

低功率射頻器材技術規範測試報告

報告編號:

RT200408E03

申請者

安昀商號

產品名稱

SRR5 Short Range Radar

型號

F5TR

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 109 年 9 月 02 日

報告簽署人簽章:

陳 瓊 美



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報告發行紀錄

Issue No.	Description	Date Issued
RT200408E03	Original release.	109 年 9 月 02 日

證 明 書

產 品 名 稱：SRR5 Short Range Radar

商 標：Aptiv

型 號：F5TR

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：F5TR)，收件日期 109 年 4 月 08 日，於 109 年 4 月 18 日至 109 年 8 月 18 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：

黃健琳

， 日 期：109 年 9 月 02 日

黃健琳 / 專員

審 核 者：

陳瓊美

， 日 期：109 年 9 月 02 日

陳瓊美 / 經理

香港商立德國際商品試驗有限公司桃園分公司

實驗室地址：300 新竹市科學工業園區力行一路 1 號 E-2

此份報告不得摘錄複製，除全份複製外，需經實驗室書面同意。



1 低功率射頻器材量測記錄表

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：SRR5 Short Range Radar

型號：F5TR

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：	SRR5 Short Range Radar
型號：	F5TR
額定電源：	12 Vdc
調變方式：	FMCW
工作頻率：	76 ~ 77 GHz
峰值功率密度：	20.888 dBm/MHz
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 SRR5 Short Range 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)
LR	1	76.15	2	76.53	3	76.83
MR	1	76.34	2	76.58	3	76.67
SR	1	76.45	2	76.58		

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	17	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，其中以側放擁有最大干擾值，故以上述擺放方式進行最終量測，並將測試結果紀錄。

詳細之規格請參考使用說明書，產品的照片請參照 BV 編號: 200408E03-1。

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

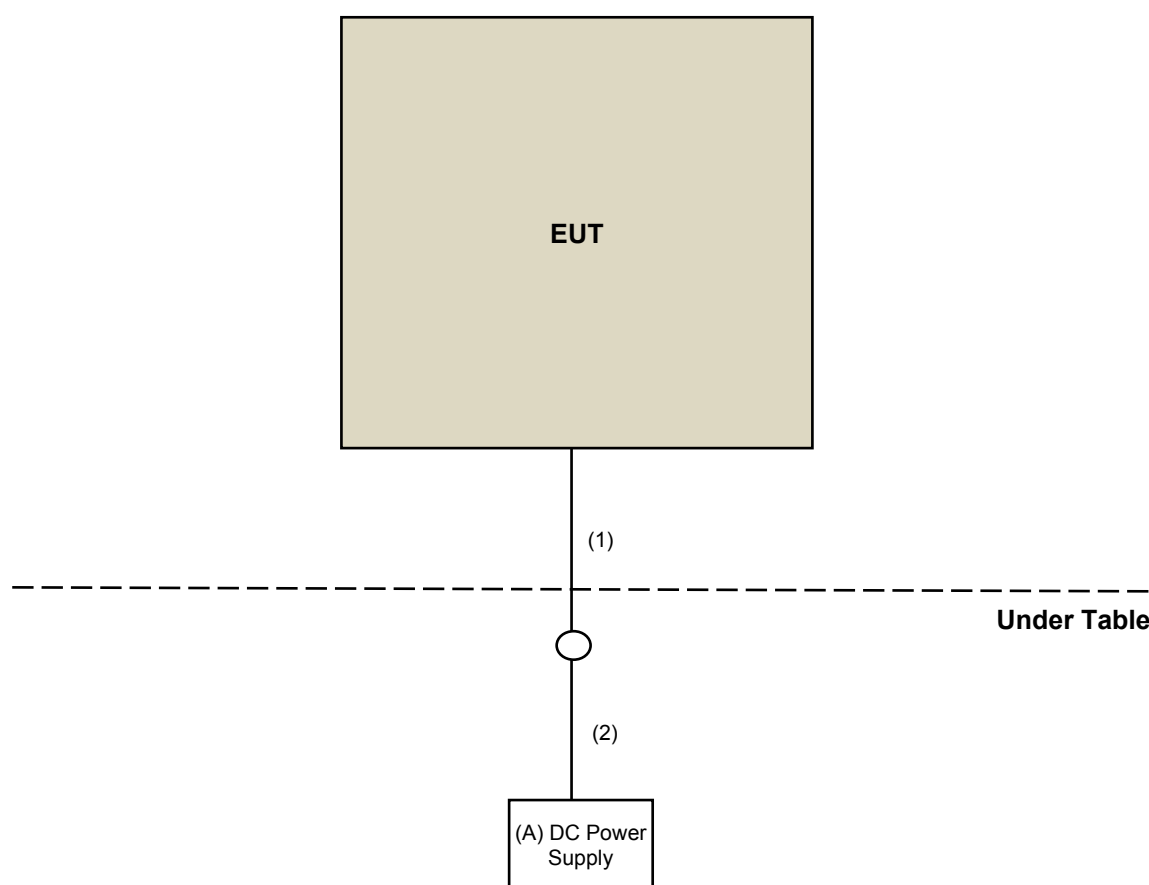
NOTE:

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	Yes	0	Supplied by client (Brand: Aptiv; Model: NA)
2	DC Cable	1	3	Yes	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℃~50℃間變化，供應電壓在額定值之±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 - 3.0	614	1.63	*100	30
3 - 30	1842/f	4.89/f	*180/f ²	30
30 - 300	27.5	0.073	1.0	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 Keysight	N9038A	MY54450088	July 03, 2019	July 02, 2020
Pre-Amplifier EMCI	EMC001340	980142	May 30, 2019	May 29, 2020
Loop Antenna Electro-Metrics	EM-6879	264	Feb. 18, 2020	Feb. 17, 2021
RF Cable	NA	LOOPCAB-001	Jan. 08, 2020	Jan. 07, 2021
RF Cable	NA	LOOPCAB-002	Jan. 08, 2020	Jan. 07, 2021
Pre-Amplifier Mini-Circuits	ZFL-1000VH2B	AMP-ZFL-05	Apr. 30, 2019	Apr. 29, 2020
Trilog Broadband Antenna SCHWARZBECK	VULB 9168	9168-361	Nov. 11, 2019	Nov. 10, 2020
RF Cable	8D	966-3-1	Mar. 17, 2020	Mar. 16, 2021
RF Cable	8D	966-3-2	Mar. 17, 2020	Mar. 16, 2021
RF Cable	8D	966-3-3	Mar. 17, 2020	Mar. 16, 2021
Fixed attenuator Mini-Circuits	UNAT-5+	PAD-3m-3-01	Sep. 26, 2019	Sep. 25, 2020
Horn Antenna SCHWARZBECK	BBHA9120-D	9120D-406	Nov. 24, 2019	Nov. 23, 2020
Pre-Amplifier EMCI	EMC12630SE	980384	Jan. 15, 2020	Jan. 14, 2021
RF Cable	EMC104-SM-SM-1200	160922	Jan. 15, 2020	Jan. 14, 2021
RF Cable	EMC104-SM-SM-2000	180601	June 10, 2019	June 09, 2020
RF Cable	EMC104-SM-SM-6000	180602	June 10, 2019	June 09, 2020
Spectrum Analyzer Keysight	N9030A	MY54490679	July 17, 2019	July 16, 2020
Pre-Amplifier EMCI	EMC184045SE	980387	Jan. 15, 2020	Jan. 14, 2021
Horn Antenna SCHWARZBECK	BBHA 9170	BBHA9170519	Nov. 24, 2019	Nov. 23, 2020
RF Cable	EMC102-KM-KM-1200	160924	Jan. 15, 2020	Jan. 14, 2021
RF Cable	EMC-KM-KM-4000	200214	Mar. 11, 2020	Mar. 10, 2021
Software	ADT_Radiated_V8.7.08	NA	NA	NA
Antenna Tower & Turn Table Max-Full	MF-7802	MF780208406	NA	NA
Boresight Antenna Fixture	FBA-01	FBA-SIP01	NA	NA

Note:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. The test was performed in 966 Chamber No. 3.
3. The 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	Feb. 07, 2020	Feb. 06, 2021
*OXE89 Horn Antenna (33~55GHz) QuinStar	QWH-UCRR00	924200002	Jan. 20, 2020	Jan. 19, 2022
*Conical Horn Antenna (50~75GHz) Keysight	WR15CH-Conical	WR15CH_001	Jan. 20, 2020	Jan. 19, 2022
*Conical Horn Antenna (75~110GHz) Keysight	WR10CH-Conical	WR10CH_001	Jan. 20, 2020	Jan. 19, 2022
*Conical Horn Antenna (110~170GHz) Keysight	WR6.5CH-Conical	WR6.5CH_001	Jan. 20, 2020	Jan. 19, 2022
*Conical Horn Antenna (140~220GHz) Keysight	WR5.1CH-Conical	WR5.1CH_001	Dec. 09, 2019	Dec. 08, 2021
*Conical Horn Antenna (220~330GHz) Keysight	WR3.4DH-Diagonal	WR3.4DH_001	Dec. 09, 2019	Dec. 08, 2021
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	Dec. 09, 2019	Dec. 08, 2021
*N9029AV03-DC9 - 220-330 GHz VDI Standard Downconverter with 9VDC supply Keysight	SA Extension	SAX 376	Dec. 09, 2019	Dec. 08, 2021
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 Keysight	E8257D	MY53401987	June 17, 2020	June 16, 2021
*Power Meter VDI	PM5	431V	Dec. 09, 2019	Dec. 08, 2021
Boresight Antenna Tower & Turn Table Max-Full	MF-7802BS	MF780208530	NA	NA

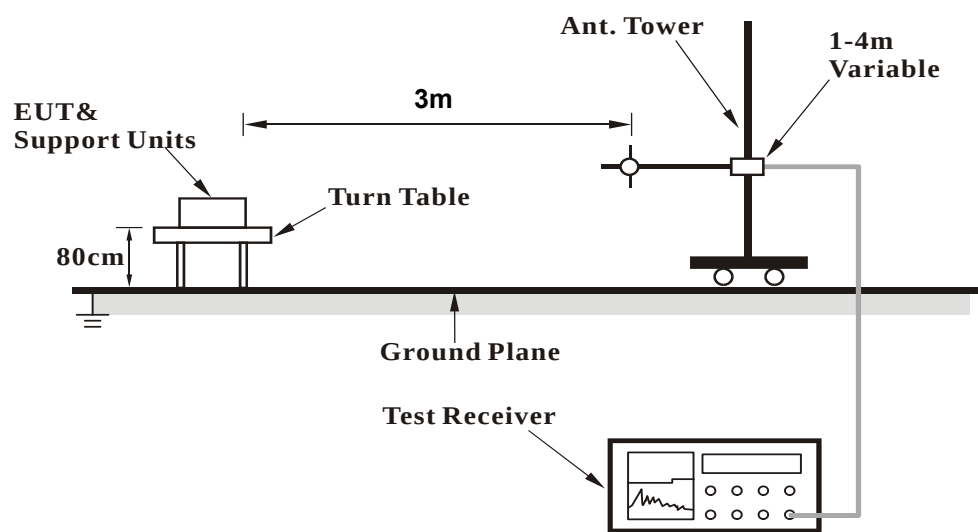
Note:

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.

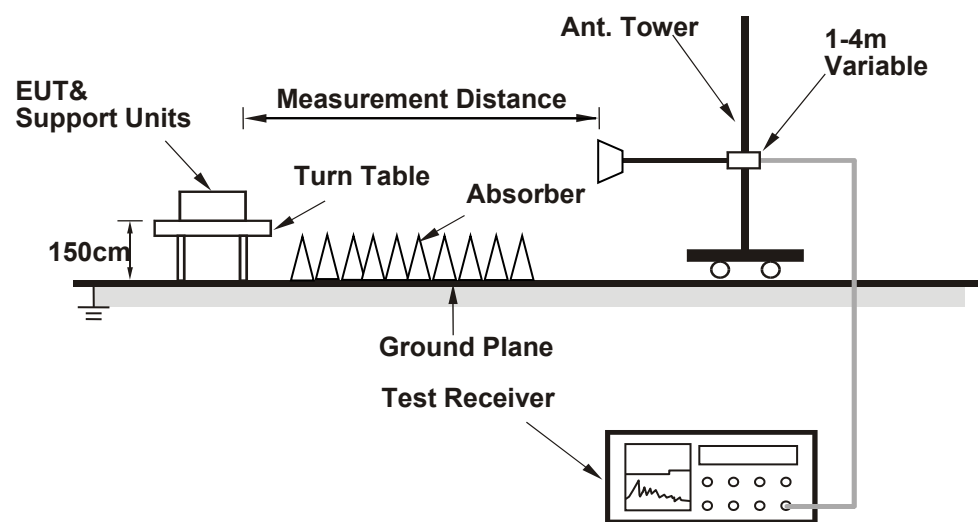
Measurement	Frequency	Uncertainty
Radiated emissions	40GHz ~ 231GHz	5.4 dB

4.4 測試配置

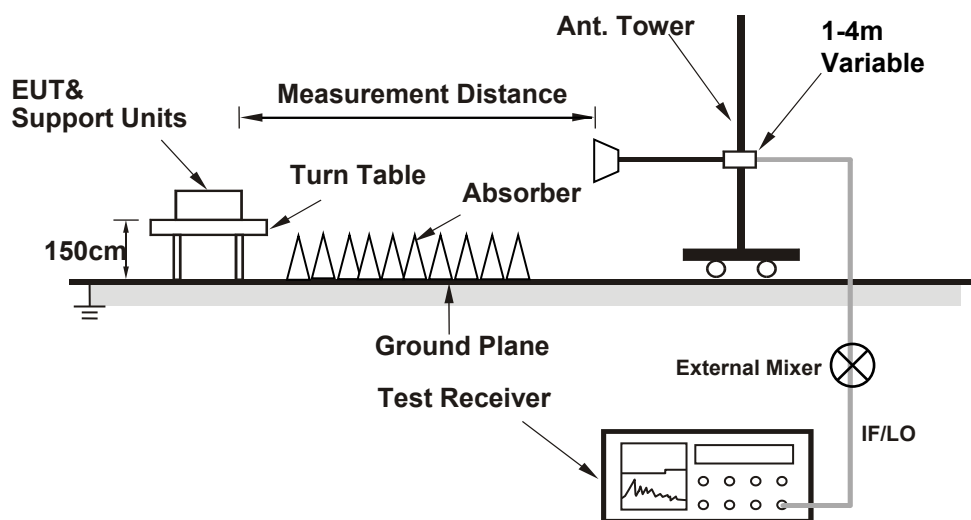
<Frequency Range below 1GHz>



<Frequency Range above 1GHz ~ 50GHz>



<Frequency Range above 50GHz>



4.5 量測結果 (LR 模式)

4.5.1 混附發射接收

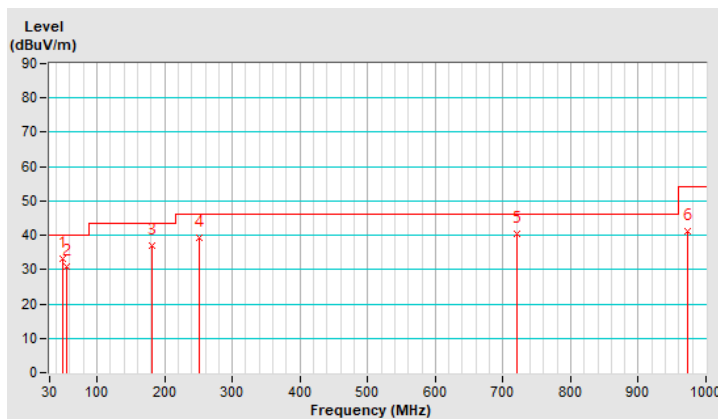
Below 1GHz Data

操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 1 : 76.15 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：	109 年 4 月 18 日	測試者：	鄭又瑋

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	50.20	33.2 QP	40.0	-6.8	1.20 H	252	40.9	-7.7
2	55.40	31.0 QP	40.0	-9.0	1.21 H	76	39.0	-8.0
3	180.40	37.0 QP	43.5	-6.5	1.06 H	127	45.8	-8.8
4	250.40	39.3 QP	46.0	-6.7	1.97 H	145	47.7	-8.4
5	720.50	40.5 QP	46.0	-5.5	2.20 H	247	37.7	2.8
6	972.10	41.1 QP	54.0	-12.9	1.16 H	96	34.3	6.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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.

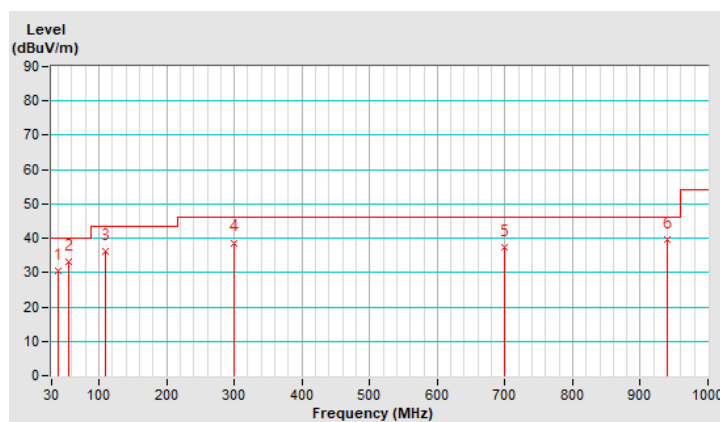


操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 1：76.15 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	40.50	30.6 QP	40.0	-9.4	1.00 V	120	38.7	-8.1
2	55.20	33.2 QP	40.0	-6.8	1.00 V	177	41.2	-8.0
3	110.20	36.1 QP	43.5	-7.4	1.01 V	76	46.4	-10.3
4	300.40	38.7 QP	46.0	-7.3	1.50 V	224	45.0	-6.3
5	700.20	37.4 QP	46.0	-8.6	1.90 V	84	34.8	2.6
6	940.40	39.8 QP	46.0	-6.2	1.02 V	209	33.3	6.5

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 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.

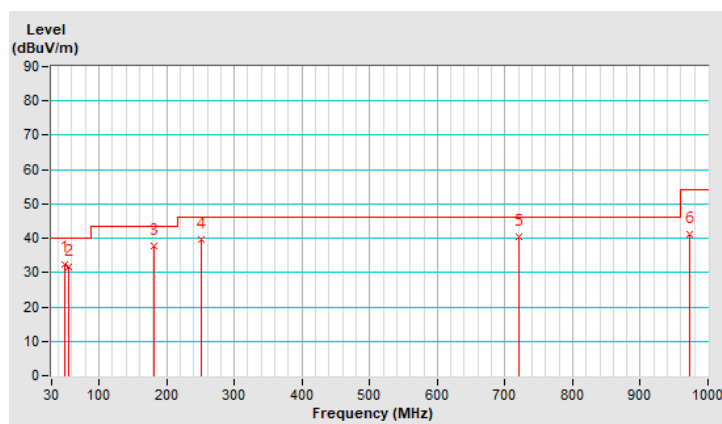


操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 2 : 76.53 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	49.60	32.6 QP	40.0	-7.4	1.21 H	238	40.3	-7.7
2	55.70	31.6 QP	40.0	-8.4	1.16 H	81	39.5	-7.9
3	180.80	37.6 QP	43.5	-5.9	1.08 H	133	46.4	-8.8
4	250.60	39.7 QP	46.0	-6.3	1.96 H	160	48.0	-8.3
5	720.60	40.5 QP	46.0	-5.5	2.18 H	242	37.7	2.8
6	972.20	41.1 QP	54.0	-12.9	1.18 H	95	34.3	6.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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.



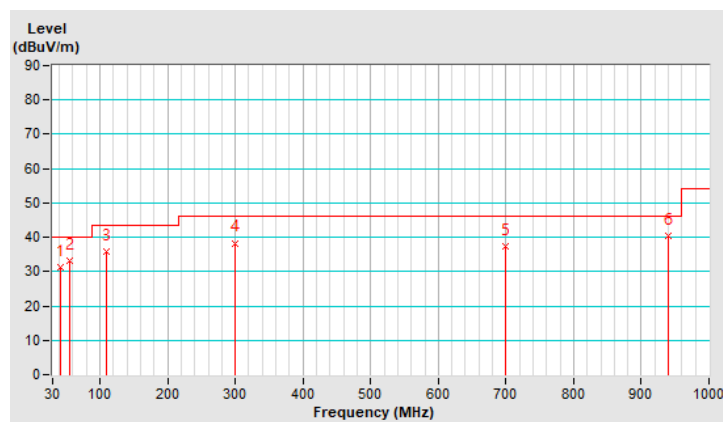
操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 2 : 76.53 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	40.70	31.4 QP	40.0	-8.6	1.03 V	114	39.5	-8.1
2	54.90	33.1 QP	40.0	-6.9	1.06 V	176	41.1	-8.0
3	110.20	35.9 QP	43.5	-7.6	1.01 V	86	46.2	-10.3
4	300.20	38.3 QP	46.0	-7.7	1.53 V	220	44.6	-6.3
5	699.90	37.2 QP	46.0	-8.8	1.94 V	69	34.6	2.6
6	940.80	40.3 QP	46.0	-5.7	1.00 V	225	33.7	6.6

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 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.

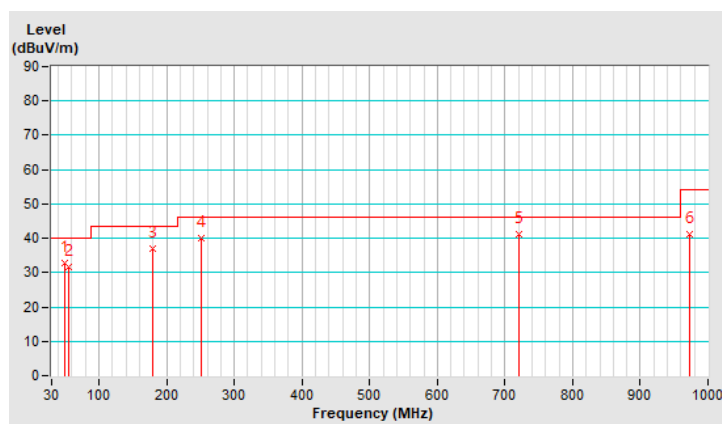


操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 3 : 76.83 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	49.70	32.8 QP	40.0	-7.2	1.16 H	237	40.5	-7.7
2	55.50	31.5 QP	40.0	-8.5	1.10 H	76	39.5	-8.0
3	180.10	37.1 QP	43.5	-6.4	1.08 H	146	45.8	-8.7
4	250.60	40.0 QP	46.0	-6.0	1.90 H	162	48.3	-8.3
5	721.40	41.0 QP	46.0	-5.0	2.18 H	232	38.2	2.8
6	972.10	41.0 QP	54.0	-13.0	1.18 H	81	34.2	6.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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.



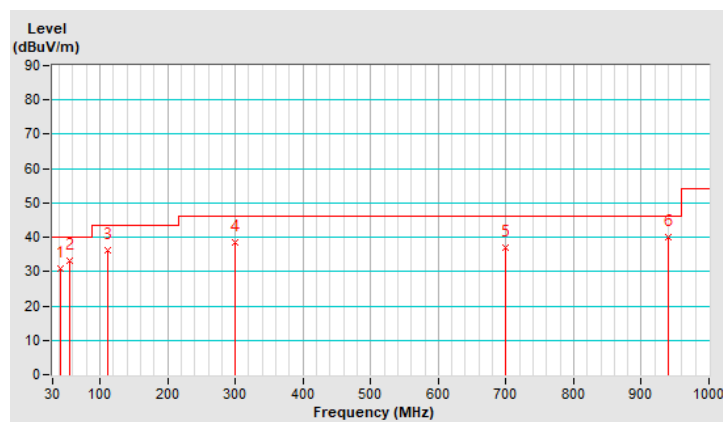
操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 3 : 76.83 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	40.90	30.8 QP	40.0	-9.2	1.06 V	103	38.8	-8.0
2	54.50	33.0 QP	40.0	-7.0	1.05 V	190	41.0	-8.0
3	110.60	36.1 QP	43.5	-7.4	1.01 V	71	46.4	-10.3
4	300.20	38.5 QP	46.0	-7.5	1.50 V	212	44.8	-6.3
5	700.00	37.1 QP	46.0	-8.9	2.00 V	82	34.5	2.6
6	940.50	40.0 QP	46.0	-6.0	1.00 V	217	33.5	6.5

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 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.



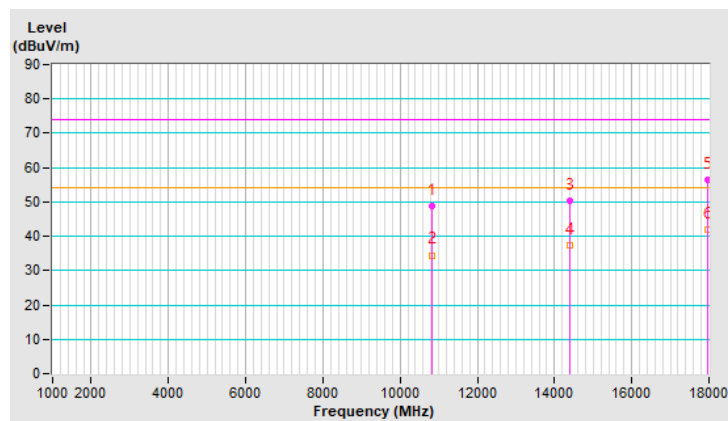
Above 1GHz Data

操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 1 : 76.15 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：	109 年 4 月 18 日	測試者：	鄭又瑋

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	10818.77	48.7 PK	74.0	-25.3	1.42 H	233	35.4	13.3
2	10818.77	34.5 AV	54.0	-19.5	1.42 H	233	21.2	13.3
3	14408.75	50.4 PK	74.0	-23.6	1.79 H	254	34.5	15.9
4	14408.75	37.3 AV	54.0	-16.7	1.79 H	254	21.4	15.9
5	17955.37	56.4 PK	74.0	-17.6	2.40 H	102	34.6	21.8
6	17955.37	42.0 AV	54.0	-12.0	2.40 H	102	20.2	21.8

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.



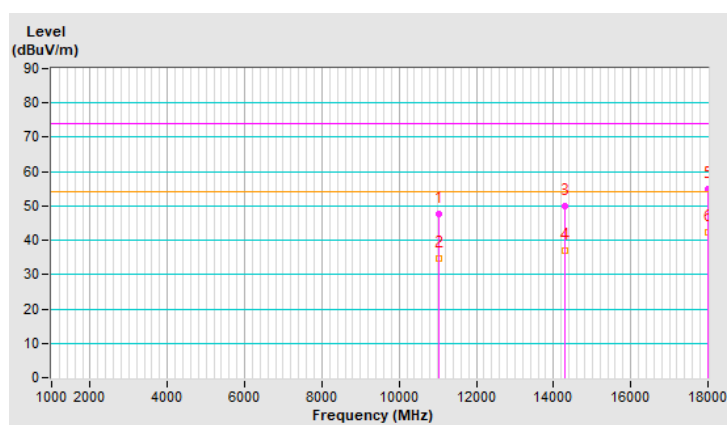
操作模式：	發射接收	調變技術：	FMCW
基本波頻率：	CH 1 : 76.15 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	11014.70	47.6 PK	74.0	-26.4	1.82 V	154	34.6	13.0
2	11014.70	34.7 AV	54.0	-19.3	1.82 V	154	21.7	13.0
3	14285.08	49.8 PK	74.0	-24.2	2.00 V	294	33.5	16.3
4	14285.08	37.0 AV	54.0	-17.0	2.00 V	294	20.7	16.3
5	17999.58	54.8 PK	74.0	-19.2	2.10 V	333	32.5	22.3
6	17999.58	42.3 AV	54.0	-11.7	2.10 V	333	20.0	22.3

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.

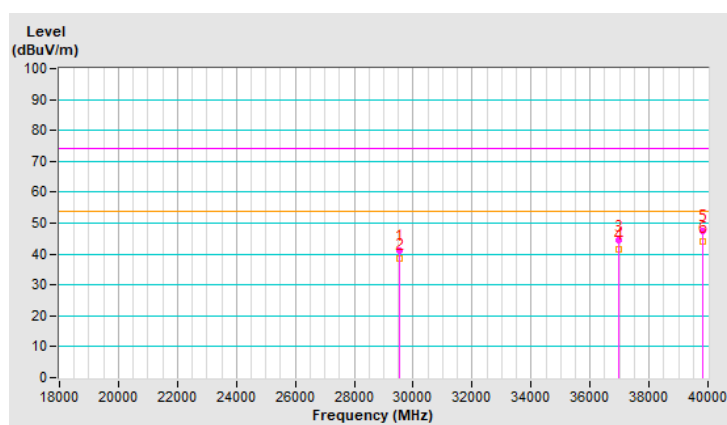


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 1 : 76.15 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	29535.15	41.3 PK	74.0	-32.7	1.77 H	144	42.5	-1.2
2	29535.15	38.4 AV	54.0	-15.6	1.77 H	144	39.6	-1.2
3	36949.70	44.3 PK	74.0	-29.7	2.10 H	200	42.0	2.3
4	36949.70	41.4 AV	54.0	-12.6	2.10 H	200	39.1	2.3
5	39822.35	47.4 PK	74.0	-26.6	1.90 H	210	41.1	6.3
6	39822.35	43.9 AV	54.0	-10.1	1.90 H	210	37.6	6.3

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.

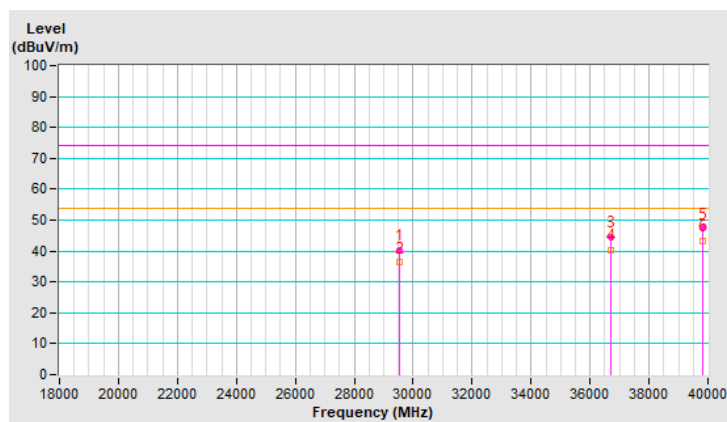


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 1 : 76.15 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	29535.15	40.4 PK	74.0	-33.6	2.20 V	120	41.6	-1.2
2	29535.15	36.3 AV	54.0	-17.7	2.20 V	120	37.5	-1.2
3	36712.65	44.6 PK	74.0	-29.4	1.50 V	144	42.1	2.5
4	36712.65	40.3 AV	54.0	-13.7	1.50 V	144	37.8	2.5
5	39822.35	47.3 PK	74.0	-26.7	1.35 V	232	41.0	6.3
6	39822.35	43.1 AV	54.0	-10.9	1.35 V	232	36.8	6.3

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.

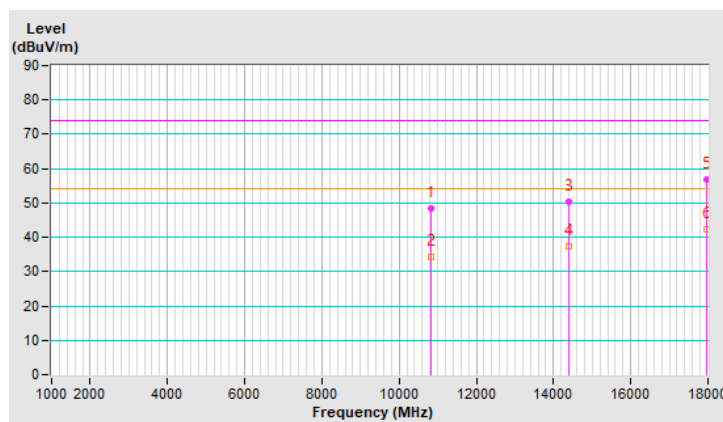


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 2 : 76.53 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	10818.20	48.5 PK	74.0	-25.5	1.37 H	240	35.2	13.3
2	10818.20	34.4 AV	54.0	-19.6	1.37 H	240	21.1	13.3
3	14408.30	50.3 PK	74.0	-23.7	1.79 H	269	34.4	15.9
4	14408.30	37.3 AV	54.0	-16.7	1.79 H	269	21.4	15.9
5	17955.90	56.8 PK	74.0	-17.2	2.40 H	96	35.0	21.8
6	17955.90	42.2 AV	54.0	-11.8	2.40 H	96	20.4	21.8

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.

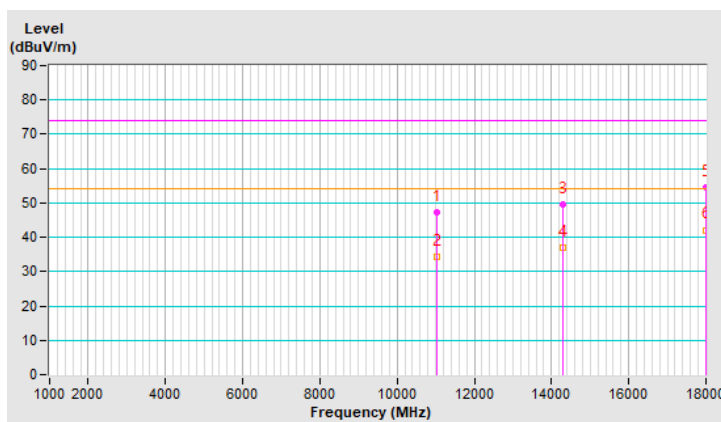


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 2 : 76.53 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	11014.50	47.4 PK	74.0	-26.6	1.83 V	142	34.4	13.0
2	11014.50	34.2 AV	54.0	-19.8	1.83 V	142	21.2	13.0
3	14284.90	49.5 PK	74.0	-24.5	2.00 V	300	33.2	16.3
4	14284.90	37.0 AV	54.0	-17.0	2.00 V	300	20.7	16.3
5	17999.50	54.5 PK	74.0	-19.5	2.15 V	317	32.2	22.3
6	17999.50	42.1 AV	54.0	-11.9	2.15 V	317	19.8	22.3

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.

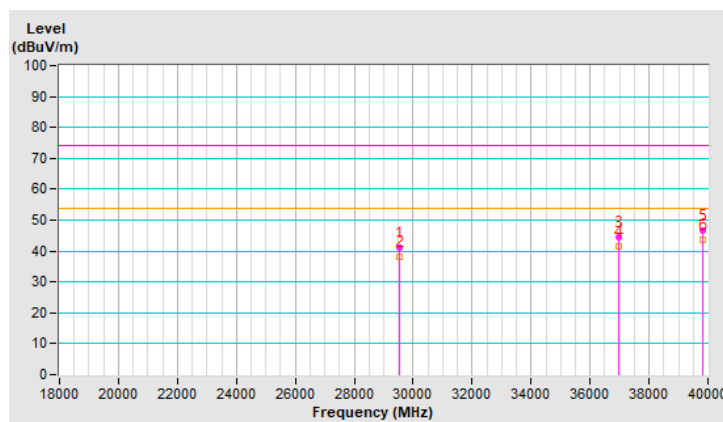


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 2 : 76.53 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	29535.30	41.2 PK	74.0	-32.8	1.73 H	150	42.4	-1.2
2	29535.30	38.3 AV	54.0	-15.7	1.73 H	150	39.5	-1.2
3	36950.10	44.6 PK	74.0	-29.4	2.09 H	194	42.3	2.3
4	36950.10	41.6 AV	54.0	-12.4	2.09 H	194	39.3	2.3
5	39821.50	46.8 PK	74.0	-27.2	1.84 H	224	40.5	6.3
6	39821.50	43.6 AV	54.0	-10.4	1.84 H	224	37.3	6.3

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.

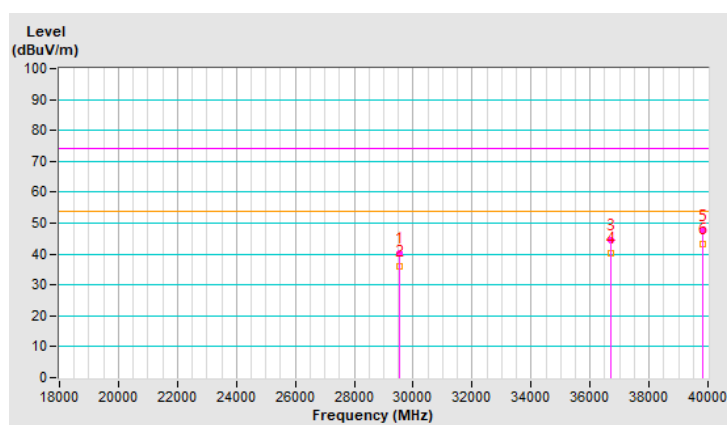


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 2 : 76.53 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	29535.20	40.2 PK	74.0	-33.8	2.22 V	112	41.4	-1.2
2	29535.20	36.0 AV	54.0	-18.0	2.22 V	112	37.2	-1.2
3	36712.50	44.4 PK	74.0	-29.6	1.52 V	150	41.9	2.5
4	36712.50	40.3 AV	54.0	-13.7	1.52 V	150	37.8	2.5
5	39822.80	47.6 PK	74.0	-26.4	1.37 V	242	41.3	6.3
6	39822.80	43.2 AV	54.0	-10.8	1.37 V	242	36.9	6.3

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.

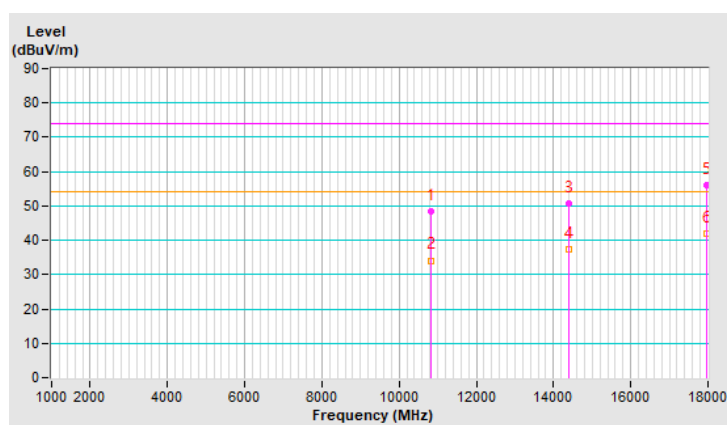


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 3 : 76.83 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	10818.10	48.3 PK	74.0	-25.7	1.41 H	224	35.0	13.3
2	10818.10	34.1 AV	54.0	-19.9	1.41 H	224	20.8	13.3
3	14409.60	50.6 PK	74.0	-23.4	1.76 H	265	34.7	15.9
4	14409.60	37.5 AV	54.0	-16.5	1.76 H	265	21.6	15.9
5	17955.60	56.1 PK	74.0	-17.9	2.36 H	91	34.3	21.8
6	17955.60	41.9 AV	54.0	-12.1	2.36 H	91	20.1	21.8

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.

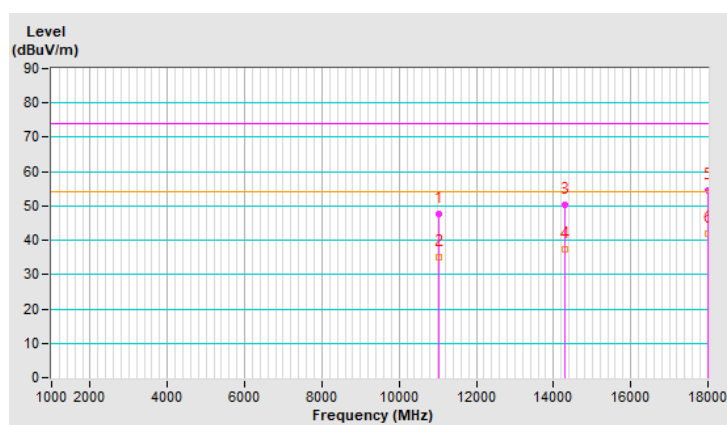


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 3 : 76.83 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	11014.60	47.7 PK	74.0	-26.3	1.82 V	164	34.7	13.0
2	11014.60	35.0 AV	54.0	-19.0	1.82 V	164	22.0	13.0
3	14285.30	50.3 PK	74.0	-23.7	2.03 V	299	34.0	16.3
4	14285.30	37.5 AV	54.0	-16.5	2.03 V	299	21.2	16.3
5	17999.30	54.5 PK	74.0	-19.5	2.09 V	339	32.2	22.3
6	17999.30	42.0 AV	54.0	-12.0	2.09 V	339	19.7	22.3

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.

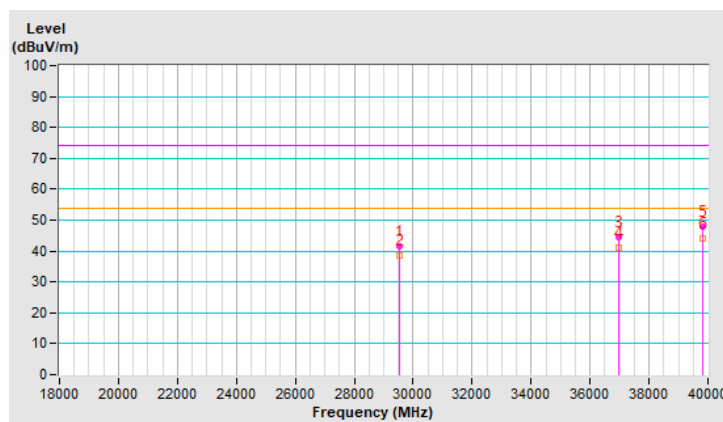


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 3 : 76.83 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	29535.10	41.7 PK	74.0	-32.3	1.83 H	131	42.9	-1.2
2	29535.10	38.5 AV	54.0	-15.5	1.83 H	131	39.7	-1.2
3	36949.40	44.4 PK	74.0	-29.6	2.06 H	216	42.1	2.3
4	36949.40	41.3 AV	54.0	-12.7	2.06 H	216	39.0	2.3
5	39822.40	47.9 PK	74.0	-26.1	1.95 H	200	41.6	6.3
6	39822.40	44.2 AV	54.0	-9.8	1.95 H	200	37.9	6.3

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.



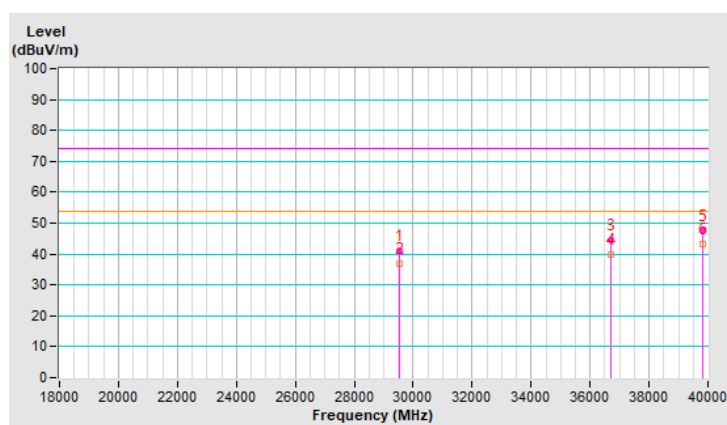
操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 3 : 76.83 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	29535.60	41.0 PK	74.0	-33.0	2.21 V	111	42.2	-1.2
2	29535.60	36.8 AV	54.0	-17.2	2.21 V	111	38.0	-1.2
3	36712.50	44.4 PK	74.0	-29.6	1.54 V	155	41.9	2.5
4	36712.50	39.8 AV	54.0	-14.2	1.54 V	155	37.3	2.5
5	39822.30	47.4 PK	74.0	-26.6	1.39 V	240	41.1	6.3
6	39822.30	43.4 AV	54.0	-10.6	1.39 V	240	37.1	6.3

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 1：76.15 GHz	測試儀器：	(AV) RB=1MHz, VB=3MHz
量測場地溫度：	23°C	量測場地濕度：	62%RH
測試日期：	109 年 8 月 17 日	測試者：	廖偉鈺

Antenna Polarity : Horizontal							
No.	Frequency (GHz)	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	42.46	80.30	-24.40	3.210	600	-596.790	Pass
2	72.19	85.44	-19.26	10.485	600	-589.515	Pass
3	75.62	72.43	-32.27	0.524	600	-599.476	Pass
4	100.49	74.89	-29.81	0.924	600	-599.076	Pass
5	165.50	87.91	-16.79	18.517	600	-581.483	Pass
6	193.99	78.95	-25.75	2.353	600	-597.647	Pass
7	229.10	84.16	-20.54	7.808	1000	-992.192	Pass
Antenna Polarity : Vertical							
No.	Frequency (GHz)	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	42.35	81.42	-23.28	4.155	600	-595.845	Pass
2	71.87	90.69	-14.01	35.120	600	-564.880	Pass
3	75.66	77.71	-26.99	1.768	600	-598.232	Pass
4	101.15	74.24	-30.46	0.795	600	-599.205	Pass
5	164.52	90.39	-14.31	32.776	600	-567.224	Pass
6	194.99	78.72	-25.98	2.231	600	-597.769	Pass
7	228.72	84.22	-20.48	7.917	1000	-992.083	Pass

Remarks:

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

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

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

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 3 m 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：	23°C	量測場地濕度：	62%RH
測試日期：	109 年 8 月 17 日	測試者：	廖偉鈺

Antenna Polarity : Horizontal							
No.	Frequency (GHz)	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	42.40	80.17	-24.53	3.116	600	-596.884	Pass
2	72.03	85.77	-18.93	11.313	600	-588.687	Pass
3	75.75	72.42	-32.28	0.523	600	-599.477	Pass
4	100.04	74.85	-29.85	0.915	600	-599.085	Pass
5	165.59	87.98	-16.72	18.817	600	-581.183	Pass
6	193.91	78.92	-25.78	2.336	600	-597.664	Pass
7	228.94	84.26	-20.44	7.990	1000	-992.010	Pass
Antenna Polarity : Vertical							
No.	Frequency (GHz)	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	42.02	81.60	-23.10	4.331	600	-595.669	Pass
2	71.75	90.57	-14.13	34.163	600	-565.837	Pass
3	75.71	77.78	-26.92	1.797	600	-598.203	Pass
4	101.28	74.45	-30.25	0.835	600	-599.165	Pass
5	164.59	90.60	-14.10	34.400	600	-565.600	Pass
6	194.85	78.61	-26.09	2.176	600	-597.824	Pass
7	228.51	83.99	-20.71	7.509	1000	-992.491	Pass

Remarks:

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

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

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

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 3 m distance.

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

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

L is the Largest Antenna Dimension 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：	23°C	量測場地濕度：	62%RH
測試日期：	109 年 8 月 17 日	測試者：	廖偉鈺

Antenna Polarity : Horizontal							
No.	Frequency (GHz)	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	42.42	80.09	-24.61	3.059	600	-596.941	Pass
2	72.45	85.70	-19.00	11.132	600	-588.868	Pass
3	75.43	72.53	-32.17	0.536	600	-599.464	Pass
4	100.11	75.03	-29.67	0.954	600	-599.046	Pass
5	165.50	87.82	-16.88	18.137	600	-581.863	Pass
6	193.61	79.37	-25.33	2.592	600	-597.408	Pass
7	228.74	83.84	-20.86	7.254	1000	-992.746	Pass
Antenna Polarity : Vertical							
No.	Frequency (GHz)	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	42.23	81.62	-23.08	4.351	600	-595.649	Pass
2	71.98	90.63	-14.07	34.639	600	-565.361	Pass
3	75.60	77.78	-26.92	1.797	600	-598.203	Pass
4	101.34	74.33	-30.37	0.812	600	-599.188	Pass
5	164.73	90.43	-14.27	33.080	600	-566.920	Pass
6	194.95	78.52	-26.18	2.131	600	-597.869	Pass
7	228.47	84.20	-20.50	7.881	1000	-992.119	Pass

Remarks:

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

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

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

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 3 m distance.

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

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

L is the Largest Antenna Dimension 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 (MR 模式)

4.6.1 混附發射接收

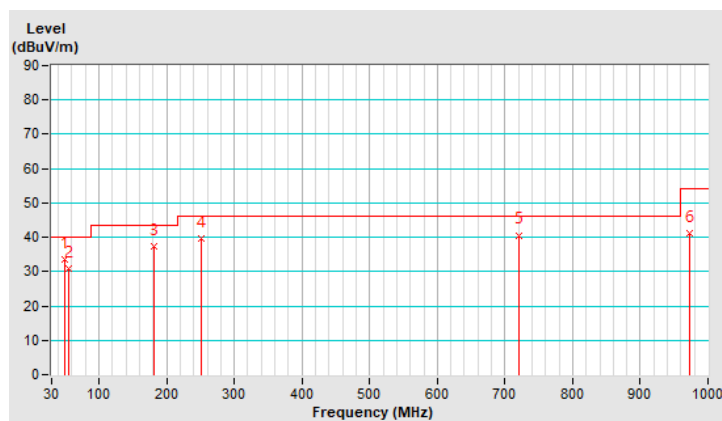
Below 1GHz Data

操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 1：76.34 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：	109 年 4 月 18 日	測試者：	鄭又瑋

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	50.30	33.5 QP	40.0	-6.5	1.18 H	251	41.2	-7.7
2	55.00	30.8 QP	40.0	-9.2	1.15 H	61	38.9	-8.1
3	180.50	37.3 QP	43.5	-6.2	1.04 H	118	46.1	-8.8
4	251.20	39.8 QP	46.0	-6.2	1.91 H	158	48.1	-8.3
5	720.50	40.6 QP	46.0	-5.4	2.25 H	260	37.8	2.8
6	972.30	41.3 QP	54.0	-12.7	1.17 H	107	34.5	6.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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.



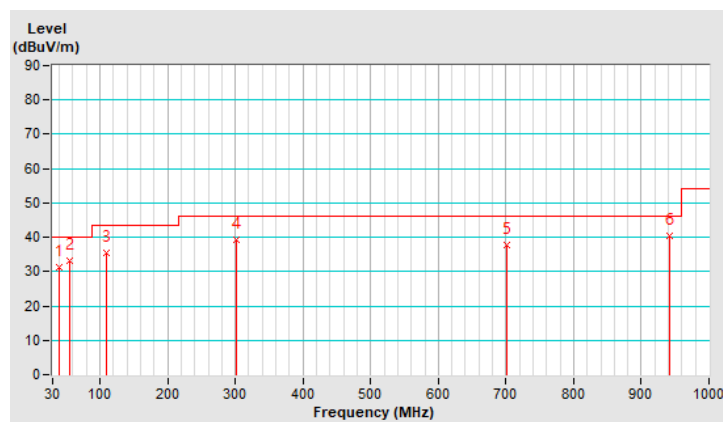
操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 1：76.34 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	40.40	31.4 QP	40.0	-8.6	1.00 V	134	39.5	-8.1
2	55.20	33.2 QP	40.0	-6.8	1.02 V	192	41.2	-8.0
3	109.70	35.6 QP	43.5	-7.9	1.05 V	60	46.0	-10.4
4	300.70	39.1 QP	46.0	-6.9	1.54 V	238	45.4	-6.3
5	700.40	37.6 QP	46.0	-8.4	1.95 V	94	35.0	2.6
6	941.00	40.3 QP	46.0	-5.7	1.06 V	220	33.7	6.6

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 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.

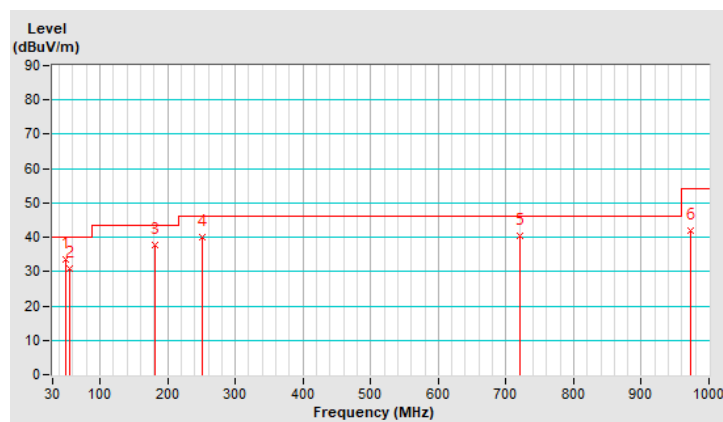


操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 2 : 76.58 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	50.30	33.4 QP	40.0	-6.6	1.19 H	264	41.1	-7.7
2	55.00	31.0 QP	40.0	-9.0	1.17 H	50	39.1	-8.1
3	181.00	37.8 QP	43.5	-5.7	1.06 H	134	46.6	-8.8
4	251.70	40.1 QP	46.0	-5.9	1.94 H	153	48.4	-8.3
5	720.40	40.3 QP	46.0	-5.7	2.24 H	249	37.5	2.8
6	973.00	41.8 QP	54.0	-12.2	1.16 H	102	35.0	6.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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.



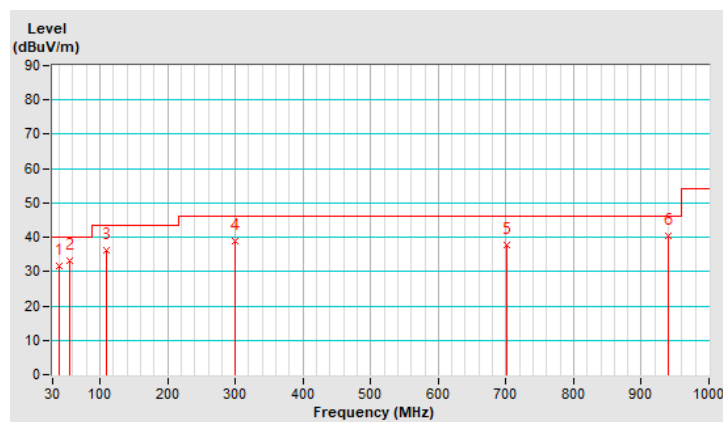
操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 2 : 76.58 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	40.20	31.5 QP	40.0	-8.5	1.00 V	120	39.6	-8.1
2	55.10	33.1 QP	40.0	-6.9	1.00 V	179	41.1	-8.0
3	110.30	36.1 QP	43.5	-7.4	1.06 V	69	46.4	-10.3
4	300.40	38.8 QP	46.0	-7.2	1.54 V	236	45.1	-6.3
5	700.70	37.6 QP	46.0	-8.4	1.96 V	84	35.0	2.6
6	940.80	40.4 QP	46.0	-5.6	1.07 V	217	33.8	6.6

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 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.

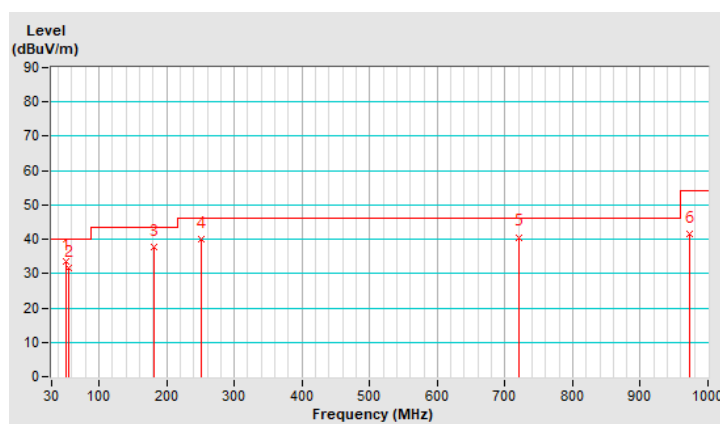


操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 3 : 76.67 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	50.50	33.4 QP	40.0	-6.6	1.15 H	266	41.1	-7.7
2	55.30	31.5 QP	40.0	-8.5	1.21 H	39	39.5	-8.0
3	181.10	37.8 QP	43.5	-5.7	1.05 H	132	46.6	-8.8
4	251.40	40.0 QP	46.0	-6.0	1.94 H	168	48.3	-8.3
5	720.60	40.6 QP	46.0	-5.4	2.22 H	253	37.8	2.8
6	972.60	41.6 QP	54.0	-12.4	1.19 H	117	34.8	6.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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.



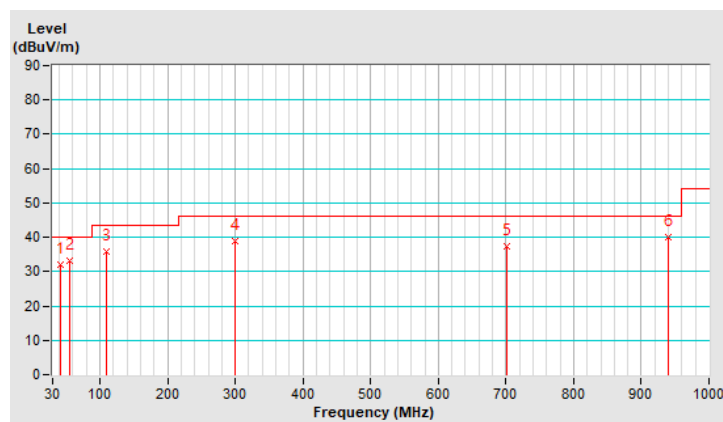
操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 3 : 76.67 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	40.90	31.9 QP	40.0	-8.1	1.00 V	109	39.9	-8.0
2	55.10	33.3 QP	40.0	-6.7	1.00 V	191	41.3	-8.0
3	109.80	35.8 QP	43.5	-7.7	1.01 V	83	46.2	-10.4
4	300.30	39.0 QP	46.0	-7.0	1.56 V	240	45.3	-6.3
5	700.30	37.2 QP	46.0	-8.8	2.00 V	68	34.6	2.6
6	940.10	39.9 QP	46.0	-6.1	1.13 V	227	33.4	6.5

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 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.



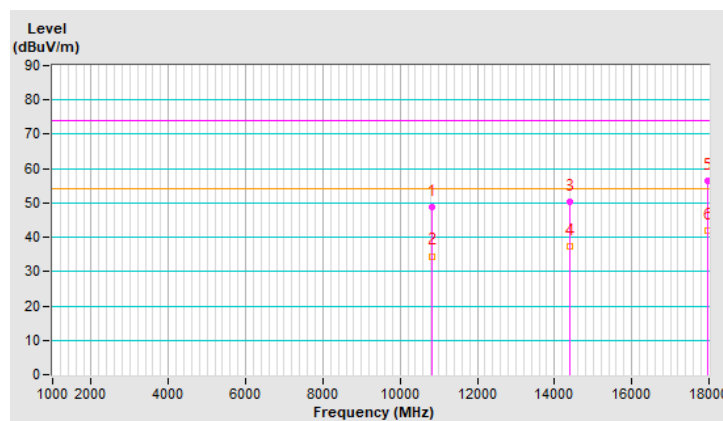
Above 1GHz Data

操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 1：76.34 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：	109 年 4 月 18 日	測試者：	鄭又瑋

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	10818.77	48.7 PK	74.0	-25.3	1.42 H	233	35.4	13.3
2	10818.77	34.5 AV	54.0	-19.5	1.42 H	233	21.2	13.3
3	14408.75	50.4 PK	74.0	-23.6	1.79 H	254	34.5	15.9
4	14408.75	37.3 AV	54.0	-16.7	1.79 H	254	21.4	15.9
5	17955.37	56.4 PK	74.0	-17.6	2.40 H	102	34.6	21.8
6	17955.37	42.0 AV	54.0	-12.0	2.40 H	102	20.2	21.8

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.

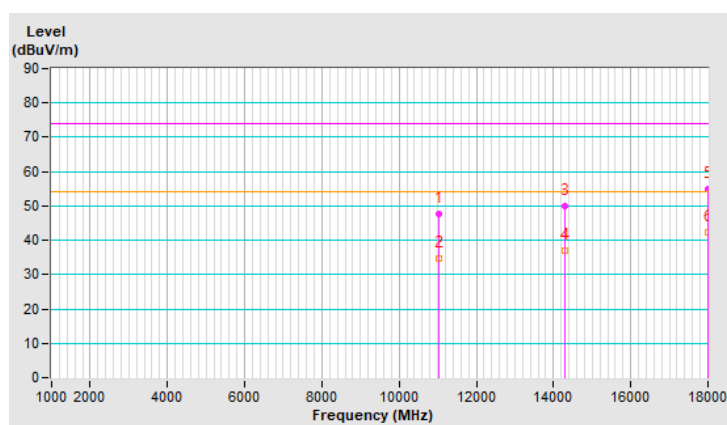


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 1 : 76.34 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	11014.70	47.6 PK	74.0	-26.4	1.82 V	154	34.6	13.0
2	11014.70	34.7 AV	54.0	-19.3	1.82 V	154	21.7	13.0
3	14285.08	49.8 PK	74.0	-24.2	2.00 V	294	33.5	16.3
4	14285.08	37.0 AV	54.0	-17.0	2.00 V	294	20.7	16.3
5	17999.58	54.8 PK	74.0	-19.2	2.10 V	333	32.5	22.3
6	17999.58	42.3 AV	54.0	-11.7	2.10 V	333	20.0	22.3

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.

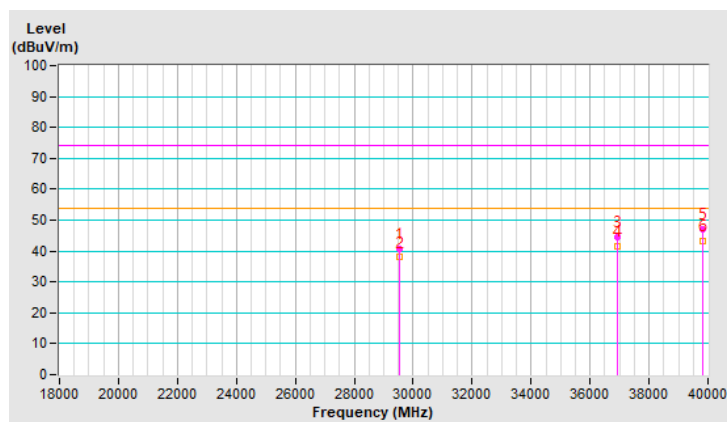


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 1 : 76.34 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	29540.10	40.8 PK	74.0	-33.2	1.71 H	154	42.0	-1.2
2	29540.10	38.0 AV	54.0	-16.0	1.71 H	154	39.2	-1.2
3	36948.30	44.5 PK	74.0	-29.5	2.06 H	201	42.2	2.3
4	36948.30	41.7 AV	54.0	-12.3	2.06 H	201	39.4	2.3
5	39833.80	47.1 PK	74.0	-26.9	1.92 H	226	40.7	6.4
6	39833.80	43.4 AV	54.0	-10.6	1.92 H	226	37.0	6.4

Remarks:

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



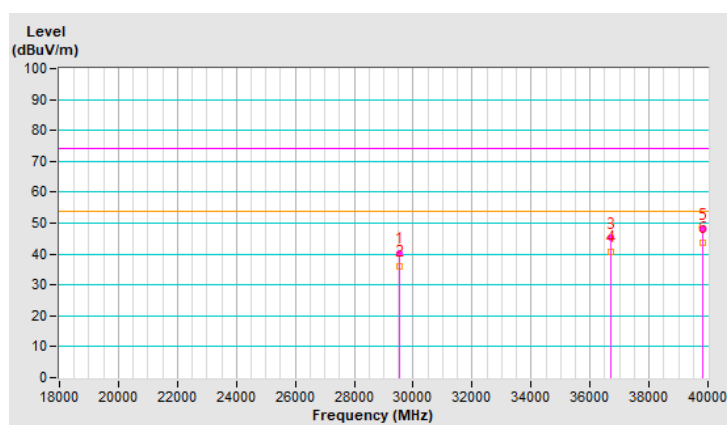
操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 1 : 76.34 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	29540.20	40.2 PK	74.0	-33.8	2.20 V	116	41.4	-1.2
2	29540.20	36.0 AV	54.0	-18.0	2.20 V	116	37.2	-1.2
3	36715.10	45.2 PK	74.0	-28.8	1.44 V	152	42.7	2.5
4	36715.10	40.7 AV	54.0	-13.3	1.44 V	152	38.2	2.5
5	39828.80	48.0 PK	74.0	-26.0	1.34 V	229	41.7	6.3
6	39828.80	43.6 AV	54.0	-10.4	1.34 V	229	37.3	6.3

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.

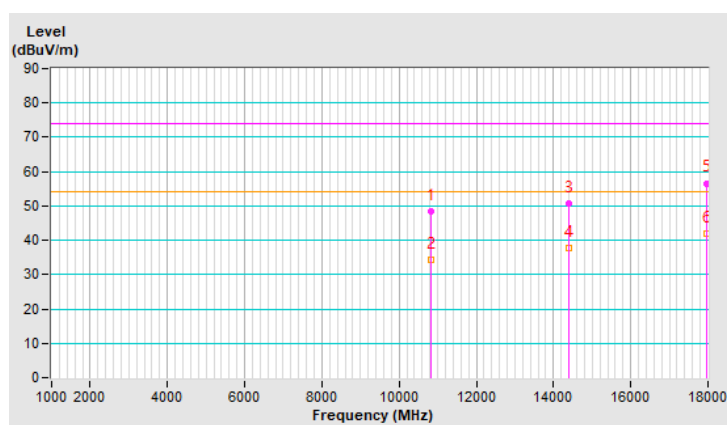


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 2 : 76.58 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	10818.40	48.4 PK	74.0	-25.6	1.38 H	242	35.1	13.3
2	10818.40	34.4 AV	54.0	-19.6	1.38 H	242	21.1	13.3
3	14410.00	50.8 PK	74.0	-23.2	1.83 H	240	34.9	15.9
4	14410.00	37.6 AV	54.0	-16.4	1.83 H	240	21.7	15.9
5	17956.40	56.6 PK	74.0	-17.4	2.45 H	107	34.8	21.8
6	17956.40	41.9 AV	54.0	-12.1	2.45 H	107	20.1	21.8

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.



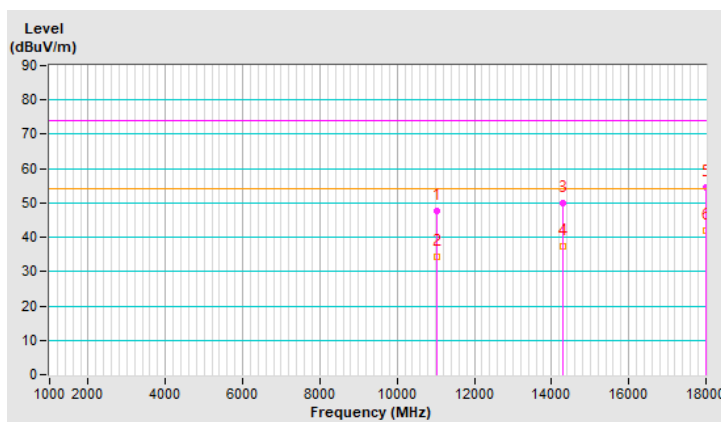
操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 2 : 76.58 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	11014.70	47.6 PK	74.0	-26.4	1.82 V	153	34.6	13.0
2	11014.70	34.4 AV	54.0	-19.6	1.82 V	153	21.4	13.0
3	14285.10	50.0 PK	74.0	-24.0	2.03 V	281	33.7	16.3
4	14285.10	37.3 AV	54.0	-16.7	2.03 V	281	21.0	16.3
5	17998.30	54.4 PK	74.0	-19.6	2.08 V	336	32.2	22.2
6	17998.30	42.0 AV	54.0	-12.0	2.08 V	336	19.8	22.2

Remarks:

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

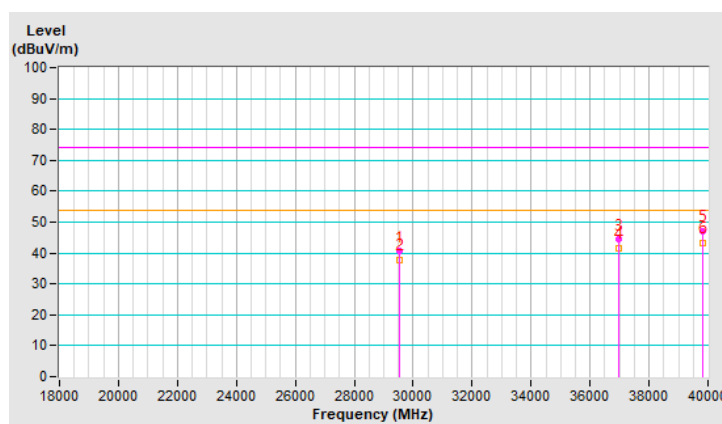


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 2 : 76.58 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	29534.70	40.5 PK	74.0	-33.5	1.69 H	146	41.7	-1.2
2	29534.70	37.8 AV	54.0	-16.2	1.69 H	146	39.0	-1.2
3	36949.90	44.3 PK	74.0	-29.7	2.00 H	188	42.0	2.3
4	36949.90	41.5 AV	54.0	-12.5	2.00 H	188	39.2	2.3
5	39820.00	47.1 PK	74.0	-26.9	1.93 H	235	40.8	6.3
6	39820.00	43.4 AV	54.0	-10.6	1.93 H	235	37.1	6.3

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.

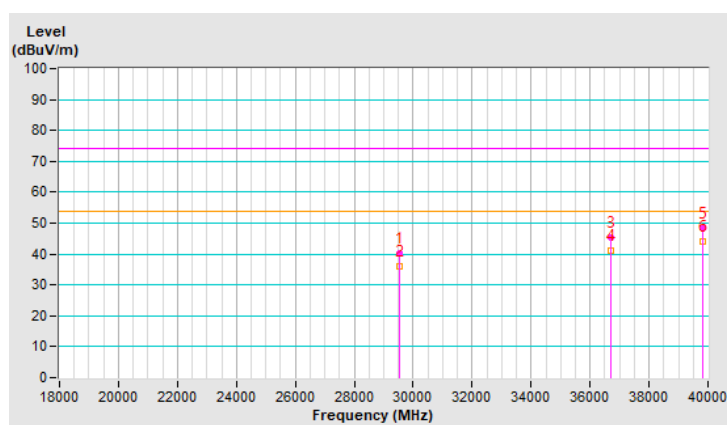


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 2 : 76.58 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	29525.60	40.4 PK	74.0	-33.6	2.16 V	105	41.6	-1.2
2	29525.60	36.1 AV	54.0	-17.9	2.16 V	105	37.3	-1.2
3	36713.30	45.5 PK	74.0	-28.5	1.38 V	163	43.0	2.5
4	36713.30	41.0 AV	54.0	-13.0	1.38 V	163	38.5	2.5
5	39822.80	48.3 PK	74.0	-25.7	1.39 V	225	42.0	6.3
6	39822.80	44.0 AV	54.0	-10.0	1.39 V	225	37.7	6.3

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.

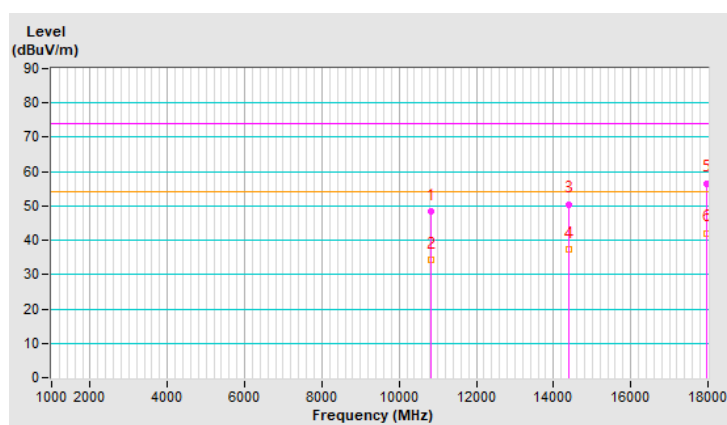


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 3 : 76.67 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	10820.70	48.4 PK	74.0	-25.6	1.38 H	231	35.1	13.3
2	10820.70	34.2 AV	54.0	-19.8	1.38 H	231	20.9	13.3
3	14409.20	50.5 PK	74.0	-23.5	1.76 H	249	34.6	15.9
4	14409.20	37.5 AV	54.0	-16.5	1.76 H	249	21.6	15.9
5	17954.20	56.6 PK	74.0	-17.4	2.46 H	115	34.8	21.8
6	17954.20	42.1 AV	54.0	-11.9	2.46 H	115	20.3	21.8

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.

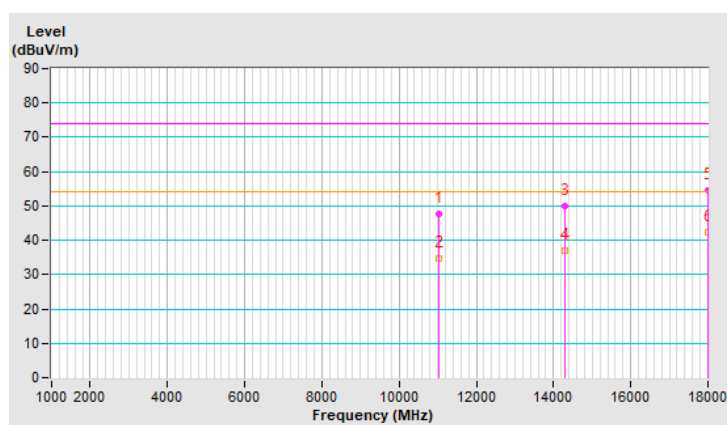


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 3 : 76.67 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	11014.50	47.6 PK	74.0	-26.4	1.87 V	139	34.6	13.0
2	11014.50	34.8 AV	54.0	-19.2	1.87 V	139	21.8	13.0
3	14285.50	50.0 PK	74.0	-24.0	1.97 V	305	33.7	16.3
4	14285.50	37.0 AV	54.0	-17.0	1.97 V	305	20.7	16.3
5	17998.20	54.5 PK	74.0	-19.5	2.15 V	320	32.3	22.2
6	17998.20	42.2 AV	54.0	-11.8	2.15 V	320	20.0	22.2

Remarks:

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

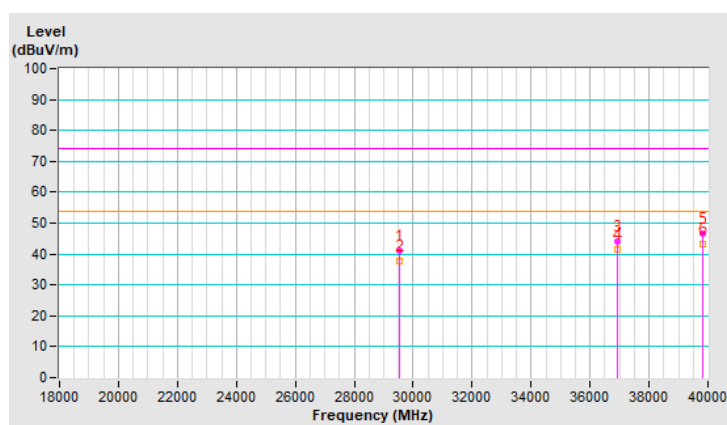


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 3 : 76.67 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	29535.80	41.0 PK	74.0	-33.0	1.74 H	164	42.2	-1.2
2	29535.80	37.9 AV	54.0	-16.1	1.74 H	164	39.1	-1.2
3	36948.40	44.0 PK	74.0	-30.0	2.04 H	201	41.7	2.3
4	36948.40	41.4 AV	54.0	-12.6	2.04 H	201	39.1	2.3
5	39822.20	46.6 PK	74.0	-27.4	1.96 H	229	40.3	6.3
6	39822.20	43.1 AV	54.0	-10.9	1.96 H	229	36.8	6.3

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.

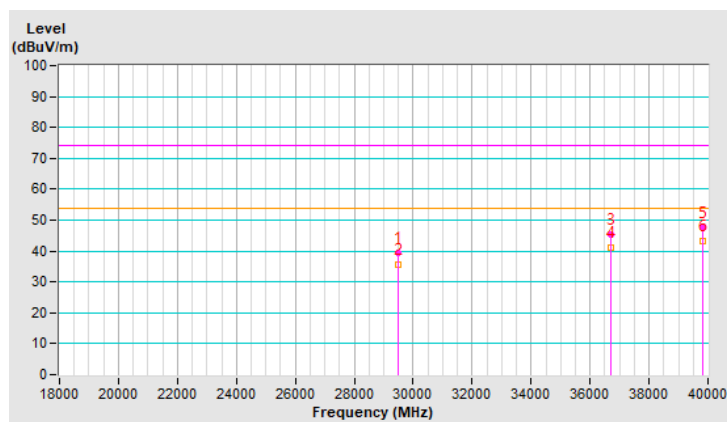


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 3 : 76.67 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	29504.80	39.6 PK	74.0	-34.4	2.16 V	108	40.7	-1.1
2	29504.80	35.7 AV	54.0	-18.3	2.16 V	108	36.8	-1.1
3	36703.20	45.3 PK	74.0	-28.7	1.39 V	147	42.8	2.5
4	36703.20	41.0 AV	54.0	-13.0	1.39 V	147	38.5	2.5
5	39820.30	47.7 PK	74.0	-26.3	1.34 V	225	41.4	6.3
6	39820.30	43.4 AV	54.0	-10.6	1.34 V	225	37.1	6.3

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 1：76.34 GHz	測試儀器：	(AV) RB=1MHz, VB=3MHz
量測場地溫度：	23°C	量測場地濕度：	62%RH
測試日期：	109 年 8 月 17 日	測試者：	廖偉鈺

Antenna Polarity : Horizontal							
No.	Frequency (GHz)	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	42.06	79.98	-24.72	2.982	600	-597.018	Pass
2	72.33	85.77	-18.93	11.313	600	-588.687	Pass
3	75.62	72.71	-31.99	0.559	600	-599.441	Pass
4	100.03	74.72	-29.98	0.888	600	-599.112	Pass
5	165.37	87.87	-16.83	18.347	600	-581.653	Pass
6	193.98	79.02	-25.68	2.391	600	-597.609	Pass
7	229.01	84.04	-20.66	7.596	1000	-992.404	Pass
Antenna Polarity : Vertical							
No.	Frequency (GHz)	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	42.15	81.42	-23.28	4.155	600	-595.845	Pass
2	71.88	90.77	-13.93	35.773	600	-564.227	Pass
3	75.25	78.05	-26.65	1.912	600	-598.088	Pass
4	101.06	74.66	-30.04	0.876	600	-599.124	Pass
5	164.66	90.64	-14.06	34.718	600	-565.282	Pass
6	194.72	78.92	-25.78	2.336	600	-597.664	Pass
7	228.62	84.08	-20.62	7.666	1000	-992.334	Pass

Remarks:

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

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

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

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 3 m 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 : 76.58 GHz	測試儀器：	(AV) RB=1MHz, VB=3MHz
量測場地溫度：	23°C	量測場地濕度：	62%RH
測試日期：	109 年 8 月 17 日	測試者：	廖偉鈺

Antenna Polarity : Horizontal							
No.	Frequency (GHz)	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	42.42	80.24	-24.46	3.166	600	-596.834	Pass
2	72.12	85.48	-19.22	10.582	600	-589.418	Pass
3	75.79	72.73	-31.97	0.562	600	-599.438	Pass
4	100.04	74.94	-29.76	0.934	600	-599.066	Pass
5	165.69	87.95	-16.75	18.688	600	-581.312	Pass
6	193.73	79.35	-25.35	2.580	600	-597.420	Pass
7	229.11	83.90	-20.80	7.355	1000	-992.645	Pass
Antenna Polarity : Vertical							
No.	Frequency (GHz)	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	42.01	81.45	-23.25	4.184	600	-595.816	Pass
2	71.77	90.80	-13.90	36.021	600	-563.979	Pass
3	75.54	77.89	-26.81	1.843	600	-598.157	Pass
4	101.07	74.57	-30.13	0.858	600	-599.142	Pass
5	164.64	90.60	-14.10	34.400	600	-565.600	Pass
6	195.09	78.49	-26.21	2.116	600	-597.884	Pass
7	228.33	84.24	-20.46	7.954	1000	-992.046	Pass

Remarks:

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

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

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

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 3 m distance.

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

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

L is the Largest Antenna Dimension 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 : 76.67 GHz	測試儀器：	(AV) RB=1MHz, VB=3MHz
量測場地溫度：	23°C	量測場地濕度：	62%RH
測試日期：	109 年 8 月 17 日	測試者：	廖偉鈺

Antenna Polarity : Horizontal							
No.	Frequency (GHz)	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	42.07	80.28	-24.42	3.196	600	-596.804	Pass
2	72.19	85.46	-19.24	10.533	600	-589.467	Pass
3	75.72	72.85	-31.85	0.578	600	-599.422	Pass
4	100.16	74.82	-29.88	0.909	600	-599.091	Pass
5	165.78	87.67	-17.03	17.521	600	-582.479	Pass
6	193.85	79.22	-25.48	2.504	600	-597.496	Pass
7	228.67	84.12	-20.58	7.737	1000	-992.263	Pass
Antenna Polarity : Vertical							
No.	Frequency (GHz)	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	42.12	81.84	-22.86	4.577	600	-595.423	Pass
2	71.78	90.76	-13.94	35.691	600	-564.309	Pass
3	75.31	77.84	-26.86	1.822	600	-598.178	Pass
4	101.27	74.50	-30.20	0.844	600	-599.156	Pass
5	164.93	90.61	-14.09	34.479	600	-565.521	Pass
6	194.95	78.58	-26.12	2.161	600	-597.839	Pass
7	228.60	84.05	-20.65	7.613	1000	-992.387	Pass

Remarks:

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

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

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

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 3 m distance.

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

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

L is the Largest Antenna Dimension 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 (SR 模式)

4.7.1 混附發射接收

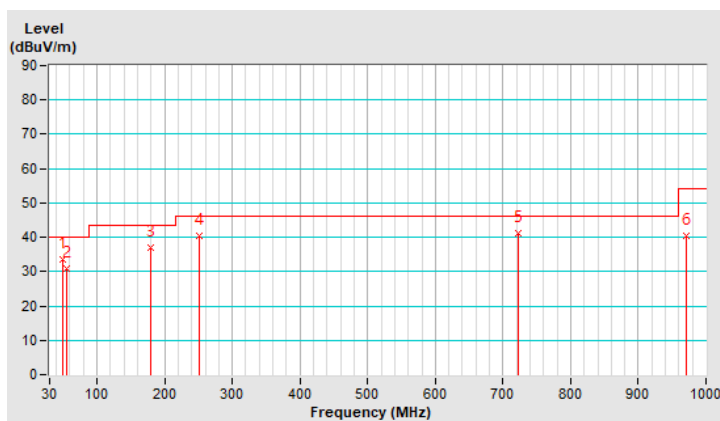
Below 1GHz Data

操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 1：76.45 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：	109 年 4 月 18 日	測試者：	鄭又瑋

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	50.30	33.5 QP	40.0	-6.5	1.19 H	240	41.2	-7.7
2	55.00	30.9 QP	40.0	-9.1	1.05 H	86	39.0	-8.1
3	180.00	37.0 QP	43.5	-6.5	1.09 H	133	45.7	-8.7
4	251.00	40.3 QP	46.0	-5.7	1.91 H	174	48.6	-8.3
5	721.90	41.3 QP	46.0	-4.7	2.16 H	234	38.5	2.8
6	971.60	40.5 QP	54.0	-13.5	1.22 H	81	33.8	6.7

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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.



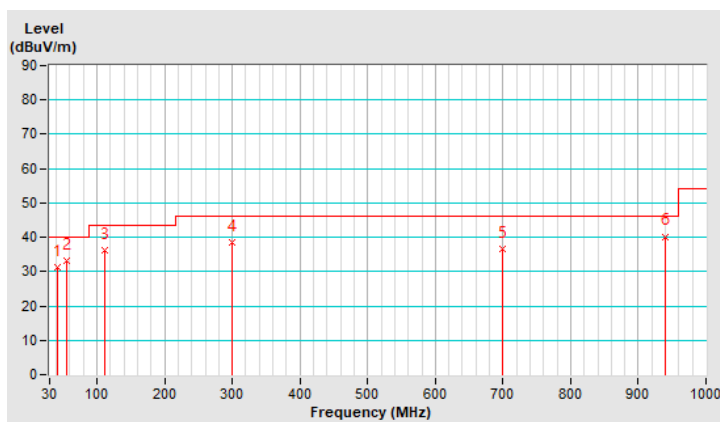
操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 1 : 76.45 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	41.50	31.2 QP	40.0	-8.8	1.01 V	114	39.2	-8.0
2	54.40	33.2 QP	40.0	-6.8	1.09 V	192	41.2	-8.0
3	110.70	36.2 QP	43.5	-7.3	1.00 V	60	46.5	-10.3
4	300.20	38.6 QP	46.0	-7.4	1.51 V	219	44.9	-6.3
5	699.50	36.7 QP	46.0	-9.3	2.04 V	77	34.1	2.6
6	940.60	40.2 QP	46.0	-5.8	1.05 V	223	33.6	6.6

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 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.

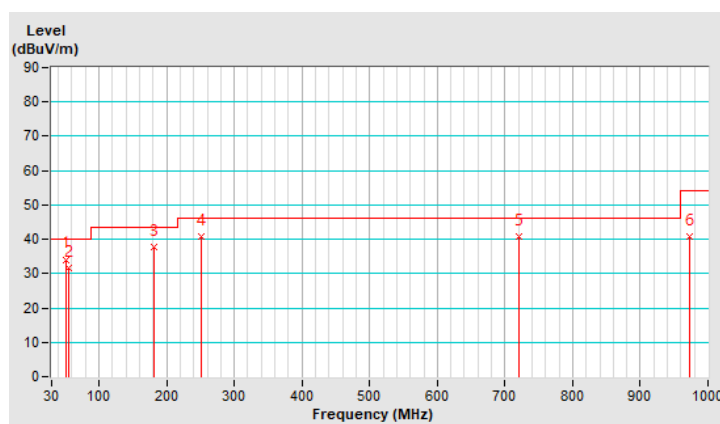


操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 2 : 76.58 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	50.90	34.1 QP	40.0	-5.9	1.18 H	245	41.8	-7.7
2	55.80	31.7 QP	40.0	-8.3	1.02 H	90	39.6	-7.9
3	180.60	37.6 QP	43.5	-5.9	1.06 H	141	46.4	-8.8
4	251.40	40.8 QP	46.0	-5.2	1.93 H	180	49.1	-8.3
5	721.30	40.8 QP	46.0	-5.2	2.14 H	242	38.0	2.8
6	972.20	40.9 QP	54.0	-13.1	1.16 H	85	34.1	6.8

Remarks:

1. Emission Level(dBuV/m) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. 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.



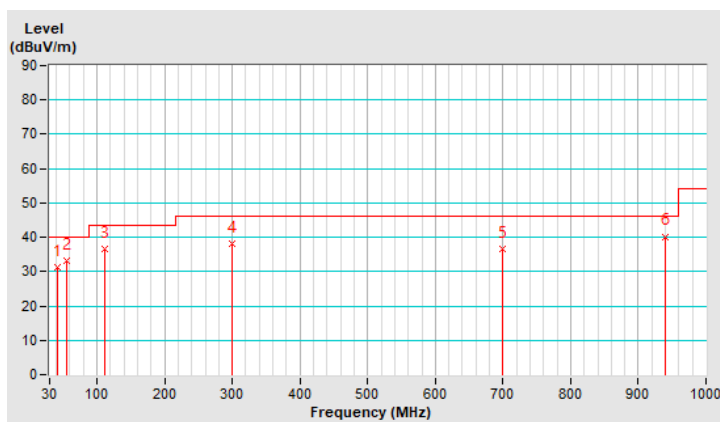
操作模式：	發射接收	頻率範圍：	Below 1GHz
基本波頻率：	CH 2 : 76.58 GHz	測試儀器：	(QP) RB=120kHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	41.30	31.1 QP	40.0	-8.9	1.05 V	114	39.1	-8.0
2	54.60	33.1 QP	40.0	-6.9	1.13 V	183	41.1	-8.0
3	111.20	36.6 QP	43.5	-6.9	1.06 V	69	46.9	-10.3
4	299.50	38.0 QP	46.0	-8.0	1.51 V	221	44.4	-6.4
5	699.20	36.6 QP	46.0	-9.4	2.09 V	82	34.0	2.6
6	940.40	40.2 QP	46.0	-5.8	1.10 V	237	33.7	6.5

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 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.



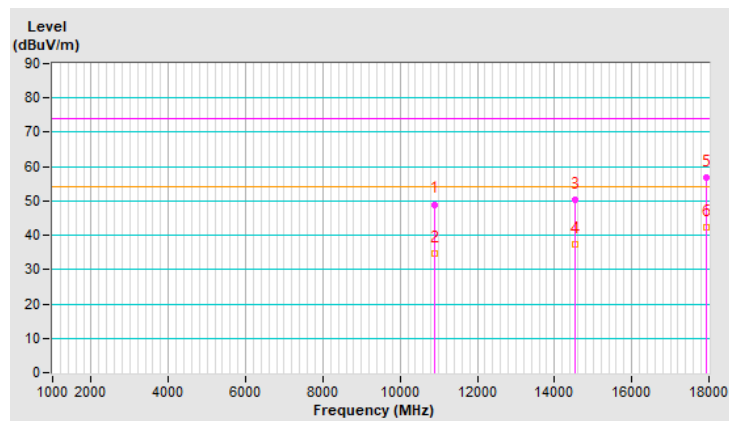
Above 1GHz Data

操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 1 : 76.45 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：	109 年 4 月 18 日	測試者：	鄭又瑋

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	10910.20	49.0 PK	74.0	-25.0	1.43 H	236	35.3	13.7
2	10910.20	34.8 AV	54.0	-19.2	1.43 H	236	21.1	13.7
3	14520.40	50.3 PK	74.0	-23.7	1.79 H	259	34.5	15.8
4	14520.40	37.2 AV	54.0	-16.8	1.79 H	259	21.4	15.8
5	17940.40	56.9 PK	74.0	-17.1	2.44 H	87	35.4	21.5
6	17940.40	42.3 AV	54.0	-11.7	2.44 H	87	20.8	21.5

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.



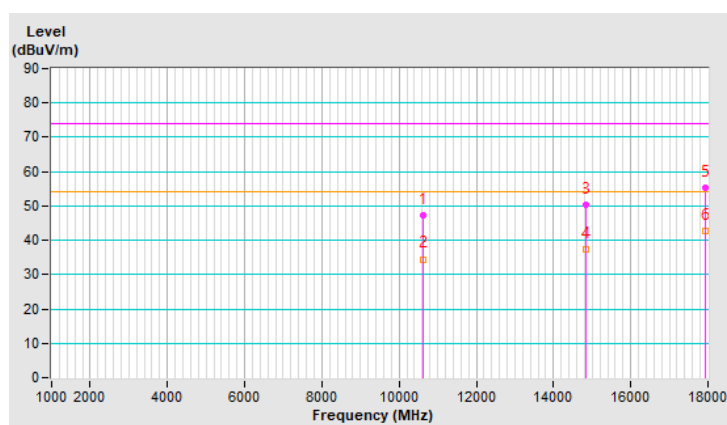
操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 1 : 76.45 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	10607.55	47.1 PK	74.0	-26.9	1.80 V	167	34.2	12.9
2	10607.55	34.5 AV	54.0	-19.5	1.80 V	167	21.6	12.9
3	14826.52	50.2 PK	74.0	-23.8	2.06 V	280	34.4	15.8
4	14826.52	37.4 AV	54.0	-16.6	2.06 V	280	21.6	15.8
5	17922.65	55.2 PK	74.0	-18.8	2.07 V	338	33.8	21.4
6	17922.65	42.6 AV	54.0	-11.4	2.07 V	338	21.2	21.4

Remarks:

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

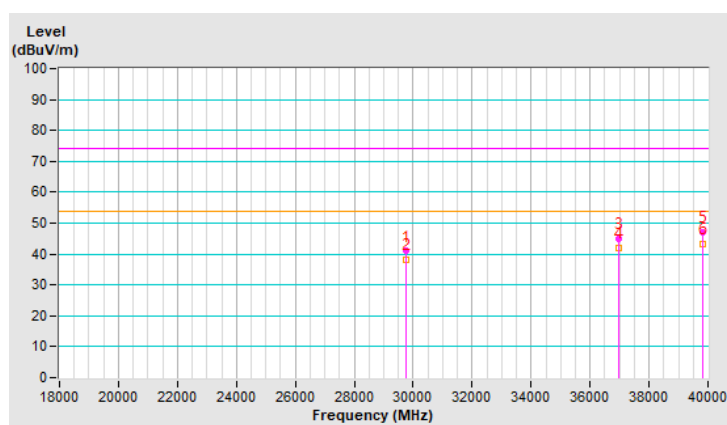


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 1 : 76.45 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	29774.30	40.9 PK	74.0	-33.1	1.68 H	160	42.0	-1.1
2	29774.30	38.1 AV	54.0	-15.9	1.68 H	160	39.2	-1.1
3	36950.30	44.8 PK	74.0	-29.2	2.02 H	213	42.5	2.3
4	36950.30	42.1 AV	54.0	-11.9	2.02 H	213	39.8	2.3
5	39833.80	47.0 PK	74.0	-27.0	1.94 H	235	40.6	6.4
6	39833.80	43.2 AV	54.0	-10.8	1.94 H	235	36.8	6.4

Remarks:

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



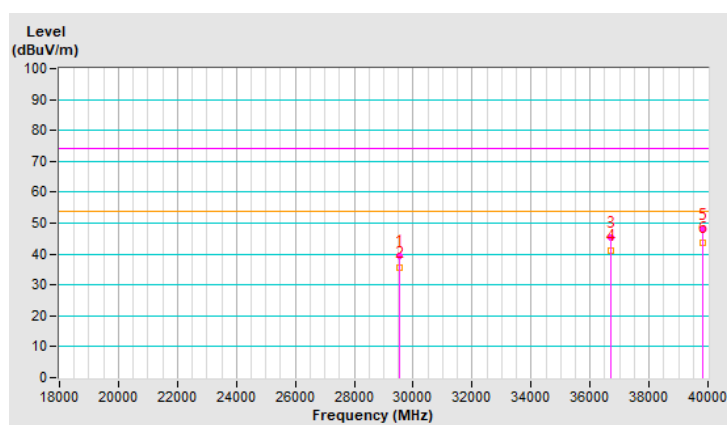
操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 1 : 76.45 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	29525.40	39.5 PK	74.0	-34.5	2.23 V	101	40.7	-1.2
2	29525.40	35.6 AV	54.0	-18.4	2.23 V	101	36.8	-1.2
3	36720.40	45.5 PK	74.0	-28.5	1.44 V	160	42.9	2.6
4	36720.40	41.2 AV	54.0	-12.8	1.44 V	160	38.6	2.6
5	39828.80	47.8 PK	74.0	-26.2	1.29 V	215	41.5	6.3
6	39828.80	43.7 AV	54.0	-10.3	1.29 V	215	37.4	6.3

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.

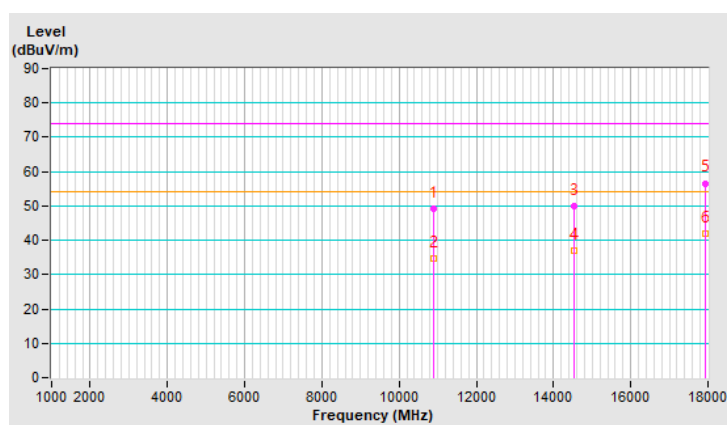


操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 2 : 76.58 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	10910.40	49.1 PK	74.0	-24.9	1.43 H	242	35.4	13.7
2	10910.40	34.8 AV	54.0	-19.2	1.43 H	242	21.1	13.7
3	14520.60	49.8 PK	74.0	-24.2	1.76 H	253	34.0	15.8
4	14520.60	37.0 AV	54.0	-17.0	1.76 H	253	21.2	15.8
5	17939.90	56.6 PK	74.0	-17.4	2.42 H	87	35.1	21.5
6	17939.90	42.0 AV	54.0	-12.0	2.42 H	87	20.5	21.5

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.



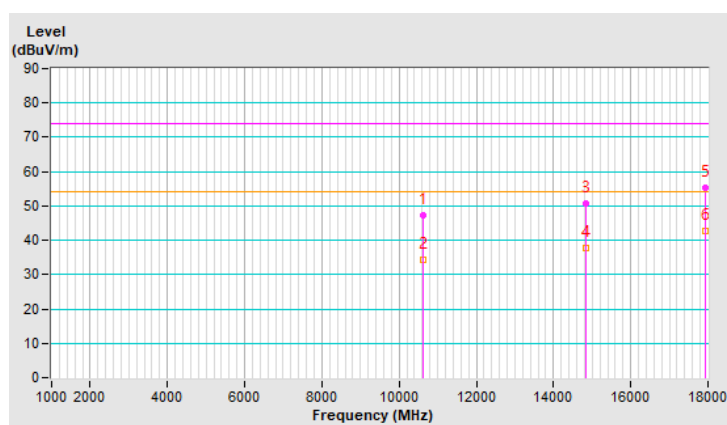
操作模式：	發射接收	頻率範圍：	1GHz ~ 18GHz
基本波頻率：	CH 2 : 76.58 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	10607.80	47.1 PK	74.0	-26.9	1.84 V	179	34.2	12.9
2	10607.80	34.2 AV	54.0	-19.8	1.84 V	179	21.3	12.9
3	14827.20	50.6 PK	74.0	-23.4	2.09 V	277	34.8	15.8
4	14827.20	37.7 AV	54.0	-16.3	2.09 V	277	21.9	15.8
5	17922.90	55.4 PK	74.0	-18.6	2.01 V	346	34.0	21.4
6	17922.90	42.6 AV	54.0	-11.4	2.01 V	346	21.2	21.4

Remarks:

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

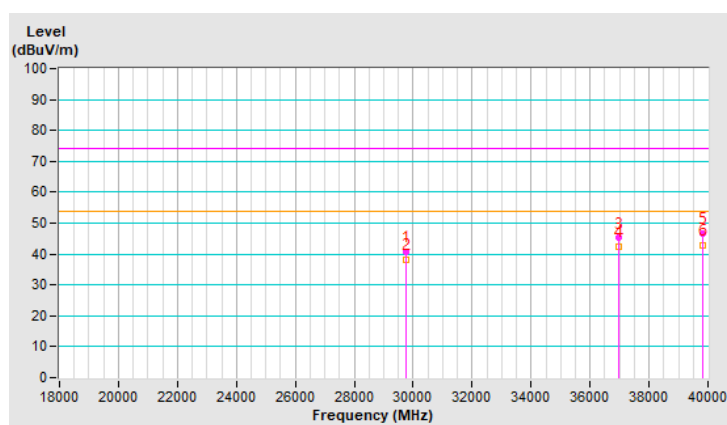


操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 2 : 76.58 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	29774.20	40.7 PK	74.0	-33.3	1.63 H	174	41.8	-1.1
2	29774.20	38.1 AV	54.0	-15.9	1.63 H	174	39.2	-1.1
3	36951.30	45.2 PK	74.0	-28.8	2.03 H	225	42.9	2.3
4	36951.30	42.3 AV	54.0	-11.7	2.03 H	225	40.0	2.3
5	39833.30	46.8 PK	74.0	-27.2	1.98 H	240	40.4	6.4
6	39833.30	42.7 AV	54.0	-11.3	1.98 H	240	36.3	6.4

Remarks:

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



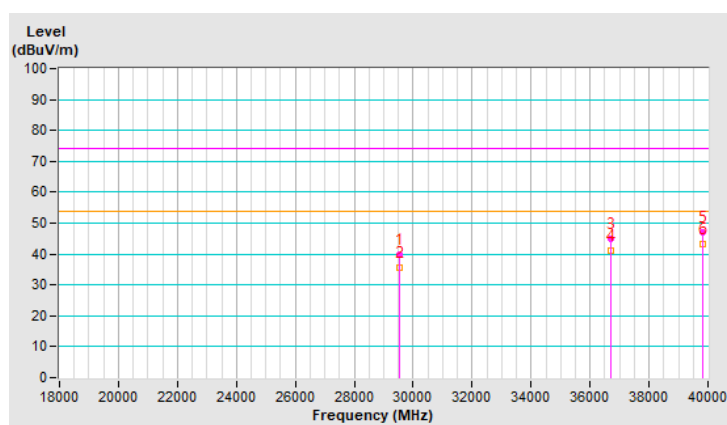
操作模式：	發射接收	頻率範圍：	18GHz ~ 40GHz
基本波頻率：	CH 2 : 76.58 GHz	測試儀器：	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度：	25°C	量測場地濕度：	75%RH
測試日期：	109 年 4 月 18 日	測試者：	鄭又瑋

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	29525.70	40.0 PK	74.0	-34.0	2.29 V	100	41.2	-1.2
2	29525.70	35.8 AV	54.0	-18.2	2.29 V	100	37.0	-1.2
3	36720.10	45.1 PK	74.0	-28.9	1.48 V	171	42.5	2.6
4	36720.10	41.0 AV	54.0	-13.0	1.48 V	171	38.4	2.6
5	39828.00	47.1 PK	74.0	-26.9	1.32 V	217	40.8	6.3
6	39828.00	43.3 AV	54.0	-10.7	1.32 V	217	37.0	6.3

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 1：76.45 GHz	測試儀器：	(AV) RB=1MHz, VB=3MHz
量測場地溫度：	23°C	量測場地濕度：	62%RH
測試日期：	109 年 8 月 17 日	測試者：	廖偉鈺

Antenna Polarity : Horizontal							
No.	Frequency (GHz)	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	42.37	80.27	-24.43	3.188	600	-596.812	Pass
2	72.05	85.45	-19.25	10.509	600	-589.491	Pass
3	75.76	72.61	-32.09	0.546	600	-599.454	Pass
4	100.11	74.66	-30.04	0.876	600	-599.124	Pass
5	165.46	87.99	-16.71	18.861	600	-581.139	Pass
6	193.68	79.13	-25.57	2.452	600	-597.548	Pass
7	228.92	83.97	-20.73	7.474	1000	-992.526	Pass
Antenna Polarity : Vertical							
No.	Frequency (GHz)	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	41.93	81.60	-23.10	4.331	600	-595.669	Pass
2	71.88	90.51	-14.19	33.695	600	-566.305	Pass
3	75.49	77.69	-27.01	1.760	600	-598.240	Pass
4	100.96	74.23	-30.47	0.794	600	-599.206	Pass
5	164.54	90.65	-14.05	34.798	600	-565.202	Pass
6	194.85	78.72	-25.98	2.231	600	-597.769	Pass
7	228.49	83.98	-20.72	7.491	1000	-992.509	Pass

Remarks:

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

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

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

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 3 m 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 : 76.58 GHz	測試儀器：	(AV) RB=1MHz, VB=3MHz
量測場地溫度：	23°C	量測場地濕度：	62%RH
測試日期：	109 年 8 月 17 日	測試者：	廖偉鈺

Antenna Polarity : Horizontal							
No.	Frequency (GHz)	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	42.46	80.09	-24.61	3.059	600	-596.941	Pass
2	72.21	85.82	-18.88	11.444	600	-588.556	Pass
3	75.66	72.84	-31.86	0.576	600	-599.424	Pass
4	100.50	74.71	-29.99	0.886	600	-599.114	Pass
5	165.61	87.91	-16.79	18.517	600	-581.483	Pass
6	193.97	78.95	-25.75	2.353	600	-597.647	Pass
7	228.74	84.10	-20.60	7.701	1000	-992.299	Pass
Antenna Polarity : Vertical							
No.	Frequency (GHz)	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	42.16	81.52	-23.18	4.252	600	-595.748	Pass
2	72.08	90.43	-14.27	33.080	600	-566.920	Pass
3	75.25	77.96	-26.74	1.873	600	-598.127	Pass
4	101.12	74.66	-30.04	0.876	600	-599.124	Pass
5	164.85	90.34	-14.36	32.401	600	-567.599	Pass
6	194.88	78.96	-25.74	2.358	600	-597.642	Pass
7	228.64	84.19	-20.51	7.862	1000	-992.138	Pass

Remarks:

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

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

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

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 3 m distance.

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

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

L is the Largest Antenna Dimension 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: 200408E03)

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。

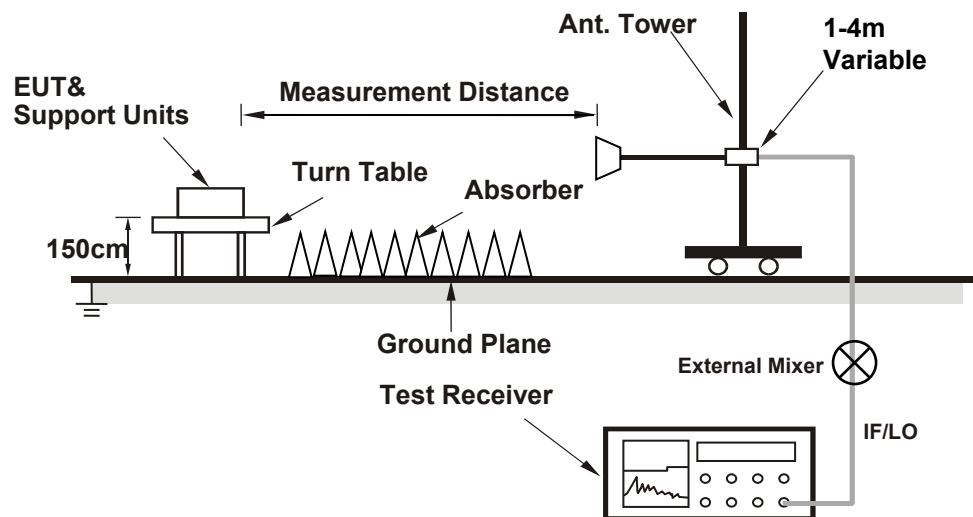
5.2 量測方法

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 (LR 模式)

操作模式	發射	測試日期	109 年 8 月 17 日
基本波頻率：	CH 1 : 76.15 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	23°C	量測場地濕度	62%RH
測試者	廖偉鈺		

Antenna Polarity : Horizontal						
No.	Frequency (GHz)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	EIRP Limit (dBm/MHz)	Pass/Fail	Detector
1	76.15	123.309	20.888	55	Pass	Peak
2	76.15	118.517	16.096	50	Pass	Average
Antenna Polarity : Vertical						
No.	Frequency (MHz)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	EIRP Limit (dBm/MHz)	Pass/Fail	Detector
1	76.15	94.329	-8.092	55	Pass	Peak
2	76.15	89.965	-12.456	50	Pass	Average

Remarks:

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

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 1.3 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)
76.15	0.05	0.00394	1.269

操作模式	發射	測試日期	109 年 8 月 17 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	23°C	量測場地濕度	62%RH
測試者	廖偉鈺		

Antenna Polarity : Horizontal						
No.	Frequency (GHz)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	EIRP Limit (dBm/MHz)	Pass/Fail	Detector
1	76.53	119.803	17.382	55	Pass	Peak
2	76.53	114.997	12.576	50	Pass	Average
Antenna Polarity : Vertical						
No.	Frequency (MHz)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	EIRP Limit (dBm/MHz)	Pass/Fail	Detector
1	76.53	90.385	-12.036	55	Pass	Peak
2	76.53	86.502	-15.919	50	Pass	Average

Remarks:

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

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 1.3 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	109 年 8 月 17 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	23°C	量測場地濕度	62%RH
測試者	廖偉鈺		

Antenna Polarity : Horizontal						
No.	Frequency (GHz)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	EIRP Limit (dBm/MHz)	Pass/Fail	Detector
1	76.83	118.998	16.577	55	Pass	Peak
2	76.83	112.984	10.563	50	Pass	Average
Antenna Polarity : Vertical						
No.	Frequency (MHz)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	EIRP Limit (dBm/MHz)	Pass/Fail	Detector
1	76.83	89.783	-12.638	55	Pass	Peak
2	76.83	84.862	-17.559	50	Pass	Average

Remarks:

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

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 1.3 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	0.00390	1.282

5.6 量測結果 (MR 模式)

操作模式	發射	測試日期	109 年 8 月 17 日
基本波頻率：	CH 1 : 76.34 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	23°C	量測場地濕度	62%RH
測試者	廖偉鈺		

Antenna Polarity : Horizontal						
No.	Frequency (GHz)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	EIRP Limit (dBm/MHz)	Pass/Fail	Detector
1	76.34	116.207	13.786	55	Pass	Peak
2	76.34	114.095	11.674	50	Pass	Average
Antenna Polarity : Vertical						
No.	Frequency (MHz)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	EIRP Limit (dBm/MHz)	Pass/Fail	Detector
1	76.34	90.774	-11.647	55	Pass	Peak
2	76.34	87.616	-14.805	50	Pass	Average

Remarks:

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

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 1.3 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)
76.34	0.05	0.00393	1.272

操作模式	發射	測試日期	109 年 8 月 17 日
基本波頻率：	CH 2 : 76.58 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	23°C	量測場地濕度	62%RH
測試者	廖偉鈺		

Antenna Polarity : Horizontal						
No.	Frequency (GHz)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	EIRP Limit (dBm/MHz)	Pass/Fail	Detector
1	76.58	113.321	10.900	55	Pass	Peak
2	76.58	108.374	5.953	50	Pass	Average
Antenna Polarity : Vertical						
No.	Frequency (MHz)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	EIRP Limit (dBm/MHz)	Pass/Fail	Detector
1	76.58	94.123	-8.298	55	Pass	Peak
2	76.58	89.084	-13.337	50	Pass	Average

Remarks:

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

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 1.3 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)
76.58	0.05	0.00392	1.276

操作模式	發射	測試日期	109 年 8 月 17 日
基本波頻率：	CH 3 : 76.67 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	23°C	量測場地濕度	62%RH
測試者	廖偉鈺		

Antenna Polarity : Horizontal						
No.	Frequency (GHz)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	EIRP Limit (dBm/MHz)	Pass/Fail	Detector
1	76.67	115.721	13.300	55	Pass	Peak
2	76.67	110.607	8.186	50	Pass	Average
Antenna Polarity : Vertical						
No.	Frequency (MHz)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	EIRP Limit (dBm/MHz)	Pass/Fail	Detector
1	76.67	90.631	-11.790	55	Pass	Peak
2	76.67	86.820	-15.601	50	Pass	Average

Remarks:

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

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 1.3 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)
76.670	0.05	0.00391	1.279

5.7 量測結果 (SR 模式)

操作模式	發射	測試日期	109 年 8 月 17 日
基本波頻率：	CH 1 : 76.45 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	23°C	量測場地濕度	62%RH
測試者	廖偉鈺		

Antenna Polarity : Horizontal						
No.	Frequency (GHz)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	EIRP Limit (dBm/MHz)	Pass/Fail	Detector
1	76.45	115.605	13.184	55	Pass	Peak
2	76.45	110.696	8.275	50	Pass	Average
Antenna Polarity : Vertical						
No.	Frequency (MHz)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	EIRP Limit (dBm/MHz)	Pass/Fail	Detector
1	76.45	82.711	-19.710	55	Pass	Peak
2	76.45	81.453	-20.968	50	Pass	Average

Remarks:

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

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 1.3 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)
76.45	0.05	0.00392	1.276

操作模式	發射	測試日期	109 年 8 月 17 日
基本波頻率：	CH 2 : 76.58 GHz	測試儀器	(PK) RB=1MHz, VB=3MHz (AV) RB=1MHz, VB=3MHz
量測場地溫度	23°C	量測場地濕度	62%RH
測試者	廖偉鈺		

Antenna Polarity : Horizontal						
No.	Frequency (GHz)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	EIRP Limit (dBm/MHz)	Pass/Fail	Detector
1	76.58	113.863	11.442	55	Pass	Peak
2	76.58	108.266	5.845	50	Pass	Average
Antenna Polarity : Vertical						
No.	Frequency (MHz)	E _{Meas} (dBμV/m)	EIRP Level (dBm/MHz)	EIRP Limit (dBm/MHz)	Pass/Fail	Detector
1	76.58	87.922	-14.499	55	Pass	Peak
2	76.58	84.587	-17.834	50	Pass	Average

Remarks:

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

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 1.3 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)
76.580	0.05	0.00392	1.276

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

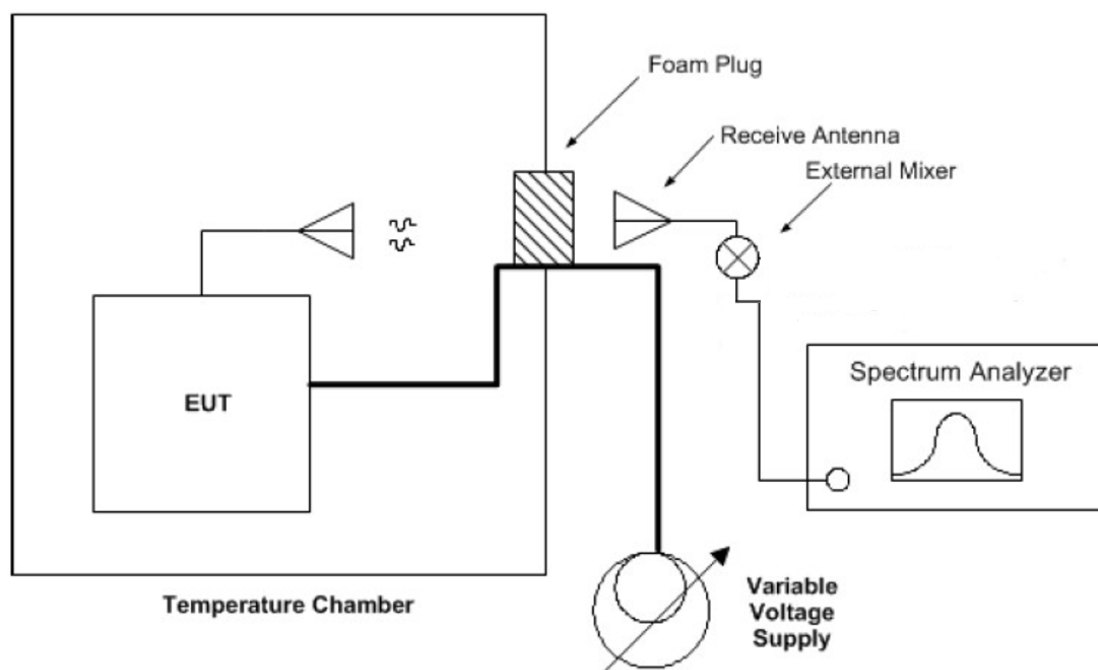
- 將待測物之天線對準接收天線並連至測試儀器。
- 設定待測物為無調變狀況,設定解析頻寬為 10 kHz,視訊頻寬大於解析頻寬。
- 觀察其頻率飄移的狀況。
- 依不同溫度和電壓變化狀況,依上面步驟重覆測試。
- 將所測的頻率飄移狀況記錄於報告內。

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	Jan. 20, 2020	Jan. 19, 2022
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	May 29, 2020	May 28, 2021
Fixed Attenuator Mini-Circuits	MDCS18N-10	MDCS18N-10-01	Apr. 14, 2020	Apr. 13, 2021
DC Power Supply Topward	6603D	795558	NA	NA
Temperature & Humidity Chamber Giant Force	GTH-150-40-SP-AR	MAA0812-008	Jan. 16, 2020	Jan. 15, 2021
True RMS Clamp Meter FLUKE	325	31130711WS	June 06, 2020	June 05, 2021

- 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 (LR 模式)

操作模式：	發射	測試日期：	109年8月18日
量測場地溫度：	23°C	量測場地濕度：	62%RH
測試者：	廖偉鈞		

Frequency Stability Versus Voltage													
Test Frequency :		76150 MHz		Frequency Range (MHz) :		76000 ~ 77000			fulk		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
85	12	76035.28	76277.62	Pass	76035.29	76277.67	Pass	76035.30	76277.63	Pass	76035.28	76277.66	Pass
80	12	76035.20	76277.36	Pass	76035.23	76277.41	Pass	76035.23	76277.36	Pass	76035.24	76277.37	Pass
70	12	76034.69	76278.03	Pass	76034.69	76278.00	Pass	76034.67	76277.99	Pass	76034.70	76277.98	Pass
60	12	76034.92	76277.49	Pass	76034.95	76277.46	Pass	76034.90	76277.48	Pass	76034.93	76277.46	Pass
50	12	76034.70	76277.63	Pass	76034.75	76277.66	Pass	76034.76	76277.63	Pass	76034.70	76277.67	Pass
40	12	76035.01	76277.49	Pass	76035.06	76277.47	Pass	76035.02	76277.49	Pass	76035.00	76277.51	Pass
30	12	76035.01	76277.72	Pass	76035.02	76277.72	Pass	76035.00	76277.73	Pass	76035.01	76277.78	Pass
20	12	76034.79	76277.54	Pass	76034.80	76277.53	Pass	76034.80	76277.54	Pass	76034.80	76277.55	Pass
10	12	76034.65	76277.64	Pass	76034.68	76277.62	Pass	76034.65	76277.59	Pass	76034.65	76277.62	Pass
0	12	76034.93	76277.49	Pass	76034.90	76277.48	Pass	76034.93	76277.49	Pass	76034.91	76277.43	Pass
-10	12	76034.64	76278.02	Pass	76034.66	76278.04	Pass	76034.62	76278.03	Pass	76034.62	76278.04	Pass
-20	12	76034.91	76277.63	Pass	76034.88	76277.62	Pass	76034.89	76277.59	Pass	76034.90	76277.59	Pass
-30	12	76035.37	76277.62	Pass	76035.33	76277.63	Pass	76035.37	76277.61	Pass	76035.38	76277.60	Pass
-40	12	76034.69	76277.79	Pass	76034.67	76277.78	Pass	76034.68	76277.79	Pass	76034.69	76277.77	Pass

Frequency Stability Versus Voltage													
Test Frequency :		76150 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	76034.78	76277.54	Pass	76034.79	76277.53	Pass	76034.79	76277.55	Pass	76034.80	76277.56	Pass
	12	76034.79	76277.54	Pass	76034.80	76277.53	Pass	76034.80	76277.54	Pass	76034.80	76277.55	Pass
	10.2	76034.77	76277.55	Pass	76034.80	76277.52	Pass	76034.79	76277.54	Pass	76034.80	76277.56	Pass

6.6 量測結果 (MR 模式)

操作模式：	發射	測試日期：	109年8月18日
量測場地溫度：	23℃	量測場地濕度：	62%RH
測試者：	廖偉鈞		

Frequency Stability Versus Voltage													
Test Frequency :		76340 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
85	12	76041.35	76624.82	Pass	76041.38	76624.84	Pass	76041.32	76624.81	Pass	76041.32	76624.81	Pass
80	12	76040.89	76625.24	Pass	76040.93	76625.25	Pass	76040.89	76625.24	Pass	76040.88	76625.23	Pass
70	12	76041.01	76625.51	Pass	76041.03	76625.55	Pass	76041.00	76625.52	Pass	76041.03	76625.55	Pass
60	12	76040.70	76624.95	Pass	76040.73	76624.94	Pass	76040.70	76624.96	Pass	76040.75	76624.94	Pass
50	12	76040.95	76625.35	Pass	76040.94	76625.36	Pass	76040.90	76625.32	Pass	76040.97	76625.36	Pass
40	12	76040.79	76625.01	Pass	76040.80	76625.00	Pass	76040.79	76624.99	Pass	76040.85	76624.94	Pass
30	12	76041.04	76625.21	Pass	76040.97	76625.19	Pass	76040.98	76625.20	Pass	76040.99	76625.23	Pass
20	12	76040.79	76625.33	Pass	76040.75	76625.31	Pass	76040.82	76625.34	Pass	76040.77	76625.36	Pass
10	12	76040.76	76625.25	Pass	76040.75	76625.23	Pass	76040.76	76625.23	Pass	76040.70	76625.22	Pass
0	12	76040.62	76625.08	Pass	76040.65	76625.05	Pass	76040.61	76625.08	Pass	76040.65	76625.06	Pass
-10	12	76040.92	76625.50	Pass	76040.90	76625.47	Pass	76040.86	76625.49	Pass	76040.86	76625.46	Pass
-20	12	76041.25	76625.13	Pass	76041.23	76625.10	Pass	76041.28	76625.08	Pass	76041.27	76625.09	Pass
-30	12	76041.04	76625.38	Pass	76041.09	76625.40	Pass	76041.07	76625.42	Pass	76041.05	76625.40	Pass
-40	12	76041.06	76625.31	Pass	76041.06	76625.33	Pass	76041.07	76625.27	Pass	76041.01	76625.33	Pass

Frequency Stability Versus Voltage													
Test Frequency :		76340 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	76040.80	76625.33	Pass	76040.74	76625.32	Pass	76040.82	76625.34	Pass	76040.76	76625.36	Pass
	12	76040.79	76625.33	Pass	76040.75	76625.31	Pass	76040.82	76625.34	Pass	76040.77	76625.36	Pass
	10.2	76040.79	76625.32	Pass	76040.75	76625.33	Pass	76040.81	76625.33	Pass	76040.79	76625.37	Pass

6.7 量測結果 (SR 模式)

操作模式：	發射	測試日期：	109年8月18日
量測場地溫度：	23°C	量測場地濕度：	62%RH
測試者：	廖偉鈞		

Frequency Stability Versus Voltage													
Test Frequency :		76450 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
85	12	76050.90	76857.76	Pass	76050.88	76857.68	Pass	76050.88	76857.70	Pass	76050.87	76857.71	Pass
80	12	76051.08	76857.47	Pass	76051.07	76857.45	Pass	76051.04	76857.50	Pass	76051.06	76857.45	Pass
70	12	76051.05	76857.14	Pass	76051.07	76857.13	Pass	76051.01	76857.14	Pass	76051.04	76857.14	Pass
60	12	76051.17	76857.25	Pass	76051.22	76857.24	Pass	76051.19	76857.28	Pass	76051.22	76857.27	Pass
50	12	76050.97	76857.76	Pass	76050.97	76857.74	Pass	76051.04	76857.78	Pass	76051.02	76857.72	Pass
40	12	76050.68	76857.22	Pass	76050.74	76857.15	Pass	76050.74	76857.20	Pass	76050.73	76857.16	Pass
30	12	76051.31	76857.69	Pass	76051.32	76857.68	Pass	76051.28	76857.75	Pass	76051.33	76857.71	Pass
20	12	76051.36	76857.16	Pass	76051.40	76857.21	Pass	76051.35	76857.20	Pass	76051.33	76857.19	Pass
10	12	76050.76	76857.18	Pass	76050.78	76857.15	Pass	76050.77	76857.20	Pass	76050.71	76857.17	Pass
0	12	76050.80	76857.54	Pass	76050.77	76857.54	Pass	76050.76	76857.54	Pass	76050.83	76857.57	Pass
-10	12	76050.73	76857.20	Pass	76050.71	76857.24	Pass	76050.72	76857.21	Pass	76050.77	76857.22	Pass
-20	12	76051.06	76857.09	Pass	76051.05	76857.10	Pass	76051.06	76857.06	Pass	76051.09	76857.03	Pass
-30	12	76051.02	76857.15	Pass	76051.07	76857.21	Pass	76051.06	76857.21	Pass	76051.00	76857.21	Pass
-40	12	76050.89	76857.15	Pass	76050.89	76857.18	Pass	76050.94	76857.14	Pass	76050.88	76857.19	Pass

Frequency Stability Versus Voltage													
Test Frequency :		76450 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	76051.34	76857.15	Pass	76051.39	76857.20	Pass	76051.34	76857.20	Pass	76051.34	76857.20	Pass
	12	76051.36	76857.16	Pass	76051.40	76857.21	Pass	76051.35	76857.20	Pass	76051.33	76857.19	Pass
	10.2	76051.34	76857.16	Pass	76051.41	76857.22	Pass	76051.36	76857.20	Pass	76051.34	76857.20	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	16.096	40.700	20	0.00810	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

您也可以在我們的網站內找到各實驗室的地圖。

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