



晶復科技股份有限公司

A Test Lab Techno Corp.

低功率射頻電機試驗報告

報告編號 2008DR49

版本(Rev.) 01

產品名稱 手持式行動電話機

申請廠商 訊巖技術有限公司

廠 牌 HUAWEI

型式 (號) MED-LX9

產品試驗依據之標準 低功率射頻電機技術規範(LP0002) 107 年 1 月 10 日

報告發行日期 109 年 09 月 07 日

填發本型式認可報告之試驗機構 (認可代號)

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財團法人全國認證基金會

認證編號 : 1330

認證有效期間 : 108.09.06 ~ 111.09.05

認可能量範圍 : 低功率射頻電機技術規範(LP0002) (頻率範圍:9 kHz to 40 GHz)



免責聲明

- 1.本測試報告所敘述之測試結果，僅對顧客所提供之測試樣品，在此測試報告所述及之測試條件下，所實施之量測有效。
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報告修訂紀錄

版本 (Rev.)	發行日期	修訂內容	修訂者
00	109 年 09 月 01 日	初版發行	趙翊如
01	109 年 09 月 07 日	更新 1.1 章節(P.6) 更新 2.5 章節(P.10) 更新 4.4 章節(P.71) 更新 NCC External Photos	趙翊如

低功率射頻電機測試證明書

產品名稱：手持式行動電話機

廠牌：HUAWEI

型號：MED-LX9

申請廠商：訊巖技術有限公司

申請者地址：臺北市內湖區洲子街55、57號3樓

製造廠商：Huawei Device Co., Ltd.

製造商地址：No.2 of Xincheng Road, Songshan Lake Zone, Dongguan, Guangdong
523808, People's Republic of China

待測物電壓：DC 5 V, 2 A

試驗電壓：110 Vac, 60 Hz

量測規範：低功率射頻電機技術規範(LP0002) 107年1月10日

試驗實驗室：晶復科技股份有限公司(桃園市八德區長安街140-1號)

樣品接受日期：109 年 08 月 14 日

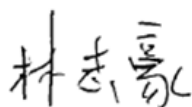
試驗日期：109 年 08 月 14 日 ~ 109 年 08 月 18 日

報告中所描述之測試結果與待測設備之架構組合，均根據實際量測情況作詳實的記錄。

由測試結果顯示，上述待測設備樣機確實已符合低功率射頻電機技術規範(LP0002)所規定的各項限制值。

特此證明！

審核者：



(林志豪)

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1. 一般敘述

1.1 待測設備一般敘述

本敘述僅針對產品簡單說明之，其他詳細之規格請參考使用說明書。

產 品 名 稱	手持式行動電話機		
廠 牌	HUAWEI		
型 號	MED-LX9		
額 定 電 源	DC 5 V, 2 A		
I M E I N o .	IMEI1: 867962053572684, IMEI2: 867962053572692		
調 變 方 式	GFSK, $\pi/4$ -DQPSK, 8DPSK		
頻 率 使 用 範 圍	2402 MHz – 2480 MHz		
天 線 廠 牌	海通		
天 線 型 號	HT_ZAL1888		
天 線 型 態	IFA Antenna		
天 線 增 益 值	-1.34 dBi		
RF 最大輸出功率	BR, GFSK:	13.95 dBm/	0.02483 W
	EDR, $\pi/4$ -DQPSK:	14.04 dBm/	0.02535 W
	EDR, 8DPSK:	14.07 dBm/	0.02553 W
	LE, GFSK:	7.34 dBm/	0.00542 W
	2LE, GFSK:	7.30 dBm/	0.00537 W

輸出/輸入埠說明：

輸 出 / 入 埠		數量	介面內容說明
1	Micro USB Port	1	連接至電源供應器
2	Card Port	1	連接至 Micro SD Card / Nano SIM Card
3	Audio Port	1	連接至多媒體終端

待測設備外圍說明：

電 源 線 類 別	本產品透過 USB Cable 供電
附 屬 裝 置	請參見下列附屬裝置表

附屬裝置表：

裝置名稱	廠牌	型號	備註
內建固定式電池	HUAWEI	HB526489EEW	3.85 VDC, 4900 mAh
電源供應器	HUAWEI	HW-050200U02	INPUT : 100-240 VAC, 50/60 Hz, 0.5 A OUTPUT : 5.0 VDC, 2 A 製造商(1): 深圳市航嘉馳源電氣股份有限公司 製造商(2): 惠州比亞迪電子有限公司 製造商(3): 東莞達宏電子有限公司
USB Cable(1)	HUAWEI	L99U2068-CS-H	STD-A→Micro-B Shielded, 1.0 m
USB Cable(2)	HUAWEI	203-1909-0	STD-A→Micro-B Shielded, 1.0 m 製造商(1): 廣東銘基高科電子股份有限公司 製造商(2): 江西錦寶科技有限公司
USB Cable(3)	HUAWEI	WA0019	STD-A→Micro-B Shielded, 1.0 m
耳機	HUAWEI	22040339	Non-Shielded, 1.1 m 製造商(1): 博羅縣全成電子有限公司 製造商(2): 富頂精密組件(深圳)有限公司

1.2 其他相關聲明

本測試報告屬(以下選擇一種打■)

■	申請新的型式檢驗認可的測試。
□	已取得型式檢驗認可之商品，因設計變更而重新測試 (變更內容請參考產品概述)。 登錄號碼: XXXXXXXX

2. 量測儀器及測試配置說明

2.1 量測設備

For Conducted

Test Period: Aug. 14 ~ Aug. 18, 2020

測試者: 申世傑

名稱	廠牌	型號	序號	本次校驗日期	校驗年限
Spectrum Analyzer (10 Hz~26.5 GHz)	KEYSIGHT	N9010B	MY59071418	03/17/2020	1 year
Power Sensor	Agilent	N1921A	MY45241957	12/11/2019	1 year
Power Meter	Agilent	N1911A	MY45101619	12/11/2019	1 year
藍芽模擬基地台	R & S	CBT	100350	03/27/2019	2 years

For Conducted Emission

Test Period: Aug. 14, 2020

測試者: 邱孝儒

名稱	廠牌	型號	序號	本次校驗日期	校驗年限
測試接收機 (9 kHz~3 GHz)	R&S	ESCI	100367	05/25/2020	1 year
線性阻抗模擬網路	R&S	ENV216	101040	03/23/2020	1 year
線性阻抗模擬網路	R&S	ENV216	101041	04/06/2020	1 year

For Radiated Emissions

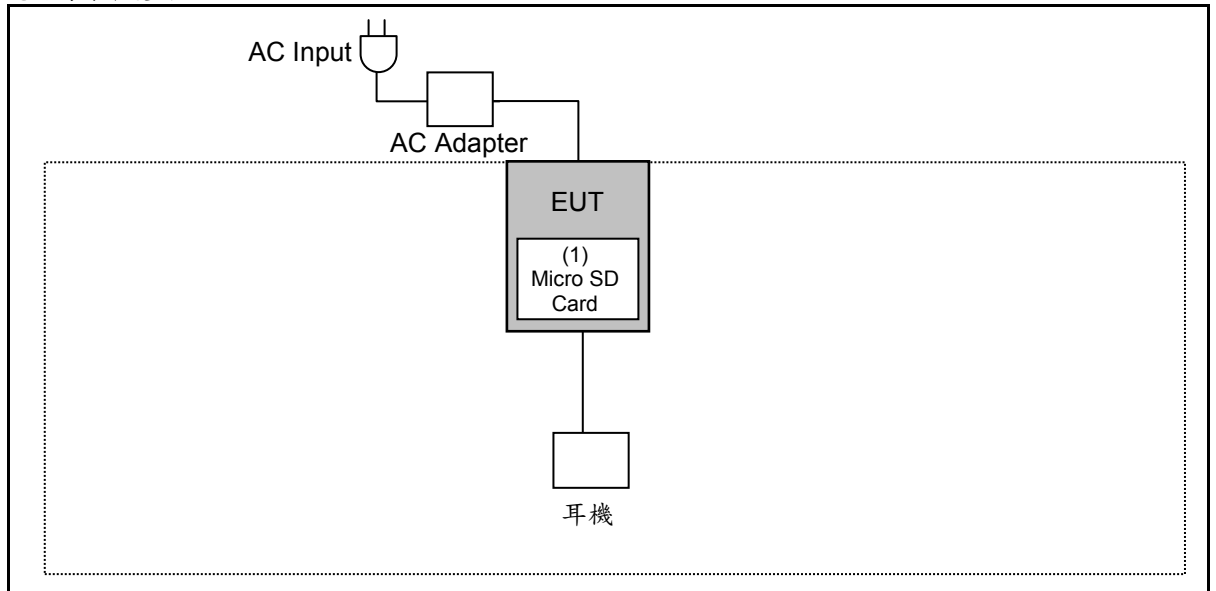
Test Period: Aug. 18, 2020

測試者: 葉佳原

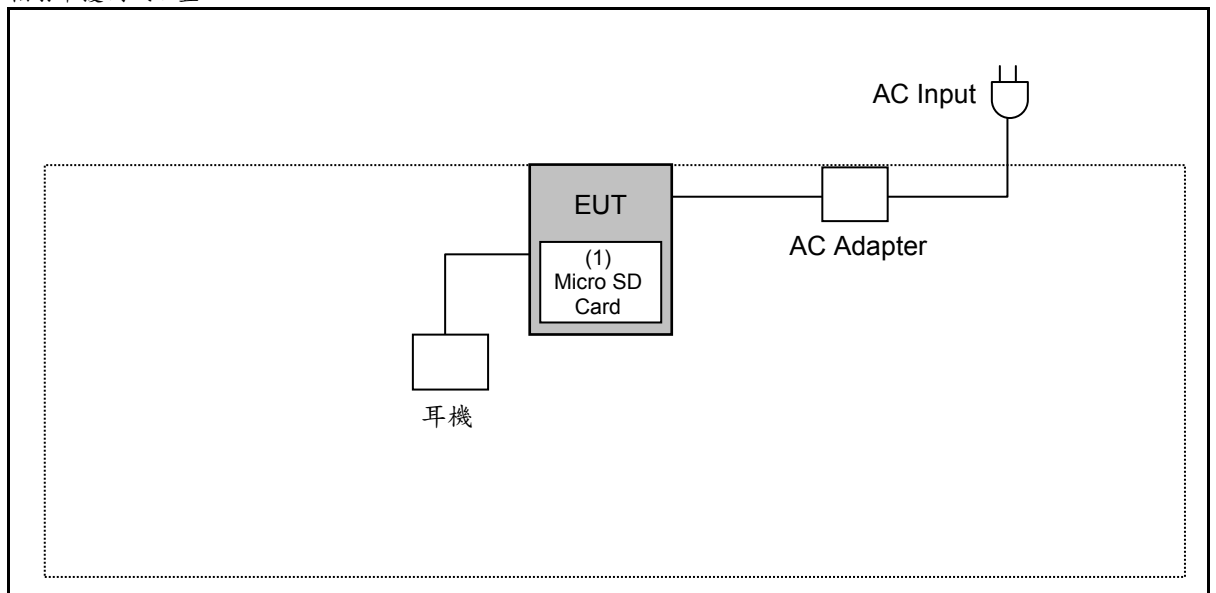
名稱	廠牌	型號	序號	本次校驗日期	校驗年限
Spectrum Analyzer	KEYSIGHT	N9030B	MY57143537	04/14/2020	1 year
Amplifier	Agilent	8449B	3008A02237	10/18/2019	1 year
Amplifier	Agilent	8447D	2944A11119	01/15/2020	1 year
天線	SCHWARZBECK MESS-ELEKTRONIK	VULB9168	01146	07/03/2020	1 year
天線(1~18 GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	02207	06/30/2020	1 year
天線(18~40 GHz)	ETS	3116	00086467	12/13/2019	1 year
藍芽模擬基地台	R & S	CBT	100350	03/27/2019	2 years

2.2 檢驗系統示意圖

電源傳導干擾測試配置



輻射干擾測試配置



2.3 輔助測試之週邊設備描述

下列輔助設備或配件為測試中所使用，以形成一個代表性的受測系統。

週邊名稱		廠牌	型號	序號	電源線	備註
(1)	Micro SD Card	Transcend	9153BA 8G 07DS1	---	---	容量：8 GB (實驗室提供)

2.4 測試軟體版本

Measurement Software			
No.	Description	Software	Version
1	Conducted Emission	EZ EMC	1.1.4.3
2	Radiated Emission	EZ EMC	1.1.4.4

2.5 測試模式

使用定頻模式量測

Pre-Test Mode
Mode 1: Charge Mode
Mode 2: BR, GFSK Continuous TX Mode
Mode 3: EDR, $\pi/4$ -DQPSK Continuous TX Mode
Mode 4: EDR, 8DPSK Continuous TX Mode
Mode 5: LE, GFSK Continuous TX Mode
Mode 6: 2LE, GFSK Continuous TX Mode
Mode 7: Receiver Mode

Final-Test Mode
Mode 1: Charge Mode
Mode 2: BR, GFSK Continuous TX Mode
Mode 4: EDR, 8DPSK Continuous TX Mode
Mode 5: LE, GFSK Continuous TX Mode
Mode 6: 2LE, GFSK Continuous TX Mode
Mode 7: Receiver Mode

測試搭配組合：

EUT Configure Mode	CE	RE<1 GHz	RE $\geq$ 1 GHz	備註
內建固定式電池	V	V	V	
電源供應器	V	V	V	製造商(1)
電源供應器				製造商(2)
電源供應器				製造商(3)
USB Cable(1)				
USB Cable(2)				製造商(1)
USB Cable(2)				製造商(2)
USB Cable(3)	V	V	V	
耳機製造商(1)				
耳機製造商(2)	V	V	V	
Micro SD Card	V	V	V	

RE $\geq$ 1 GHz : Radiated Emission above 1 GHz & Bandedge Measurement

RE<1 GHz : Radiated Emission below 1 GHz

CE : Conducted Emission

V : Final mode

X : Non support

2.6 量測不確定度

下列量測不確定水準是參照量測儀器 CISPR 16-4-2 所規定之不確定度。

Test Item	Frequency Range	Uncertainty (dB)
Conducted Emission	150 kHz ~ 30 MHz	2.68
Radiated Emission	9 kHz ~ 30 MHz	2.14
	30 MHz ~ 1000 MHz	4.99
	1000 MHz ~ 18000 MHz	4.99
	18000 MHz ~ 26500 MHz	4.23
	26500 MHz ~ 40000 MHz	4.39
Conducted Output Power	0.92 dB	
RF Bandwidth	4.79 %	
Power Spectral Density	0.92 dB	

2.7 試驗環境

產品測試時之實驗室環境條件如下：

項 目	測 試 項 目	需 求	實 際
溫度 Temperature (°C)	LP0002	10 - 40	20 - 30
濕度 Humidity (%RH)		10 - 90	45 - 75

3. 測試項目與結果判定總表

本測試報告之所有項目皆依據 NCC 低功率射頻電機技術規範(LP0002)之檢驗法。

BR/EDR 測試項目

項次	測試項目	適用規範	測試結果	量測設備	結果判定
1	輸出峰值功率	低功率射頻電機技術規範 3.10.1.2(1)(B)節	請參閱4.1節	請參閱2.1節	符合
2	電源線傳導干擾	低功率射頻電機技術規範 2.3節	請參閱4.2節	請參閱2.1節	符合
3	場強輻射 (1 GHz以上)	低功率射頻電機技術規範 2.8節、2.9節、3.10.1.5節	請參閱4.3節	請參閱2.1節	符合
4	場強輻射其它不必要之訊號 (1 GHz以下)	低功率射頻電機技術規範 2.8節、2.9節、3.10.1.5節	請參閱4.3節	請參閱2.1節	符合
5	頻帶邊緣外之輻射發射	低功率射頻電機技術規範 3.10.1.5節	請參閱4.3節	請參閱2.1節	符合
6	非必要頻帶	低功率射頻電機技術規範 3.10.1.5節	請參閱4.4節	請參閱2.1節	符合
7	頻率範圍	低功率射頻電機技術規範 3.10.1.1節	請參閱4.5節	請參閱2.1節	符合
8	發射頻寬	低功率射頻電機技術規範 3.10.1.6(1)(A)節	請參閱4.6節	請參閱2.1節	符合
9	頻道數	低功率射頻電機技術規範 3.10.1.6(1)(A)(a)節	請參閱4.7節	請參閱2.1節	符合
10	跳頻系統之載波頻率頻道間隔	低功率射頻電機技術規範 3.10.1.6(1)(A)節	請參閱4.8節	請參閱2.1節	符合
11	跳頻系統之任一頻率佔用之 平均時間	低功率射頻電機技術規範 3.10.1.6(1)(A)(a)節	請參閱4.9節	請參閱2.1節	符合
12	天線規格	低功率射頻電機技術規範 3.10.1.3(3)節、3.10.1.4節	請參閱4.11節	-----	符合
13	電波暴露量之評估	低功率射頻電機技術規範 5.20.2.1節、5.20.2.2節	請參閱4.12節	請參閱2.1節	符合

LE/2LE 測試項目

項次	測試項目	適用規範	測試結果	量測設備	結果判定
1	輸出峰值功率	低功率射頻電機技術規範 3.10.1.2(1)(C)節	請參閱4.1節	請參閱2.1節	符合
2	電源線傳導干擾	低功率射頻電機技術規範 2.3節	請參閱4.2節	請參閱2.1節	符合
3	場強輻射 (1 GHz以上)	低功率射頻電機技術規範 2.8節、2.9節、3.10.1.5節	請參閱4.3節	請參閱2.1節	符合
4	場強輻射其它不必要之訊號 (1 GHz以下)	低功率射頻電機技術規範 2.8節、2.9節、3.10.1.5節	請參閱4.3節	請參閱2.1節	符合
5	頻帶邊緣外之輻射發射	低功率射頻電機技術規範 3.10.1.5節	請參閱4.3節	請參閱2.1節	符合
6	非必要頻帶	低功率射頻電機技術規範 3.10.1.5節	請參閱4.4節	請參閱2.1節	符合
7	發射頻寬	低功率射頻電機技術規範 3.10.1.6(2)(A)節	請參閱4.6節	請參閱2.1節	符合
8	功率密度	低功率射頻電機技術規範 3.10.1.6(2)(B)節	請參閱4.10節	請參閱2.1節	符合
9	天線規格	低功率射頻電機技術規範 3.10.1.3(3)節、3.10.1.4節	請參閱4.11節	-----	符合
10	電波暴露量之評估	低功率射頻電機技術規範 5.20.2.1節、5.20.2.2節	請參閱4.12節	請參閱2.1節	符合

本產品透過預測試確認 X、Y 和 Z 個軸中最差之結果軸向為 X 軸，因此場強輻射完整測試 X 軸並將其結果記錄於報告中。

Decision Rule

- ☒ Uncertainty is not included.
- ☐ Uncertainty is included.

4. 測試項目表列

4.1 輸出峰值功率之量測

合格標準：

BR/EDR

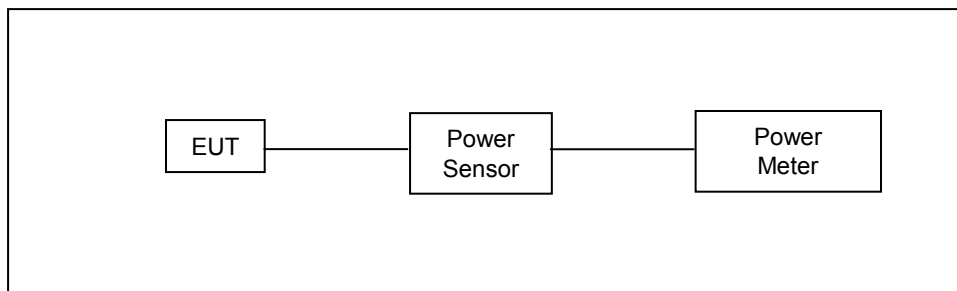
依據 NCC 低功率射頻電機技術規範(LP0002)之 3.10.1.2(1)(B)節之要求，所有操作於 2400-2483.5 兆赫且輸出功率應小於或等於 0.125 W 。

LE/2LE

依據 NCC 低功率射頻電機技術規範(LP0002)之 3.10.1.2(1)(C)節之要求，操作於 2400-2483.5 兆赫(MHz)之所有數位調變技術系統：1 瓦(W)以下。

除使用附件二之峰值輸出功率量測方式外，並得使用以最大傳導輸出功率(Maximum Conducted Output Power)作為量測方式。

測試架構圖：



測試結果:

Test Mode	Frequency (MHz)	Packet Type	RF Power setting in Test Software	Test Software Version
Mode 2	2402	DH1	Default	CBT
		DH3	Default	
		DH5	Default	
	2441	DH1	Default	
		DH3	Default	
		DH5	Default	
	2480	DH1	Default	
		DH3	Default	
		DH5	Default	
Mode 3	2402	2DH1	Default	
		2DH3	Default	
		2DH5	Default	
	2441	2DH1	Default	
		2DH3	Default	
		2DH5	Default	
	2480	2DH1	Default	
		2DH3	Default	
		2DH5	Default	
Mode 4	2402	3DH1	Default	
		3DH3	Default	
		3DH5	Default	
	2441	3DH1	Default	
		3DH3	Default	
		3DH5	Default	
	2480	3DH1	Default	
		3DH3	Default	
		3DH5	Default	

Test Mode	Frequency (MHz)	RF Power setting in Test Software	Test Software Version
Mode 5	2402	Default	adb
	2440	Default	
	2480	Default	

Test Mode	Frequency (MHz)	RF Power setting in Test Software	Test Software Version
Mode 6	2402	Default	adb
	2440	Default	
	2480	Default	

操作模式 : Mode 2: BR,GFSK Continuous TX Mode						
頻道		輸出功率(Average)		輸出功率(Peak)		限制值
		dBm	W	dBm	W	W
低頻道	DH1	10.21	0.01050	10.76	0.01191	≤0.125
	DH3	10.23	0.01054	10.78	0.01197	≤0.125
	DH5	10.25	0.01059	10.81	0.01205	≤0.125
中頻道	DH1	11.95	0.01567	12.65	0.01841	≤0.125
	DH3	11.98	0.01578	12.67	0.01849	≤0.125
	DH5	12.00	0.01585	12.69	0.01858	≤0.125
高頻道	DH1	13.24	0.02109	13.91	0.02460	≤0.125
	DH3	13.26	0.02118	13.93	0.02472	≤0.125
	DH5	13.28	0.02128	13.95	0.02483	≤0.125

操作模式 : Mode 3: EDR, π/4-DQPSK Continuous TX Mode						
頻道		輸出功率(Average)		輸出功率(Peak)		限制值
		dBm	W	dBm	W	W
低頻道	2DH1	8.69	0.00740	10.10	0.01023	≤0.125
	2DH3	8.72	0.00745	10.12	0.01028	≤0.125
	2DH5	8.75	0.00750	10.15	0.01035	≤0.125
中頻道	2DH1	11.10	0.01288	12.57	0.01807	≤0.125
	2DH3	11.13	0.01297	12.60	0.01820	≤0.125
	2DH5	11.16	0.01306	12.62	0.01828	≤0.125
高頻道	2DH1	12.50	0.01778	13.01	0.02000	≤0.125
	2DH3	12.53	0.01791	14.02	0.02523	≤0.125
	2DH5	12.55	0.01799	14.04	0.02535	≤0.125

操作模式 : Mode 4:EDR, 8DPSK Continuous TX Mode						
頻道		輸出功率(Average)		輸出功率(Peak)		限制值
		dBm	W	dBm	W	W
低頻道	3DH1	8.71	0.00743	10.13	0.01030	≤0.125
	3DH3	8.73	0.00746	10.15	0.01035	≤0.125
	3DH5	8.76	0.00752	10.17	0.01040	≤0.125
中頻道	3DH1	11.12	0.01294	12.58	0.01811	≤0.125
	3DH3	11.15	0.01303	12.61	0.01824	≤0.125
	3DH5	11.18	0.01312	12.64	0.01837	≤0.125
高頻道	3DH1	12.55	0.01799	14.03	0.02529	≤0.125
	3DH3	12.57	0.01807	14.05	0.02541	≤0.125
	3DH5	12.59	0.01816	14.07	0.02553	≤0.125

操作模式 : Mode 5: LE, GFSK Continuous TX Mode					
頻道	輸出功率(Average)		輸出功率(Peak)		限制值
	dBm	W	dBm	W	W
低頻道	5.99	0.00397	6.27	0.00424	≤ 1
中頻道	7.08	0.00511	7.34	0.00542	≤ 1
高頻道	6.74	0.00472	7.00	0.00501	≤ 1

操作模式 : Mode 6: 2LE, GFSK Continuous TX Mode					
頻道	輸出功率(Average)		輸出功率(Peak)		限制值
	dBm	W	dBm	W	W
低頻道	3.61	0.00230	6.20	0.00417	≤ 1
中頻道	4.69	0.00294	7.30	0.00537	≤ 1
高頻道	4.36	0.00273	7.00	0.00501	≤ 1

4.2 電源線傳導干擾之量測

合格標準：

依據 NCC 低功率射頻電機技術規範(LP0002)之 2.3 節，以市電為電源之低功率射頻電機，其傳導回電源線上頻率自 150 kHz 至 30 MHz 之射頻電壓 (在電源端子每一電源線對接地點) 不得超過下表所列之限值。測量時應經過 50 Ω /50 μ H 之電源線阻抗模擬網路 (LISN)。頻率重疊處，以較低限值為準。

Frequency (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。

測試方法：

測試場地為標準傳導測試場地。將待測物置於 0.8 米高的非金屬桌面，使其在工作狀態，待測物電源線接至電源線阻抗穩定網路上，從測試接收機記錄頻率由 0.15 MHz 至 30 MHz 之間之電源線傳導放射強度。

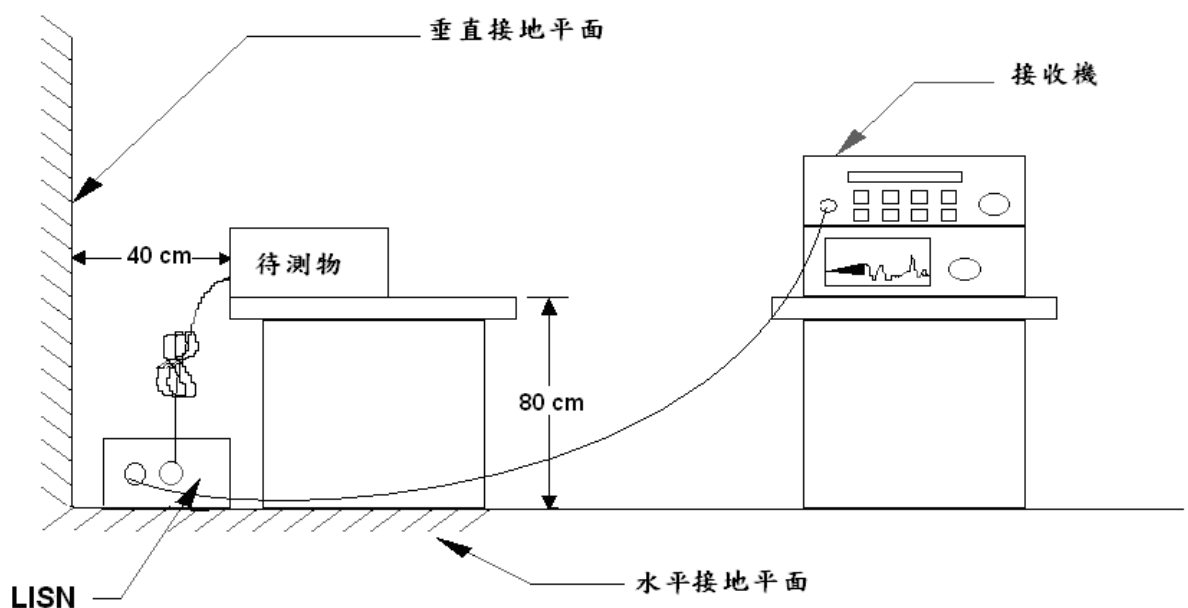
干擾值之計算

電源傳導干擾電壓之計算公式如下

結果值 = 儀器讀值(QP/AV) + 校正因子

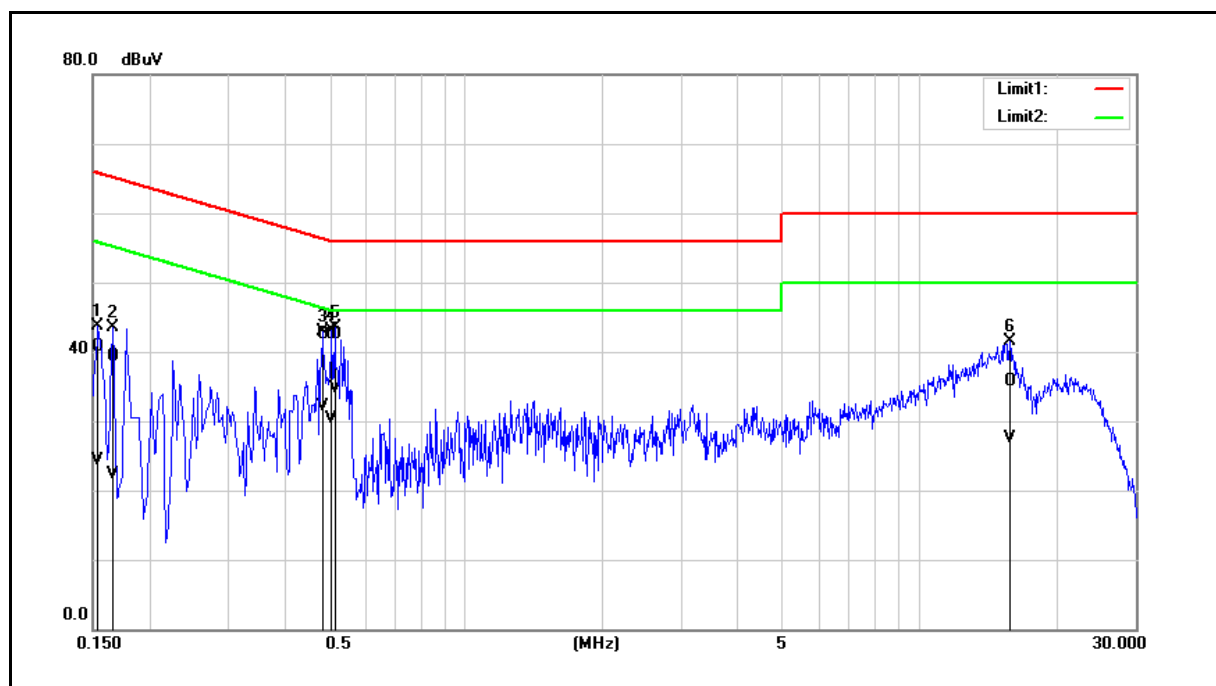
其中校正因子為：饋線損失 + 電源阻抗模擬網路損失

測試架構圖：



測試結果:

Standard:	LP0002	Line:	L1
Test item:	Conducted Emission	Power:	AC 110 V/60 Hz
Mode:	Mode 1		
Description:			

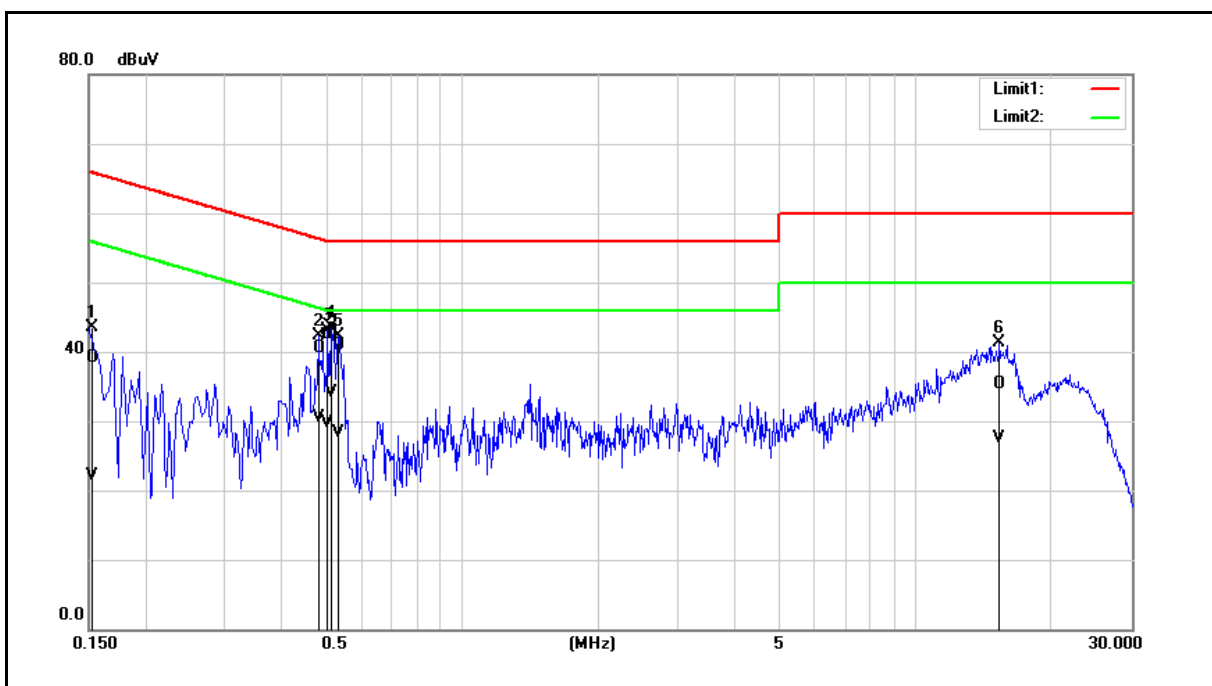


No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1540	30.96	14.62	9.65	40.61	24.27	65.78	55.78	-25.17	-31.51	Pass
2	0.1660	29.70	12.61	9.65	39.35	22.26	65.16	55.16	-25.81	-32.90	Pass
3	0.4820	32.75	22.48	9.66	42.41	32.14	56.30	46.30	-13.89	-14.16	Pass
4	0.5060	32.78	20.72	9.66	42.44	30.38	56.00	46.00	-13.56	-15.62	Pass
5	0.5140	32.93	25.00	9.66	42.59	34.66	56.00	46.00	-13.41	-11.34	Pass
6	15.8140	25.68	17.59	9.98	35.66	27.57	60.00	50.00	-24.34	-22.43	Pass

註：1. 干擾值(dBuV) = 校正係數(dB) + 讀值(dBuV)。

2. 校正係數(dB) = 量測信號線損失(dB) + 電源阻抗模擬網路係數(dB)。

Standard:	LP0002	Line:	N
Test item:	Conducted Emission	Power:	AC 110 V/60 Hz
Mode:	Mode 1		
Description:			



No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1524	29.47	12.44	9.68	39.15	22.12	65.87	55.87	-26.72	-33.75	Pass
2	0.4820	30.82	20.76	9.69	40.51	30.45	56.30	46.30	-15.79	-15.85	Pass
3	0.5060	32.88	20.04	9.69	42.57	29.73	56.00	46.00	-13.43	-16.27	Pass
4	0.5140	32.97	24.32	9.69	42.66	34.01	56.00	46.00	-13.34	-11.99	Pass
5	0.5340	31.19	18.62	9.69	40.88	28.31	56.00	46.00	-15.12	-17.69	Pass
6	15.3580	25.19	17.50	10.10	35.29	27.60	60.00	50.00	-24.71	-22.40	Pass

註：1. 干擾值(dBuV) = 校正係數(dB) + 讀值(dBuV)。

2. 校正係數(dB) = 量測信號線損失(dB) + 電源阻抗模擬網路係數(dB)。

4.3 場強輻射之量測

合格標準:

依據 NCC 低功率射頻電機技術規範(LP0002)之使用頻帶範圍外之任意 100 千赫 (kHz)內，發射機所產生的射頻功率相較於使用頻帶範圍中包含最高所需功率之 100 千赫(kHz)內的射頻功率，至少須衰減 20 dB，以射頻傳導或輻射方式測量。如發射機以依據 NCC 低功率射頻電機技術規範(LP0002)之 3.10.1.5(2)之峰值傳導輸出功率量測方式者，至少須衰減 30 dB。此外，落於第 2.7 節禁用頻段之輻射發射，應符合第 2.8 節之規定。

依據 NCC 低功率射頻電機技術規範第 2.7 節之規定，禁用頻段如下：

頻率(MHz)	頻率(MHz)	頻率(MHz)	頻率(MHz)
0.090~0.110	108.00~138.00	1660.0~1785.0	8025.0~8500.0
0.490~0.510	149.90~150.05	1805.0~1888.0	9000.0~9200.0
2.172~2.198	156.70~156.90	1885.0~1900.0	9300.0~9500.0
3.013~3.033	162.01~167.17	1905.0~1985.0	10600~12700
4.115~4.198	167.72~173.20	2010.0~2025.0	13250~13400
5.670~5.690	240.00~285.00	2110.0~2170.0	14470~14500
6.200~6.300	322.00~335.40	2200.0~2300.0	15350~16200
8.230~8.400	399.90~410.00	2310.0~2390.0	17700~21400
12.265~12.600	485.00~510.00	2483.5~2900.0	22010~23120
13.340~13.430	608.00~614.00	3260.0~3267.0	23600~24000
14.965~15.020	703.00~748.00	3332.0~3339.0	31200~31800
16.700~16.755	758.00~803.00	3345.8~3358.0	36430~36500
19.965~20.020	825.00~915.00	3500.0~4400.0	38600 以上
25.500~25.700	930.00~1240.0	4500.0~5250.0	
37.475~38.275	1300.0~1427.0	5350.0~5460.0	
73.500~75.400	1435.0~1626.5	7250.0~7750.0	

依據 NCC 低功率射頻電機技術規範第 2.8 節之規定，除本規範各章節另有放寬規定者外，其電場強度不得超過下表之限值，且其不必要之發射皆不得大於主波發射強度。各頻段重疊處，以較嚴格之限制值為準。

頻 率 (MHz)	電場強度(μV/m)	測距(m)
0.009 - 0.490(含)	2,400/頻率(千赫)	300
0.490 (不含) – 1.705 (含)	24,000/頻率(千赫)	30
1.705(不含) – 30 (不含)	30	30
30 (含) – 88 (含)	100	3
88 (不含)- 216 (含)	150	3
216 (不含)- 960 (含)	200	3
960 (不含)以上	500	3

測試方法：

測試場地為開放測試場，將待測物置於 0.8 米高的非金屬桌面，使其在工作狀態，接收天線置於 3 米外相同的高度。待測物分別要垂直或水平放置，而且桌面要 360 度旋轉，另外接收天線也要從 1.0 米至 4.0 米升降變化，以找出最大的輻射電場強度，接收天線置於水平、垂直極向各執行測試一次。

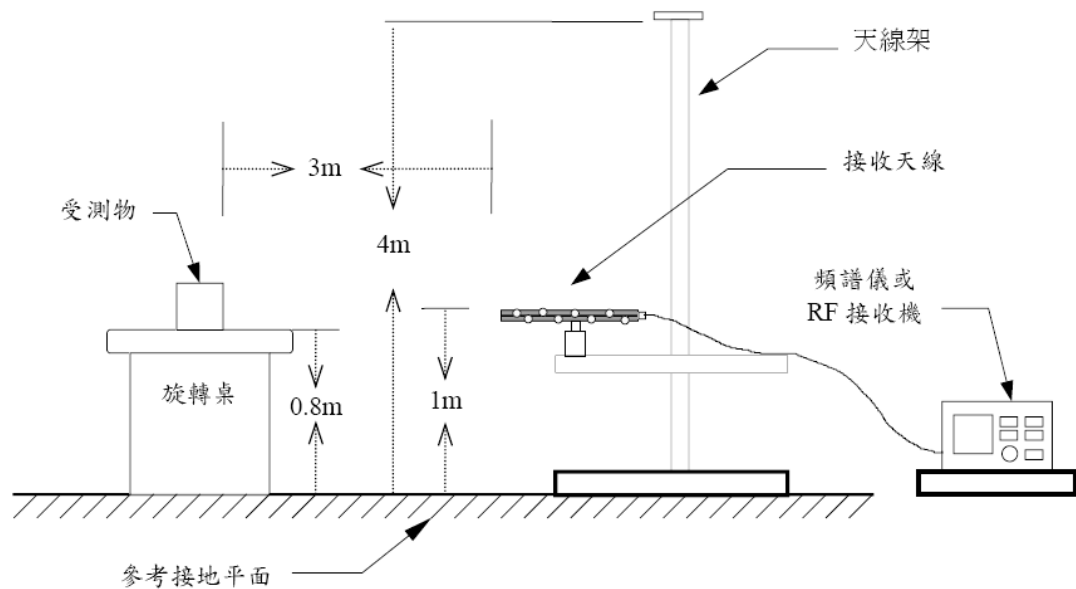
場強度之計算

場強之計算公式為：結果值 = 讀值 + 校正因子

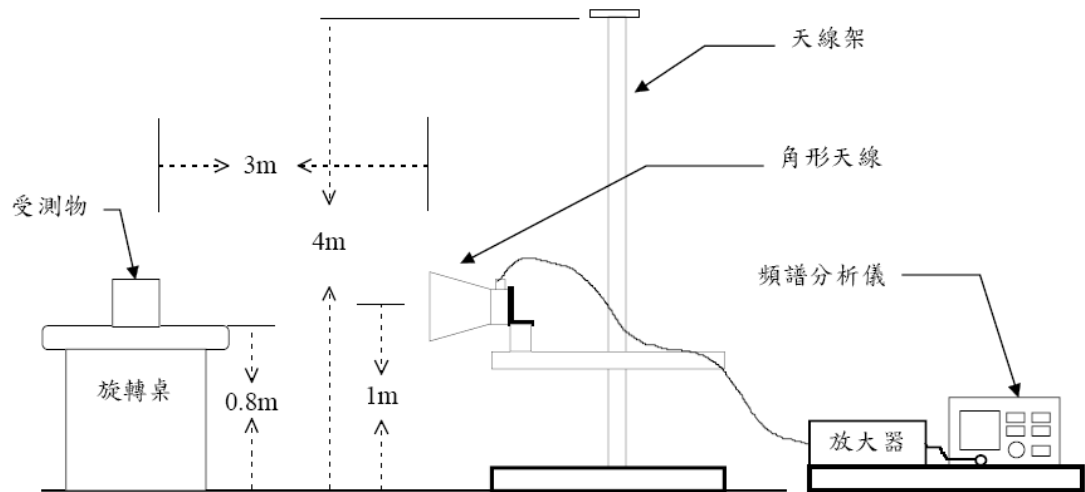
其中校正因子為：天線因子 + 饋線損失 + 濾波器損失（若有使用） - 放大器增益（若有使用）

測試架構圖：

量測頻率低於 1 GHz 以下之測試配置

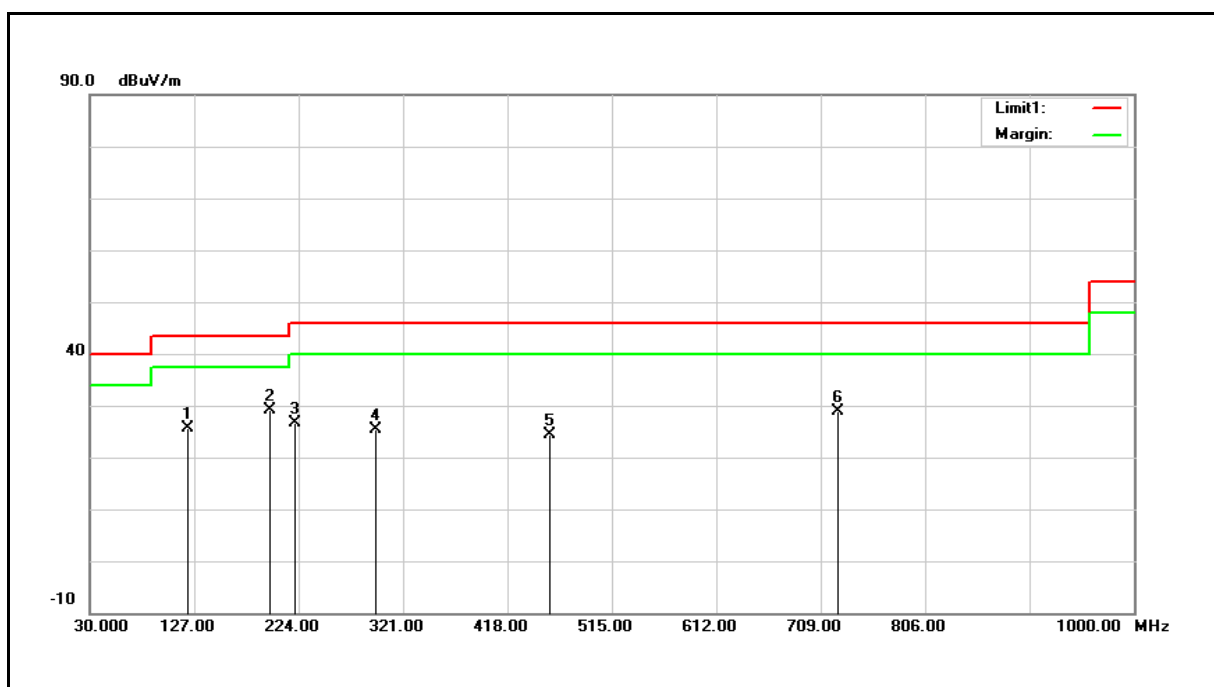


量測頻率高於 1 GHz 以上之測試配置



其它不必要之訊號 (1 GHz 以下)

Standard:	LP0002	Test Distance:	3 m
Test item:	Radiated Emission		
Frequency:	2402 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	121.1800	35.48	-9.87	25.61	43.50	-17.89	QP
2	196.8400	39.14	-10.01	29.13	43.50	-14.37	QP
3	221.0900	36.23	-9.59	26.64	46.00	-19.36	QP
4	295.7800	32.16	-6.68	25.48	46.00	-20.52	QP
5	456.8000	28.27	-3.93	24.34	46.00	-21.66	QP
6	724.5200	28.62	0.33	28.95	46.00	-17.05	QP

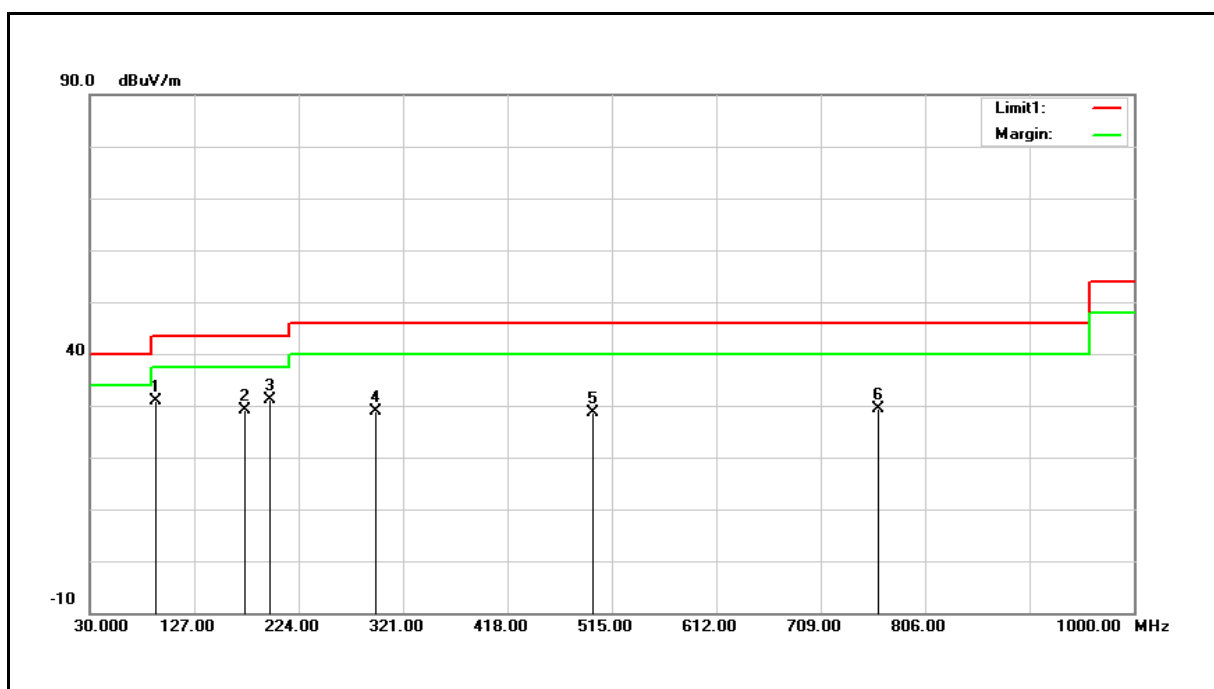
Note: 1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

Example: 25.61 = -9.87 + 35.48

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3.When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Radiated Emission		
Frequency:	2402 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	91.1100	45.19	-14.21	30.98	43.50	-12.52	QP
2	174.5300	37.42	-8.36	29.06	43.50	-14.44	QP
3	196.8400	41.25	-10.01	31.24	43.50	-12.26	QP
4	295.7800	35.66	-6.68	28.98	46.00	-17.02	QP
5	497.5400	32.24	-3.72	28.52	46.00	-17.48	QP
6	762.3500	28.51	0.95	29.46	46.00	-16.54	QP

Note: 1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

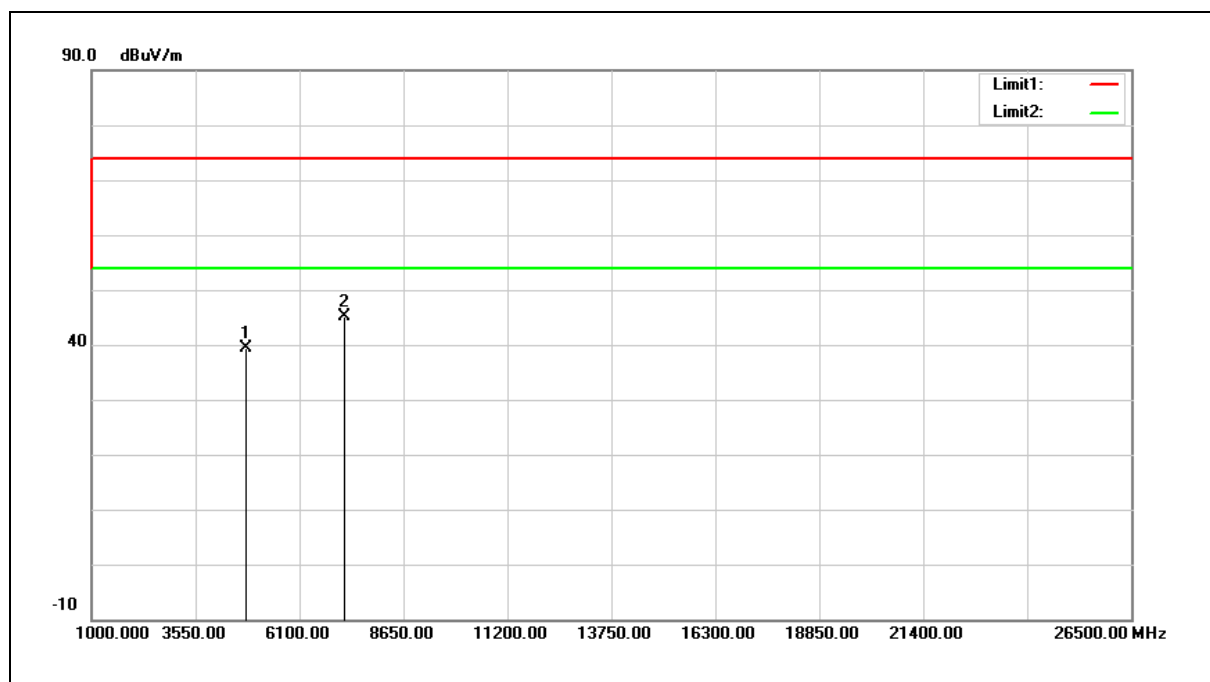
Example: $30.98 = -14.21 + 45.19$

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3.When the peak results are less than average limit, so not need to evaluate the average.

場強輻射量測 (1 GHz 以上)

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2402 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.000	36.54	2.80	39.34	74.00	-34.66	peak
2	7206.000	36.38	8.82	45.20	74.00	-28.80	peak

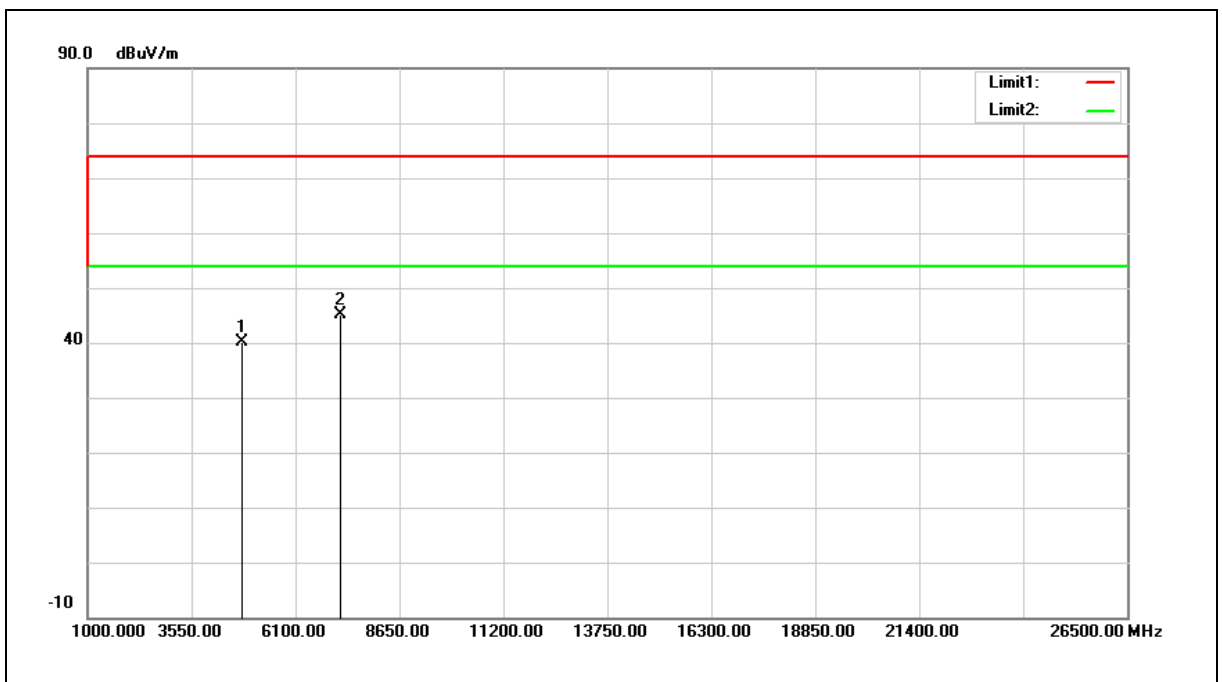
Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

Example: $39.34 = 2.80 + 36.54$

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2402 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.000	37.35	2.80	40.15	74.00	-33.85	peak
2	7206.000	36.36	8.82	45.18	74.00	-28.82	peak

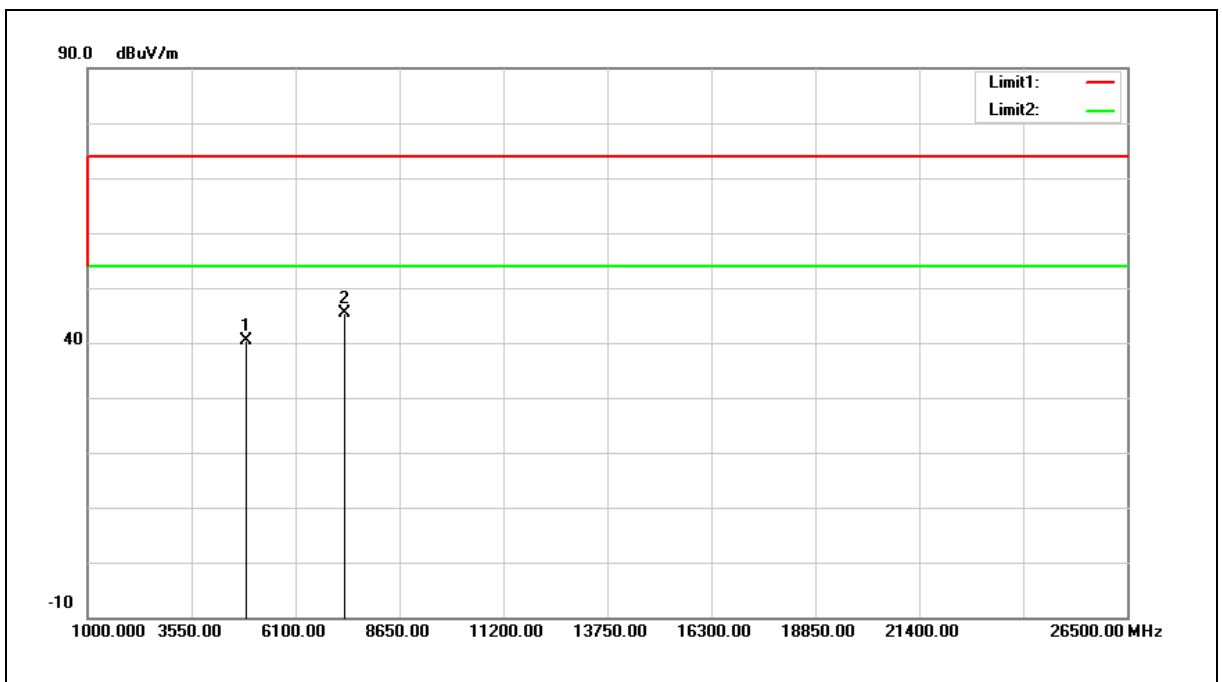
Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

Example: $40.15 = 2.80 + 37.35$

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2441 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



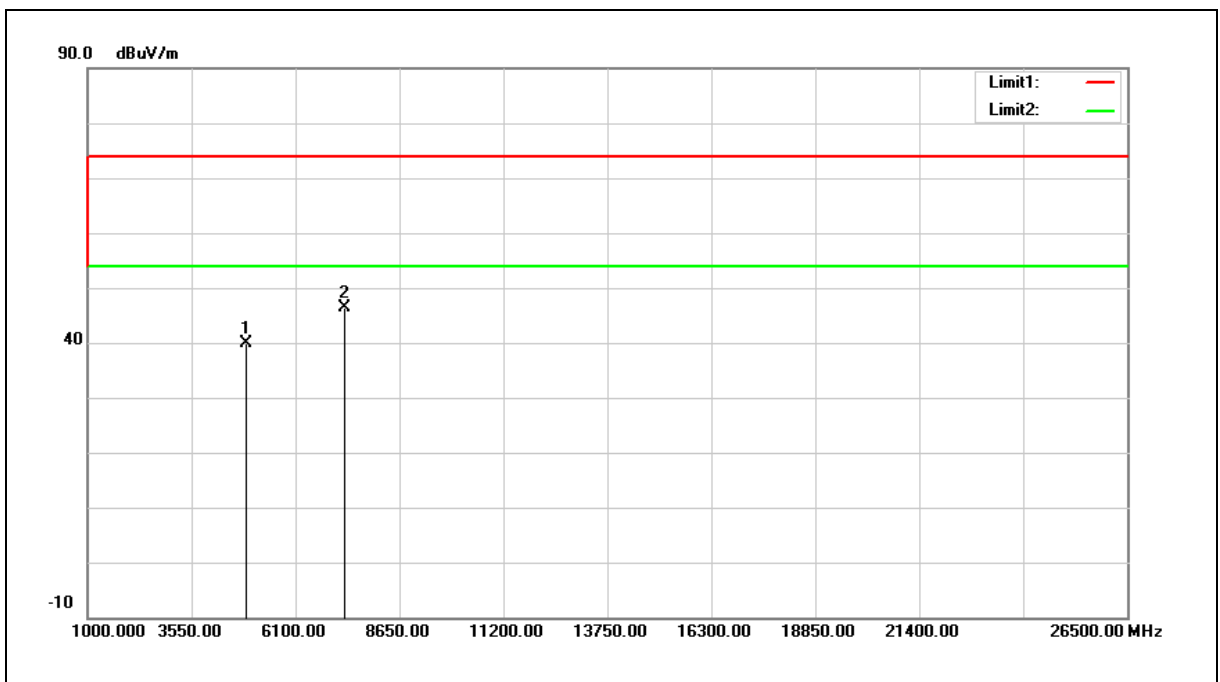
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4882.000	37.29	2.98	40.27	74.00	-33.73	peak
2	7323.000	36.21	9.18	45.39	74.00	-28.61	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2441 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



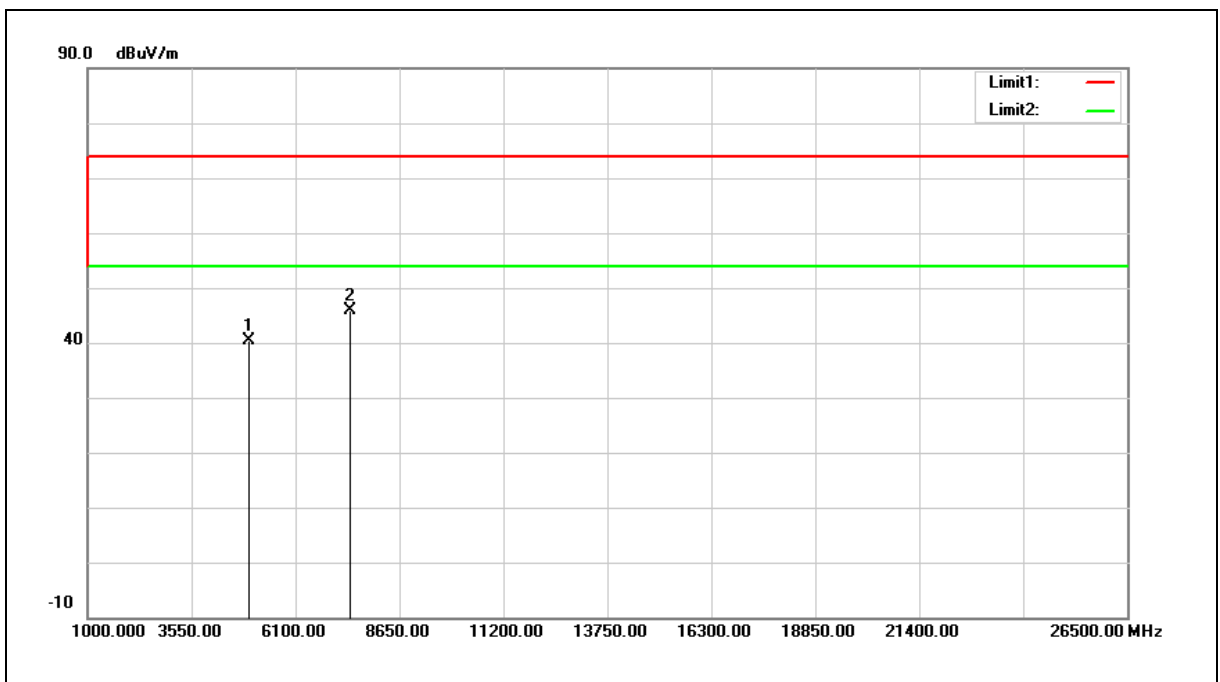
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4882.000	36.86	2.98	39.84	74.00	-34.16	peak
2	7323.000	37.14	9.18	46.32	74.00	-27.68	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2480 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



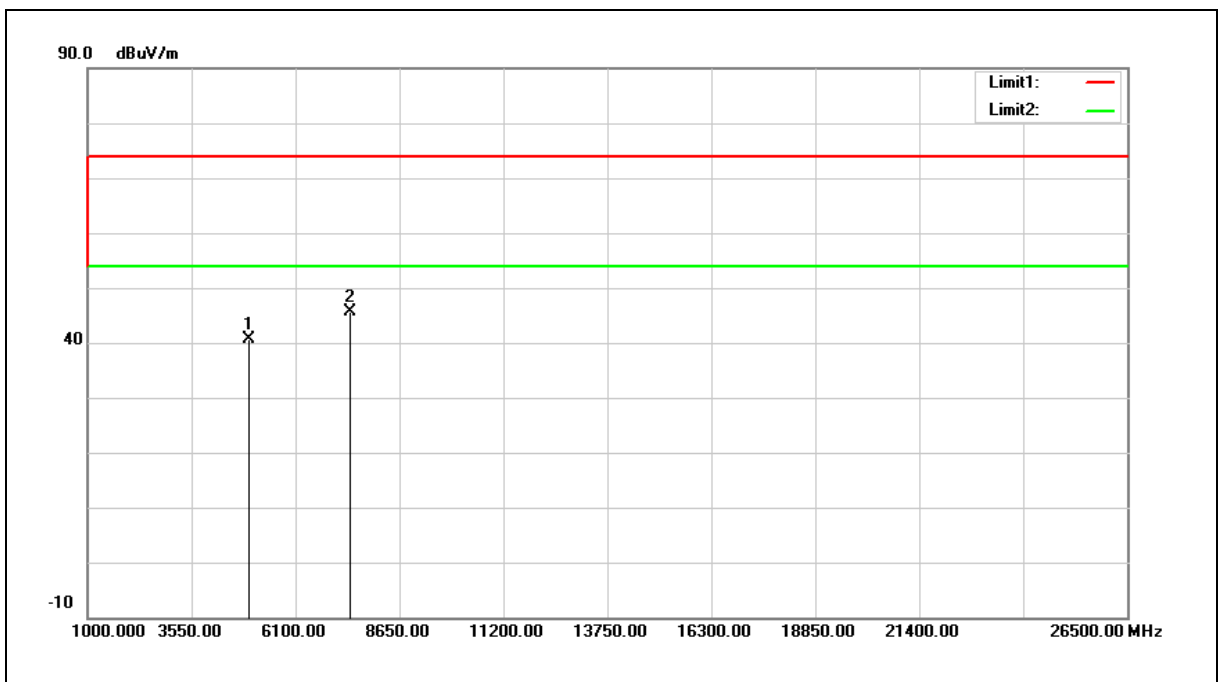
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	37.16	3.17	40.33	74.00	-33.67	peak
2	7440.000	36.40	9.55	45.95	74.00	-28.05	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2480 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



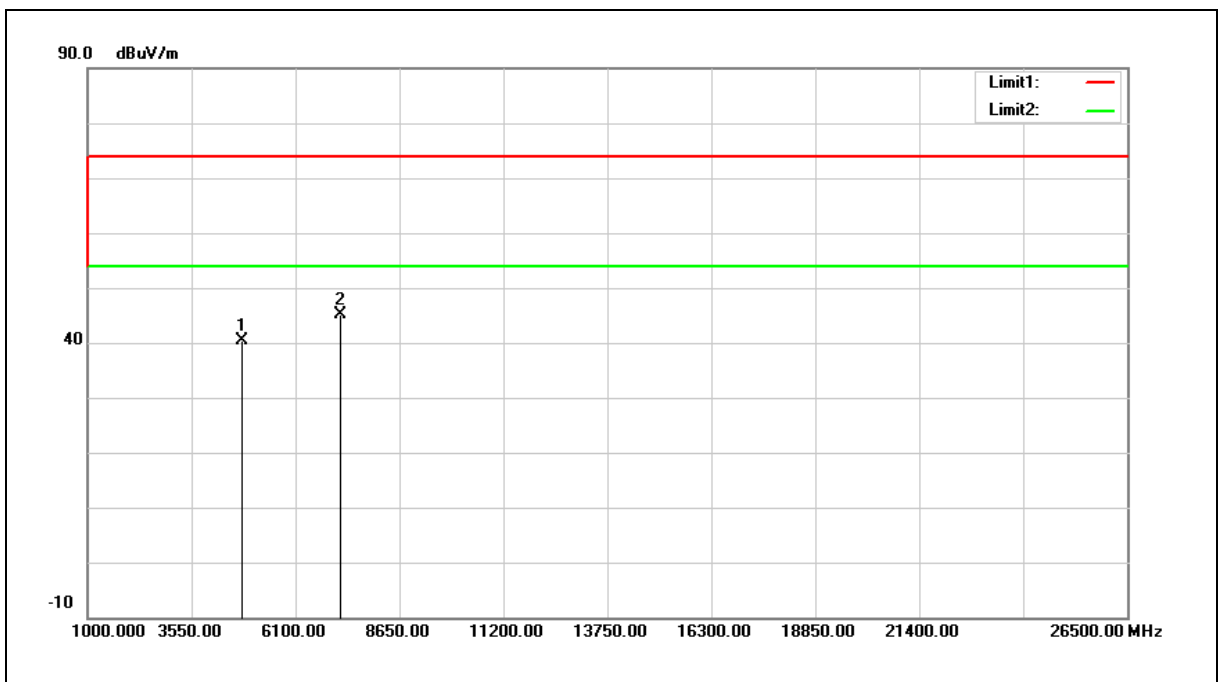
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	37.52	3.17	40.69	74.00	-33.31	peak
2	7440.000	36.03	9.55	45.58	74.00	-28.42	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2402 MHz		
Mode:	Mode 4		
Ant.Polar.:	Horizontal		



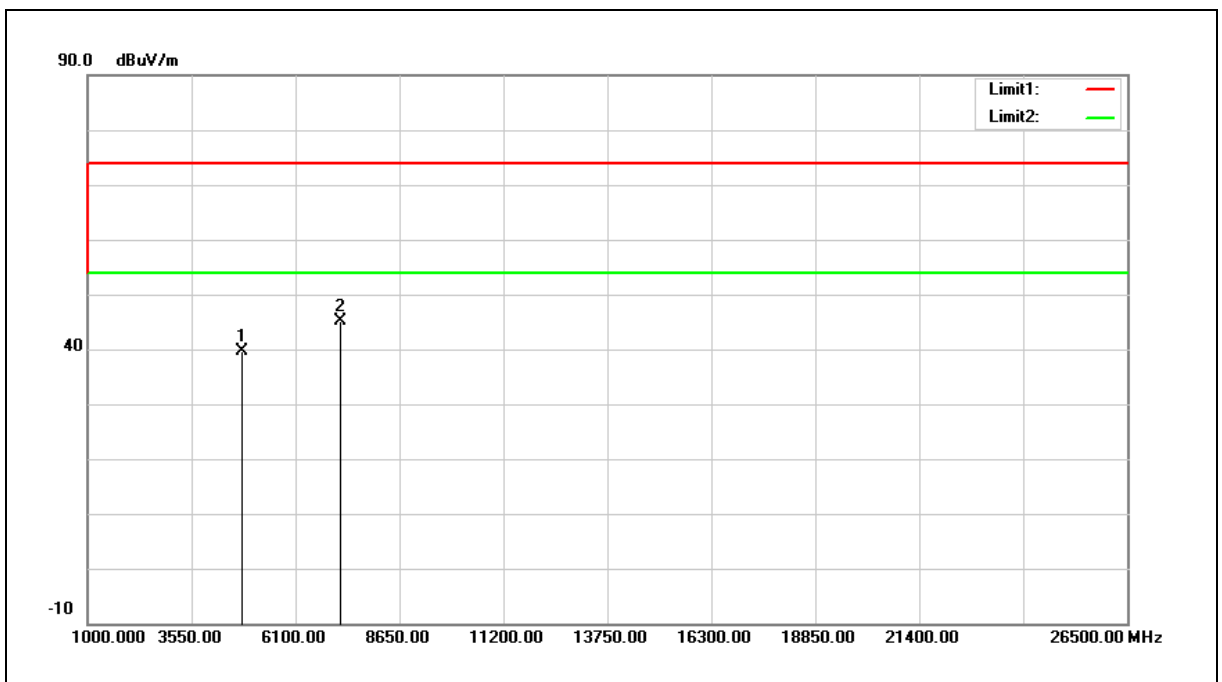
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.000	37.51	2.80	40.31	74.00	-33.69	peak
2	7206.000	36.34	8.82	45.16	74.00	-28.84	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2402 MHz		
Mode:	Mode 4		
Ant.Polar.:	Vertical		



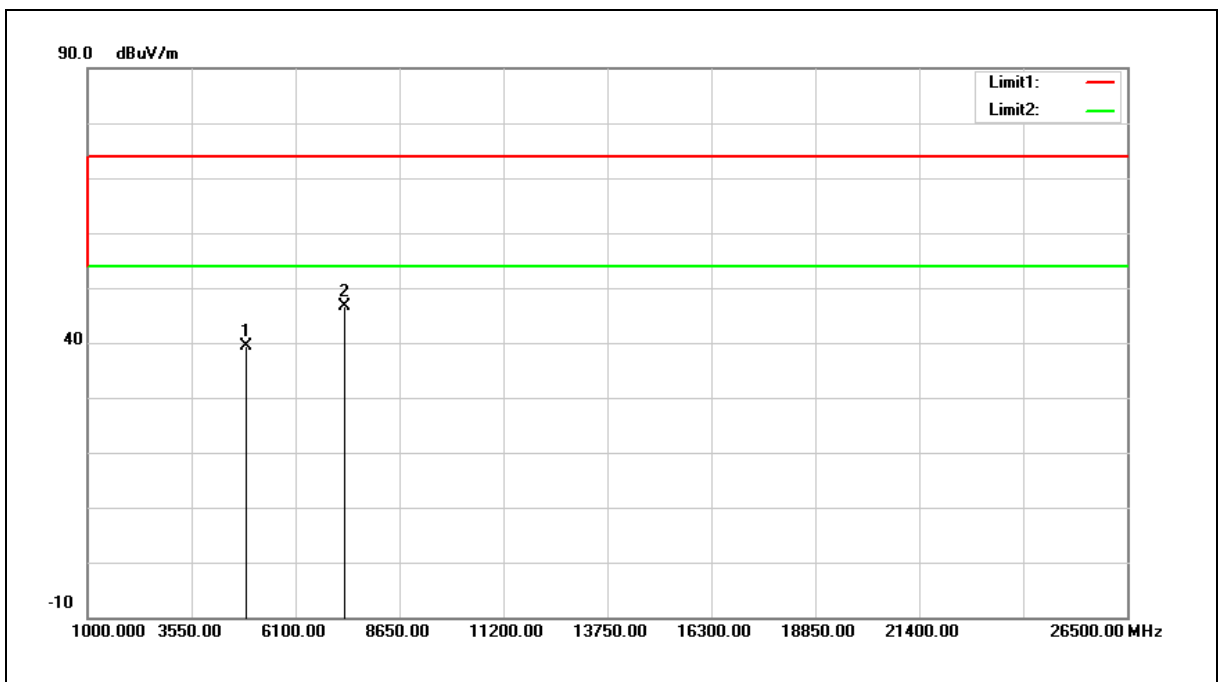
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.000	36.77	2.80	39.57	74.00	-34.43	peak
2	7206.000	36.24	8.82	45.06	74.00	-28.94	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2441 MHz		
Mode:	Mode 4		
Ant.Polar.:	Horizontal		



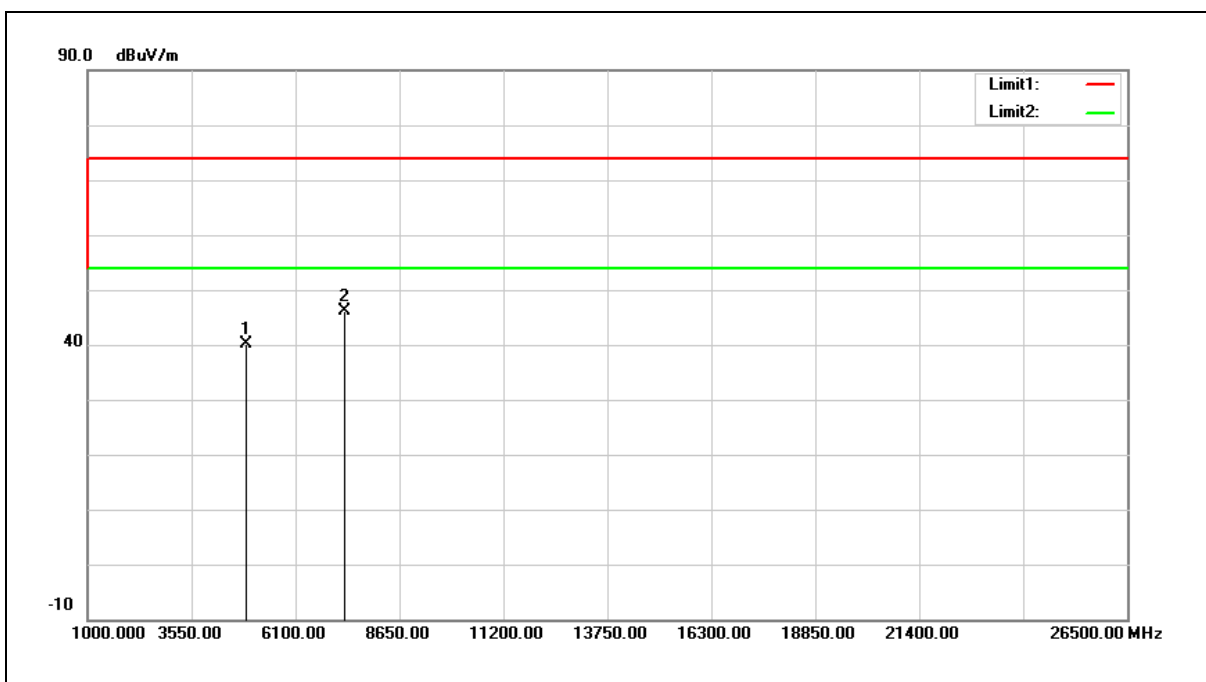
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4882.000	36.49	2.98	39.47	74.00	-34.53	peak
2	7323.000	37.44	9.18	46.62	74.00	-27.38	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2441 MHz		
Mode:	Mode 4		
Ant.Polar.:	Vertical		



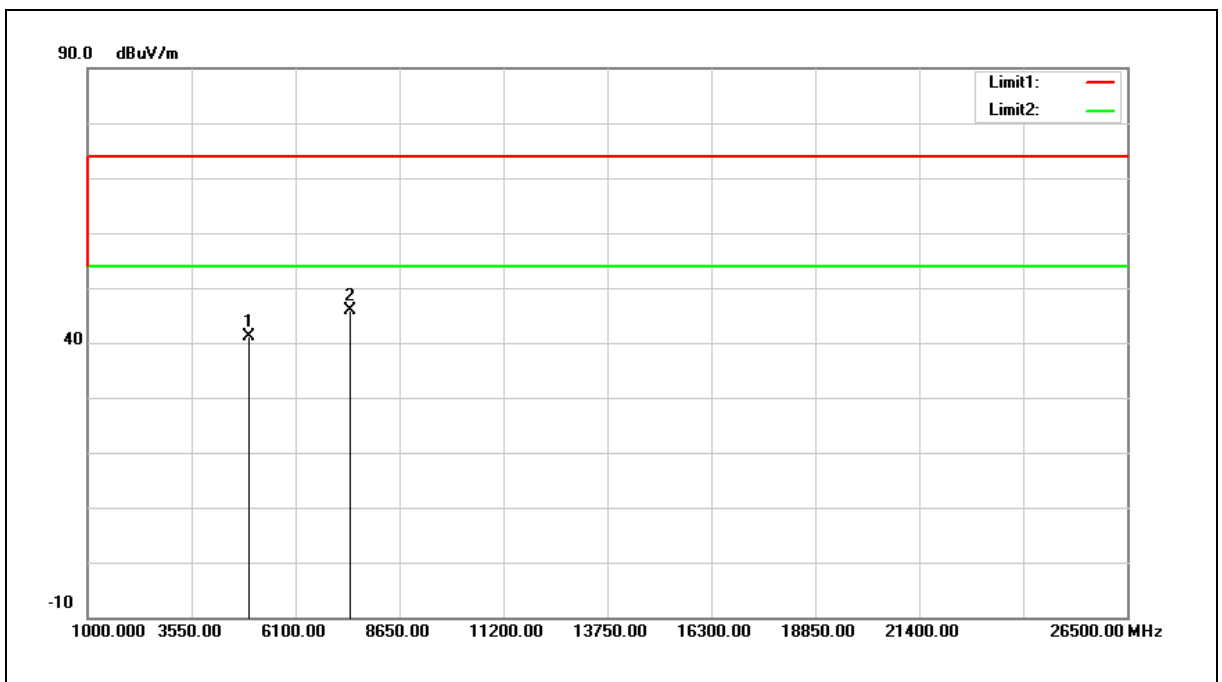
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4882.000	37.24	2.98	40.22	74.00	-33.78	peak
2	7323.000	36.88	9.18	46.06	74.00	-27.94	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2480 MHz		
Mode:	Mode 4		
Ant.Polar.:	Horizontal		



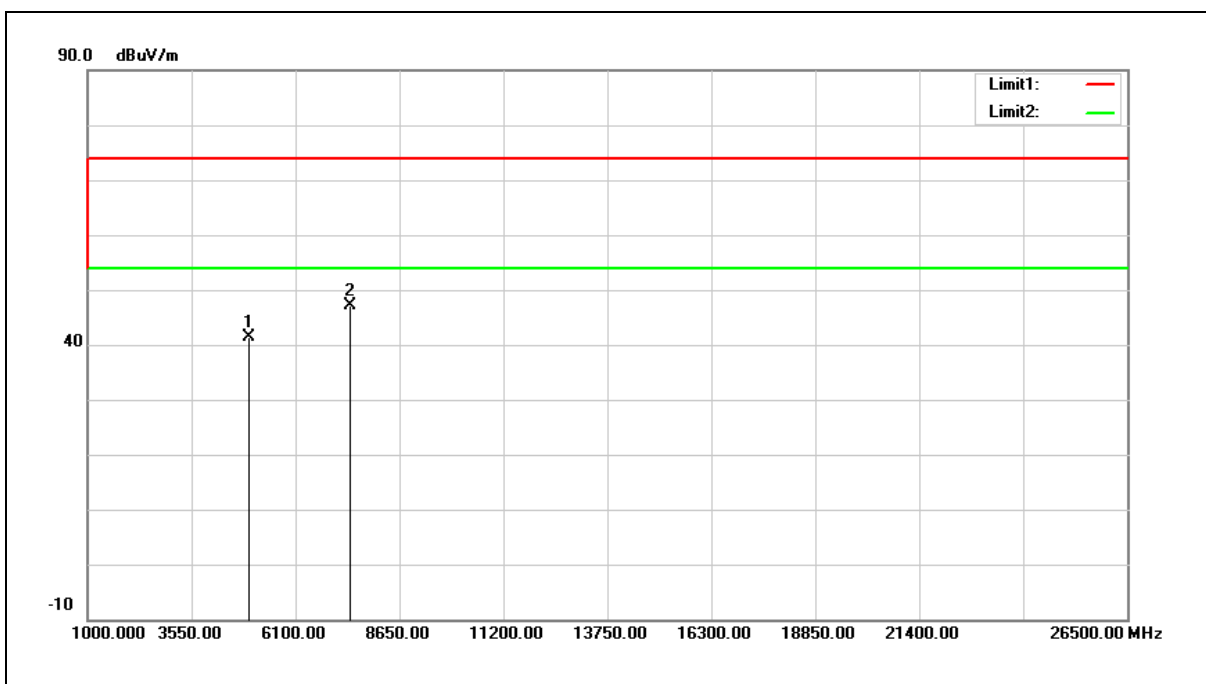
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	37.85	3.17	41.02	74.00	-32.98	peak
2	7440.000	36.41	9.55	45.96	74.00	-28.04	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2480 MHz		
Mode:	Mode 4		
Ant.Polar.:	Vertical		



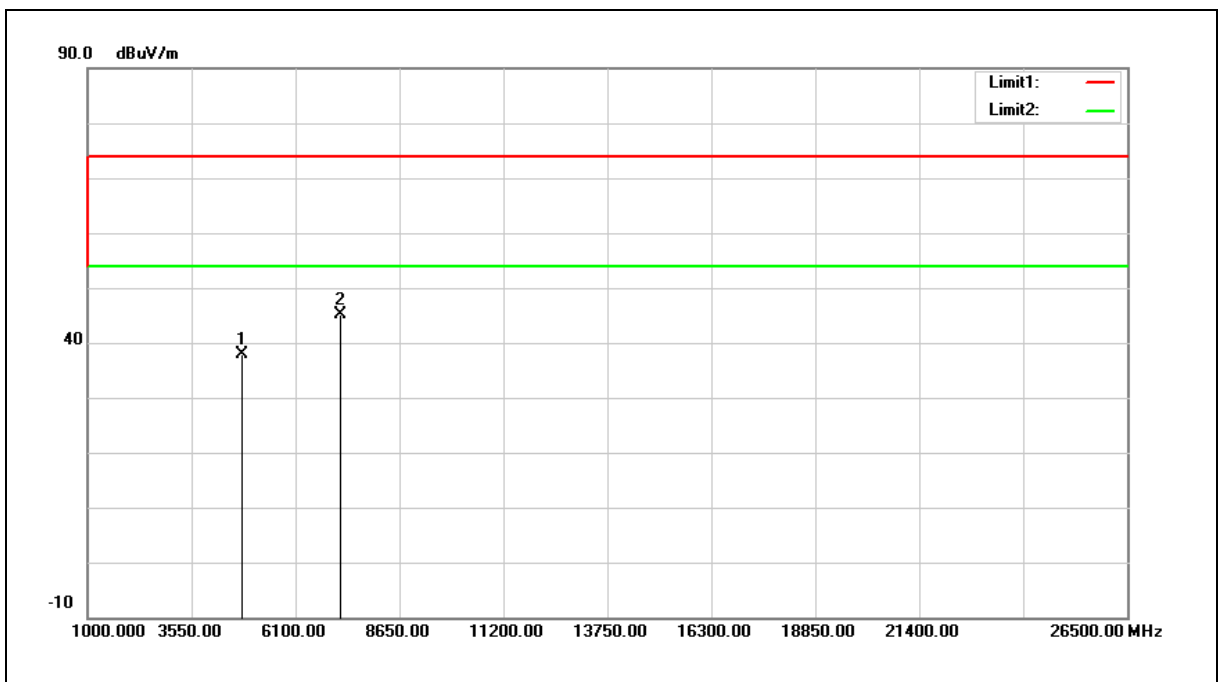
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	38.19	3.17	41.36	74.00	-32.64	peak
2	7440.000	37.55	9.55	47.10	74.00	-26.90	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2402 MHz		
Mode:	Mode 5		
Ant.Polar.:	Horizontal		



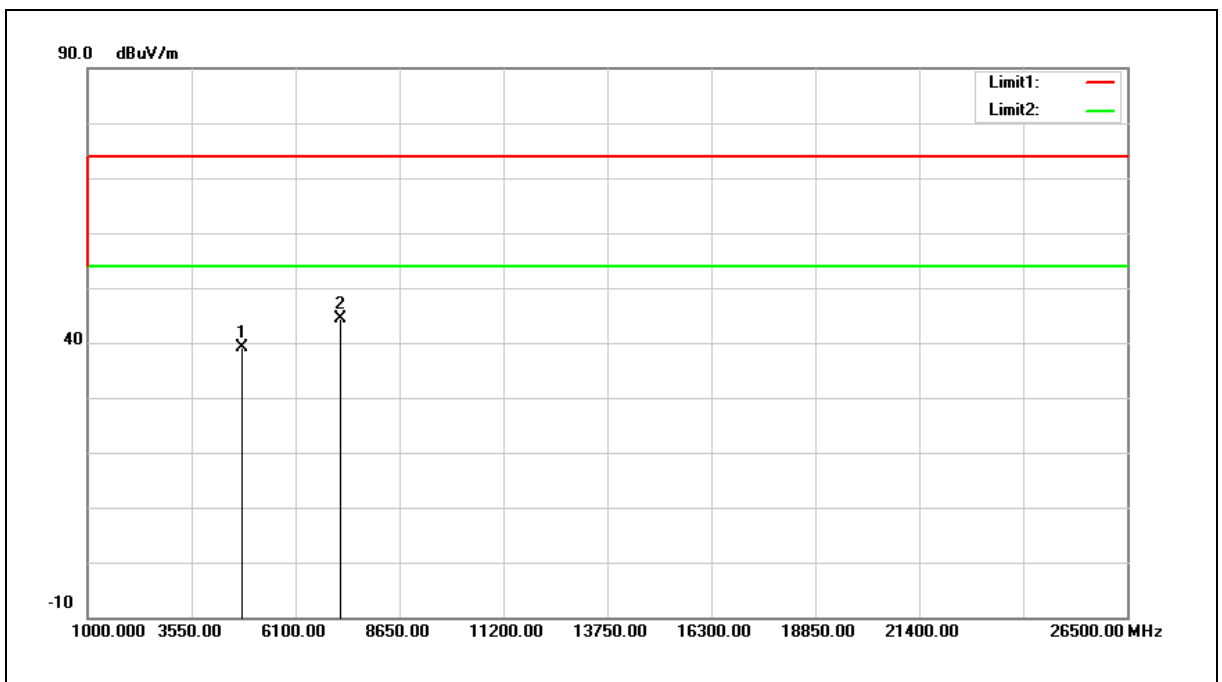
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.000	35.13	2.80	37.93	74.00	-36.07	peak
2	7206.000	36.35	8.82	45.17	74.00	-28.83	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2402 MHz		
Mode:	Mode 5		
Ant.Polar.:	Vertical		



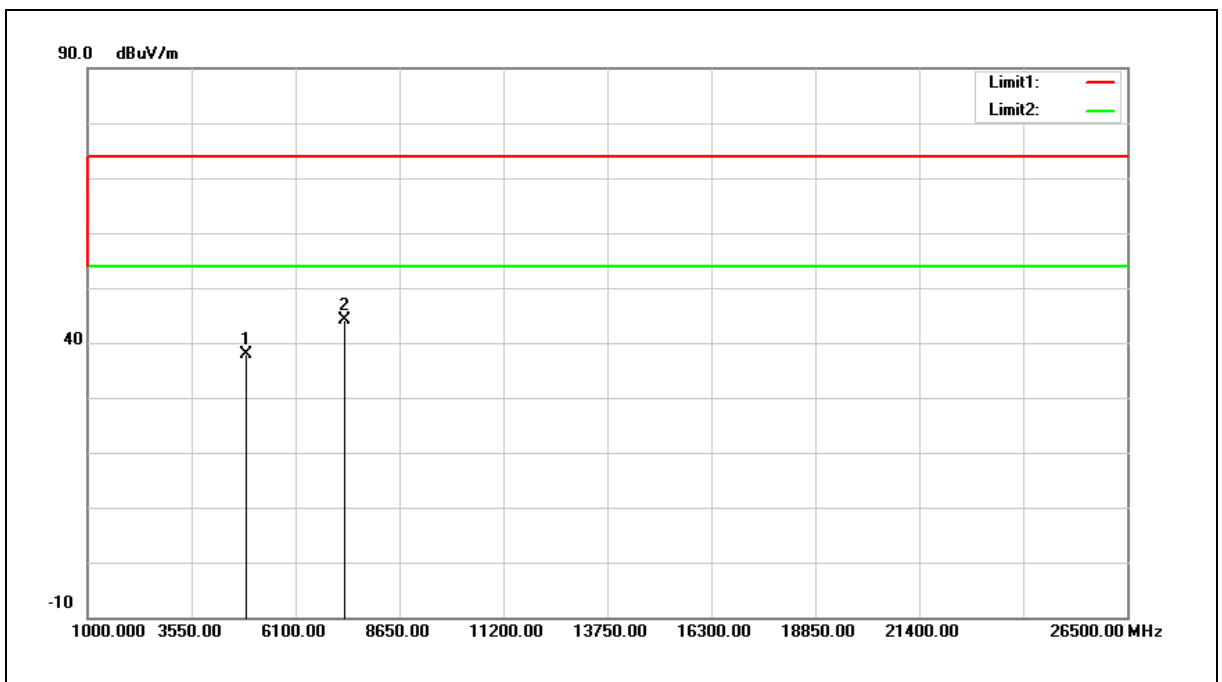
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.000	36.35	2.80	39.15	74.00	-34.85	peak
2	7206.000	35.54	8.82	44.36	74.00	-29.64	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2440 MHz		
Mode:	Mode 5		
Ant.Polar.:	Horizontal		



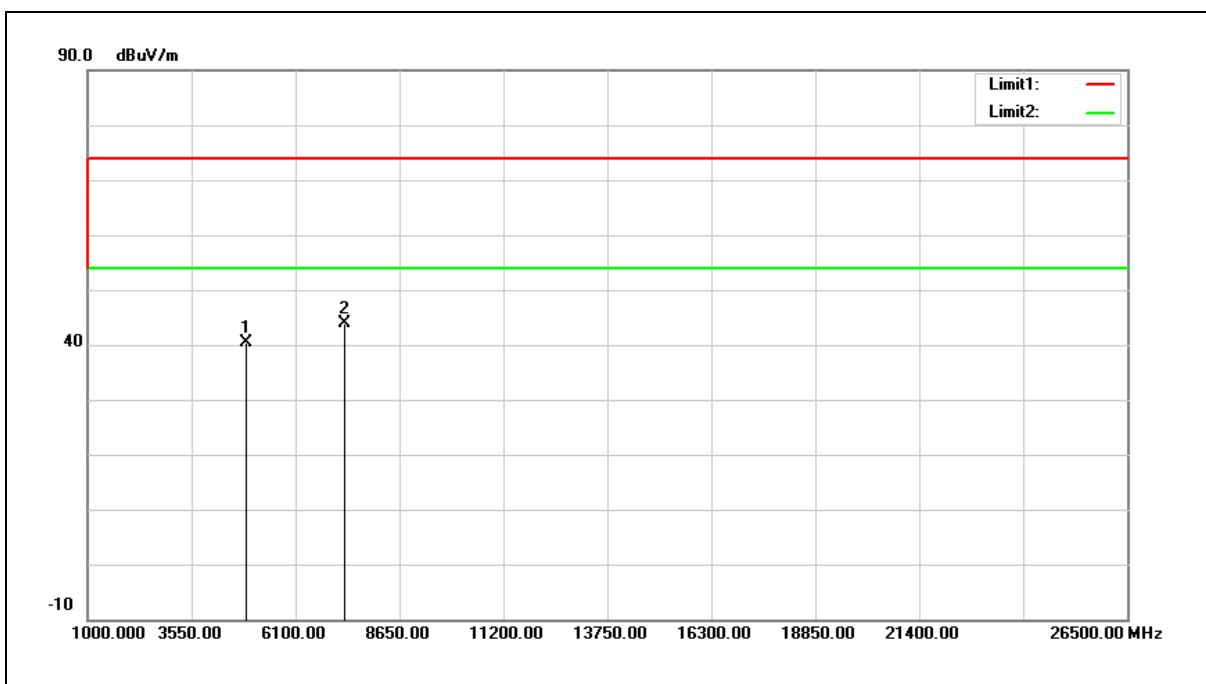
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4880.000	34.82	2.97	37.79	74.00	-36.21	peak
2	7320.000	35.01	9.18	44.19	74.00	-29.81	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2440 MHz		
Mode:	Mode 5		
Ant.Polar.:	Vertical		



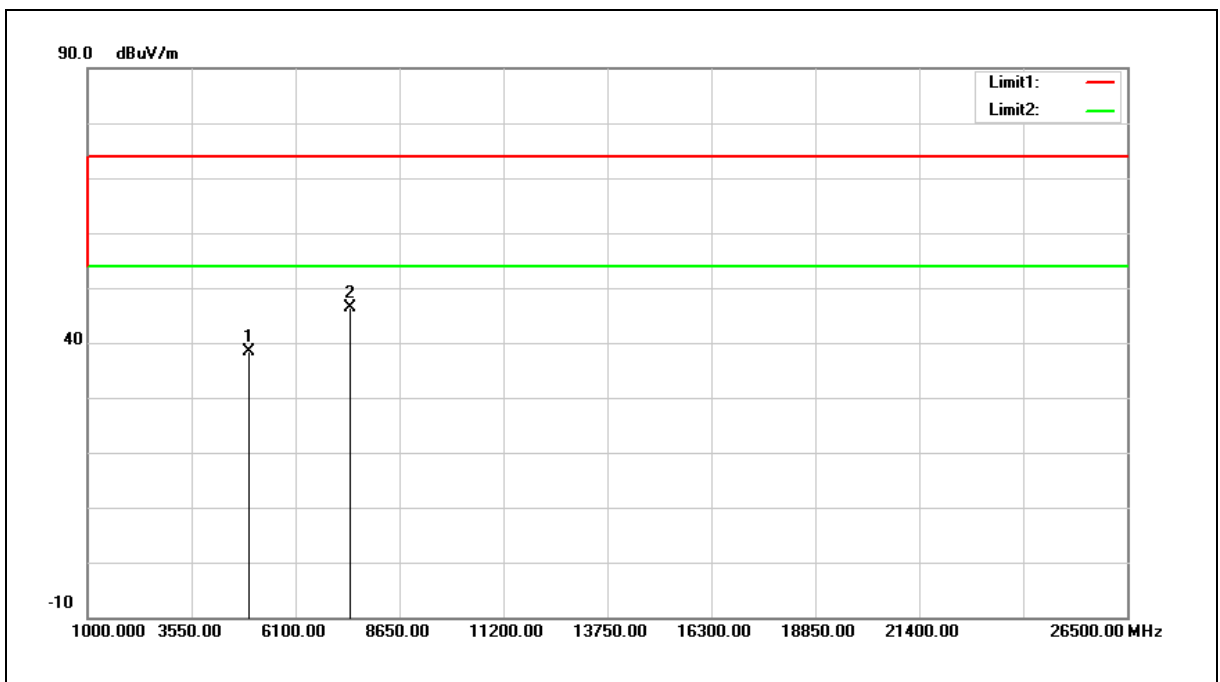
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4880.000	37.36	2.97	40.33	74.00	-33.67	peak
2	7320.000	34.79	9.18	43.97	74.00	-30.03	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2480 MHz		
Mode:	Mode 5		
Ant.Polar.:	Horizontal		



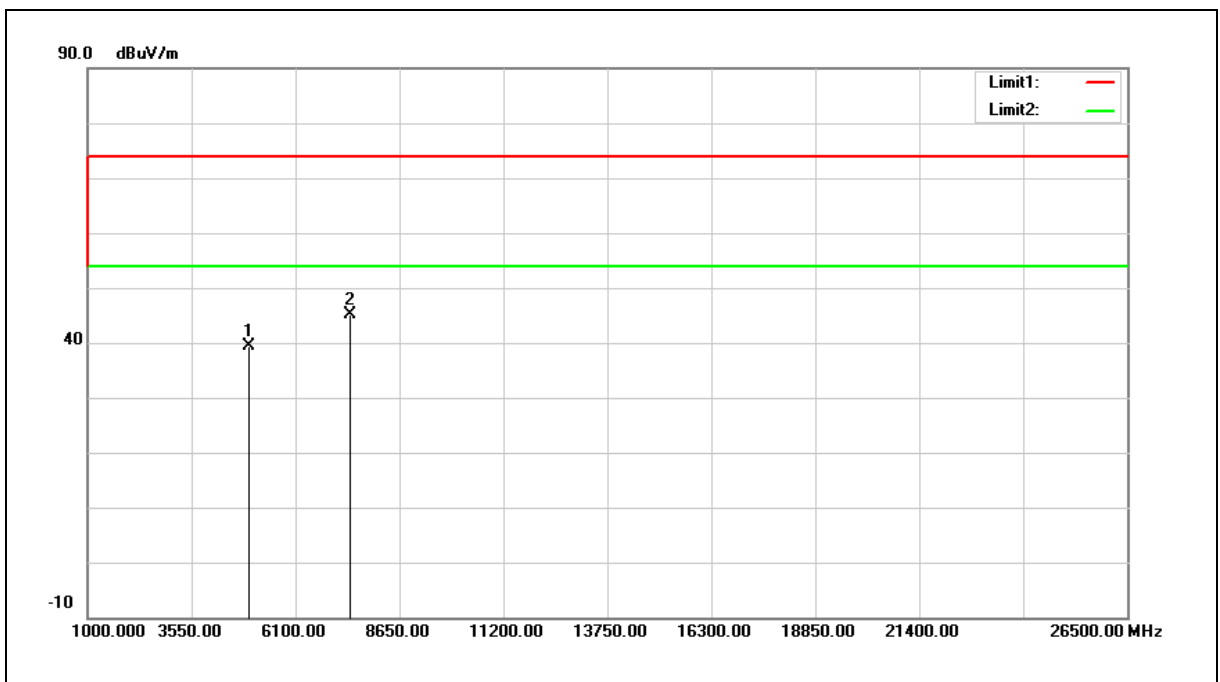
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	35.24	3.17	38.41	74.00	-35.59	peak
2	7440.000	36.77	9.55	46.32	74.00	-27.68	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2480 MHz		
Mode:	Mode 5		
Ant.Polar.:	Vertical		



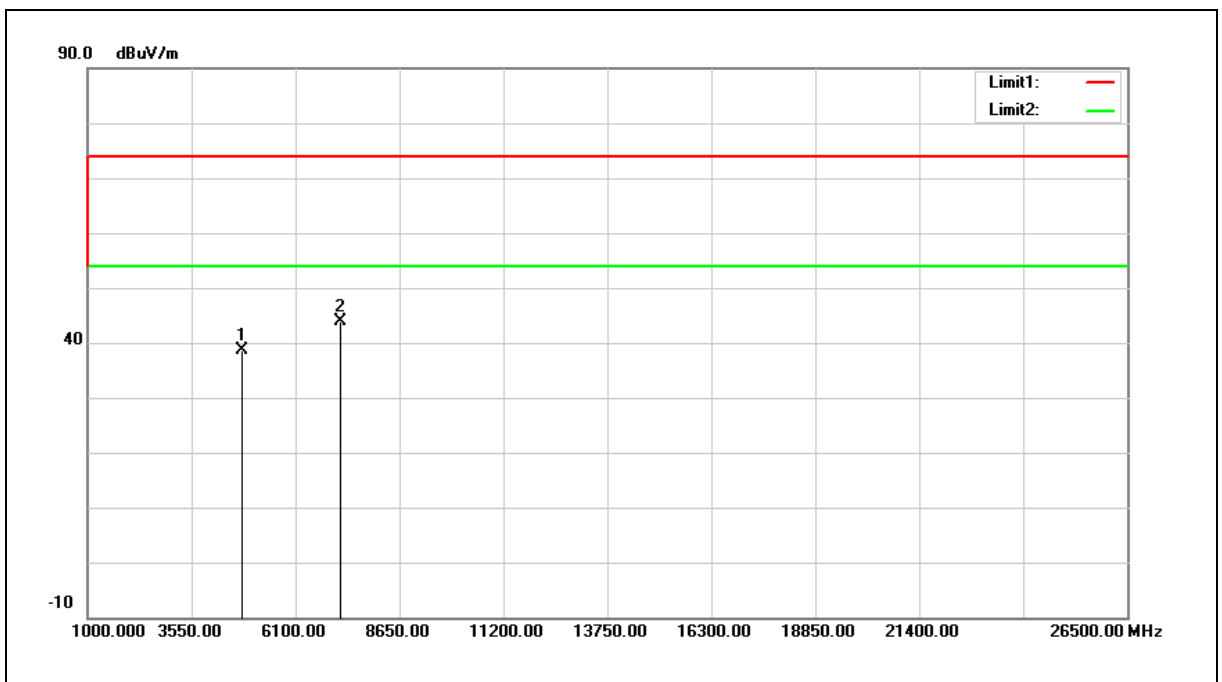
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	36.19	3.17	39.36	74.00	-34.64	peak
2	7440.000	35.67	9.55	45.22	74.00	-28.78	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2402 MHz		
Mode:	Mode 6		
Ant.Polar.:	Horizontal		



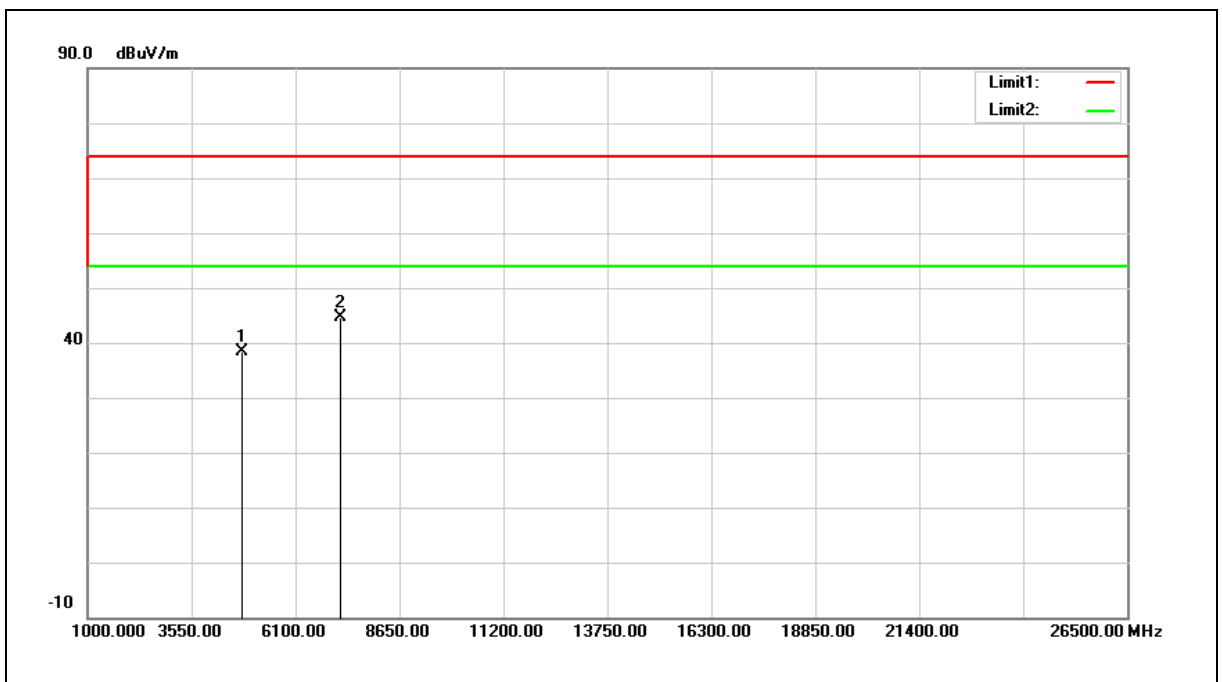
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.000	35.79	2.80	38.59	74.00	-35.41	peak
2	7206.000	34.95	8.82	43.77	74.00	-30.23	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2402 MHz		
Mode:	Mode 6		
Ant.Polar.:	Vertical		



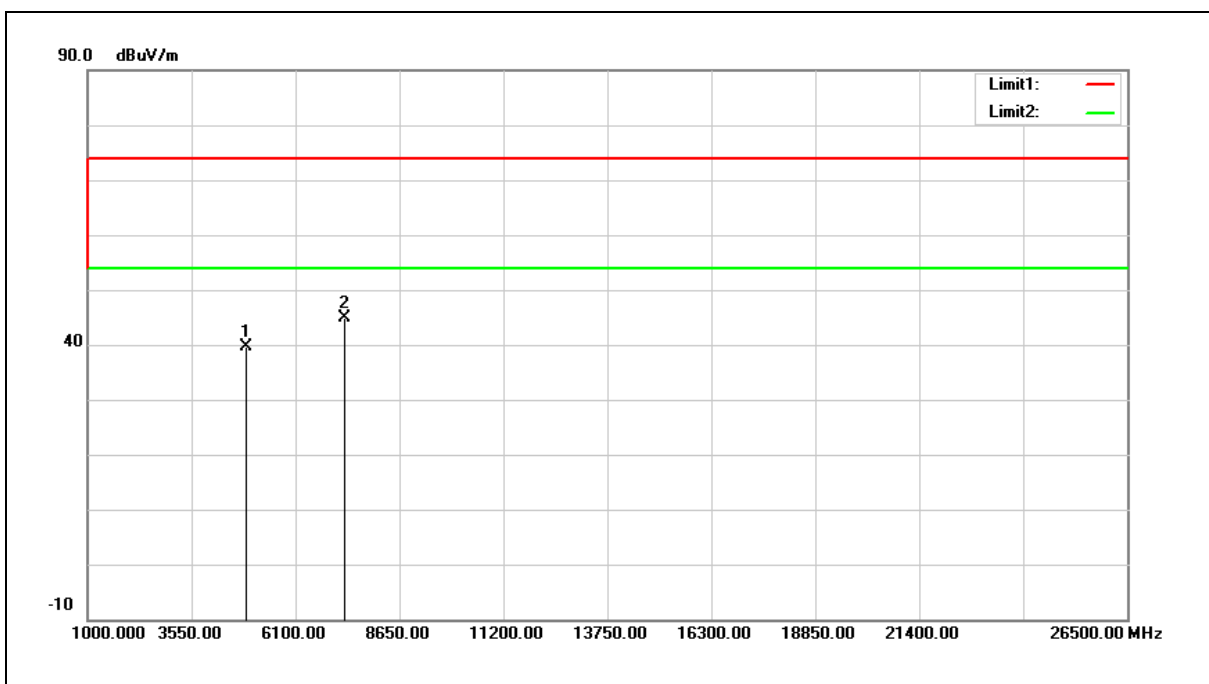
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.000	35.65	2.80	38.45	74.00	-35.55	peak
2	7206.000	35.89	8.82	44.71	74.00	-29.29	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2440 MHz		
Mode:	Mode 6		
Ant.Polar.:	Horizontal		



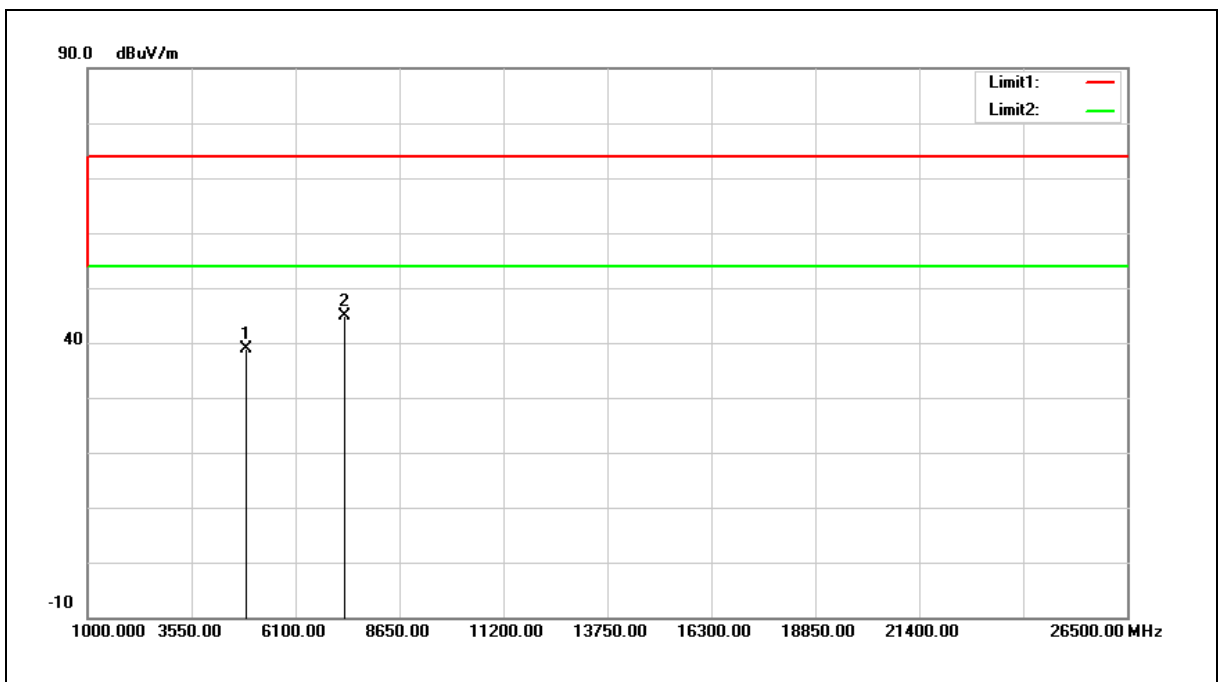
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4880.000	36.60	2.97	39.57	74.00	-34.43	peak
2	7320.000	35.66	9.18	44.84	74.00	-29.16	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2440 MHz		
Mode:	Mode 6		
Ant.Polar.:	Vertical		



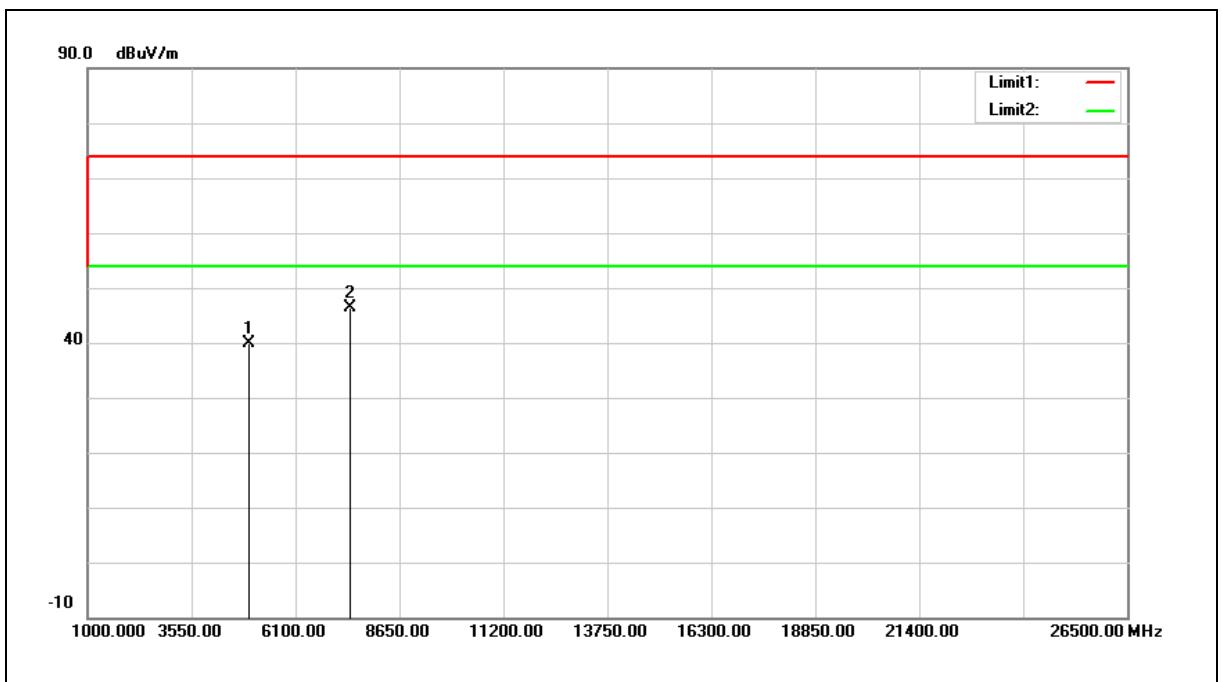
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4880.000	35.87	2.97	38.84	74.00	-35.16	peak
2	7320.000	35.64	9.18	44.82	74.00	-29.18	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2480 MHz		
Mode:	Mode 6		
Ant.Polar.:	Horizontal		



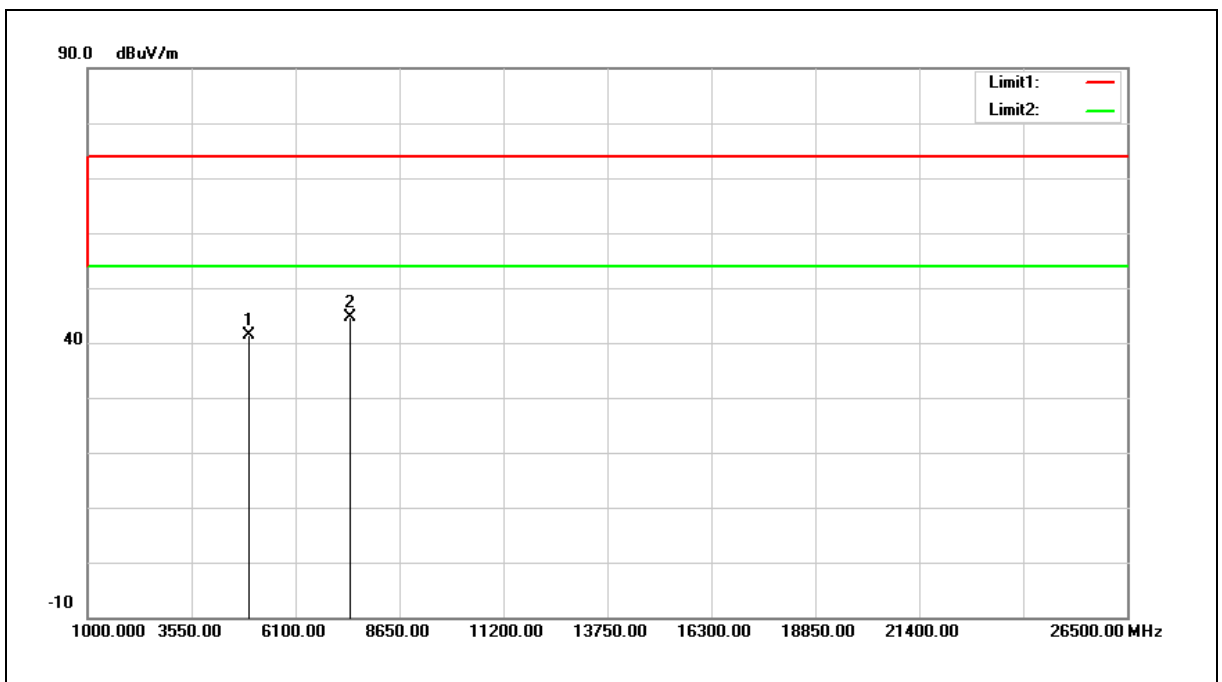
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	36.59	3.17	39.76	74.00	-34.24	peak
2	7440.000	36.86	9.55	46.41	74.00	-27.59	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2480 MHz		
Mode:	Mode 6		
Ant.Polar.:	Vertical		



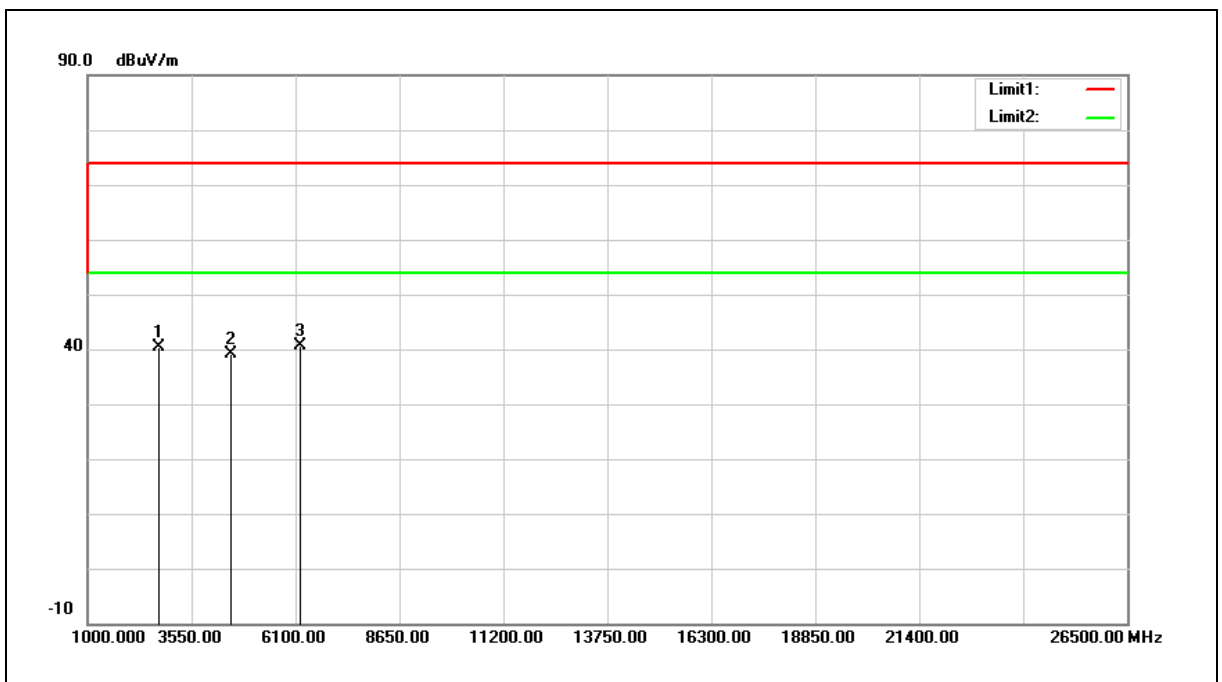
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	38.15	3.17	41.32	74.00	-32.68	peak
2	7440.000	34.97	9.55	44.52	74.00	-29.48	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Mode:	Mode 7		
Ant.Polar.:	Horizontal		
Description:			



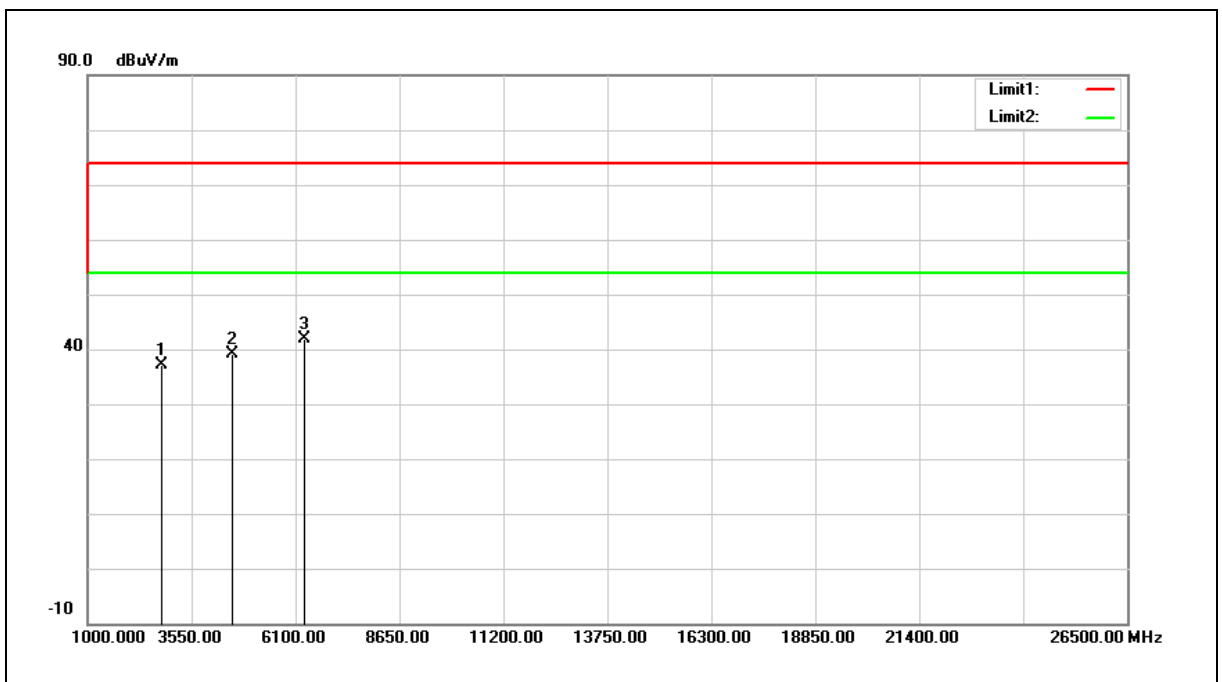
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2751.000	42.35	-1.96	40.39	74.00	-33.61	peak
2	4502.000	37.18	2.05	39.23	74.00	-34.77	peak
3	6219.000	34.90	5.69	40.59	74.00	-33.41	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Mode:	Mode 7		
Ant.Polar.:	Vertical		
Description:			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2802.000	38.82	-1.77	37.05	74.00	-36.95	peak
2	4553.000	36.83	2.19	39.02	74.00	-34.98	peak
3	6321.000	35.89	6.01	41.90	74.00	-32.10	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

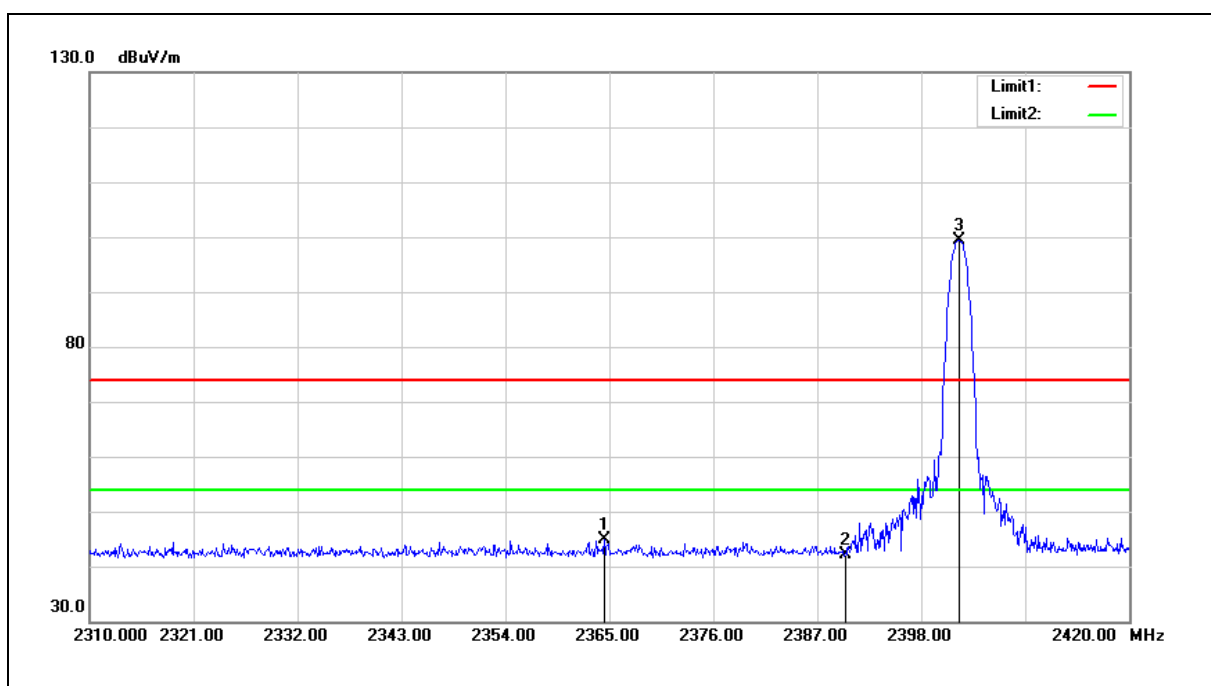
2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

頻帶邊緣

附註：其上下邊緣落於低功率射頻電機第 2.7 節所列頻帶內之混附發射，其電場強度必須符合第 2.8 節的限制規定。

Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2402 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



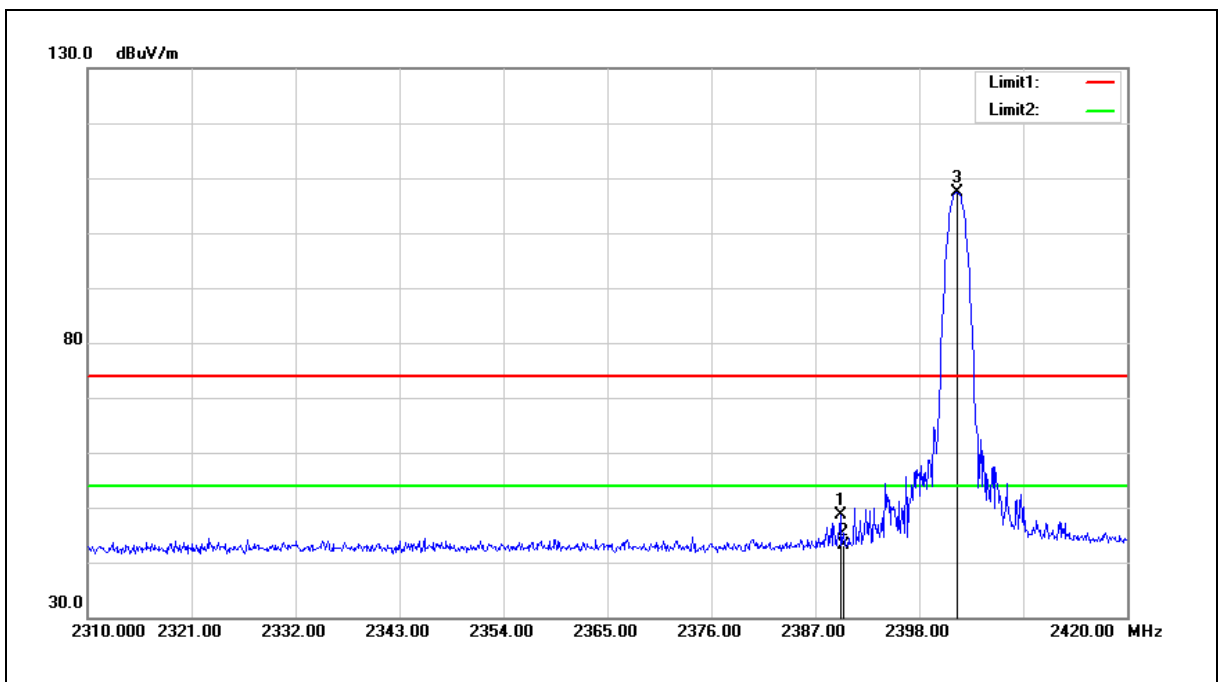
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2364.450	48.14	-3.38	44.76	74.00	-29.24	peak
2	2390.000	45.51	-3.28	42.23	74.00	-31.77	peak
3	2402.070	102.63	-3.23	99.40	--	--	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2402 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



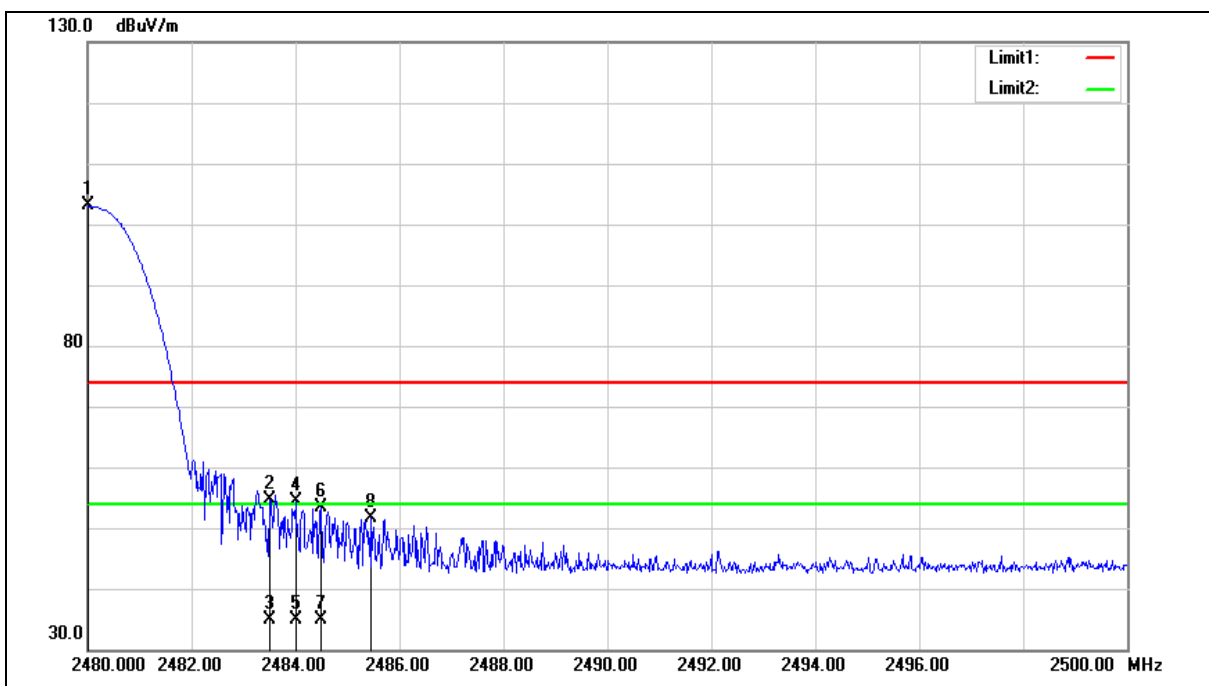
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.640	51.81	-3.28	48.53	74.00	-25.47	peak
2	2390.000	46.46	-3.28	43.18	74.00	-30.82	peak
3	2402.070	110.65	-3.23	107.42	--	--	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) - Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2480 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2480 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		

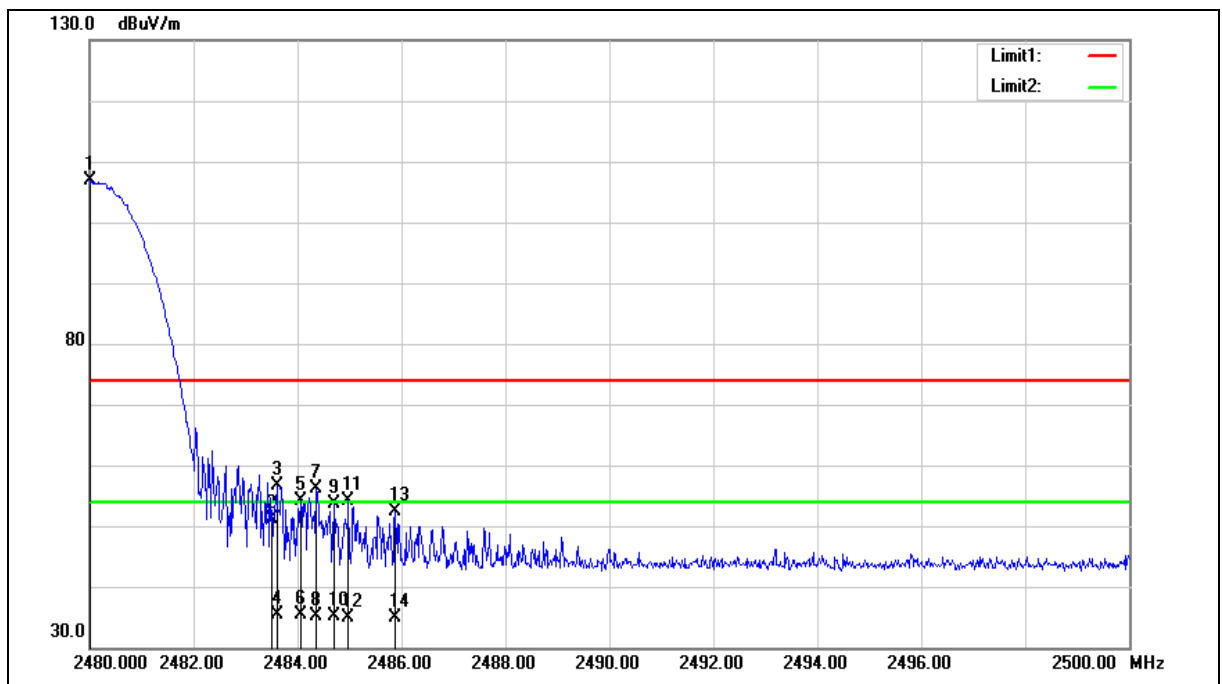
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.020	105.97	-2.94	103.03	--	--	peak
2	2483.500	57.55	-2.93	54.62	74.00	-19.38	peak
3	2483.500	37.90	-2.93	34.97	54.00	-19.03	AVG
4	2484.000	57.35	-2.93	54.42	74.00	-19.58	peak
5	2484.000	37.72	-2.93	34.79	54.00	-19.21	AVG
6	2484.480	56.34	-2.93	53.41	74.00	-20.59	peak
7	2484.480	37.74	-2.93	34.81	54.00	-19.19	AVG
8	2485.440	54.65	-2.92	51.73	74.00	-22.27	peak

Note: 1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3.When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2480 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2480 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		

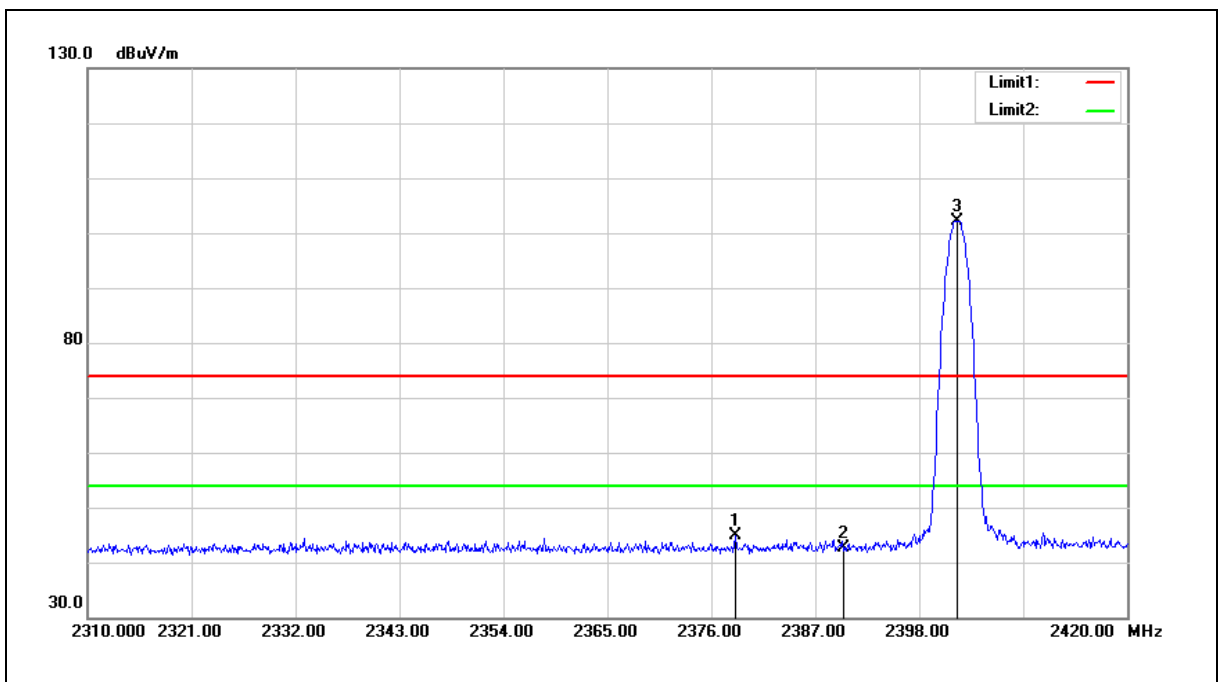
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.020	109.77	-2.94	106.83	--	--	peak
2	2483.500	53.99	-2.93	51.06	74.00	-22.94	peak
3	2483.600	59.55	-2.93	56.62	74.00	-17.38	peak
4	2483.600	38.43	-2.93	35.50	54.00	-18.50	AVG
5	2484.060	56.99	-2.93	54.06	74.00	-19.94	peak
6	2484.060	38.20	-2.93	35.27	54.00	-18.73	AVG
7	2484.360	58.97	-2.93	56.04	74.00	-17.96	peak
8	2484.360	38.01	-2.93	35.08	54.00	-18.92	AVG
9	2484.700	56.48	-2.93	53.55	74.00	-20.45	peak
10	2484.700	38.03	-2.93	35.10	54.00	-18.90	AVG
11	2484.980	56.99	-2.93	54.06	74.00	-19.94	peak
12	2484.980	37.93	-2.93	35.00	54.00	-19.00	AVG
13	2485.880	55.29	-2.92	52.37	74.00	-21.63	peak
14	2485.880	37.75	-2.92	34.83	54.00	-19.17	AVG

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2402 MHz		
Mode:	Mode 4		
Ant.Polar.:	Horizontal		



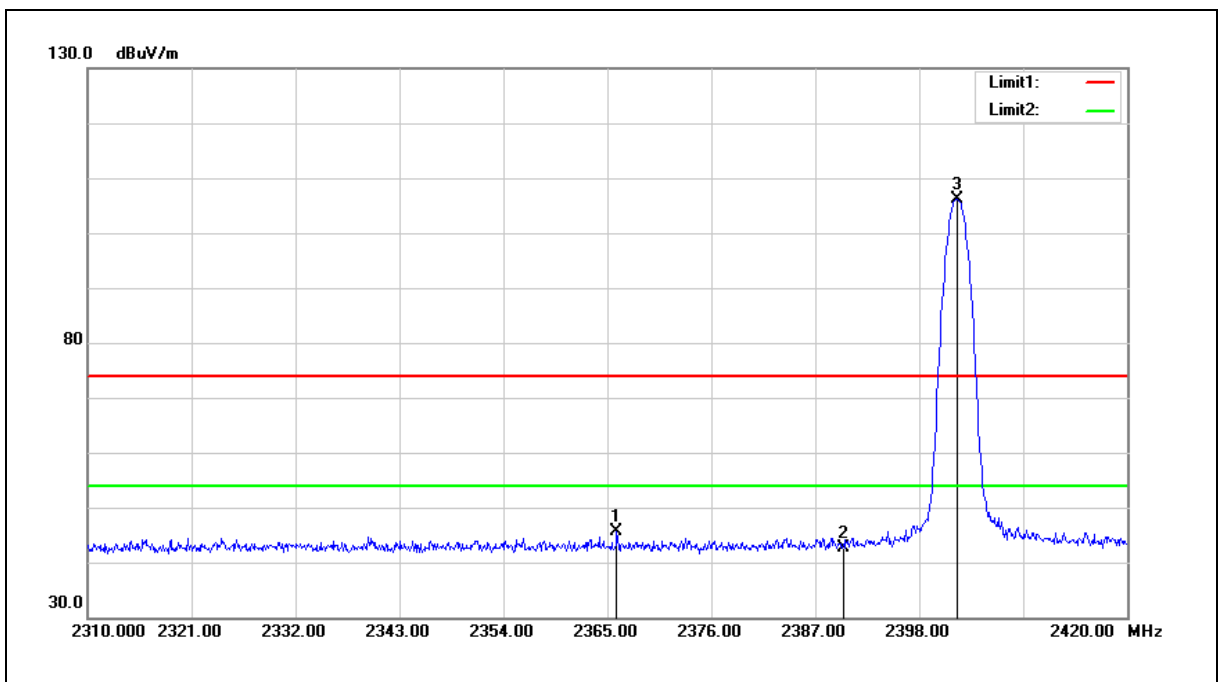
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2378.530	48.24	-3.32	44.92	74.00	-29.08	peak
2	2390.000	45.97	-3.28	42.69	74.00	-31.31	peak
3	2402.070	105.46	-3.23	102.23	--	--	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) - Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2402 MHz		
Mode:	Mode 4		
Ant.Polar.:	Vertical		



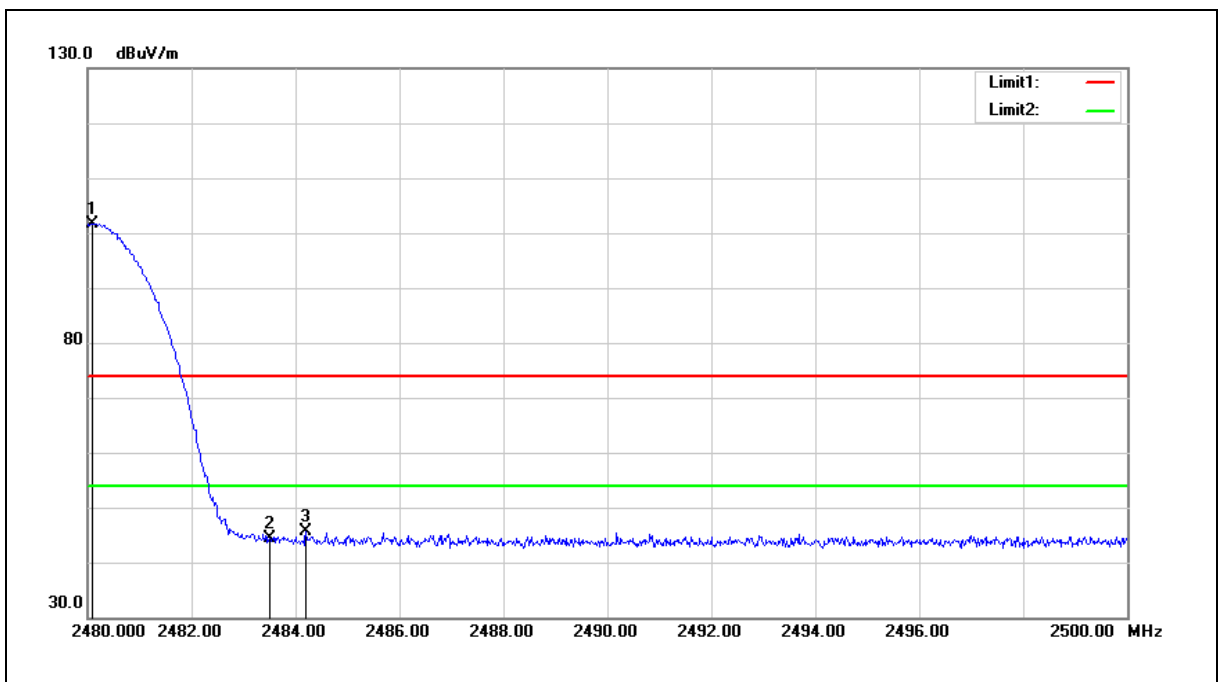
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2365.990	49.04	-3.37	45.67	74.00	-28.33	peak
2	2390.000	46.02	-3.28	42.74	74.00	-31.26	peak
3	2401.960	109.27	-3.23	106.04	--	--	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2480 MHz		
Mode:	Mode 4		
Ant.Polar.:	Horizontal		



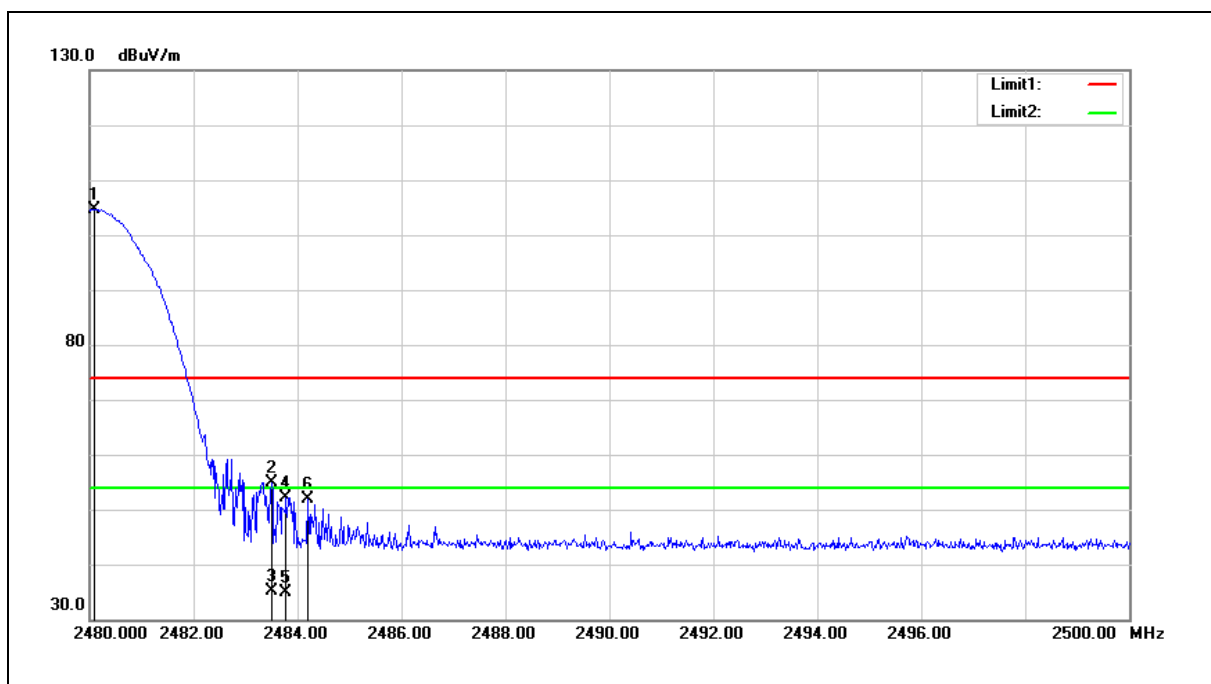
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.080	104.63	-2.94	101.69	--	--	peak
2	2483.500	47.32	-2.93	44.39	74.00	-29.61	peak
3	2484.200	48.61	-2.93	45.68	74.00	-28.32	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) - Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2480 MHz		
Mode:	Mode 4		
Ant.Polar.:	Vertical		



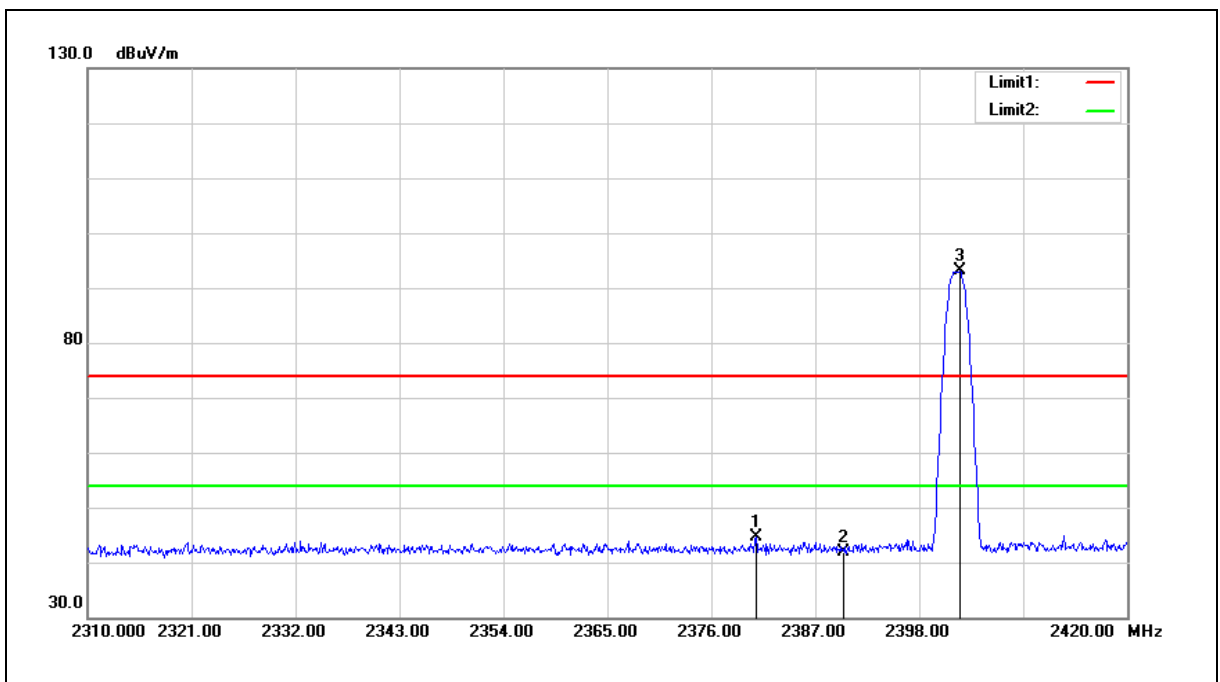
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.080	107.58	-2.94	104.64	--	--	peak
2	2483.500	57.79	-2.93	54.86	74.00	-19.14	peak
3	2483.500	37.94	-2.93	35.01	54.00	-18.99	AVG
4	2483.780	55.11	-2.93	52.18	74.00	-21.82	peak
5	2483.780	37.85	-2.93	34.92	54.00	-19.08	AVG
6	2484.200	54.89	-2.93	51.96	74.00	-22.04	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) - Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2402 MHz		
Mode:	Mode 5		
Ant.Polar.:	Horizontal		



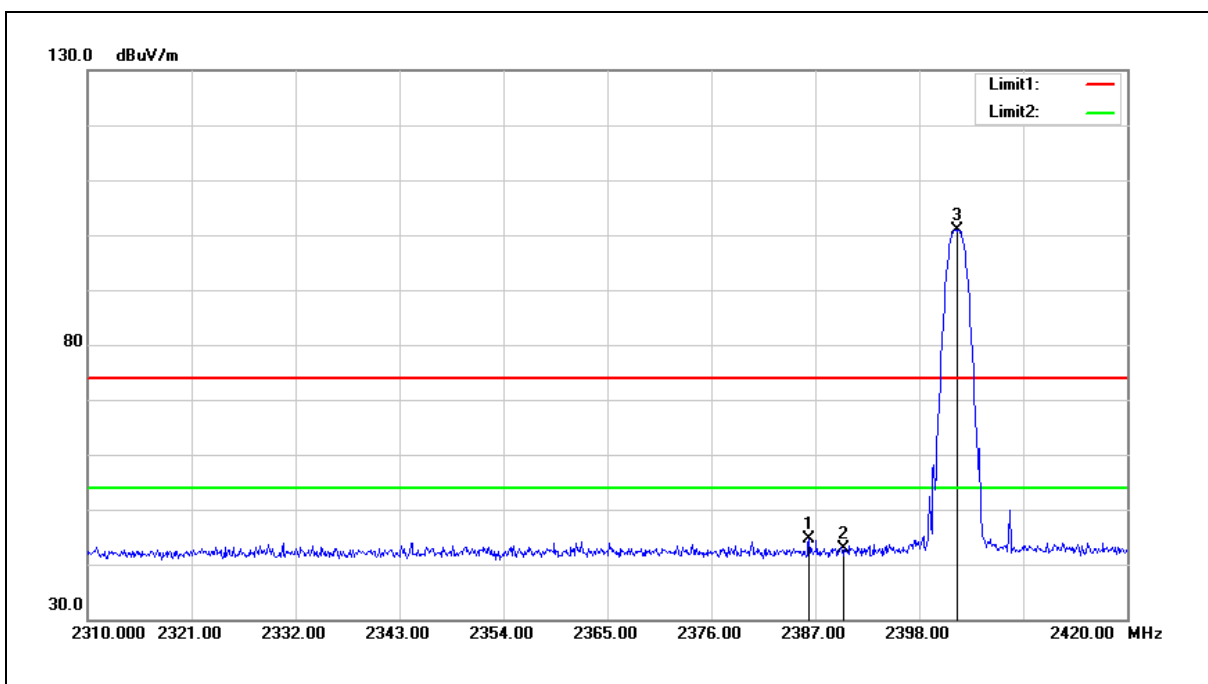
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2380.730	48.07	-3.32	44.75	74.00	-29.25	peak
2	2390.000	45.15	-3.28	41.87	74.00	-32.13	peak
3	2402.290	96.25	-3.23	93.02	--	--	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) - Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2402 MHz		
Mode:	Mode 5		
Ant.Polar.:	Vertical		



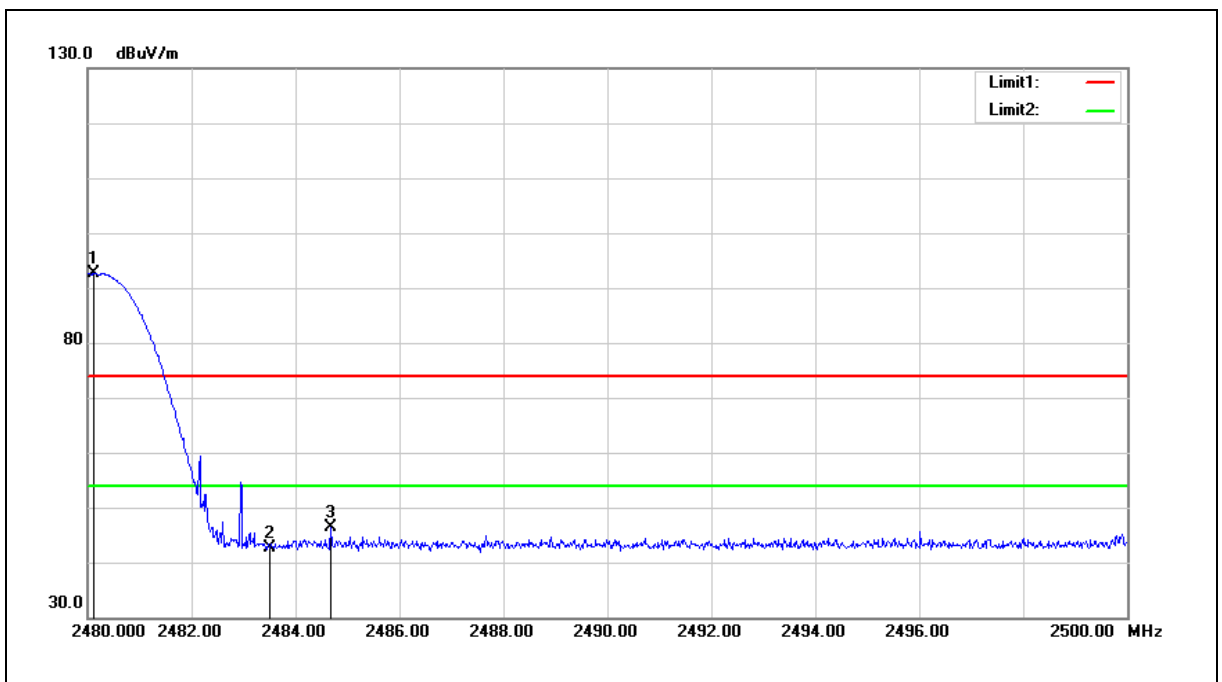
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.340	47.82	-3.29	44.53	74.00	-29.47	peak
2	2390.000	46.20	-3.28	42.92	74.00	-31.08	peak
3	2401.960	104.03	-3.23	100.80	--	--	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) - Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2480 MHz		
Mode:	Mode 5		
Ant.Polar.:	Horizontal		



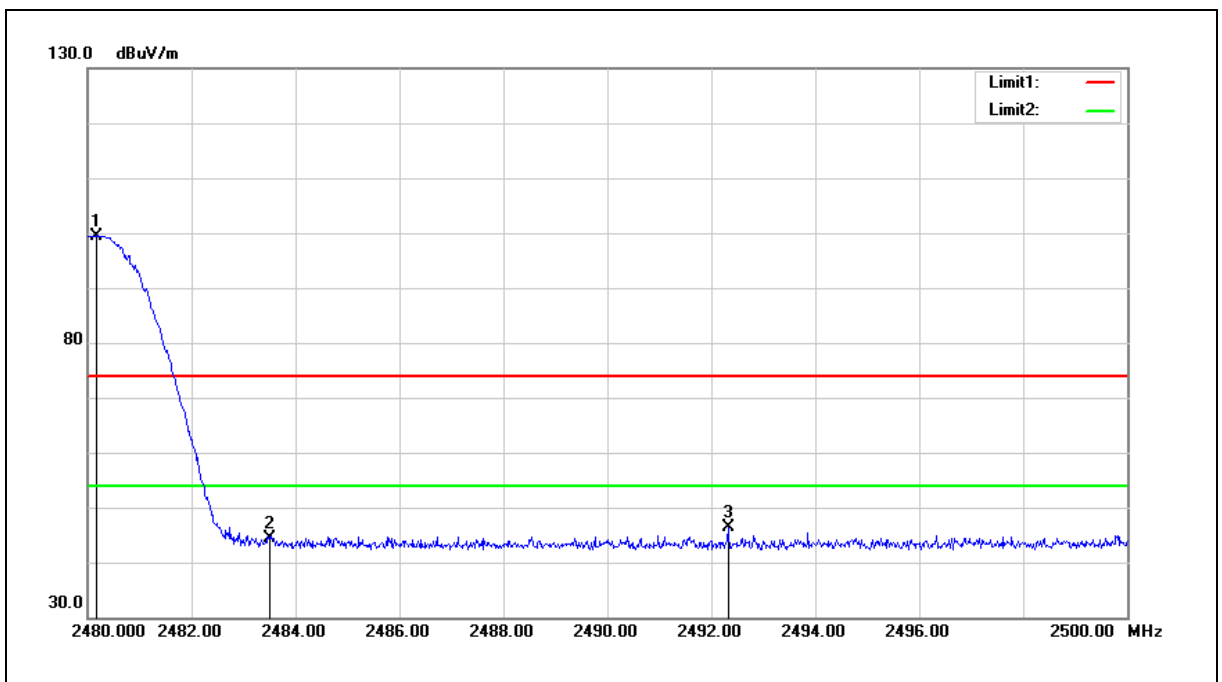
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.120	95.55	-2.94	92.61	--	--	peak
2	2483.500	45.67	-2.93	42.74	74.00	-31.26	peak
3	2484.680	49.31	-2.93	46.38	74.00	-27.62	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) - Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2480 MHz		
Mode:	Mode 5		
Ant.Polar.:	Vertical		



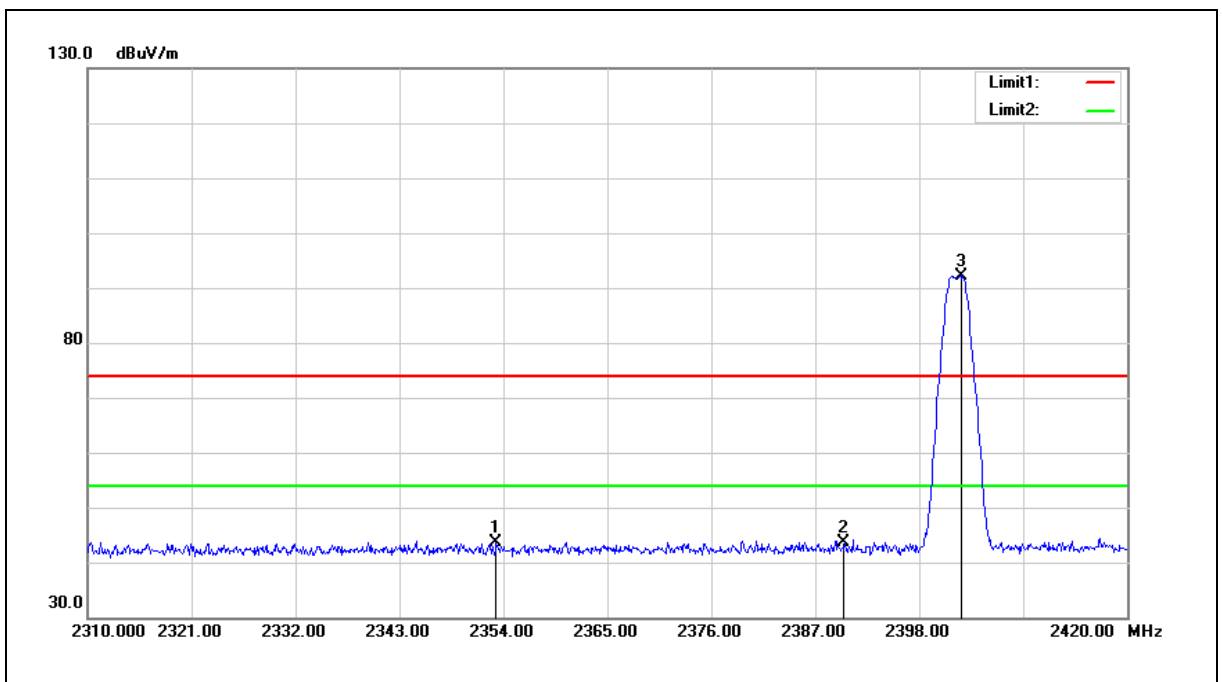
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.160	102.44	-2.94	99.50	--	--	peak
2	2483.500	47.24	-2.93	44.31	74.00	-29.69	peak
3	2492.320	49.23	-2.90	46.33	74.00	-27.67	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) - Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2402 MHz		
Mode:	Mode 6		
Ant.Polar.:	Horizontal		



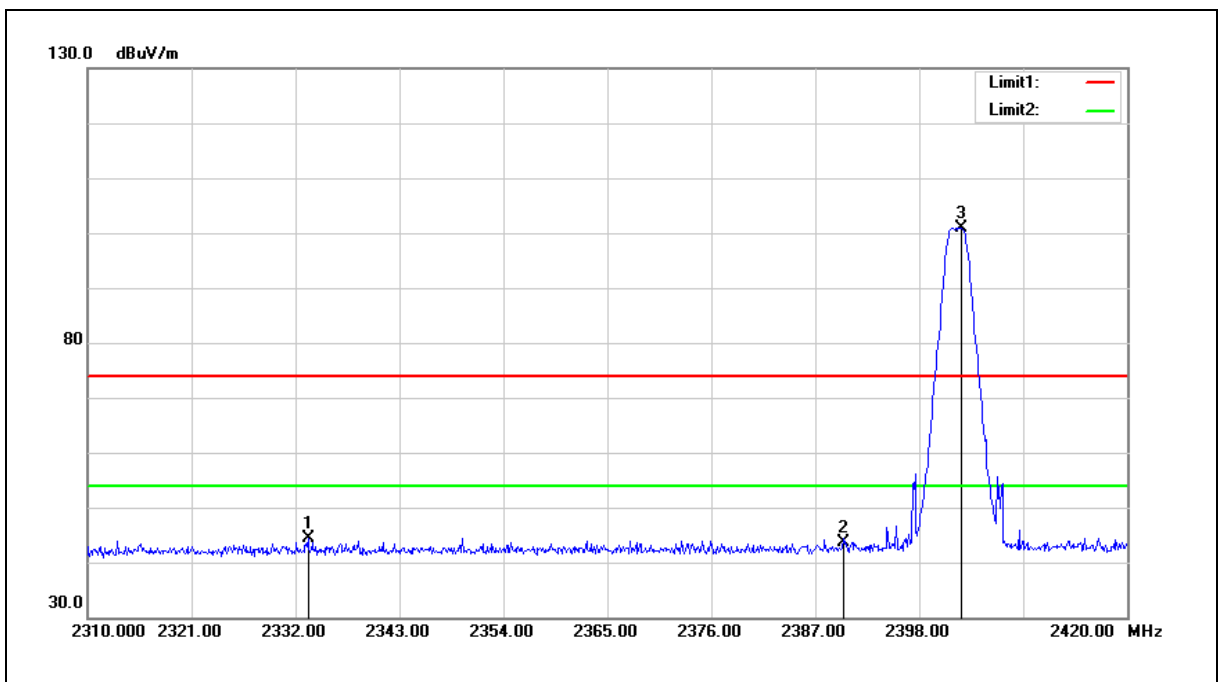
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2353.230	47.16	-3.41	43.75	74.00	-30.25	peak
2	2390.000	46.98	-3.28	43.70	74.00	-30.30	peak
3	2402.400	95.48	-3.23	92.25	--	--	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2402 MHz		
Mode:	Mode 6		
Ant.Polar.:	Vertical		



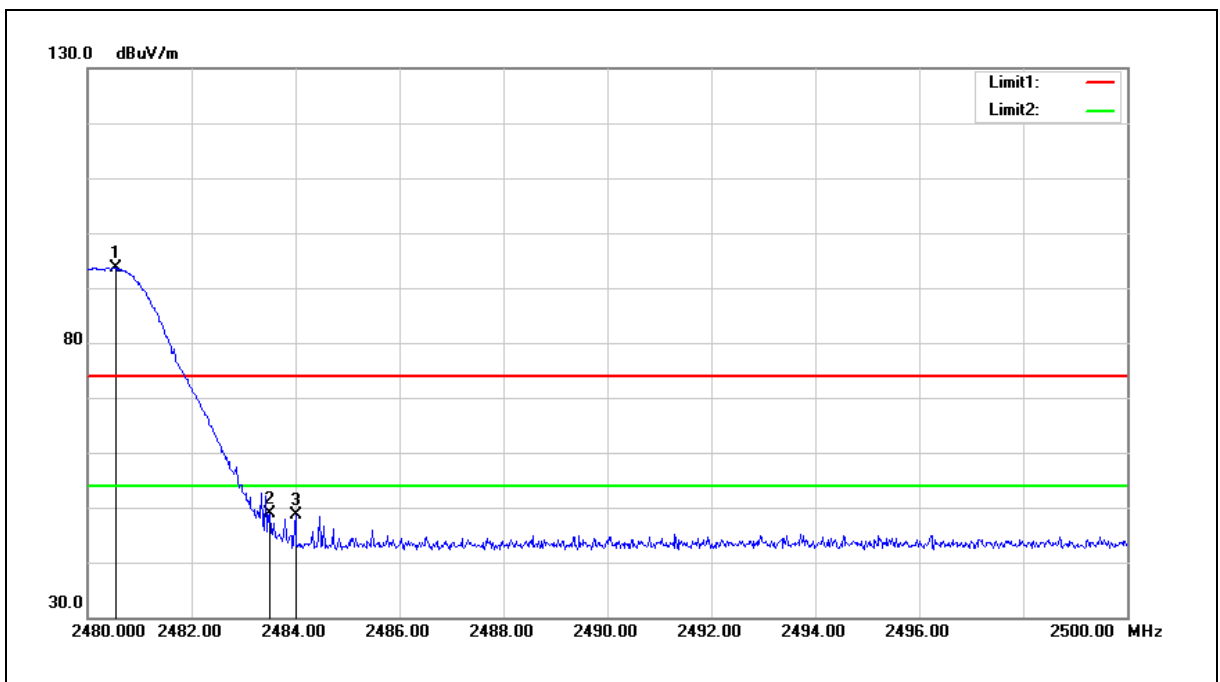
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2333.320	47.90	-3.48	44.42	74.00	-29.58	peak
2	2390.000	46.80	-3.28	43.52	74.00	-30.48	peak
3	2402.400	104.16	-3.23	100.93	--	--	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) - Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2480 MHz		
Mode:	Mode 6		
Ant.Polar.:	Horizontal		



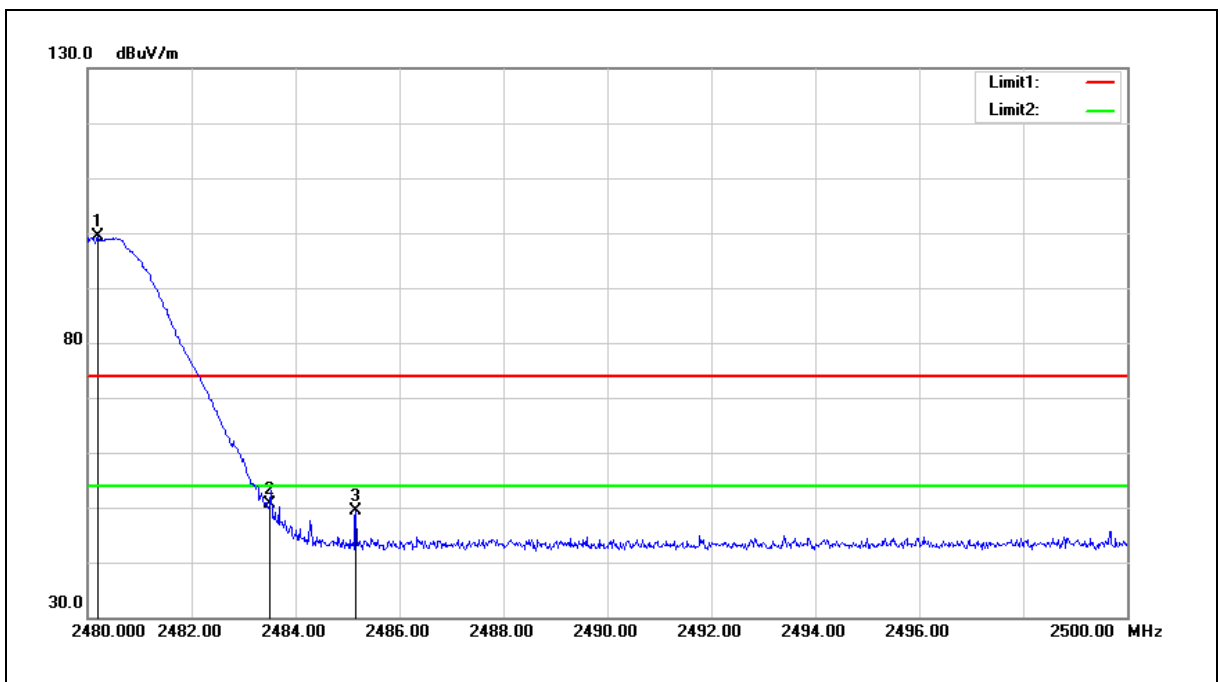
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.540	96.61	-2.94	93.67	--	--	peak
2	2483.500	51.76	-2.93	48.83	74.00	-25.17	peak
3	2484.000	51.56	-2.93	48.63	74.00	-25.37	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) - Pre-Amplifier gain (dB).

3. When the peak results are less than average limit, so not need to evaluate the average.

Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2480 MHz		
Mode:	Mode 6		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.200	102.23	-2.94	99.29	--	--	peak
2	2483.500	53.62	-2.93	50.69	74.00	-23.31	peak
3	2485.160	52.33	-2.92	49.41	74.00	-24.59	peak

Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

2. Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) - Pre-Amplifier gain (dB).

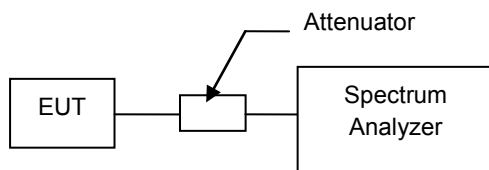
3. When the peak results are less than average limit, so not need to evaluate the average.

4.4 非必要頻帶之量測

合格標準：

發射限制： 使用頻帶範圍外之任意 100 千赫 (kHz)內，發射器所產生的射頻功率相較於使用頻帶範圍中包含最高所需功率之 100 千赫 (kHz)內的射頻功率，BR/EDR 須衰減 20 分貝(dB)；LE/2LE 須衰減 30 分貝(dB)，以射頻傳導或輻射方式測量。

測試架構圖：



測試結果：

操作模式	: Mode 2: BR, GFSK Continuous TX Mode Mode 4: EDR, 8DPSK Continuous TX Mode Mode 5: LE, GFSK Continuous TX Mode Mode 6: 2LE, GFSK Continuous TX Mode
量測之結果掃圖如下頁所示	

附註 1:於使用頻帶範圍之任意 100 千赫 (kHz)內，發射器所產生的射頻功率相較於使用頻帶範圍中包含最高所需功率之 100 千赫 (kHz)內的射頻功率，BR/EDR 衰減 20 分貝(dB)；LE/2LE 衰減 30 分貝(dB)以上，符合規定。

附註 2:測試結果頻帶外之輻射雜訊皆小於主頻 BR/EDR TX 20 dB；LE/2LE TX 30 dB。

Out of Band Conducted Spurious Emission

Mode 2: BR, GFSK Continuous TX Mode

低頻道



中頻道



高頻道

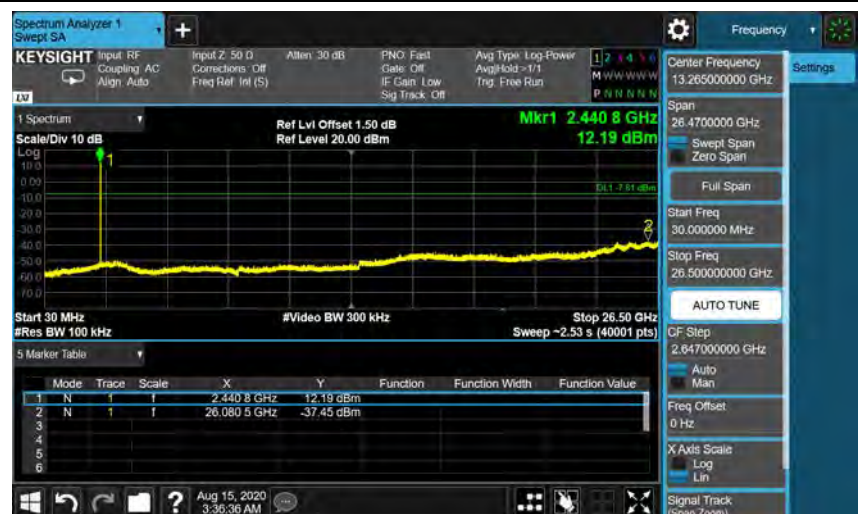


Mode 4: EDR, 8DPSK Continuous TX Mode

低頻道



中頻道



高頻道



Mode 5: LE, GFSK Continuous TX Mode

低頻道



中頻道



高頻道



Mode 6: 2LE, GFSK Continuous TX Mode

低頻道



中頻道



高頻道



Reference level

Mode 5: LE, GFSK Continuous TX Mode

低頻道

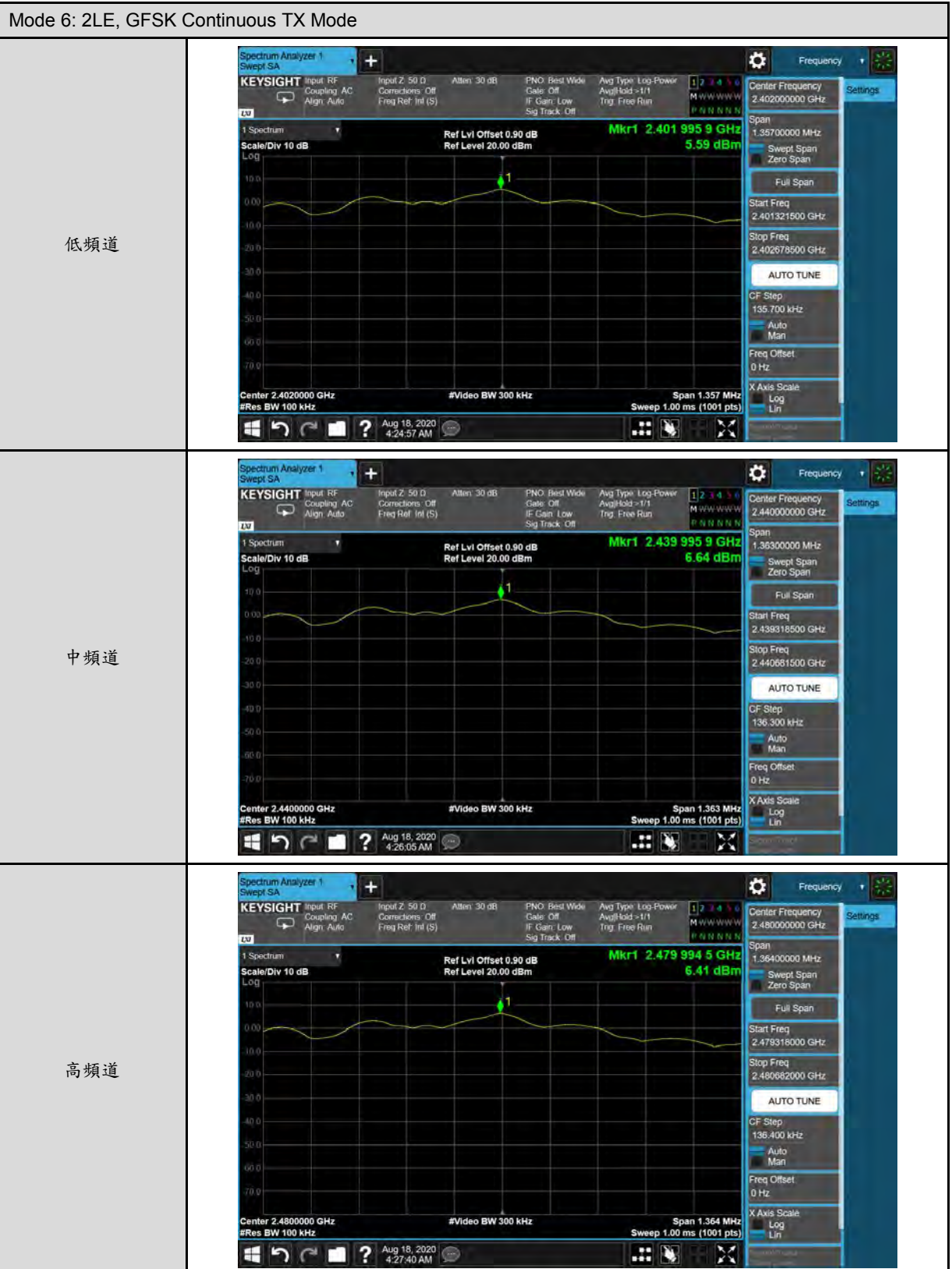


中頻道



高頻道

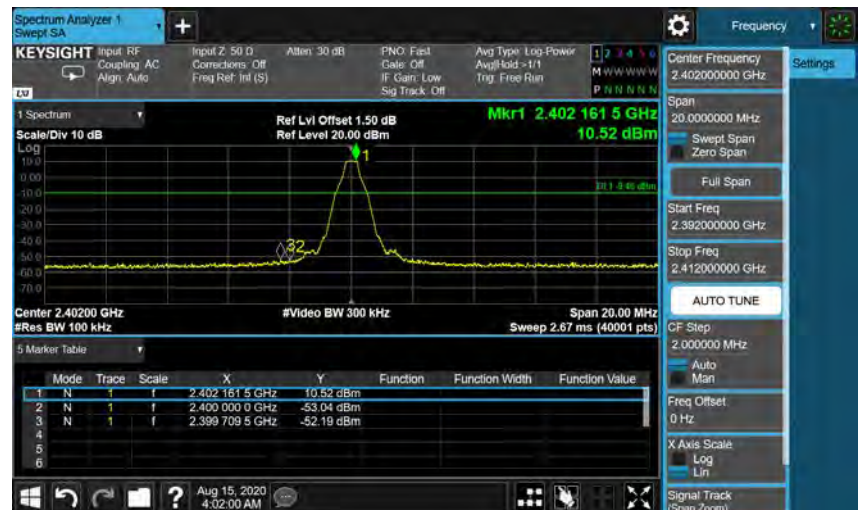




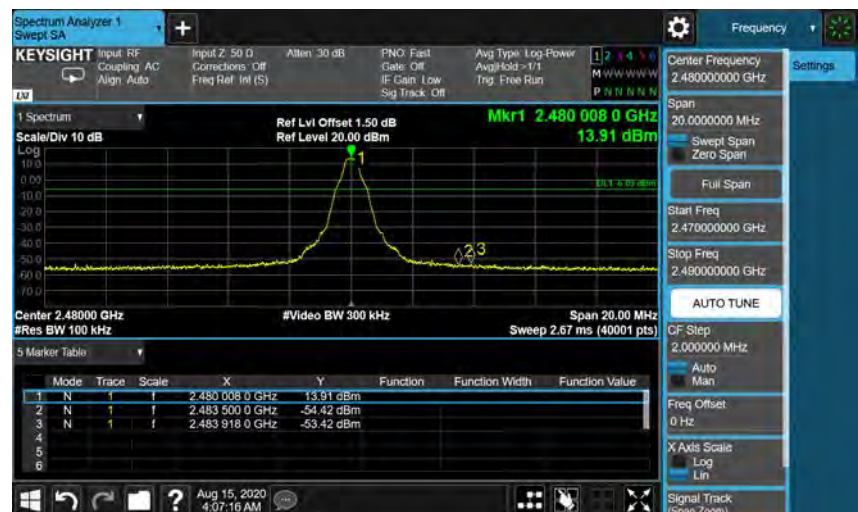
Conducted Band Edge

Mode 2: BR, GFSK Continuous TX Mode_Un-hopping

低頻道



高頻道



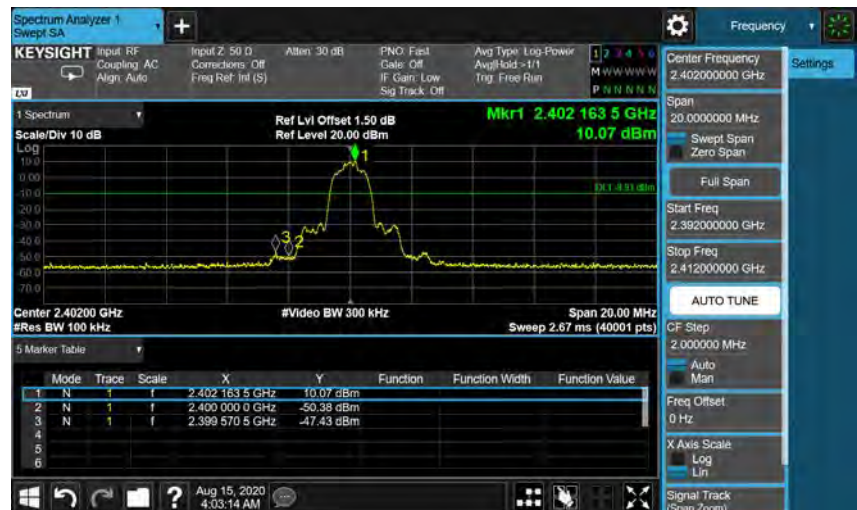
Mode 2: BR, GFSK Continuous TX Mode_Hopping

低頻道-高頻道

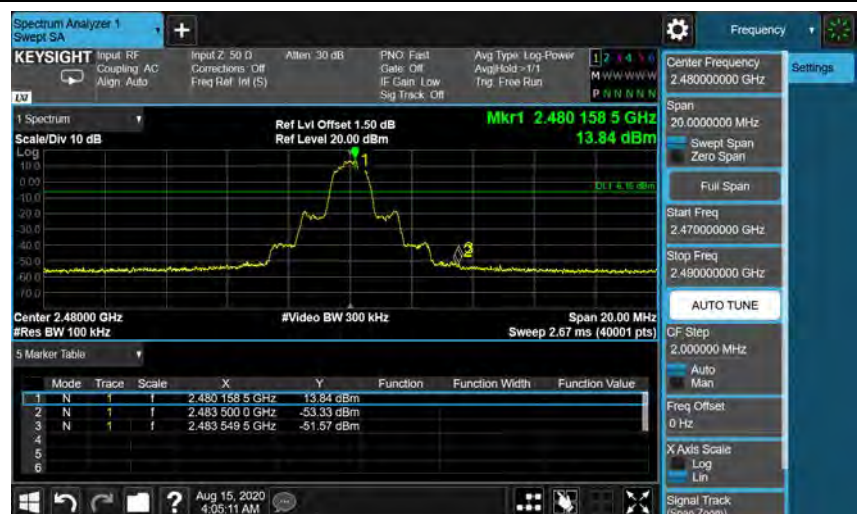


Mode 4: EDR, 8DPSK Continuous TX Mode_Un-hopping

低頻道



高頻道



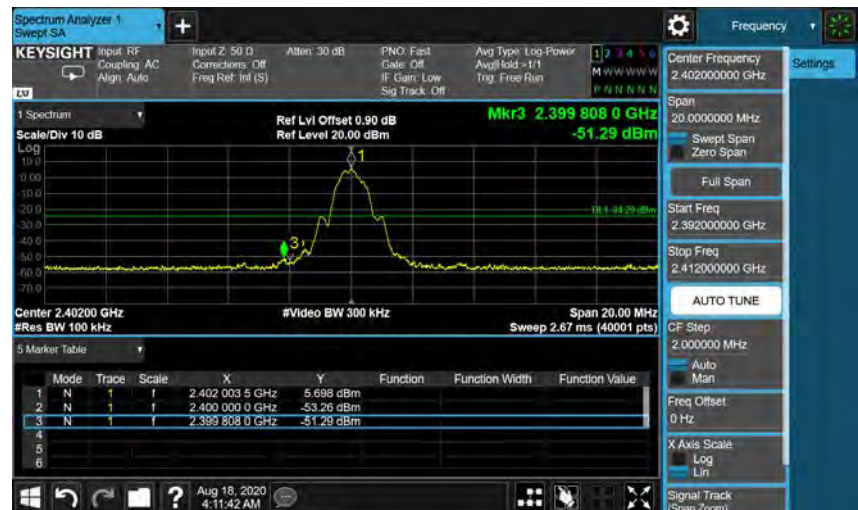
Mode 4: EDR, 8DPSK Continuous TX Mode_Hopping

低頻道-高頻道

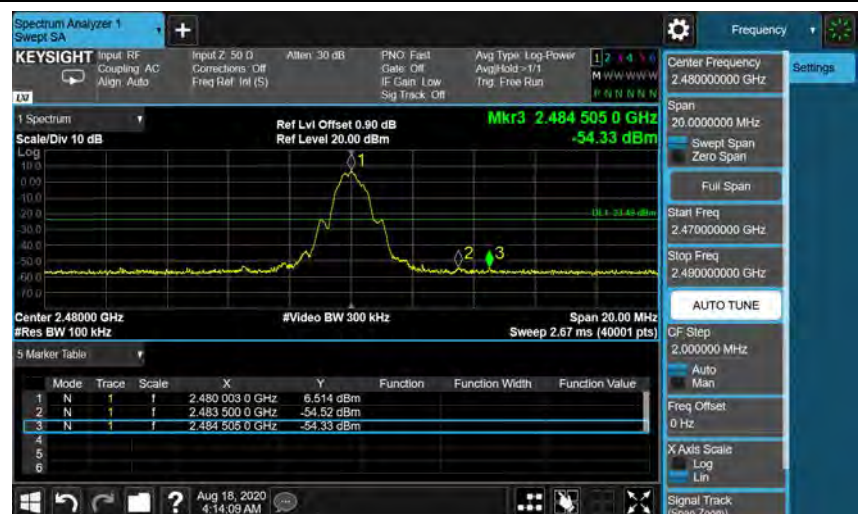


Mode 5: LE, GFSK Continuous TX Mode

低頻道



高頻道



Mode 6: 2LE, GFSK Continuous TX Mode

低頻道



高頻道



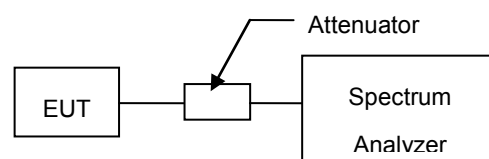
4.5 頻率範圍之要求

合格標準：

依據 NCC 低功率射頻電機技術規範(LP0002)之 3.10.1.1 節之要求，允許使用的頻率範圍為 2400 至 2483.5 MHz。

測試架構圖：

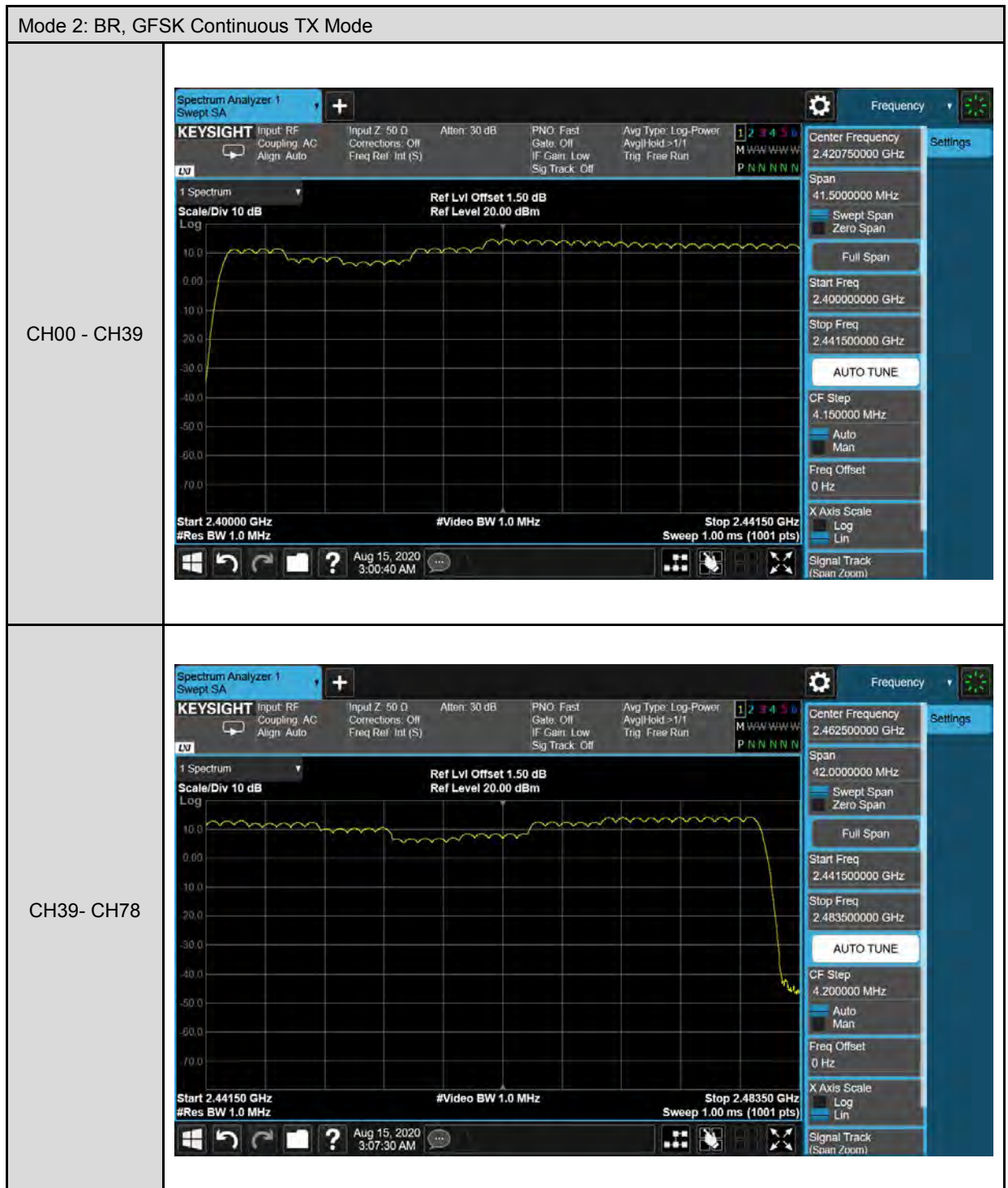
測試場地測試配置如圖所示。



測試結果：

操作模式	: Mode 2: BR, GFSK Continuous TX Mode Mode 4: EDR, 8DPSK Continuous TX Mode
------	--

量測之掃描圖如下頁所示





4.6 發射頻寬之要求

合格標準:

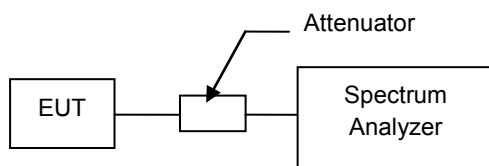
BR/EDR

對跳頻系統(Frequency Hopping System)而言,依據 NCC 低功率射頻電機技術規範 3.10.1.6(1)(A)節之要求,跳頻系統之載波頻率頻道間隔應至少 25 千赫(kHz)或跳頻頻道 20 dB 頻寬之三分之二,兩者取較寬者。系統之跳頻頻道應依虛擬亂數排列,在各頻率之跳頻頻道上跳躍。每一發射機必須均等的使用每一頻率。系統接收機應具有與發射機跳躍頻道頻寬相匹配之輸入頻寬,且應隨所發射的信號同步偏移接收頻率。

LE/2LE

依據 NCC 低功率射頻電機技術規範 3.10.1.6(2)(A)節之要求,對使用數位調變技術(Digital Modulation Techniques)系統而言,6 dB 頻寬至少應有 500 千赫(kHz)。

測試架構圖:



測試結果:

操作模式 : Mode 2: BR, GFSK Continuous TX Mode Mode 4: EDR, 8DPSK Continuous TX Mode				
操作模式	頻道	發射頻寬(20 dB)		
		量測值 (MHz)	2/3 量測值 (MHz)	限制值 (MHz)
Mode 2	低頻道	0.917	0.611	-----
	中頻道	0.932	0.621	-----
	高頻道	0.934	0.623	-----
Mode 4	低頻道	1.279	0.853	-----
	中頻道	1.290	0.860	-----
	高頻道	1.292	0.861	-----
註: 發射頻寬(20 dB) 之 2/3 量測值 = 量測值 x 2 / 3				
測試掃描圖請參考下頁。				

操作模式： Mode 5: LE, GFSK Continuous TX Mode Mode 6: 2LE, GFSK Continuous TX Mode			
操作模式	頻道	發射頻寬(6dB)	
		量測值 (kHz)	限制值 (kHz)
Mode 5	低頻道	587.500	≥ 500
	中頻道	585.200	≥ 500
	高頻道	583.100	≥ 500
Mode 6	低頻道	904.600	≥ 500
	中頻道	908.500	≥ 500
	高頻道	908.800	≥ 500
測試掃描圖請參考下頁。			

Mode 2: BR, GFSK Continuous TX Mode

低頻道

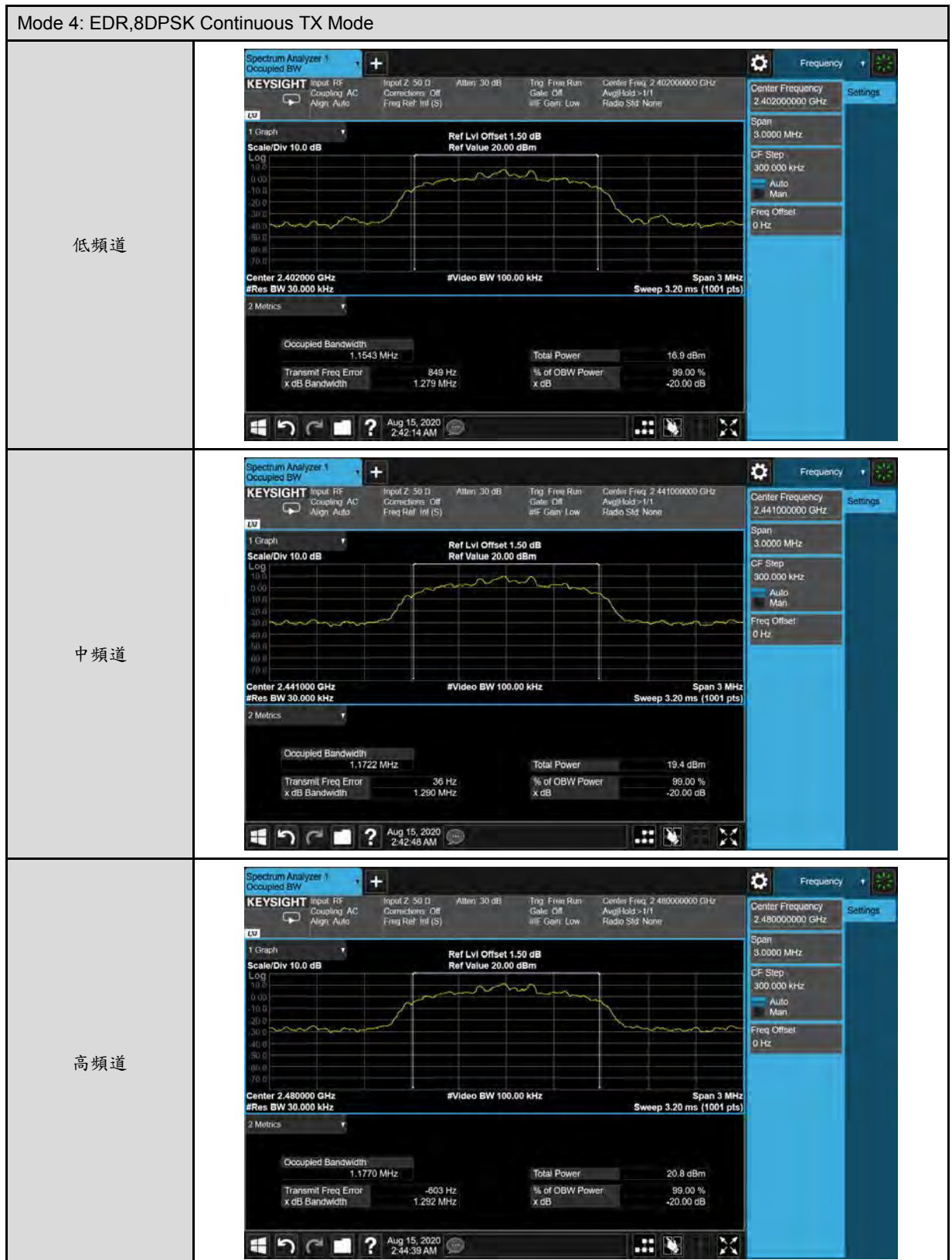


中頻道



高頻道





Mode 5: LE, GFSK Continuous TX Mode

低頻道



中頻道



高頻道



Mode 6: 2LE, GFSK Continuous TX Mode

低頻道



中頻道



高頻道

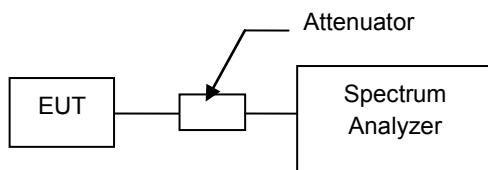


4.7 頻道數之要求

合格標準:

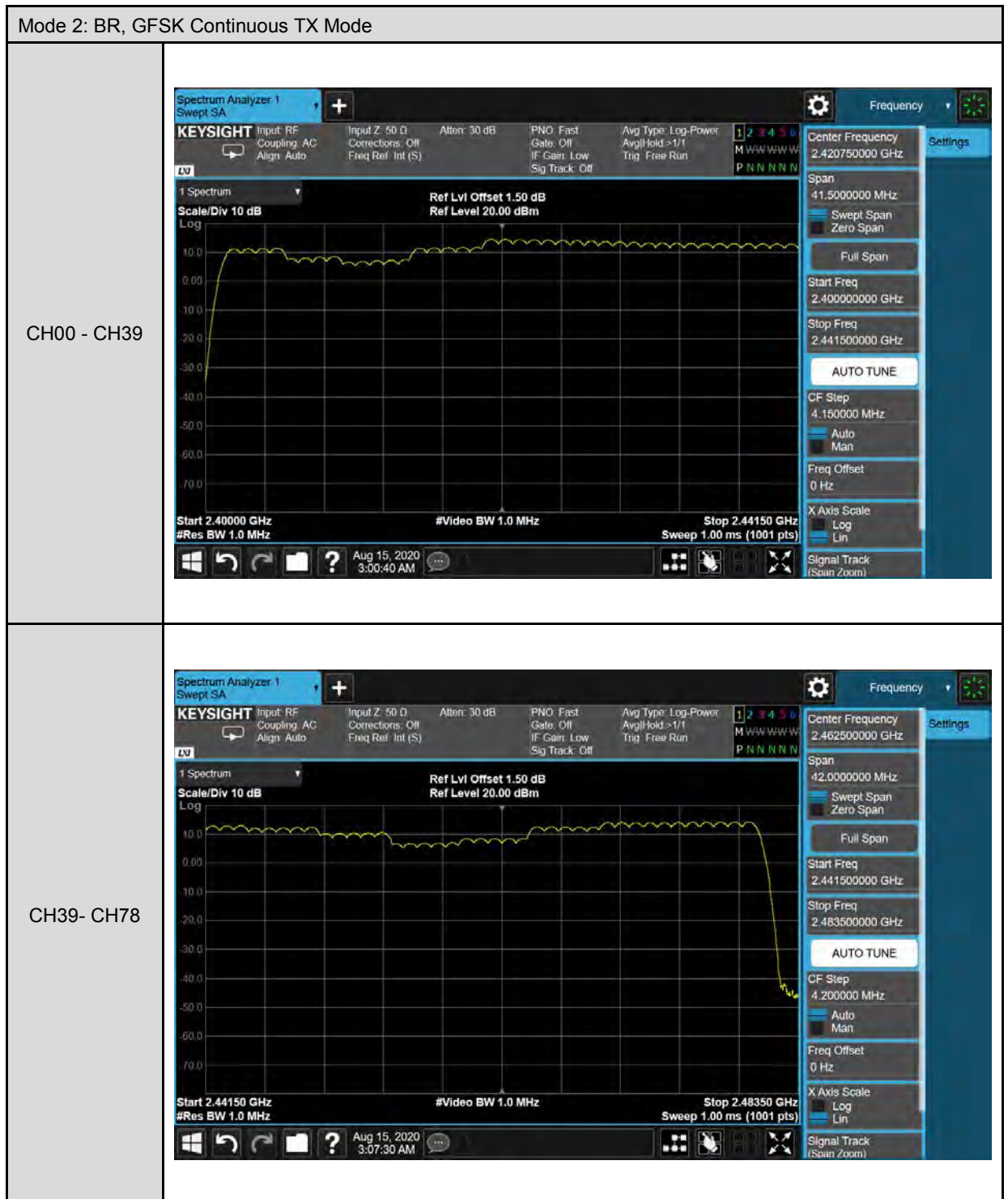
對跳頻系統(Frequency Hopping System)而言，依據 NCC 低功率射頻電機技術規範(LP0002)之 3.10.1.6(1)(A)(a)節之要求，至少使用 15 個無重疊之頻道(複合系統時，關閉數位調變作業狀態檢驗)。

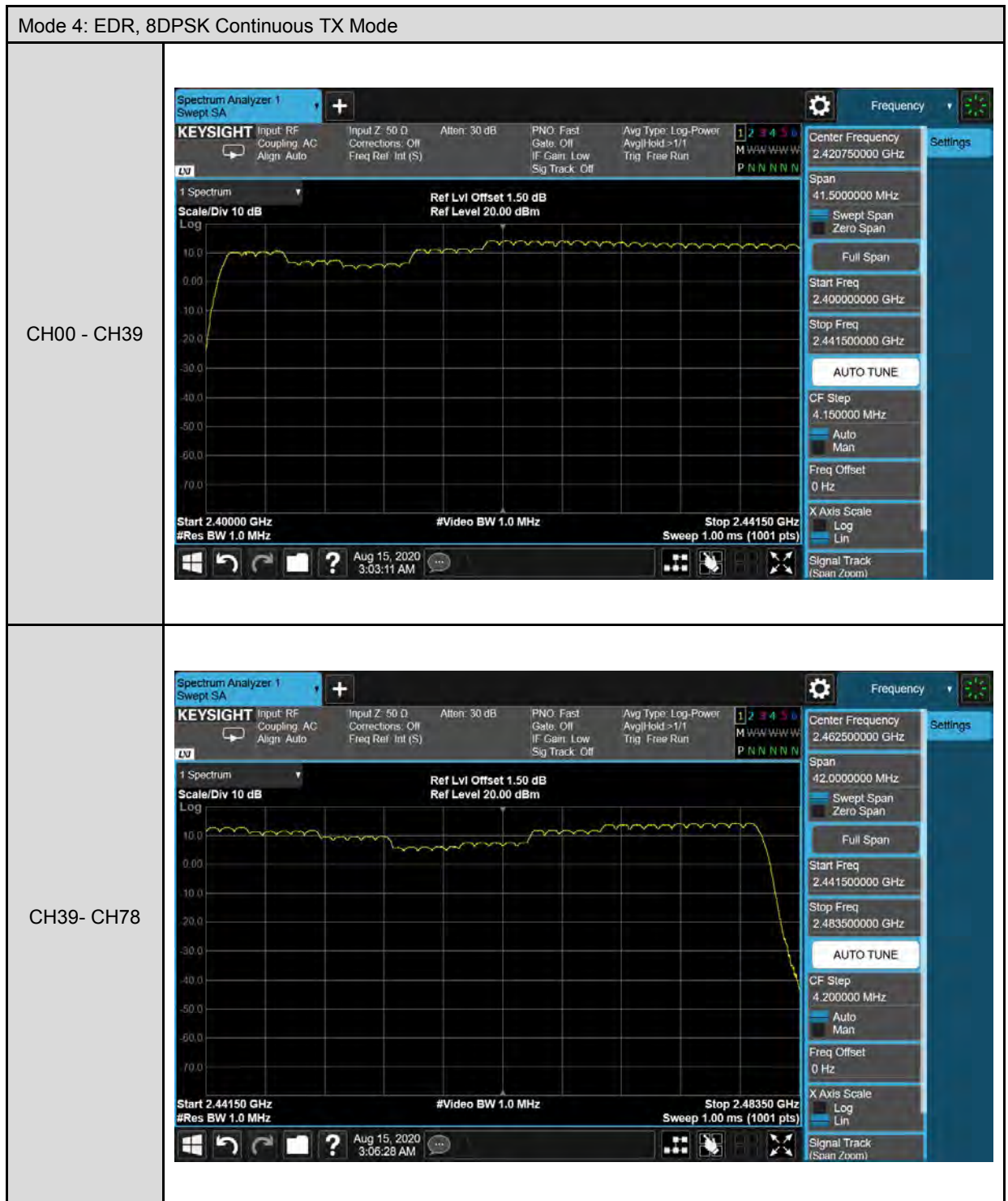
測試架構圖：



測試結果:

操作模式	: Mode 2: BR, GFSK Continuous TX Mode Mode 4: EDR, 8DPSK Continuous TX Mode
量測之掃描圖如下頁所示	



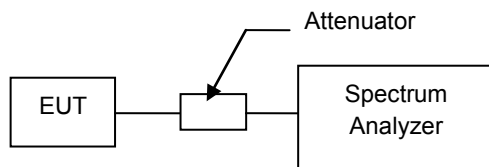


4.8 跳頻系統之載波頻率頻道間隔之量測

合格標準:

依據 NCC 低功率射頻電機技術規範(LP0002) 之 3.10.1.6(1)(A)節要求，應至少 25 kHz 或跳頻頻道之 20 dB 頻寬之三分之二，兩者取較寬者。

測試架構圖：



測試結果:

操作模式： Mode 2: BR, GFSK Continuous TX Mode Mode 4: EDR, 8DPSK Continuous TX Mode			
操作模式	頻道	鄰頻道載波間隔	
		量測值 (MHz)	限制值 (MHz)
Mode 2	低頻道	1.000	≥ 0.611
	中頻道	1.000	≥ 0.621
	高頻道	1.000	≥ 0.623
Mode 4	低頻道	1.000	≥ 0.853
	中頻道	1.000	≥ 0.860
	高頻道	1.000	≥ 0.861

Mode 2: BR, GFSK Continuous TX Mode

低頻道



中頻道



高頻道



Mode 4: EDR, 8DPSK Continuous TX Mode

低頻道



中頻道



高頻道

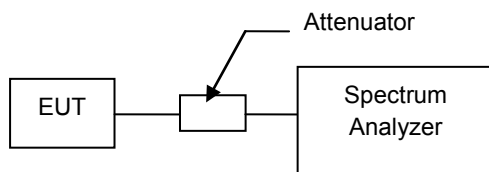


4.9 跳頻系統之任一頻率佔用之平均時間之量測

合格標準:

依據 NCC 低功率射頻電機技術規範(LP0002)之 3.10.1.6(1)(A)(a)節之要求，若使用 15 個無重疊之頻道，在 0.4 秒乘以跳頻頻道數之週期內，任一頻道佔用之平均時間不得超過 0.4 秒(複合系統時，關閉跳頻作業狀態檢驗)。

測試架構圖：



測試結果:

操作模式	: Mode 2: BR, GFSK Continuous TX Mode Mode 4: EDR, 8DPSK Continuous TX Mode
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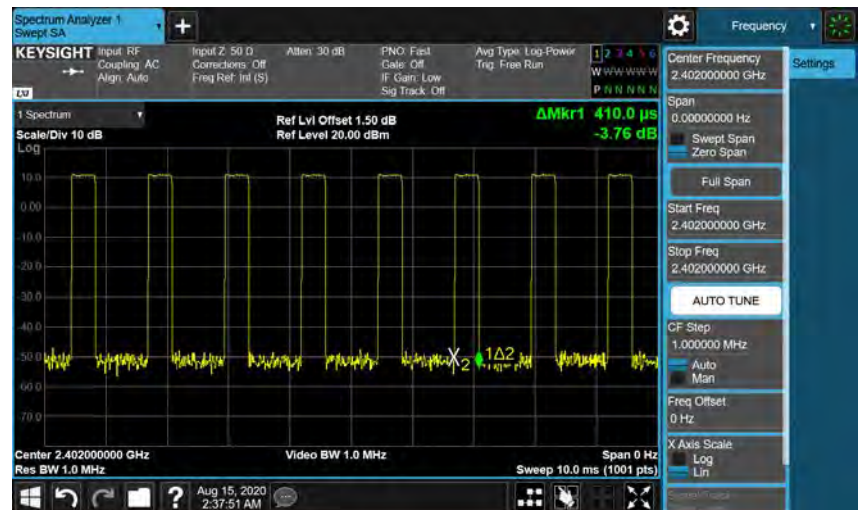
此項測試進行量測高中低頻道，取其最大值紀錄於此量測結果，量測之結果數據如下頁所示。

Mode 2: BR, GFSK Continuous TX Mode	
DH1 模式	
需量測之週期(秒)	$79\text{CH} * 0.4 = 31.6$ (秒)
待測物每秒跳頻之總次數	1600(藍牙通訊協定標準)
頻道每秒佔用之次數	$800/79\text{CH} = 10.13$ (次/秒)
頻道每次佔用之時間(1)	0.410 ms (秒)
週期內頻道佔用之總次數(2)	$31.6 * 10.13 = 320.108$ (次)
週期內佔用的平均時間(1) * (2)	131.244 ms (秒)
LIMIT(msec)	≤ 400
DH3 模式	
需量測之週期(秒)	$79\text{CH} * 0.4 = 31.6$ (秒)
待測物每秒跳頻之總次數	1600(藍牙通訊協定標準)
頻道每秒佔用之次數	$400/79\text{CH} = 5.06$ (次/秒)
頻道每次佔用之時間(1)	1.660 ms (秒)
週期內頻道佔用之總次數(2)	$31.6 * 5.06 = 159.896$ (次)
週期內佔用的平均時間(1) * (2)	265.427 ms (秒)
LIMIT(msec)	≤ 400
DH5 模式	
需量測之週期(秒)	$79\text{CH} * 0.4 = 31.6$ (秒)
待測物每秒跳頻之總次數	1600(藍牙通訊協定標準)
頻道每秒佔用之次數	$266.7/79\text{CH} = 3.38$ (次/秒)
頻道每次佔用之時間(1)	2.910 ms (秒)
週期內頻道佔用之總次數(2)	$31.6 * 3.38 = 106.808$ (次)
週期內佔用的平均時間(1) * (2)	310.811 ms (秒)
LIMIT(msec)	≤ 400

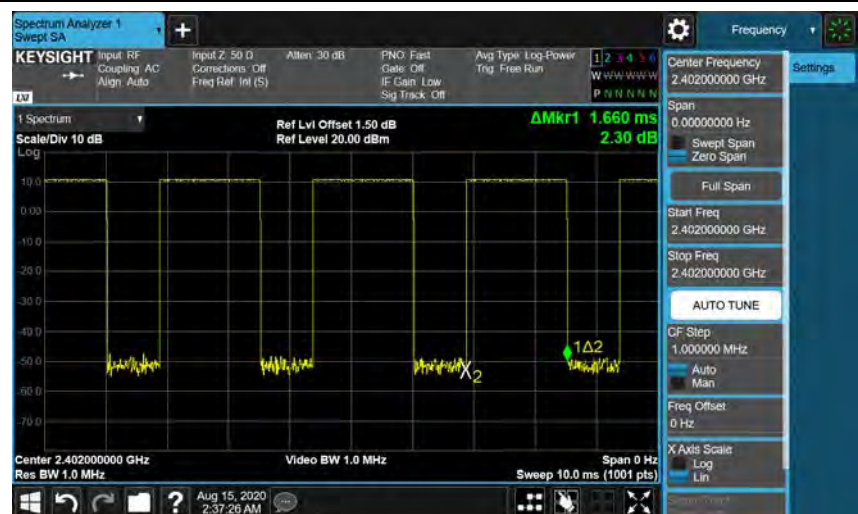
附註: RB=1 MHz ; VB=1 MHz ; SPAN=0 MHz ; Sweep Time=10 msec

Mode 2: BR, GFSK Continuous TX Mode

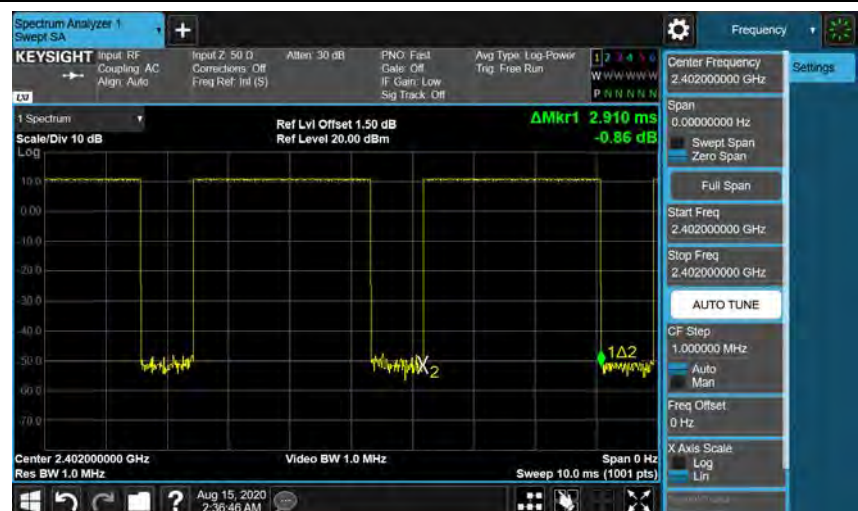
DH1



DH3



DH5

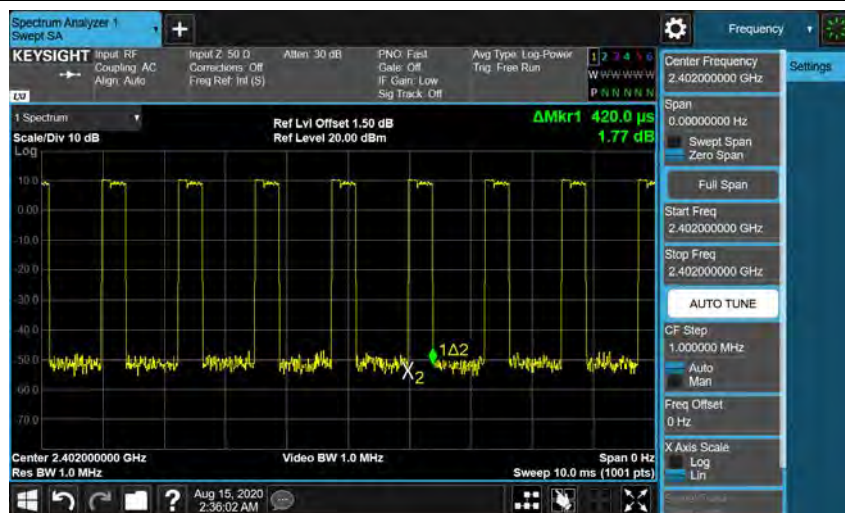


Mode 4: EDR, 8DPSK Continuous TX Mode	
3DH1 模式	
需量測之週期(秒)	$79\text{CH} * 0.4 = 31.6$ (秒)
待測物每秒跳頻之總次數	1600(藍牙通訊協定標準)
頻道每秒佔用之次數	$800/79\text{CH} = 10.13$ (次/秒)
頻道每次佔用之時間(1)	0.420 ms (秒)
週期內頻道佔用之總次數(2)	$31.6 * 10.13 = 320.108$ (次)
週期內佔用的平均時間(1) * (2)	134.445 ms (秒)
LIMIT(msec)	≤ 400
3DH3 模式	
需量測之週期(秒)	$79\text{CH} * 0.4 = 31.6$ (秒)
待測物每秒跳頻之總次數	1600(藍牙通訊協定標準)
頻道每秒佔用之次數	$400/79\text{CH} = 5.06$ (次/秒)
頻道每次佔用之時間(1)	1.670 ms (秒)
週期內頻道佔用之總次數(2)	$31.6 * 5.06 = 159.896$ (次)
週期內佔用的平均時間(1) * (2)	267.026 ms (秒)
LIMIT(msec)	≤ 400
3DH5 模式	
需量測之週期(秒)	$79\text{CH} * 0.4 = 31.6$ (秒)
待測物每秒跳頻之總次數	1600(藍牙通訊協定標準)
頻道每秒佔用之次數	$266.7/79\text{CH} = 3.38$ (次/秒)
頻道每次佔用之時間(1)	2.920 ms (秒)
週期內頻道佔用之總次數(2)	$31.6 * 3.38 = 106.808$ (次)
週期內佔用的平均時間(1) * (2)	311.879 ms (秒)
LIMIT(msec)	≤ 400

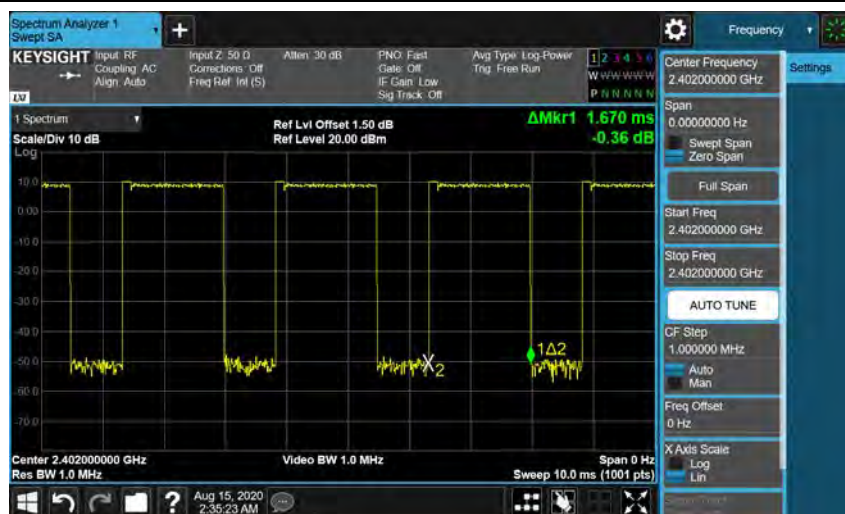
附註: RB=1 MHz ; VB=1 MHz ; SPAN=0 MHz ; Sweep Time=10 msec

Mode 4: EDR, 8DPSK Continuous TX Mode

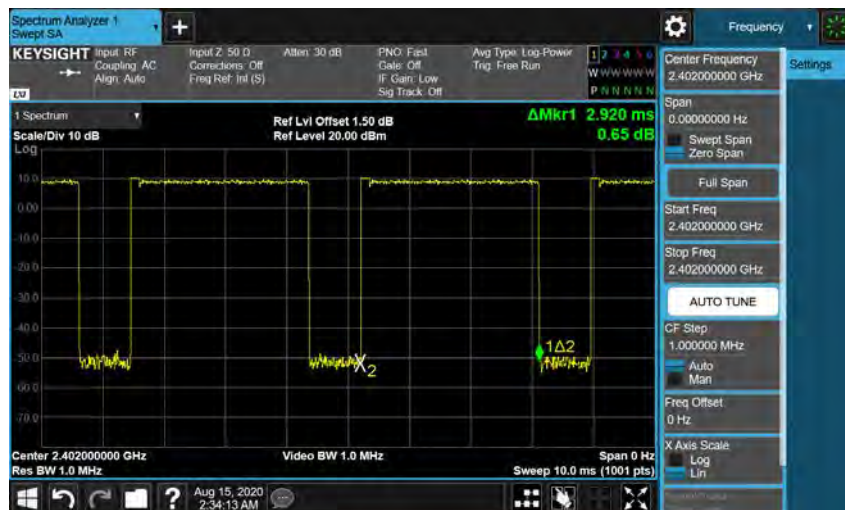
3DH1



3DH3



3DH5



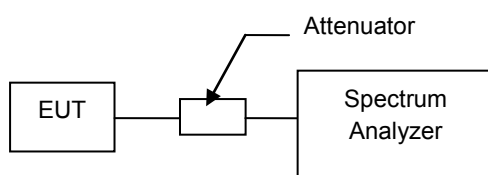
4.10 功率密度之要求

合格標準:

依據NCC低功率射頻電機技術規範(LP0002)之3.10.1.6(2)(B)節之要求,數位調變技術(Digital Modulation Techniques)系統之功率密度,再使用頻率範圍之任意3 kHz頻寬內,由發射機傳導至天線之峰值發射電功率密度在任意期間內,皆不得大於8 dBm(複合系統時,關閉跳頻作業狀態檢驗)。

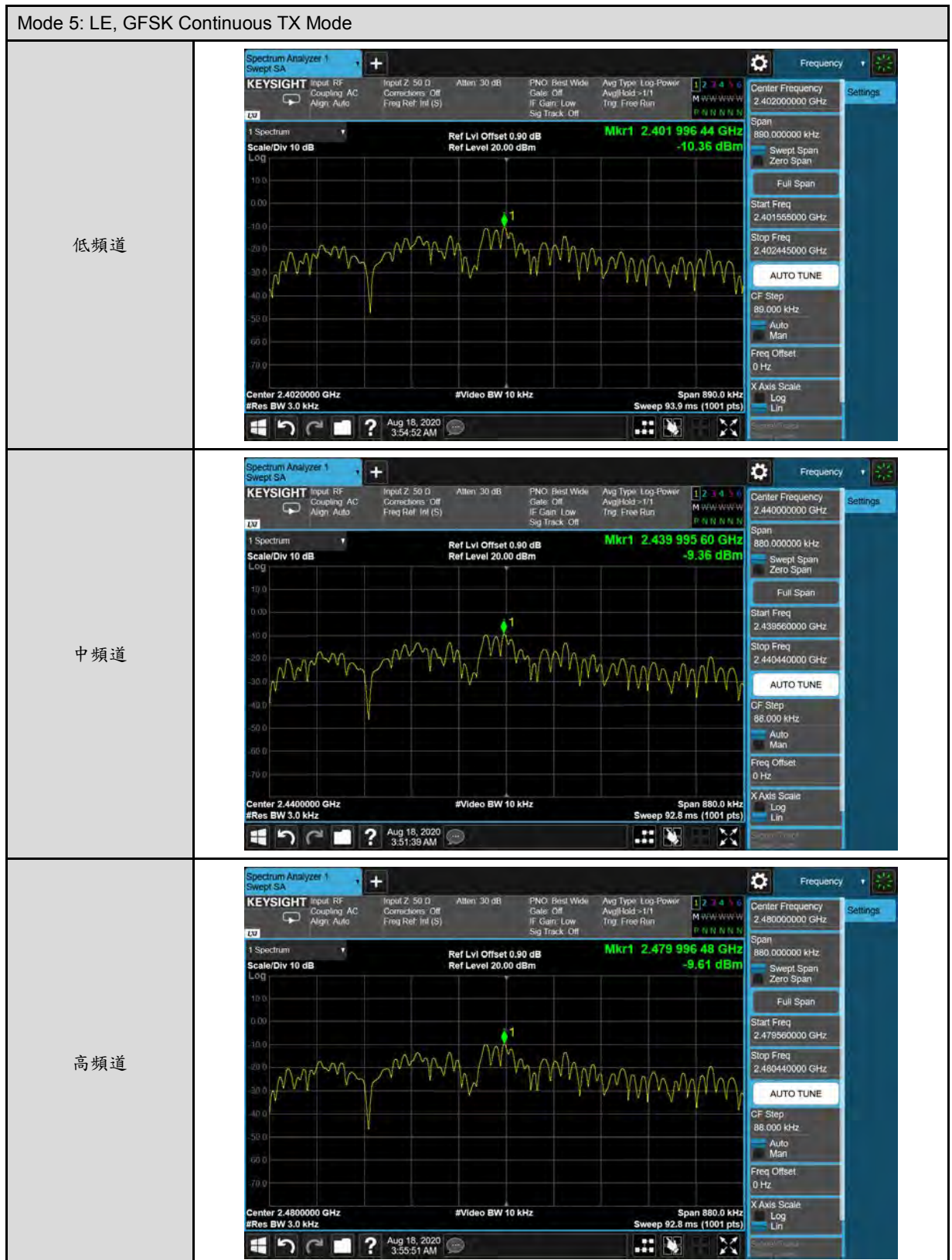
測試架構圖:

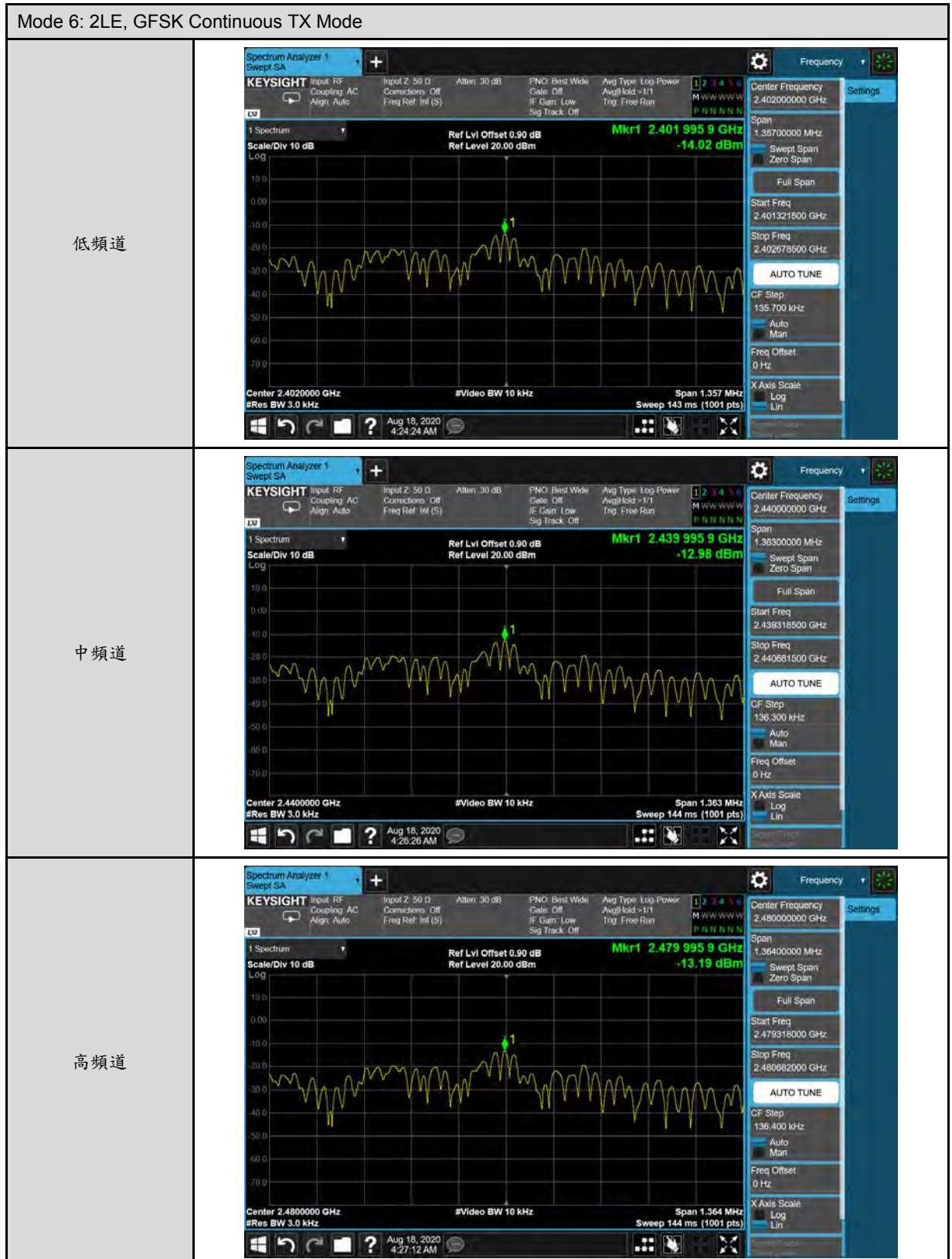
測試場地測試配置如圖所示。



測試結果:

操作模式 : Mode 5: LE, GFSK Continuous TX Mode Mode 6: 2LE, GFSK Continuous TX Mode			
操作模式	頻道	量測值 (dBm/3 kHz)	限制值 (dBm/3 kHz)
Mode 5	低頻道	-10.360	≤ 8
	中頻道	-9.360	≤ 8
	高頻道	-9.610	≤ 8
Mode 6	低頻道	-14.020	≤ 8
	中頻道	-12.980	≤ 8
	高頻道	-13.190	≤ 8





4.11 天線規格之要求

合格標準:

依據 NCC 低功率射頻電機技術規範(LP0002)之 3.10.1.3(3)節之要求，除 3.10.1.3(1)及 3.10.1.3(2)外，使用超過 6 dBi 方向增益之發射天線時，應依超過 6 dBi 天線方向增益的 dBi 總量，等量減少最大傳導輸出功率限制值。

依據 NCC 低功率射頻電機技術規範(LP0002)之 3.10.1.4 節之要求，天線之規格不受第 2.2 節規定之限制。

判定結果:符合。

4.12 電波暴露量之評估

合格標準:

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：

5.20.2.1 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。

5.20.2.2 一般人/不可控制之暴露

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

註 1：標記*表平面波等效功率密度。

註 2：f 表測試頻率，單位：MHz。

判定結果:

Band	Frequency (MHz)	Limit (mW/cm ²)	Distance [R] (cm)	Power [P] (dBm)	ANT Gain (dBi)	Numeric Gain [G] (dBi)	Duty Cycle	Power Density [S] (mW/cm ²)
BT	2402-2480	1	20	13.28	-1.34	0.73	1	0.0031
WLAN 2.4 GHz	2412-2462	1	20	17.63	-1.34	0.73	1	0.0084
WCDMA (Band I)_下天線	1920-1980	1	20	21.20	-0.2	0.95	1	0.0249

Simultaneous MPE = BT + WLAN 2.4 GHz + WCDMA (Band I)_下天線
= 0.0031 + 0.0084 + 0.0249 = 0.0364

--- END---