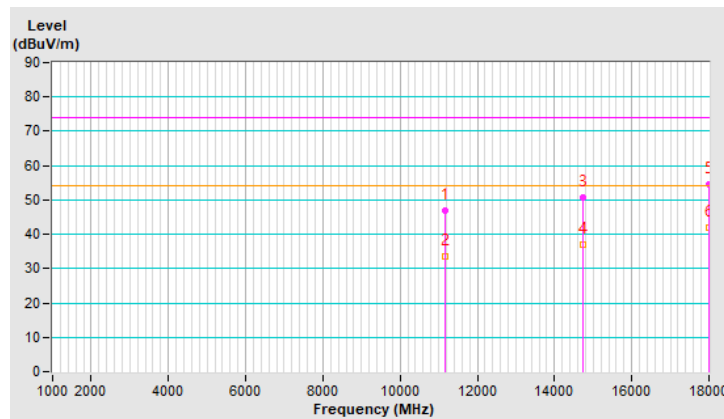


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 1 : 76.2 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	11164.12	47.0 PK	74.0	-27.0	1.73 V	233	32.7	14.3
2	11164.12	33.4 AV	54.0	-20.6	1.73 V	233	19.1	14.3
3	14738.22	50.6 PK	74.0	-23.4	2.22 V	322	33.2	17.4
4	14738.22	37.1 AV	54.0	-16.9	2.22 V	322	19.7	17.4
5	17995.23	54.6 PK	74.0	-19.4	2.02 V	250	31.0	23.6
6	17995.23	41.8 AV	54.0	-12.2	2.02 V	250	18.2	23.6

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

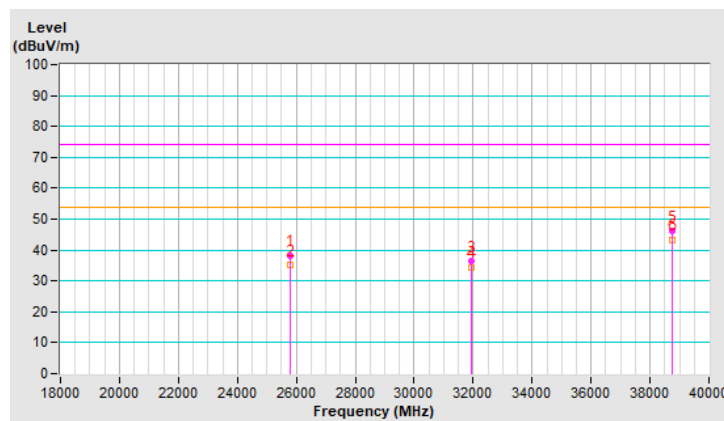


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 1 : 76.2 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	25812.38	38.2 PK	74.0	-35.8	1.38 H	234	39.0	-0.8
2	25812.38	35.0 AV	54.0	-19.0	1.38 H	234	35.8	-0.8
3	31923.23	36.3 PK	74.0	-37.7	1.96 H	152	37.4	-1.1
4	31923.23	34.2 AV	54.0	-19.8	1.96 H	152	35.3	-1.1
5	38762.52	46.0 PK	74.0	-28.0	2.52 H	134	41.1	4.9
6	38762.52	43.2 AV	54.0	-10.8	2.52 H	134	38.3	4.9

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

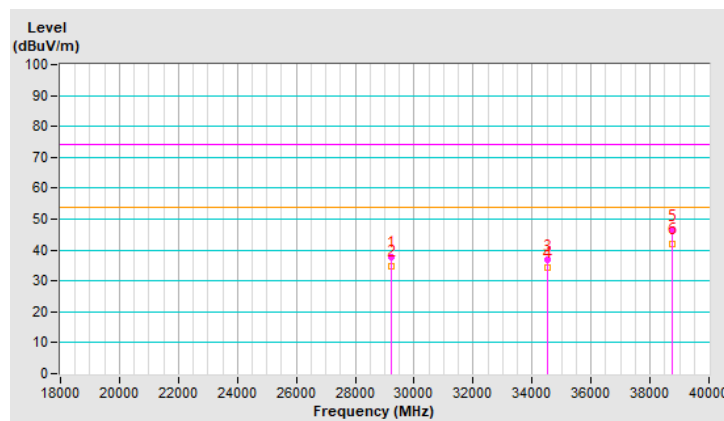


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 1：76.2 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	29219.87	37.6 PK	74.0	-36.4	1.97 V	78	39.2	-1.6
2	29219.87	34.8 AV	54.0	-19.2	1.97 V	78	36.4	-1.6
3	34505.25	36.7 PK	74.0	-37.3	1.52 V	233	38.4	-1.7
4	34505.25	34.3 AV	54.0	-19.7	1.52 V	233	36.0	-1.7
5	38773.07	46.4 PK	74.0	-27.6	1.20 V	305	41.4	5.0
6	38773.07	41.9 AV	54.0	-12.1	1.20 V	305	36.9	5.0

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

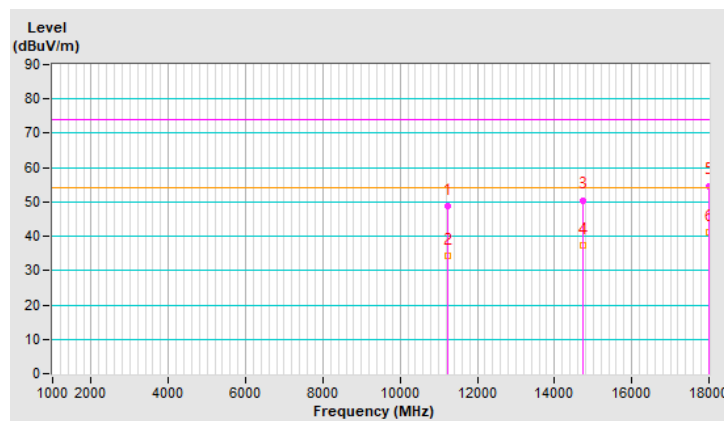


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 2 : 76.54 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	11220.65	48.7 PK	74.0	-25.3	1.38 H	247	34.3	14.4
2	11220.65	34.2 AV	54.0	-19.8	1.38 H	247	19.8	14.4
3	14740.66	50.5 PK	74.0	-23.5	1.95 H	106	33.1	17.4
4	14740.66	37.4 AV	54.0	-16.6	1.95 H	106	20.0	17.4
5	17985.56	54.7 PK	74.0	-19.3	2.30 H	179	31.2	23.5
6	17985.56	41.3 AV	54.0	-12.7	2.30 H	179	17.8	23.5

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

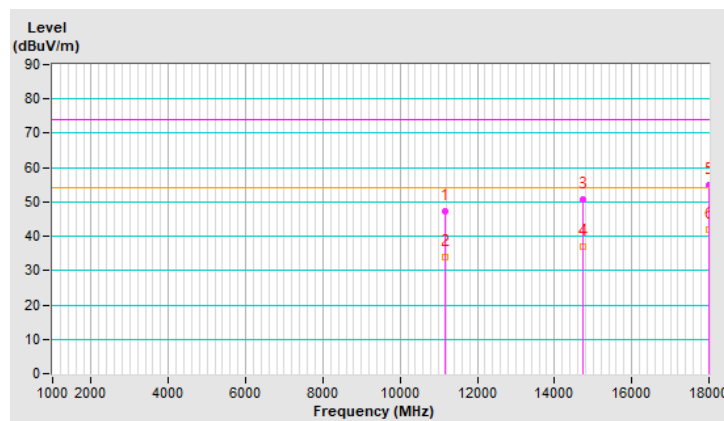


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 2 : 76.54 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	11163.99	47.3 PK	74.0	-26.7	1.74 V	254	33.0	14.3
2	11163.99	33.8 AV	54.0	-20.2	1.74 V	254	19.5	14.3
3	14738.43	50.7 PK	74.0	-23.3	2.27 V	312	33.3	17.4
4	14738.43	37.0 AV	54.0	-17.0	2.27 V	312	19.6	17.4
5	17995.55	54.9 PK	74.0	-19.1	2.02 V	245	31.3	23.6
6	17995.55	41.9 AV	54.0	-12.1	2.02 V	245	18.3	23.6

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

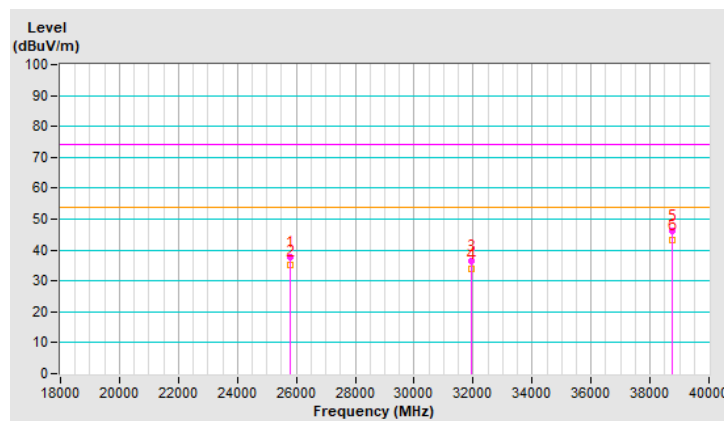


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 2 : 76.54 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	25812.31	37.9 PK	74.0	-36.1	1.33 H	253	38.7	-0.8
2	25812.31	35.0 AV	54.0	-19.0	1.33 H	253	35.8	-0.8
3	31923.64	36.4 PK	74.0	-37.6	1.99 H	173	37.5	-1.1
4	31923.64	34.0 AV	54.0	-20.0	1.99 H	173	35.1	-1.1
5	38761.92	46.3 PK	74.0	-27.7	2.52 H	122	41.4	4.9
6	38761.92	43.2 AV	54.0	-10.8	2.52 H	122	38.3	4.9

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.

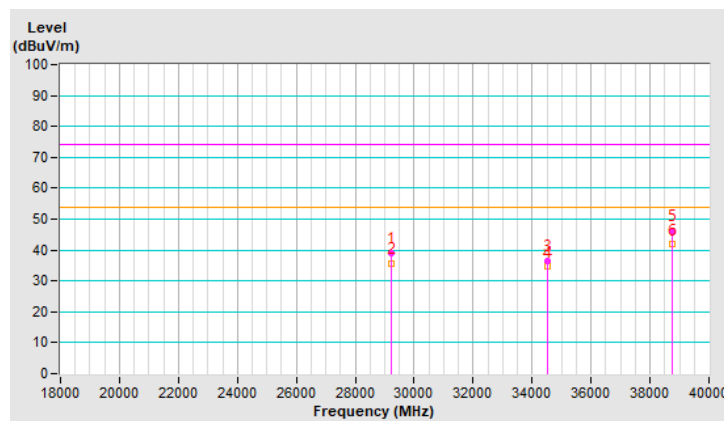


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 2 : 76.54 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	110 年 9 月 13 日	測試者：	杜維倫

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	29219.86	39.0 PK	74.0	-35.0	2.01 V	58	40.6	-1.6
2	29219.86	35.6 AV	54.0	-18.4	2.01 V	58	37.2	-1.6
3	34504.36	36.6 PK	74.0	-37.4	1.48 V	224	38.3	-1.7
4	34504.36	34.6 AV	54.0	-19.4	1.48 V	224	36.3	-1.7
5	38772.64	46.2 PK	74.0	-27.8	1.19 V	295	41.2	5.0
6	38772.64	41.8 AV	54.0	-12.2	1.19 V	295	36.8	5.0

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. Margin value = Emission Level – Limit value
4. The other emission levels were very low against the limit.



操作模式：	發射接收	頻率範圍：	40GHz ~ 231GHz
基本波頻率：	CH 1：76.2 GHz	測試儀器：	(AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	66%RH
測試日期：	110 年 9 月 15 日	測試者：	廖偉鈞

Antenna Polarity: Horizontal										
No.	Frequency (GHz)	SA Value (dBm)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)	Margin (pW/cm ²)	PASS/FAIL
1	49.03	-56.37	-85.47	20.30	65.30	-39.40	0.10	600.00	-599.90	PASS
2	73.60	-92.62	-88.71	19.90	65.99	-38.71	0.12	600.00	-599.88	PASS
3	75.62	-92.36	-87.39	20.00	67.44	-37.26	0.17	600.00	-599.83	PASS
4	102.63	-92.11	-86.08	20.00	71.40	-33.30	0.41	600.00	-599.59	PASS
5	169.38	-93.17	-92.11	20.50	69.22	-35.48	0.25	600.00	-599.75	PASS
6	195.03	-92.64	-86.85	21.32	74.89	-29.81	0.92	600.00	-599.08	PASS
7	228.30	-96.22	-81.77	21.52	81.14	-23.56	3.89	1000.00	-996.11	PASS
Antenna Polarity: Vertical										
No.	Frequency (GHz)	SA Value (dBm)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)	Margin (pW/cm ²)	PASS/FAIL
1	49.30	-56.36	-85.77	20.30	65.04	-39.66	0.10	600.00	-599.90	PASS
2	73.24	-92.54	-88.74	19.90	65.91	-38.79	0.12	600.00	-599.88	PASS
3	75.54	-92.53	-87.51	20.00	67.31	-37.39	0.16	600.00	-599.84	PASS
4	102.30	-92.29	-86.45	20.00	71.01	-33.69	0.38	600.00	-599.62	PASS
5	169.42	-93.13	-92.20	20.50	69.14	-35.56	0.25	600.00	-599.75	PASS
6	195.27	-92.43	-87.04	21.32	74.71	-29.99	0.89	600.00	-599.11	PASS
7	228.10	-95.99	-82.21	21.52	80.69	-24.01	3.51	1000.00	-996.49	PASS

Remarks:

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

Follow ANSI 63.10 section 9.4 Equations to calculate and extrapolate field strength

$$E_{\text{Meas}} \text{ (dB}\mu\text{V/m)} = 126.8 - 20\log(\lambda) + P - G$$

where:

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

P is the power measured at the output of the test antenna, in dBm

λ is the wavelength of the emission under investigation [300/fMHz], in m

G is the gain of the test antenna, in dBi

Follow ANSI 63.10 section 9.5 Equations to calculate EIRP

$$\text{EIRP Level (dBm/MHz)} = E_{\text{Meas}} \text{ (dB}\mu\text{V/m)} + 20 \cdot \log(d_{\text{Meas}}) - 104.7$$

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

Measurements made at 1 meter distance.

2. Power density formula as follows

Follow ANSI 63.10 section 9.6 Equations to calculate power density

$$PD = EIRP_{\text{Linear}} / 4 \pi d^2$$

PD is the power density at the distance specified by the limit, in W/m²

EIRP_{Linear} is the equivalent isotropically radiated power, in watts

d is the 3m distance.

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

$$R_{\text{far field}} = (2 * L^2) / \lambda$$

L is the Largest Antenna Dimension of measurement antenna, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
40	0.03	0.0075	0.240
50	0.03	0.0060	0.300

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
50	0.025	0.0060	0.208
75	0.025	0.0040	0.313

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
75	0.018	0.0040	0.162
110	0.018	0.0027	0.238

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
110	0.012	0.0027	0.106
170	0.012	0.0018	0.163

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
170	0.008	0.0018	0.073
260	0.008	0.0012	0.111

操作模式：	發射接收	頻率範圍：	40GHz ~ 231GHz
基本波頻率：	CH 2 : 76.54 GHz	測試儀器：	(AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	66%RH
測試日期：	110 年 9 月 15 日	測試者：	廖偉鈞

Antenna Polarity: Horizontal										
No.	Frequency (GHz)	SA Value (dBm)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)	Margin (pW/cm ²)	PASS/FAIL
1	48.94	-56.33	-85.63	20.30	65.12	-39.58	0.10	600.00	-599.90	PASS
2	73.53	-92.60	-88.41	19.90	66.28	-38.42	0.13	600.00	-599.87	PASS
3	75.44	-92.22	-87.21	20.00	67.60	-37.10	0.17	600.00	-599.83	PASS
4	102.49	-92.10	-86.22	20.00	71.25	-33.45	0.40	600.00	-599.60	PASS
5	169.57	-93.08	-92.37	20.50	68.97	-35.73	0.24	600.00	-599.76	PASS
6	194.89	-92.58	-87.30	21.32	74.43	-30.27	0.83	600.00	-599.17	PASS
7	228.14	-96.14	-81.58	21.52	81.32	-23.38	4.06	1000.00	-995.94	PASS
Antenna Polarity: Vertical										
No.	Frequency (GHz)	SA Value (dBm)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)	Margin (pW/cm ²)	PASS/FAIL
1	48.92	-56.23	-85.82	20.30	64.93	-39.77	0.09	600.00	-599.91	PASS
2	73.36	-92.71	-88.72	19.90	65.95	-38.75	0.12	600.00	-599.88	PASS
3	75.26	-92.50	-87.59	20.00	67.20	-37.50	0.16	600.00	-599.84	PASS
4	102.60	-92.18	-86.22	20.00	71.26	-33.44	0.40	600.00	-599.60	PASS
5	169.85	-93.26	-92.48	20.50	68.88	-35.82	0.23	600.00	-599.77	PASS
6	195.20	-92.76	-86.99	21.32	74.76	-29.94	0.90	600.00	-599.10	PASS
7	227.84	-96.31	-82.23	21.52	80.66	-24.04	3.49	1000.00	-996.51	PASS

Remarks:

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

Follow ANSI 63.10 section 9.4 Equations to calculate and extrapolate field strength

$$E_{\text{Meas}} (\text{dB}\mu\text{V/m}) = 126.8 - 20\log(\lambda) + P - G$$

where:

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

P is the power measured at the output of the test antenna, in dBm

λ is the wavelength of the emission under investigation [300/fMHz], in m

G is the gain of the test antenna, in dBi

Follow ANSI 63.10 section 9.5 Equations to calculate EIRP

$$\text{EIRP Level (dBm/MHz)} = E_{\text{Meas}} (\text{dB}\mu\text{V/m}) + 20 \cdot \log(d_{\text{Meas}}) - 104.7$$

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

Measurements made at 1 meter distance.

2. Power density formula as follows

Follow ANSI 63.10 section 9.6 Equations to calculate power density

$$PD = EIRP_{\text{Linear}} / 4 \pi d^2$$

PD is the power density at the distance specified by the limit, in W/m²

EIRP_{Linear} is the equivalent isotropically radiated power, in watts

d is the 3m distance.

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

$$R_{\text{far field}} = (2 * L^2) / \lambda$$

L is the Largest Antenna Dimension of measurement antenna, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
40	0.03	0.0075	0.240
50	0.03	0.0060	0.300

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
50	0.025	0.0060	0.208
75	0.025	0.0040	0.313

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
75	0.018	0.0040	0.162
110	0.018	0.0027	0.238

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
110	0.012	0.0027	0.106
170	0.012	0.0018	0.163

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
170	0.008	0.0018	0.073
260	0.008	0.0012	0.111

操作模式：	發射接收	頻率範圍：	40GHz ~ 231GHz
基本波頻率：	CH 3 : 76.82 GHz	測試儀器：	(AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	66%RH
測試日期：	110 年 9 月 15 日	測試者：	廖偉鈞

Antenna Polarity: Horizontal										
No.	Frequency (GHz)	SA Value (dBm)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)	Margin (pW/cm ²)	PASS/FAIL
1	49.14	-56.32	-85.63	20.30	65.16	-39.54	0.10	600.00	-599.90	PASS
2	73.53	-92.59	-88.41	19.90	66.28	-38.42	0.13	600.00	-599.87	PASS
3	75.33	-92.53	-87.68	20.00	67.12	-37.58	0.15	600.00	-599.85	PASS
4	102.64	-92.22	-86.36	20.00	71.12	-33.58	0.39	600.00	-599.61	PASS
5	169.49	-92.78	-92.56	20.50	68.78	-35.92	0.23	600.00	-599.77	PASS
6	195.26	-92.46	-87.12	21.32	74.63	-30.07	0.87	600.00	-599.13	PASS
7	228.44	-96.22	-81.58	21.52	81.33	-23.37	4.07	1000.00	-995.93	PASS
Antenna Polarity: Vertical										
No.	Frequency (GHz)	SA Value (dBm)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	Power Density (pW/cm ²)	Power Density Limit (pW/cm ²)	Margin (pW/cm ²)	PASS/FAIL
1	49.09	-56.39	-85.57	20.30	65.21	-39.49	0.10	600.00	-599.90	PASS
2	73.35	-92.50	-88.58	19.90	66.09	-38.61	0.12	600.00	-599.88	PASS
3	75.37	-92.64	-87.21	20.00	67.59	-37.11	0.17	600.00	-599.83	PASS
4	102.61	-92.12	-86.22	20.00	71.26	-33.44	0.40	600.00	-599.60	PASS
5	169.70	-93.19	-92.34	20.50	69.01	-35.69	0.24	600.00	-599.76	PASS
6	195.14	-92.45	-87.21	21.32	74.53	-30.17	0.85	600.00	-599.15	PASS
7	228.02	-96.40	-81.95	21.52	80.95	-23.75	3.73	1000.00	-996.27	PASS

Remarks:

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

Follow ANSI 63.10 section 9.4 Equations to calculate and extrapolate field strength

$$E_{\text{Meas}} (\text{dB}\mu\text{V/m}) = 126.8 - 20\log(\lambda) + P - G$$

where:

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

P is the power measured at the output of the test antenna, in dBm

λ is the wavelength of the emission under investigation [300/fMHz], in m

G is the gain of the test antenna, in dBi

Follow ANSI 63.10 section 9.5 Equations to calculate EIRP

$$\text{EIRP Level (dBm/MHz)} = E_{\text{Meas}} (\text{dB}\mu\text{V/m}) + 20 \cdot \log(d_{\text{Meas}}) - 104.7$$

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

Measurements made at 1 meter distance.

2. Power density formula as follows

Follow ANSI 63.10 section 9.6 Equations to calculate power density

$$PD = EIRP_{\text{Linear}} / 4 \pi d^2$$

PD is the power density at the distance specified by the limit, in W/m²

EIRP_{Linear} is the equivalent isotropically radiated power, in watts

d is the 3m distance.

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

$$R_{\text{far field}} = (2 * L^2) / \lambda$$

L is the Largest Antenna Dimension of measurement antenna, including the reflector

λ is the wavelength

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
40	0.03	0.0075	0.240
50	0.03	0.0060	0.300

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
50	0.025	0.0060	0.208
75	0.025	0.0040	0.313

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
75	0.018	0.0040	0.162
110	0.018	0.0027	0.238

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
110	0.012	0.0027	0.106
170	0.012	0.0018	0.163

Frequency (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
170	0.008	0.0018	0.073
260	0.008	0.0012	0.111

4.8 量測結果判定

依據測試數據結果，符合低功率射頻器材技術規範之要求。

4.9 配置照片

請參照 Test Setup Photos (BV 編號: BHKU-WTW-P21070816-TSup)

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。

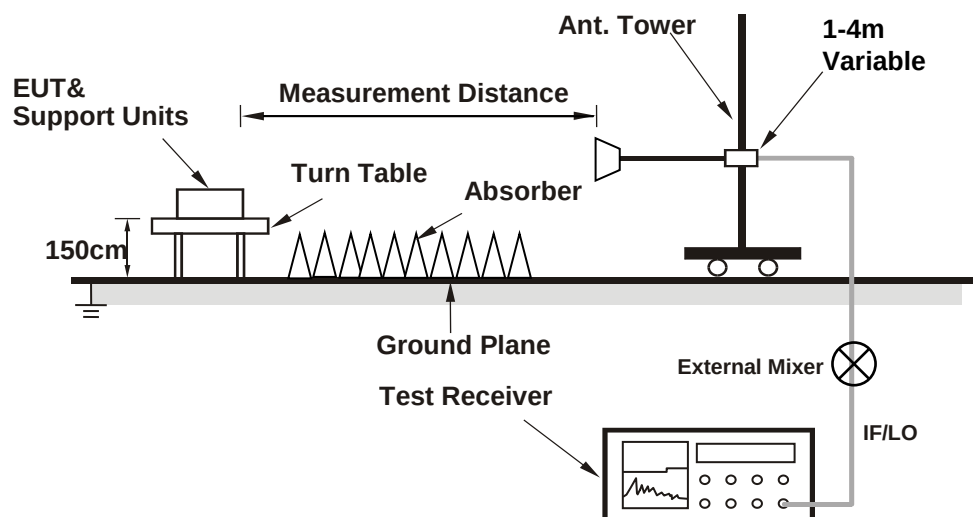
5.2 量測方法

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 (Narrow 模式)

操作模式	發射	測試日期	110 年 9 月 15 日
基本波頻率：	CH 1 : 76.11 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	25°C	量測場地濕度	66%RH
測試者	廖偉鈺		

Antenna Polarity & Test Distance : Horizontal								
No.	Frequency (GHz)	SA Value (mV)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm)	EIRP Limit (dBm)	PASS/FAIL
1	76.11	-54.52	-18.59	20.00	136.30	33.88 PK	55.00	PASS
2	76.11	-62.49	-27.15	20.00	127.74	25.32 AV	50.00	PASS
Antenna Polarity & Test Distance : Vertical								
No.	Frequency (GHz)	SA Value (mV)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm)	EIRP Limit (dBm)	PASS/FAIL
1	76.11	-69.47	-33.17	20.00	121.72	19.3 PK	55.00	PASS
2	76.11	-77.25	-41.72	20.00	113.17	10.75 AV	50.00	PASS

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

Follow ANSI 63.10 section 9.4 Equations to calculate and extrapolate field strength

$$E_{\text{Meas}} (\text{dB}\mu\text{V/m}) = 126.8 - 20\log(\lambda) + P - G$$

where:

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

P is the power measured at the output of the test antenna, in dBm

λ is the wavelength of the emission under investigation [300/fMHz], in m

G is the gain of the test antenna, in dBi

Follow ANSI 63.10 section 9.5 Equations to calculate EIRP

$$\text{EIRP Level (dBm/MHz)} = E_{\text{Meas}} (\text{dB}\mu\text{V/m}) + 20 \cdot \log(d_{\text{Meas}}) - 104.7$$

where:

EIRP is the equivalent isotropically radiated power, in dBm

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

Measurements made at 1.3 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 of either the EUT antenna or measurement antenna, including the reflector

λ is the wavelength

FREQUENCY (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.11	0.05	0.00394	1.269

操作模式	發射	測試日期	110 年 9 月 15 日
基本波頻率：	CH 2 : 76.51 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	25°C	量測場地濕度	66%RH
測試者	廖偉鈞		

Antenna Polarity & Test Distance : Horizontal								
No.	Frequency (GHz)	SA Value (mV)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm)	EIRP Limit (dBm)	PASS/FAIL
1	76.51	-55.07	-18.73	20.00	136.20	33.78 PK	55.00	PASS
2	76.51	-62.67	-27.26	20.00	127.67	25.25 AV	50.00	PASS
Antenna Polarity & Test Distance : Vertical								
No.	Frequency (GHz)	SA Value (mV)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm)	EIRP Limit (dBm)	PASS/FAIL
1	76.51	-69.53	-33.88	20.00	121.05	18.63 PK	55.00	PASS
2	76.51	-77.42	-42.18	20.00	112.75	10.33 AV	50.00	PASS

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

Follow ANSI 63.10 section 9.4 Equations to calculate and extrapolate field strength

$$E_{\text{Meas}} (\text{dB}\mu\text{V/m}) = 126.8 - 20\log(\lambda) + P - G$$

where:

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

P is the power measured at the output of the test antenna, in dBm

λ is the wavelength of the emission under investigation [300/fMHz], in m

G is the gain of the test antenna, in dBi

Follow ANSI 63.10 section 9.5 Equations to calculate EIRP

$$\text{EIRP Level (dBm/MHz)} = E_{\text{Meas}} (\text{dB}\mu\text{V/m}) + 20 \cdot \log(d_{\text{Meas}}) - 104.7$$

where:

EIRP is the equivalent isotropically radiated power, in dBm

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

Measurements made at 1.3 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 of either the EUT antenna or measurement antenna, including the reflector

λ is the wavelength

FREQUENCY (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.51	0.05	0.00392	1.276

操作模式	發射	測試日期	110 年 9 月 15 日
基本波頻率：	CH 3 : 76.90 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	25°C	量測場地濕度	66%RH
測試者	廖偉鈺		

Antenna Polarity & Test Distance : Horizontal								
No.	Frequency (GHz)	SA Value (mV)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm)	EIRP Limit (dBm)	PASS/FAIL
1	76.90	-55.09	-18.84	20.00	136.14	33.71 PK	55.00	PASS
2	76.90	-62.85	-27.44	20.00	127.54	25.11 AV	50.00	PASS
Antenna Polarity & Test Distance : Vertical								
No.	Frequency (GHz)	SA Value (mV)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm)	EIRP Limit (dBm)	PASS/FAIL
1	76.90	-69.62	-34.03	20.00	120.95	18.52 PK	55.00	PASS
2	76.90	-77.57	-42.24	20.00	112.74	10.31 AV	50.00	PASS

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

Follow ANSI 63.10 section 9.4 Equations to calculate and extrapolate field strength

$$E_{\text{Meas}} (\text{dB}\mu\text{V/m}) = 126.8 - 20\log(\lambda) + P - G$$

where:

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

P is the power measured at the output of the test antenna, in dBm

λ is the wavelength of the emission under investigation [300/fMHz], in m

G is the gain of the test antenna, in dBi

Follow ANSI 63.10 section 9.5 Equations to calculate EIRP

$$\text{EIRP Level (dBm/MHz)} = E_{\text{Meas}} (\text{dB}\mu\text{V/m}) + 20 \cdot \log(d_{\text{Meas}}) - 104.7$$

where:

EIRP is the equivalent isotropically radiated power, in dBm

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

Measurements made at 1.3 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 of either the EUT antenna or measurement antenna, including the reflector

λ is the wavelength

FREQUENCY (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.9	0.05	0.0039	1.282

5.6 量測結果 (Mid 模式)

操作模式	發射	測試日期	110 年 9 月 15 日
基本波頻率：	CH 1 : 76.18 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	25°C	量測場地濕度	66%RH
測試者	廖偉鈺		

Antenna Polarity & Test Distance : Horizontal								
No.	Frequency (GHz)	SA Value (mV)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm)	EIRP Limit (dBm)	PASS/FAIL
1	76.18	-54.06	-18.19	20.00	136.70	34.28 PK	55.00	PASS
2	76.18	-62.02	-26.82	20.00	128.07	25.65 AV	50.00	PASS
Antenna Polarity & Test Distance : Vertical								
No.	Frequency (GHz)	SA Value (mV)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm)	EIRP Limit (dBm)	PASS/FAIL
1	76.18	-68.92	-33.17	20.00	121.72	19.3 PK	55.00	PASS
2	76.18	-76.89	-41.76	20.00	113.13	10.71 AV	50.00	PASS

Remarks:

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

Follow ANSI 63.10 section 9.4 Equations to calculate and extrapolate field strength

$$E_{\text{Meas}} (\text{dB}\mu\text{V/m}) = 126.8 - 20\log(\lambda) + P - G$$

where:

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

P is the power measured at the output of the test antenna, in dBm

λ is the wavelength of the emission under investigation [300/fMHz], in m

G is the gain of the test antenna, in dBi

Follow ANSI 63.10 section 9.5 Equations to calculate EIRP

$$\text{EIRP Level (dBm/MHz)} = E_{\text{Meas}} (\text{dB}\mu\text{V/m}) + 20 \cdot \log(d_{\text{Meas}}) - 104.7$$

where:

EIRP is the equivalent isotropically radiated power, in dBm

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

Measurements made at 1.3 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 of either the EUT antenna or measurement antenna, including the reflector

λ is the wavelength

FREQUENCY (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.18	0.05	0.00394	1.269

操作模式	發射	測試日期	110 年 9 月 15 日
基本波頻率：	CH 2 : 76.53 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	25°C	量測場地濕度	66%RH
測試者	廖偉鈞		

Antenna Polarity & Test Distance : Horizontal								
No.	Frequency (GHz)	SA Value (mV)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm)	EIRP Limit (dBm)	PASS/FAIL
1	76.53	-54.25	-18.36	20.00	136.57	34.15 PK	55.00	PASS
2	76.53	-62.27	-26.95	20.00	127.98	25.56 AV	50.00	PASS
Antenna Polarity & Test Distance : Vertical								
No.	Frequency (GHz)	SA Value (mV)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm)	EIRP Limit (dBm)	PASS/FAIL
1	76.53	-69.05	-33.47	20.00	121.46	19.04 PK	55.00	PASS
2	76.53	-77.12	-42.02	20.00	112.91	10.49 AV	50.00	PASS

Remarks:

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

Follow ANSI 63.10 section 9.4 Equations to calculate and extrapolate field strength

$$E_{\text{Meas}} (\text{dB}\mu\text{V/m}) = 126.8 - 20\log(\lambda) + P - G$$

where:

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

P is the power measured at the output of the test antenna, in dBm

λ is the wavelength of the emission under investigation [300/fMHz], in m

G is the gain of the test antenna, in dBi

Follow ANSI 63.10 section 9.5 Equations to calculate EIRP

$$\text{EIRP Level (dBm/MHz)} = E_{\text{Meas}} (\text{dB}\mu\text{V/m}) + 20 \cdot \log(d_{\text{Meas}}) - 104.7$$

where:

EIRP is the equivalent isotropically radiated power, in dBm

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

Measurements made at 1.3 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 of either the EUT antenna or measurement antenna, including the reflector

λ is the wavelength

FREQUENCY (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.53	0.05	0.00392	1.276

操作模式	發射	測試日期	110 年 9 月 15 日
基本波頻率：	CH 3 : 76.83 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	25°C	量測場地濕度	66%RH
測試者	廖偉鈺		

Antenna Polarity & Test Distance : Horizontal								
No.	Frequency (GHz)	SA Value (mV)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm)	EIRP Limit (dBm)	PASS/FAIL
1	76.83	-54.47	-18.46	20.00	136.51	34.09 PK	55.00	PASS
2	76.83	-62.42	-27.10	20.00	127.87	25.45 AV	50.00	PASS
Antenna Polarity & Test Distance : Vertical								
No.	Frequency (GHz)	SA Value (mV)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm)	EIRP Limit (dBm)	PASS/FAIL
1	76.83	-69.72	-34.03	20.00	120.94	18.52 PK	55.00	PASS
2	76.83	-77.62	-42.08	20.00	112.89	10.47 AV	50.00	PASS

Remarks:

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

Follow ANSI 63.10 section 9.4 Equations to calculate and extrapolate field strength

$$E_{\text{Meas}} (\text{dB}\mu\text{V/m}) = 126.8 - 20\log(\lambda) + P - G$$

where:

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

P is the power measured at the output of the test antenna, in dBm

λ is the wavelength of the emission under investigation [300/fMHz], in m

G is the gain of the test antenna, in dBi

Follow ANSI 63.10 section 9.5 Equations to calculate EIRP

$$\text{EIRP Level (dBm/MHz)} = E_{\text{Meas}} (\text{dB}\mu\text{V/m}) + 20 \cdot \log(d_{\text{Meas}}) - 104.7$$

where:

EIRP is the equivalent isotropically radiated power, in dBm

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

Measurements made at 1.3 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 of either the EUT antenna or measurement antenna, including the reflector

λ is the wavelength

FREQUENCY (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.83	0.05	0.0039	1.282

5.7 量測結果 (Wide 模式)

操作模式	發射	測試日期	110 年 9 月 15 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	25°C	量測場地濕度	66%RH
測試者	廖偉鈺		

Antenna Polarity & Test Distance : Horizontal								
No.	Frequency (GHz)	SA Value (mV)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm)	EIRP Limit (dBm)	PASS/FAIL
1	76.20	-53.92	-18.05	20.00	136.85	34.43 PK	55.00	PASS
2	76.20	-61.89	-26.66	20.00	128.24	25.82 AV	50.00	PASS
Antenna Polarity & Test Distance : Vertical								
No.	Frequency (GHz)	SA Value (mV)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm)	EIRP Limit (dBm)	PASS/FAIL
1	76.20	-68.74	-32.98	20.00	121.92	19.5 PK	55.00	PASS
2	76.20	-76.62	-41.52	20.00	113.38	10.96 AV	50.00	PASS

Remarks:

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

Follow ANSI 63.10 section 9.4 Equations to calculate and extrapolate field strength

$$E_{\text{Meas}} (\text{dB}\mu\text{V/m}) = 126.8 - 20\log(\lambda) + P - G$$

where:

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

P is the power measured at the output of the test antenna, in dBm

λ is the wavelength of the emission under investigation [300/fMHz], in m

G is the gain of the test antenna, in dBi

Follow ANSI 63.10 section 9.5 Equations to calculate EIRP

$$\text{EIRP Level (dBm/MHz)} = E_{\text{Meas}} (\text{dB}\mu\text{V/m}) + 20 \cdot \log(d_{\text{Meas}}) - 104.7$$

where:

EIRP is the equivalent isotropically radiated power, in dBm

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

Measurements made at 1.3 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 of either the EUT antenna or measurement antenna, including the reflector

λ is the wavelength

FREQUENCY (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.2	0.05	0.00394	1.269

操作模式	發射	測試日期	110 年 9 月 15 日
基本波頻率：	CH 2 : 76.54 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	25°C	量測場地濕度	66%RH
測試者	廖偉鈺		

Antenna Polarity & Test Distance : Horizontal								
No.	Frequency (GHz)	SA Value (mV)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm)	EIRP Limit (dBm)	PASS/FAIL
1	76.54	-54.02	-18.20	20.00	136.74	34.31 PK	55.00	76.54
2	76.54	-61.94	-26.79	20.00	128.15	25.72 AV	50.00	76.54
Antenna Polarity & Test Distance : Vertical								
No.	Frequency (GHz)	SA Value (mV)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm)	EIRP Limit (dBm)	PASS/FAIL
1	76.54	-68.78	-33.12	20.00	121.82	19.39 PK	55.00	76.54
2	76.54	-76.69	-41.72	20.00	113.22	10.79 AV	50.00	76.54

Remarks:

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

Follow ANSI 63.10 section 9.4 Equations to calculate and extrapolate field strength

$$E_{\text{Meas}} (\text{dB}\mu\text{V/m}) = 126.8 - 20\log(\lambda) + P - G$$

where:

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

P is the power measured at the output of the test antenna, in dBm

λ is the wavelength of the emission under investigation [300/fMHz], in m

G is the gain of the test antenna, in dBi

Follow ANSI 63.10 section 9.5 Equations to calculate EIRP

$$\text{EIRP Level (dBm/MHz)} = E_{\text{Meas}} (\text{dB}\mu\text{V/m}) + 20 \cdot \log(d_{\text{Meas}}) - 104.7$$

where:

EIRP is the equivalent isotropically radiated power, in dBm

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

Measurements made at 1.3 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 of either the EUT antenna or measurement antenna, including the reflector

λ is the wavelength

FREQUENCY (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.2	0.05	0.00394	1.269

操作模式	發射	測試日期	110 年 9 月 15 日
基本波頻率：	CH 3 : 76.82 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	25°C	量測場地濕度	66%RH
測試者	廖偉鈺		

Antenna Polarity & Test Distance : Horizontal								
No.	Frequency (GHz)	SA Value (mV)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm)	EIRP Limit (dBm)	PASS/FAIL
1	76.82	-54.17	-18.30	20.00	136.67	34.25 PK	55.00	PASS
2	76.82	-62.04	-26.92	20.00	128.05	25.63 AV	50.00	PASS
Antenna Polarity & Test Distance : Vertical								
No.	Frequency (GHz)	SA Value (mV)	Power (dBm)	Gain of test Antenna (dBi)	E _{Meas} (dBμV/m)	EIRP Level (dBm)	EIRP Limit (dBm)	PASS/FAIL
1	76.82	-68.87	-33.18	20.00	121.79	19.37 PK	55.00	PASS
2	76.82	-76.84	-41.81	20.00	113.16	10.74 AV	50.00	PASS

Remarks:

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

Follow ANSI 63.10 section 9.4 Equations to calculate and extrapolate field strength

$$E_{\text{Meas}} (\text{dB}\mu\text{V/m}) = 126.8 - 20\log(\lambda) + P - G$$

where:

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

P is the power measured at the output of the test antenna, in dBm

λ is the wavelength of the emission under investigation [300/fMHz], in m

G is the gain of the test antenna, in dBi

Follow ANSI 63.10 section 9.5 Equations to calculate EIRP

$$\text{EIRP Level (dBm/MHz)} = E_{\text{Meas}} (\text{dB}\mu\text{V/m}) + 20 \cdot \log(d_{\text{Meas}}) - 104.7$$

where:

EIRP is the equivalent isotropically radiated power, in dBm

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

Measurements made at 1.3 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 of either the EUT antenna or measurement antenna, including the reflector

λ is the wavelength

FREQUENCY (GHz)	L (m)	Lambda (m)	R (Far Field) (m)
76.2	0.05	0.00394	1.269

5.8 量測結果判定

依據測試數據結果，符合低功率射頻器材技術規範之要求。

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

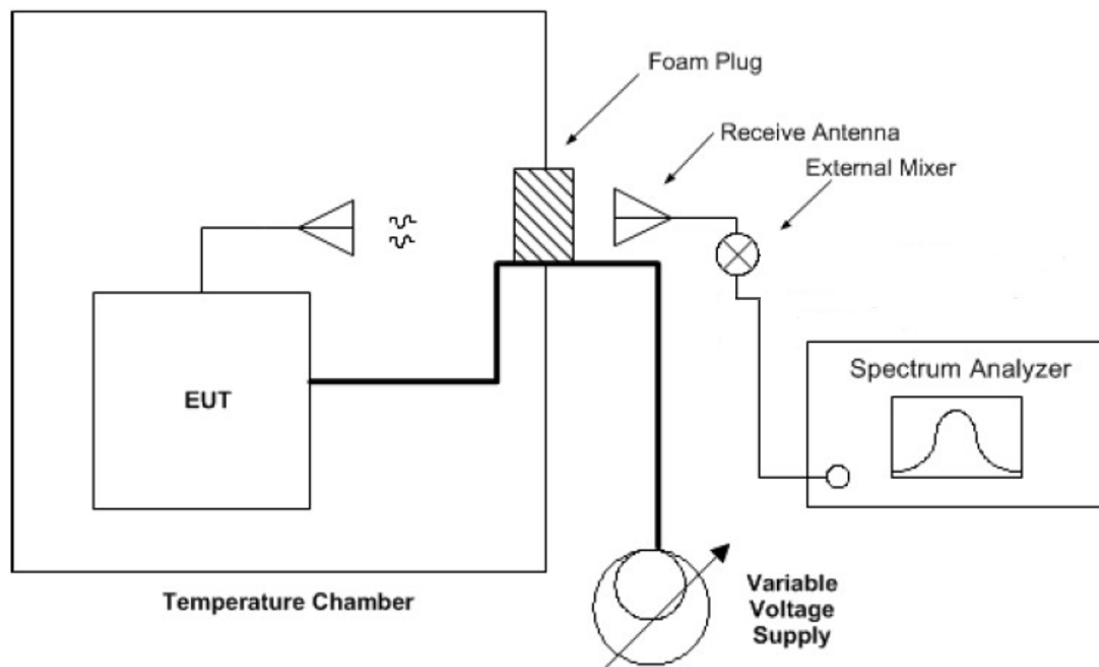
- 將待測物之天線對準接收天線並連至測試儀器。
- 設定待測物為無調變狀況,設定解析頻寬為 10 kHz, 視訊頻寬大於解析頻寬。
- 觀察其頻率飄移的狀況。
- 依不同溫度和電壓變化狀況,依上面步驟重覆測試。
- 將所測的頻率飄移狀況記錄於報告內。

6.3 量測儀器

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
*Conical Horn Antenna (75~110GHz) Keysight	WR10CH-Conical	WR10CH_001	2020/1/20	2022/1/19
N9029AV15-DC9 - 50-75 GHz VDI Standard Downconverter with 9VDC supply Keysight	SA Extension WR15	SAX 381	CoC	CoC
Spectrum Analyzer R&S	FSV40	100964	Mar. 08, 2021	Mar. 07, 2022
10dB Attenuator Woken	MDCS18N-10	MDCS18N-10-01	Apr. 13, 2021	Apr. 12, 2022
DC Power Supply Topward	6603D	795558	NA	NA
Temperature & Humidity Chamber Giant Force	GTH-150-40-SP-AR	MAA0812-008	June 02, 2021	June 01, 2022
True RMS Clamp Meter FLUKE	325	31130711WS	June 02, 2021	June 01, 2022

- NOTE:**
- The test was performed in Oven room 2.
 - The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
 - *The calibration interval of the above test instruments is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
 - Certificate of Conformance (CoC) which is issued by manufacturer states that the product meets the specification.

6.4 測試配置



6.5 量測結果 (Narrow 模式)

操作模式：	發射	測試日期：	110 年 9 月 15 日
量測場地溫度：	23°C	量測場地濕度：	62%RH
測試者：	廖偉鈞		

FREQUEMNCY STABILITY VERSUS TEMP.													
Test Frequency :		76110 MHz		Frequency Range(MHz):		76000 ~ 77000		PASS / FAIL		PASS			
Temperature (°C)	Power Supply (Vdc)	Frequency over time of reading tolerance											
		0 minutes			2 minutes			5 minutes			10 minutes		
		FL(MHz)	FH(MHz)	PASS/ FAIL	FL(MHz)	FH(MHz)	PASS/ FAIL	FL(MHz)	FH(MHz)	PASS/ FAIL	FL(MHz)	FH(MHz)	PASS/ FAIL
50	12	76033.20	76176.93	PASS	76033.22	76176.90	PASS	76033.22	76176.87	PASS	76033.19	76176.90	PASS
40	12	76033.25	76176.90	PASS	76033.22	76176.90	PASS	76033.25	76176.90	PASS	76033.22	76176.93	PASS
30	12	76033.17	76176.93	PASS	76033.15	76176.96	PASS	76033.17	76176.97	PASS	76033.17	76176.92	PASS
20	12	76033.26	76176.45	PASS	76033.24	76176.44	PASS	76033.23	76176.46	PASS	76033.25	76176.46	PASS
10	12	76033.63	76176.39	PASS	76033.60	76176.38	PASS	76033.60	76176.35	PASS	76033.60	76176.32	PASS
0	12	76033.64	76176.78	PASS	76033.64	76176.83	PASS	76033.64	76176.80	PASS	76033.67	76176.80	PASS
-10	12	76033.70	76176.63	PASS	76033.73	76176.59	PASS	76033.71	76176.61	PASS	76033.68	76176.60	PASS
-20	12	76033.27	76176.67	PASS	76033.26	76176.63	PASS	76033.23	76176.63	PASS	76033.26	76176.69	PASS

FREQUENCY STABILITY VERSUS VOLTAGE													
Test Frequency :		76110 MHz		Frequency Range(MHz):		76000 ~ 77000		PASS / FAIL		PASS			
Temperature (°C)	Power Supply (Vdc)	Frequency over time of reading tolerance											
		0 minutes			2 minutes			5 minutes			10 minutes		
		FL(MHz)	FH(MHz)	PASS/ FAIL	FL(MHz)	FH(MHz)	PASS/ FAIL	FL(MHz)	FH(MHz)	PASS/ FAIL	FL(MHz)	FH(MHz)	PASS/ FAIL
20	13.8	76033.26	76176.46	PASS	76033.26	76176.43	PASS	76033.22	76176.45	PASS	76033.24	76176.45	PASS
	12	76033.26	76176.45	PASS	76033.24	76176.44	PASS	76033.23	76176.46	PASS	76033.25	76176.46	PASS
	10.2	76033.27	76176.46	PASS	76033.25	76176.44	PASS	76033.24	76176.45	PASS	76033.26	76176.45	PASS

6.6 量測結果 (Mid 模式)

操作模式：	發射	測試日期：	110年9月15日
量測場地溫度：	23°C	量測場地濕度：	62%RH
測試者：	廖偉鈺		

FREQUEMNCY STABILITY VERSUS TEMP.													
Test Frequency :		76180 MHz		Frequency Range(MHz):		76000 ~ 77000		PASS / FAIL		PASS			
Temperature (°C)	Power Supply (Vdc)	Frequency over time of reading tolerance											
		0 minutes			2 minutes			5 minutes			10 minutes		
		FL(MHz)	FH(MHz)	PASS/ FAIL	FL(MHz)	FH(MHz)	PASS/ FAIL	FL(MHz)	FH(MHz)	PASS/ FAIL	FL(MHz)	FH(MHz)	PASS/ FAIL
50	12	76042.10	76313.50	PASS	76042.04	76313.51	PASS	76042.09	76313.50	PASS	76042.07	76313.49	PASS
40	12	76042.04	76313.78	PASS	76041.98	76313.76	PASS	76042.04	76313.72	PASS	76042.01	76313.75	PASS
30	12	76042.33	76313.50	PASS	76042.35	76313.49	PASS	76042.32	76313.52	PASS	76042.35	76313.49	PASS
20	12	76041.98	76313.62	PASS	76041.97	76313.70	PASS	76041.98	76313.65	PASS	76041.94	76313.62	PASS
10	12	76042.33	76313.26	PASS	76042.33	76313.30	PASS	76042.30	76313.27	PASS	76042.32	76313.30	PASS
0	12	76041.84	76313.80	PASS	76041.89	76313.79	PASS	76041.90	76313.83	PASS	76041.83	76313.83	PASS
-10	12	76041.98	76313.80	PASS	76042.03	76313.78	PASS	76041.97	76313.75	PASS	76041.99	76313.77	PASS
-20	12	76041.76	76313.22	PASS	76041.77	76313.20	PASS	76041.77	76313.23	PASS	76041.75	76313.20	PASS

FREQUENCY STABILITY VERSUS VOLTAGE													
Test Frequency :		76180 MHz		Frequency Range(MHz):		76000 ~ 77000		PASS / FAIL		PASS			
Temperature (°C)	Power Supply (Vdc)	Frequency over time of reading tolerance											
		0 minutes			2 minutes			5 minutes			10 minutes		
		FL(MHz)	FH(MHz)	PASS/ FAIL	FL(MHz)	FH(MHz)	PASS/ FAIL	FL(MHz)	FH(MHz)	PASS/ FAIL	FL(MHz)	FH(MHz)	PASS/ FAIL
20	13.8	76041.98	76313.64	PASS	76041.96	76313.70	PASS	76041.97	76313.65	PASS	76041.93	76313.63	PASS
	12	76041.98	76313.62	PASS	76041.97	76313.70	PASS	76041.98	76313.65	PASS	76041.94	76313.62	PASS
	10.2	76041.99	76313.63	PASS	76041.96	76313.68	PASS	76041.99	76313.65	PASS	76041.94	76313.63	PASS

6.7 量測結果 (Wide 模式)

操作模式：	發射	測試日期：	110 年 9 月 15 日
量測場地溫度：	23°C	量測場地濕度：	62%RH
測試者：	廖偉鈺		

FREQUEMNCY STABILITY VERSUS TEMP.													
Test Frequency :		76200 MHz		Frequency Range(MHz):		76000 ~ 77000		PASS / FAIL		PASS			
Temperature (°C)	Power Supply (Vdc)	Frequency over time of reading tolerance											
		0 minutes			2 minutes			5 minutes			10 minutes		
		FL(MHz)	FH(MHz)	PASS/ FAIL	FL(MHz)	FH(MHz)	PASS/ FAIL	FL(MHz)	FH(MHz)	PASS/ FAIL	FL(MHz)	FH(MHz)	PASS/ FAIL
50	12	76032.04	76355.55	PASS	76032.04	76355.53	PASS	76032.06	76355.49	PASS	76032.10	76355.54	PASS
40	12	76031.86	76355.71	PASS	76031.85	76355.71	PASS	76031.84	76355.73	PASS	76031.89	76355.73	PASS
30	12	76031.88	76355.74	PASS	76031.83	76355.72	PASS	76031.82	76355.69	PASS	76031.81	76355.72	PASS
20	12	76032.06	76355.42	PASS	76032.11	76355.43	PASS	76032.09	76355.38	PASS	76032.07	76355.37	PASS
10	12	76032.31	76355.73	PASS	76032.31	76355.73	PASS	76032.32	76355.79	PASS	76032.28	76355.75	PASS
0	12	76031.82	76355.18	PASS	76031.76	76355.22	PASS	76031.77	76355.22	PASS	76031.81	76355.19	PASS
-10	12	76032.23	76355.33	PASS	76032.23	76355.33	PASS	76032.24	76355.35	PASS	76032.27	76355.32	PASS
-20	12	76032.03	76355.47	PASS	76032.00	76355.43	PASS	76032.01	76355.43	PASS	76032.01	76355.49	PASS

FREQUEMNCY STABILITY VERSUS VOLTAGE													
Test Frequency :		76200 MHz		Frequency Range(MHz):		76000 ~ 77000		PASS / FAIL		PASS			
Temperature (°C)	Power Supply (Vdc)	Frequency over time of reading tolerance											
		0 minutes			2 minutes			5 minutes			10 minutes		
		FL(MHz)	FH(MHz)	PASS/ FAIL	FL(MHz)	FH(MHz)	PASS/ FAIL	FL(MHz)	FH(MHz)	PASS/ FAIL	FL(MHz)	FH(MHz)	PASS/ FAIL
20	13.8	76032.06	76355.41	PASS	76032.11	76355.44	PASS	76032.09	76355.38	PASS	76032.08	76355.38	PASS
	12	76032.06	76355.42	PASS	76032.11	76355.43	PASS	76032.09	76355.38	PASS	76032.07	76355.37	PASS
	10.2	76032.07	76355.44	PASS	76032.12	76355.42	PASS	76032.08	76355.36	PASS	76032.06	76355.36	PASS

6.8 量測結果判定

依據測試數據結果，符合低功率射頻器材技術規範之要求。

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 Integral patch arrays 天線，無使用天線接頭。

7.3 結果判定

符合低功率射頻器材技術規範之要求。

8 電波暴露量之評估

8.1 適用標準

請見本報告 3.1 節第(7)項的規定。

8.2 評估方法

a) 以所測得的最大輸出功率值換算出待測物所輻射的功率密度。

b) $P_d = (P_{out} * G) / (4 * \pi * r^2)$

where

P_d = power density in mW/cm^2

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

8.3 評估結果

Frequency (GHz)	Max. Avg. EIRP (dBm)	Max. Avg. EIRP (mW)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Pass/ Fail
76~77	25.82	381.95	20	0.07599	1	Pass

9 檢測實驗室基本資料

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

如您有任何問題或建議，請與下列實驗室聯絡：

林口 EMC / RF 實驗室：

Tel: 886-2-26052180

Fax: 886-2-26051924

新竹 EMC / RF 及通訊實驗室：

Tel: 886-3-6668565

Fax: 886-3-6668323

華亞 EMC / RF / Safety 實驗室：

Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

您也可以在我们的網站內找到各實驗室的地圖。

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