



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 1911DR37

版本(Rev.) 01

產品名稱 Gaming Wireless Headset

申請廠商 Harman International Industries, Incorporated

商標或廠牌 JBL

型式 (號) QUANTUM800

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 108 年 12 月 04 日

填發本型式認可報告之試驗機構 (認可代號)

晶復科技股份有限公司
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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)
2.4 GHz 射頻電信終端設備技術規範(RTTE01)

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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	108 年 11 月 21 日	初版發行	劉品婕
01	108 年 12 月 04 日	第 5 頁更新附屬裝置表。	劉品婕

低功率射頻電機測試證明書

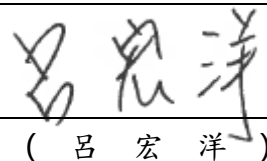
發行日期：108年12月04日

產品名稱：Gaming Wireless Headset
商標：JBL
型號：QUANTUM800
申請廠商：Harman International Industries, Incorporated
申請者地址：8500 Balboa Blvd, Northridge, CA 91329, UNITED STATES
製造廠商：Shenzhen Horn Audio Co., Ltd.
製造商地址：No.6, 4th Guihua Road, Pingshan New District, Shenzhen City, Guangdong Province, P.R. China
待測物電壓：DC 5 V, 2.0 A
試驗電壓：110 Vac, 60 Hz / DC 3.7 V
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)
試驗受理日期：108 年 10 月 29 號
樣品接受日期：108 年 10 月 31 號
試驗完成日期：108 年 11 月 12 號

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：


(呂 宏 洋)

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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	Gaming Wireless Headset			
商 標 或 廠 牌	JBL			
型 號	QUANTUM800			
額 定 電 源	DC 5 V, 2.0 A			
調 變 方 式	GFSK, $\pi/4$ -DQPSK, 8DPSK			
頻 率 使 用 範 圍	2402 MHz – 2480 MHz			
天 線 製 造 商	SOUTH STAR TECHNOLOGY HONG KONG COMPANY LIMITED			
天 線 型 號	N12-6173-R0A			
天 線 型 態	PIFA Antenna			
天 線 增 益 值	3.34 dBi			
RF 最大輸出功率	BR, GFSK:	9.28 dBm/	0.00847 W	
	EDR, $\pi/4$ -DQPSK:	8.92 dBm/	0.00780 W	
	EDR, 8DPSK:	8.98 dBm/	0.00791 W	
	LE, GFSK:	2.13 dBm/	0.00163 W	

輸出/輸入埠說明：

輸 出 / 入 埠		數量	介面內容說明
1	USB Port	1	連接至電源供應器
2	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，請參見下列附屬裝置表
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 / 製造商	型號	備註
內建固定式電池	Guangzhou Great Power Energy & Technology Co., Ltd	GSP974241	DC 3.7 V, 1300 mAh
USB Cable	JBL	QUANTUM800	STD-A → Type-C Shielded, 1.5 m
USB WIRELESS DONGLE	JBL	QUANTUM800TM	無線功能:FHSS

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: Nov. 12, 2019

測試者: 仇冠中

名稱	廠牌	型號	序號	本次校驗日期	校驗年限
Spectrum Analyzer	Keysight	N9010A	MY52221312	01/14/2019	1 year
Power Sensor	Anritsu	MA2411B	1126022	08/31/2019	1 year
Power Meter	Anritsu	ML2495A	1135009	08/31/2019	1 year

For Conducted Emission

Test Period: Nov. 11, 2019

測試者: 申世傑

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	05/23/2019	1 year
線性阻抗模擬網路	R&S	ENV216	101040	04/03/2019	1 year
線性阻抗模擬網路	R&S	ENV216	101041	03/28/2019	1 year

For Radiated Emissions

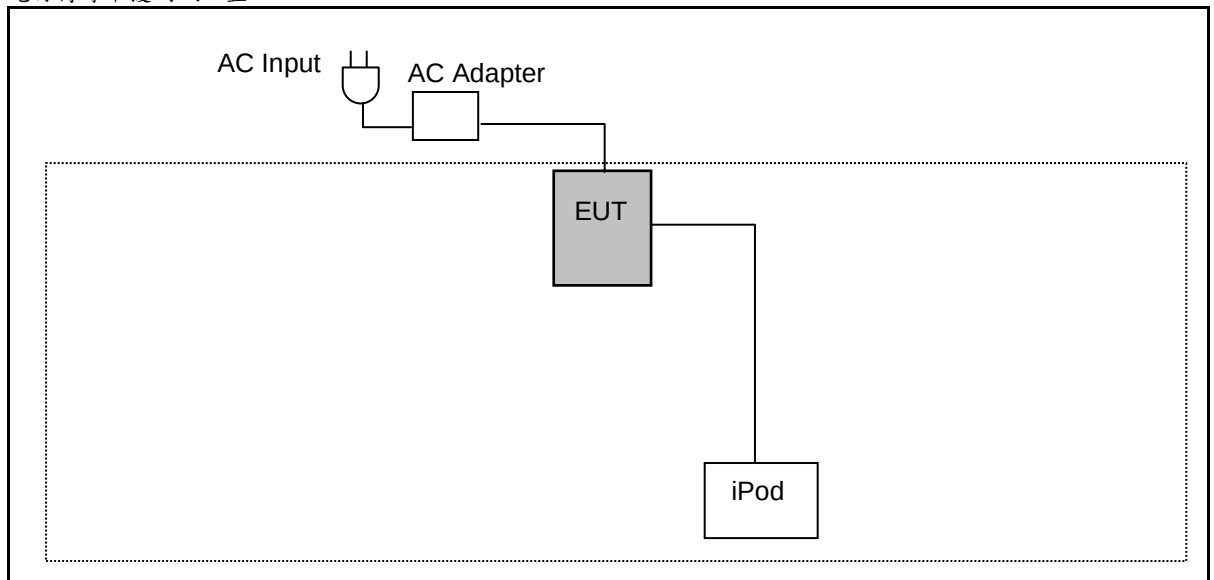
Test Period: Oct. 31 ~ Nov. 01, 2019

測試者: 劉彥聖

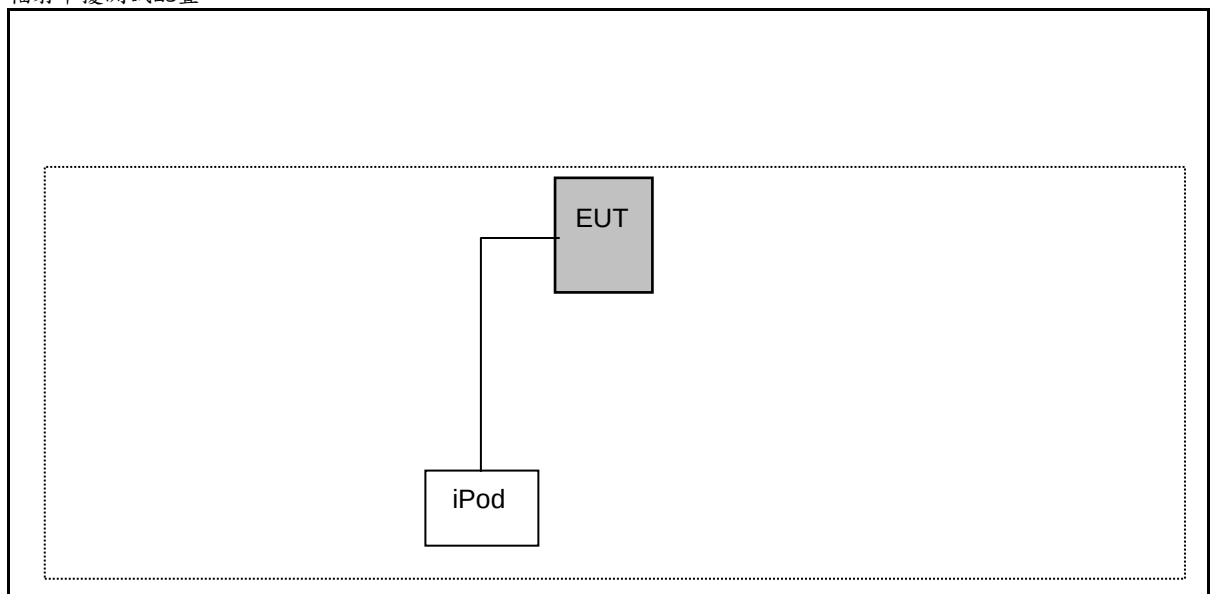
名稱	廠牌	型號	序號	本次校驗日期	校驗年限
Spectrum Analyzer	Agilent	E4445A	MY46181986	05/30/2019	1 year
Spectrum Analyzer	Agilent	N9020A	US47520902	09/18/2019	1 year
Amplifier	Agilent	8449B	3008A02456	03/20/2019	1 year
Amplifier	Agilent	8447D	2944A11120	12/13/2018	1 year
天線	SCHWARZBECK	SB AC VULB	9168-0841	11/19/2018	1 year
天線(1~18 GHz)	ETS	3117	00152321	09/19/2019	1 year
天線(18~40 GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	08/14/2019	1 year

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		商標	型 號	序 號	電 源 線	備 註
(1)	Adapter	HUAWEI	HW-100400U00	---	---	INPUT : AC 100- 240 V, 50- 60 H, 1.2 A OUTPUT : DC 5 V, 2 A or DC 9 V, 2 A or DC 10 V, 4 A
(2)	i-Pod	Apple	A1199	YM734DKEVQ5	---	---

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

Pre-Test Mode
Mode 1: Normal 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: Receiver Mode

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

NOTE: 1.充電時無法使用無線功能
2.無充電時藍牙與 AUX 可同時作動

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	2.8
Radiated Emission	9 kHz ~ 30 MHz	1.7
	30 MHz ~ 1000 MHz	5.7
	1000 MHz ~ 18000 MHz	5.6
	18000 MHz ~ 26500 MHz	4.9
	26500 MHz ~ 40000 MHz	4.8
Conducted Output Power	+0.27 dB / -0.28 dB	
RF Bandwidth	4.96 %	
Power Spectral Density	+0.71 dB / -0.77 dB	

Decision Rule

☒ Uncertainty is not included.

☐ Uncertainty is included.

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	23 - 26
濕度 Humidity (%RH)		10 - 90	55 - 60

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	合格
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	合格
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	合格
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	合格
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	合格
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	合格
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	合格
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	合格
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	合格
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	合格
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	合格
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	-----	合格

LE 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	合格
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	合格
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	合格
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	合格
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	合格
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	合格
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	合格
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	合格
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	-----	合格

4. 測試項目表列

4.1 輸出峰值功率之量測

合格標準:

BR/EDR

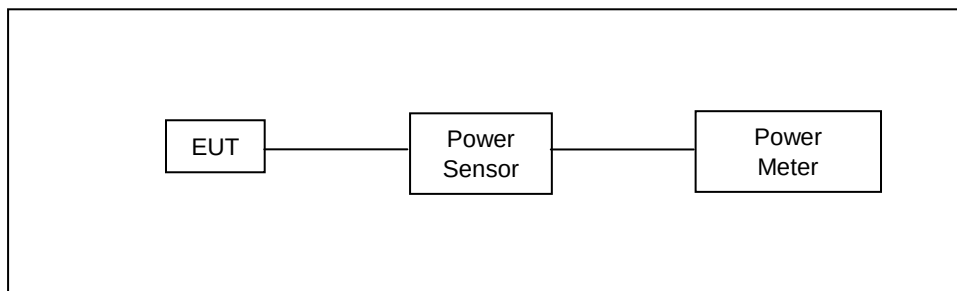
依據 NCC 低功率射頻電機技術規範(LP0002)之 3.10.1.2(1)(B)節之要求，所有操作於 2400-2483.5 兆赫且輸出功率應小於或等於 0.125 W。

LE

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:

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	7.32	0.00540	8.94	0.00783	≤0.125
	DH3	7.35	0.00543	8.96	0.00787	≤0.125
	DH5	7.40	0.00550	8.99	0.00793	≤0.125
中頻道	DH1	7.65	0.00582	9.21	0.00834	≤0.125
	DH3	7.69	0.00587	9.25	0.00841	≤0.125
	DH5	7.72	0.00592	9.28	0.00847	≤0.125
高頻道	DH1	7.61	0.00577	9.15	0.00822	≤0.125
	DH3	7.65	0.00582	9.17	0.00826	≤0.125
	DH5	7.67	0.00585	9.20	0.00832	≤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	5.71	0.00372	8.63	0.00729	≤0.125
	2DH3	5.74	0.00375	8.67	0.00736	≤0.125
	2DH5	5.78	0.00378	8.70	0.00741	≤0.125
中頻道	2DH1	5.91	0.00390	8.85	0.00767	≤0.125
	2DH3	5.96	0.00394	8.87	0.00771	≤0.125
	2DH5	5.99	0.00397	8.92	0.00780	≤0.125
高頻道	2DH1	5.73	0.00374	8.70	0.00741	≤0.125
	2DH3	5.77	0.00378	8.73	0.00746	≤0.125
	2DH5	5.83	0.00383	8.75	0.00750	≤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	5.72	0.00373	8.72	0.00745	≤0.125
	3DH3	5.76	0.00377	8.75	0.00750	≤0.125
	3DH5	5.79	0.00379	8.80	0.00759	≤0.125
中頻道	3DH1	5.94	0.00393	8.88	0.00773	≤0.125
	3DH3	5.98	0.00396	8.94	0.00783	≤0.125
	3DH5	6.00	0.00398	8.98	0.00791	≤0.125
高頻道	3DH1	5.76	0.00377	8.78	0.00755	≤0.125
	3DH3	5.79	0.00379	8.81	0.00760	≤0.125
	3DH5	5.84	0.00384	8.85	0.00767	≤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	-0.66	0.00086	2.13	0.00163	≤ 1
中頻道	-0.70	0.00085	2.08	0.00161	≤ 1
高頻道	-1.07	0.00078	1.71	0.00148	≤ 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。

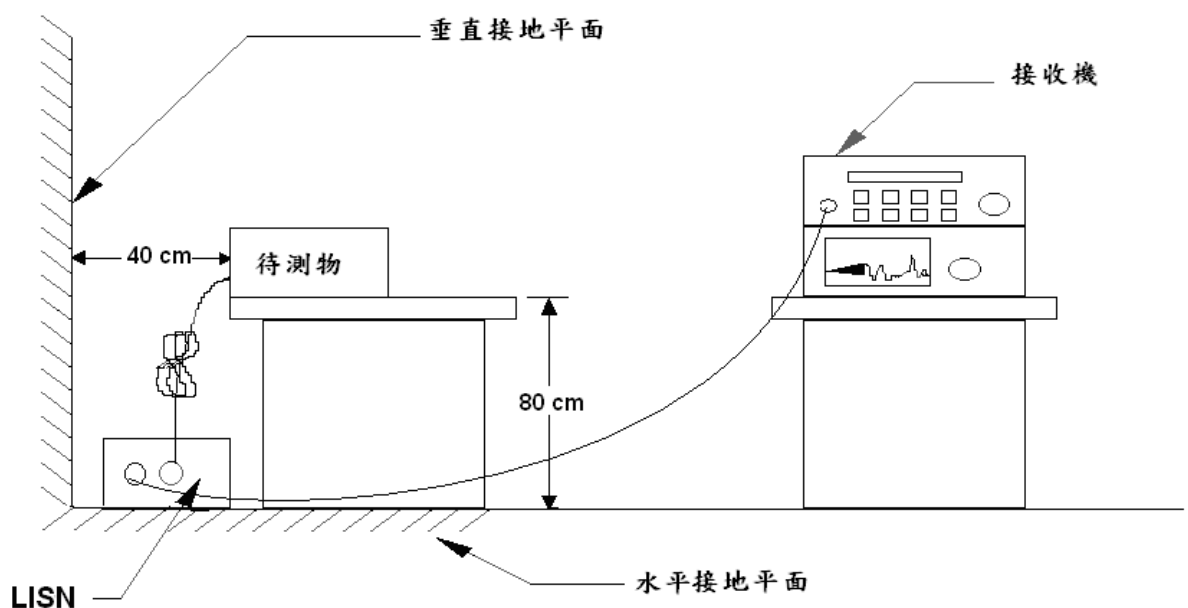
干擾值之計算

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

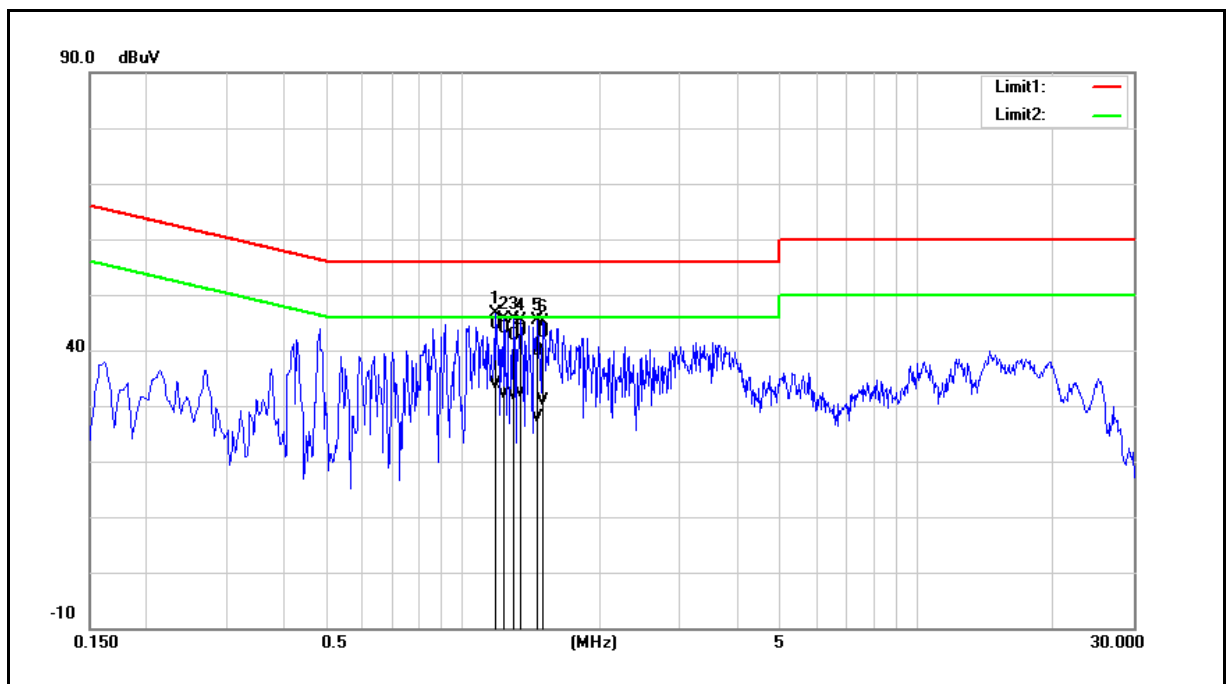
其中校正因子為：饋線損失 + 電源阻抗模擬網路損失

測試架構圖：



測試結果:

Standard:	LP0002	Line:	L1
Test item:	Conducted Emission	Power:	AC 110 V/60 Hz
Test Mode:	Mode 1	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Description:			

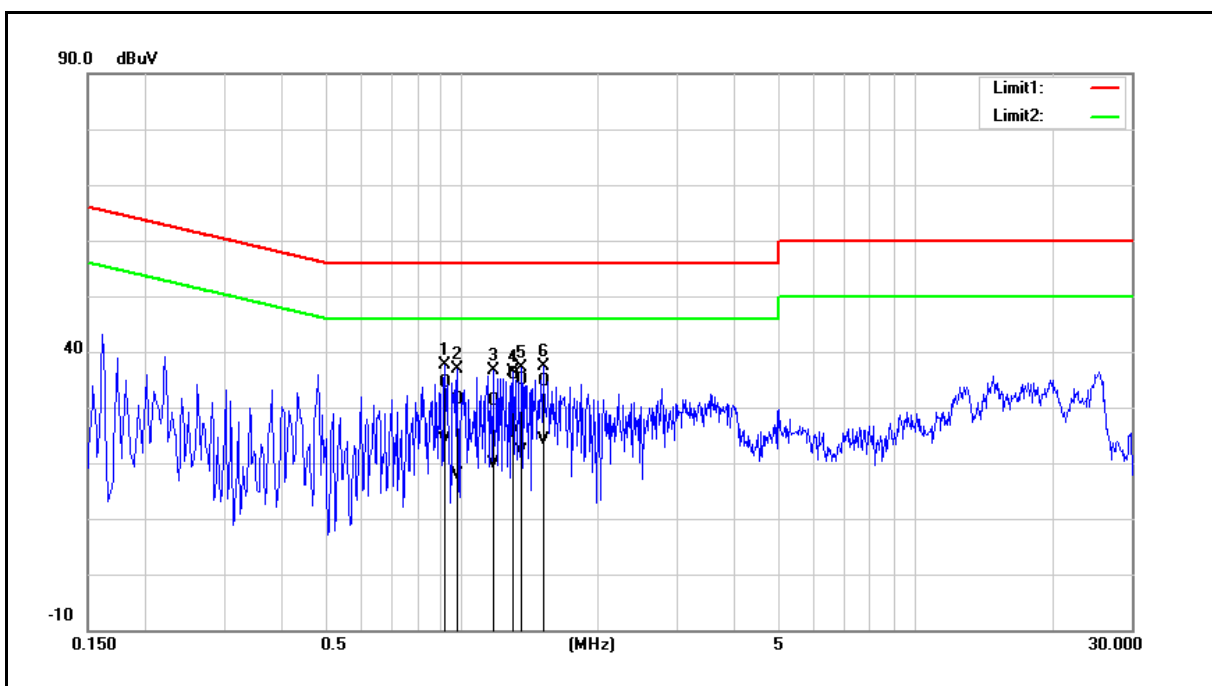


No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	1.1780	34.68	23.86	9.91	44.59	33.77	56.00	46.00	-11.41	-12.23	Pass
2	1.2300	33.97	22.14	9.91	43.88	32.05	56.00	46.00	-12.12	-13.95	Pass
3	1.2940	32.65	21.92	9.92	42.57	31.84	56.00	46.00	-13.43	-14.16	Pass
4	1.3380	33.55	22.40	9.92	43.47	32.32	56.00	46.00	-12.53	-13.68	Pass
5	1.4580	30.00	17.93	9.94	39.94	27.87	56.00	46.00	-16.06	-18.13	Pass
6	1.4980	33.21	21.03	9.94	43.15	30.97	56.00	46.00	-12.85	-15.03	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
Test Mode:	Mode 1	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
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	0.9220	24.69	14.32	9.80	34.49	24.12	56.00	46.00	-21.51	-21.88	Pass
2	0.9820	21.55	8.01	9.81	31.36	17.82	56.00	46.00	-24.64	-28.18	Pass
3	1.1780	21.31	9.90	9.88	31.19	19.78	56.00	46.00	-24.81	-26.22	Pass
4	1.2980	26.07	15.60	9.89	35.96	25.49	56.00	46.00	-20.04	-20.51	Pass
5	1.3580	24.99	12.22	9.90	34.89	22.12	56.00	46.00	-21.11	-23.88	Pass
6	1.5180	24.69	14.17	9.92	34.61	24.09	56.00	46.00	-21.39	-21.91	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 (μ V/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。

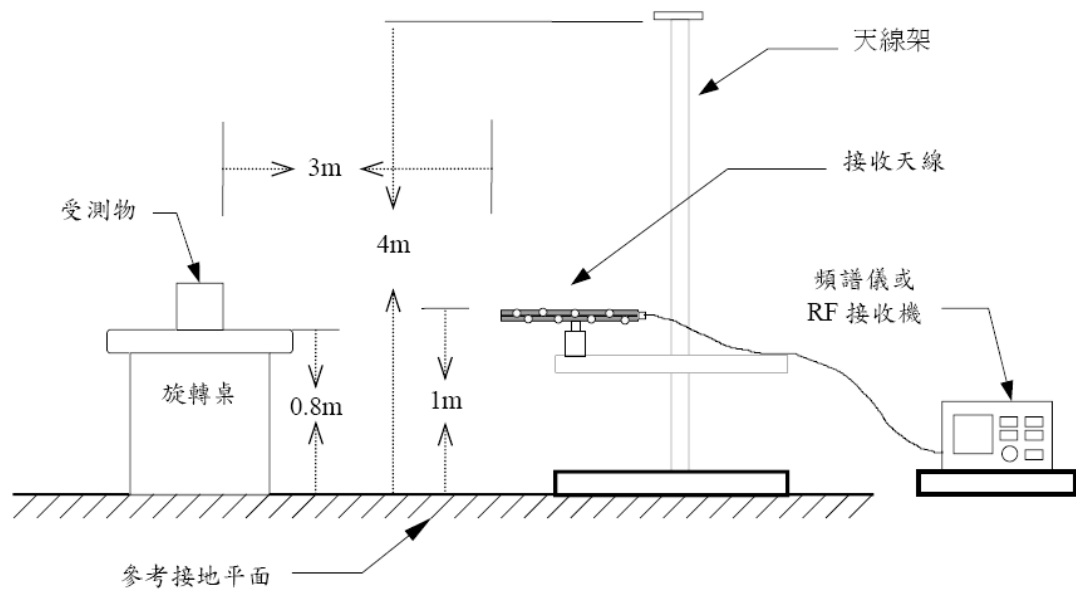
場強度之計算

場強之計算公式為：結果值 = 讀值 + 校正因子

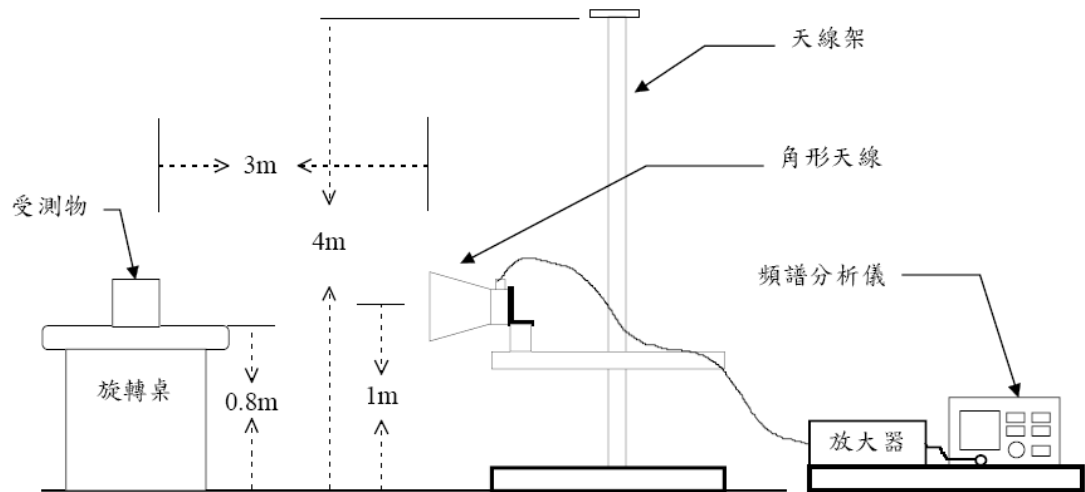
其中校正因子為：天線因子+ 饋線損失 + 濾波器損失（若有使用） - 放大器增益（若有使用）

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

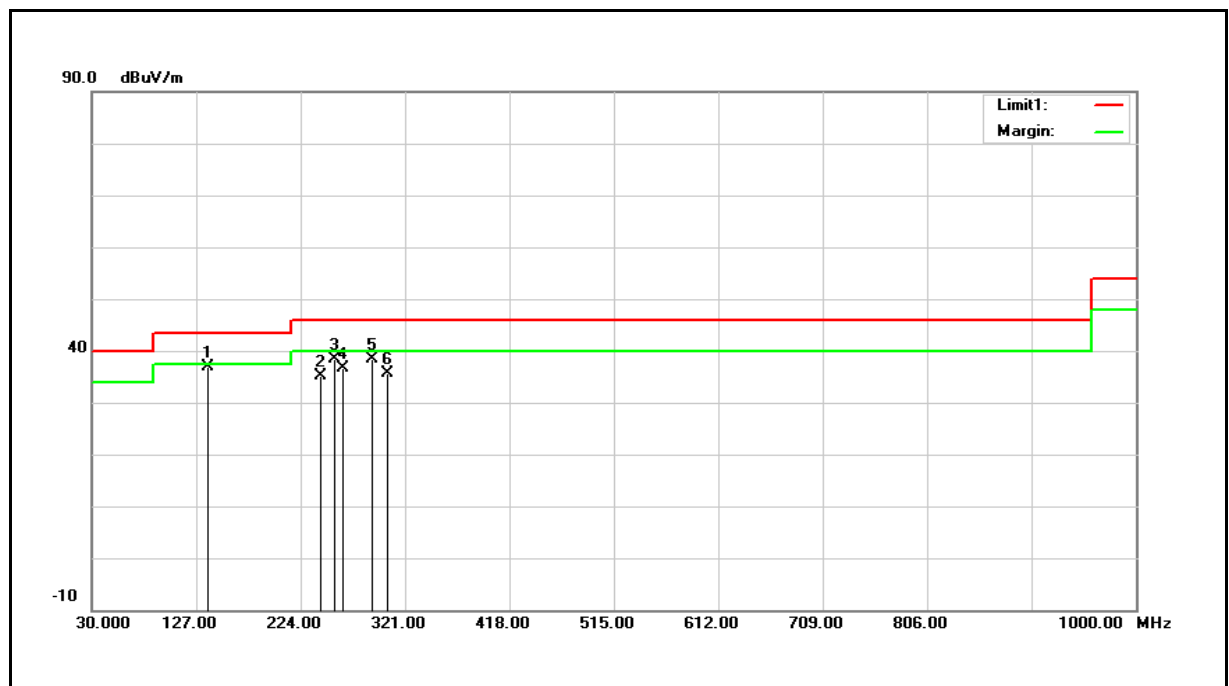


測試結果:

場強輻射之量測依據輸出峰值功率之量測結果取其最大值之操作模式為場強輻射測試模式。

其它不必要之訊號 (1 GHz 以下)

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic	Power:	DC 3.7 V
Frequency:	2480 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Test 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	137.6700	48.09	-11.18	36.91	43.50	-6.59	QP
2	242.4300	47.18	-12.04	35.14	46.00	-10.86	QP
3	255.0400	50.16	-11.66	38.50	46.00	-7.50	QP
4	262.8000	48.10	-11.42	36.68	46.00	-9.32	QP
5	289.9600	48.72	-10.45	38.27	46.00	-7.73	QP
6	304.5100	45.82	-10.19	35.63	46.00	-10.37	QP

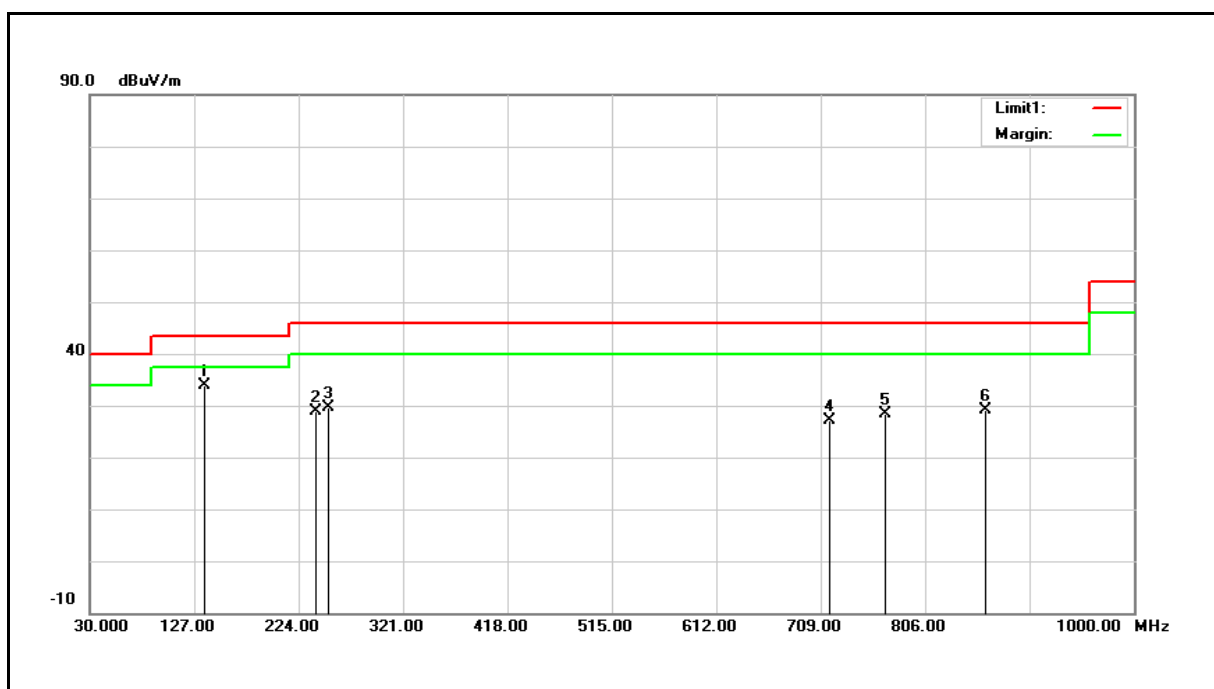
Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

Example: $36.91 = -11.18 + 48.09$

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	Power:	DC 3.7 V
Frequency:	2480 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Test 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	136.7000	45.27	-11.29	33.98	43.50	-9.52	QP
2	240.4900	40.88	-12.12	28.76	46.00	-17.24	QP
3	251.1600	41.42	-11.75	29.67	46.00	-16.33	QP
4	717.7300	28.25	-1.16	27.09	46.00	-18.91	QP
5	769.1400	28.56	-0.23	28.33	46.00	-17.67	QP
6	862.2600	28.38	0.75	29.13	46.00	-16.87	QP

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

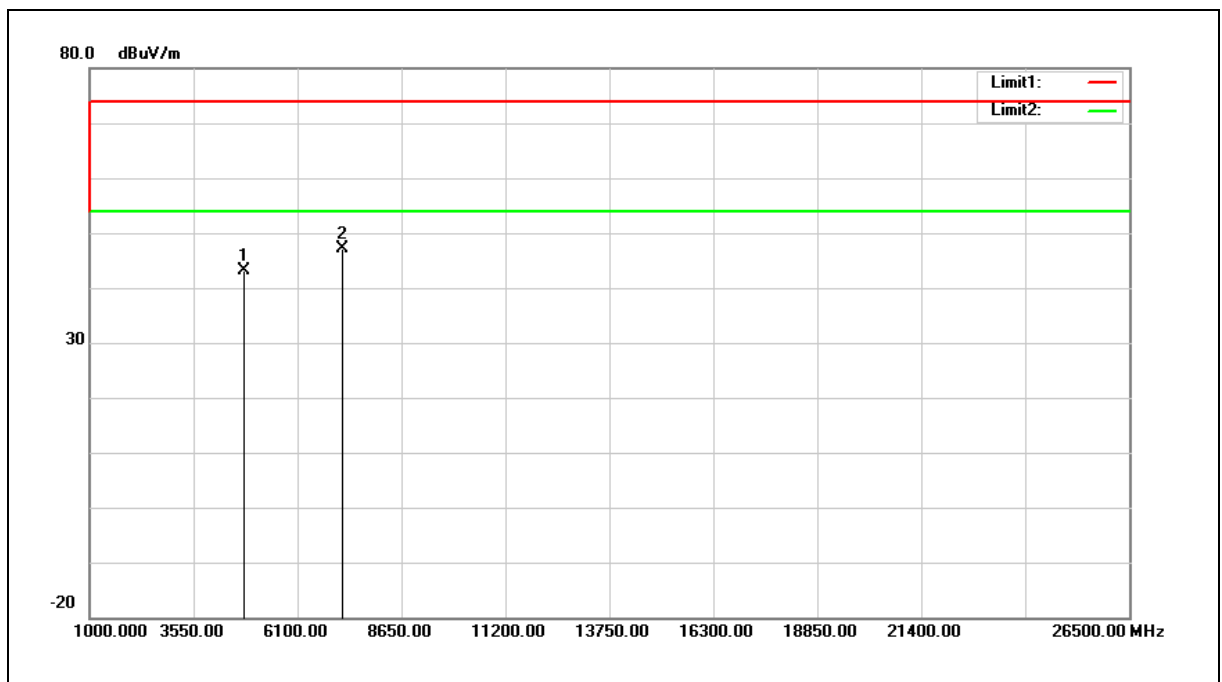
Example: 33.98= -11.29+45.27

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	Power:	DC 3.7 V
Frequency:	2402 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
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	48.70	-5.57	43.13	74.00	-30.87	peak
2	7206.000	48.40	-1.37	47.03	74.00	-26.97	peak

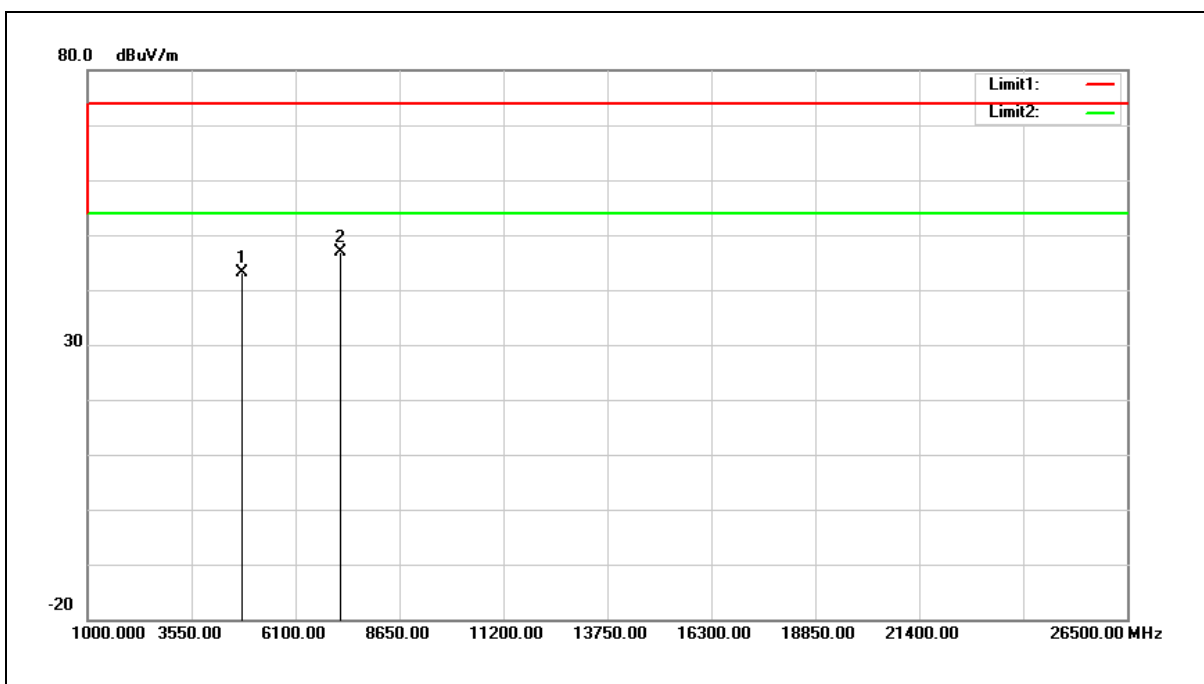
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

Example: 43.13= -5.57+48.70

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	Power:	DC 3.7 V
Frequency:	2402 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
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	48.66	-5.57	43.09	74.00	-30.91	peak
2	7206.000	48.32	-1.37	46.95	74.00	-27.05	peak

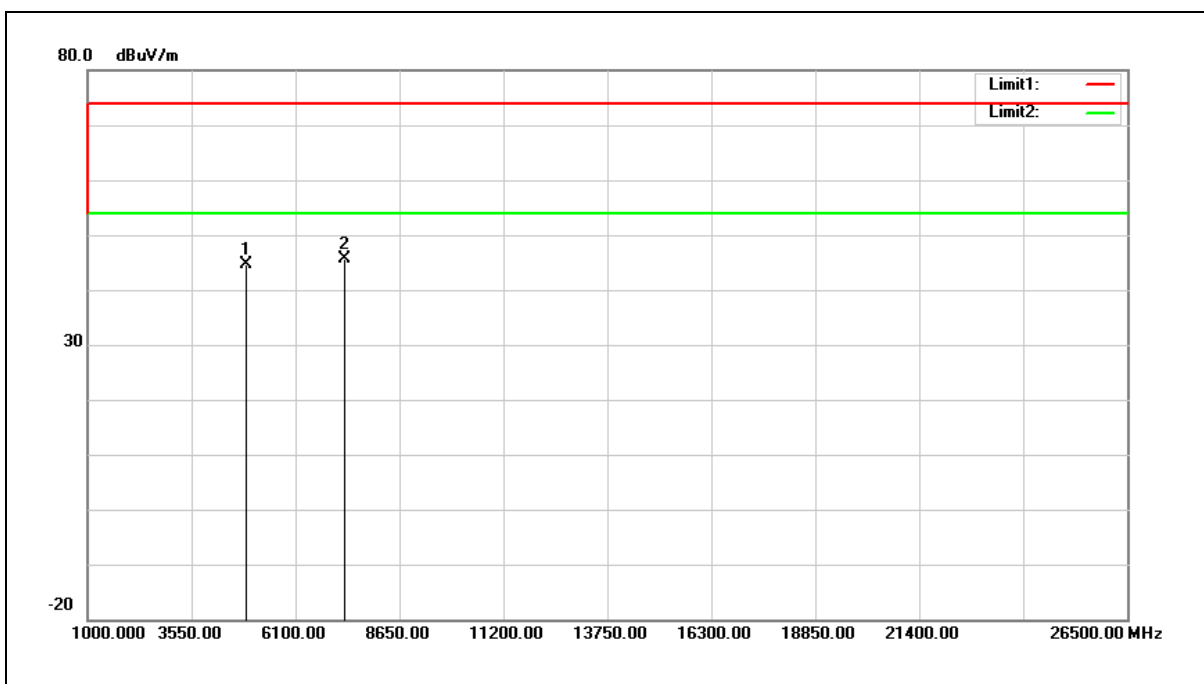
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

Example: 43.09= -5.57+48.66

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	Power:	DC 3.7 V
Frequency:	2441 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



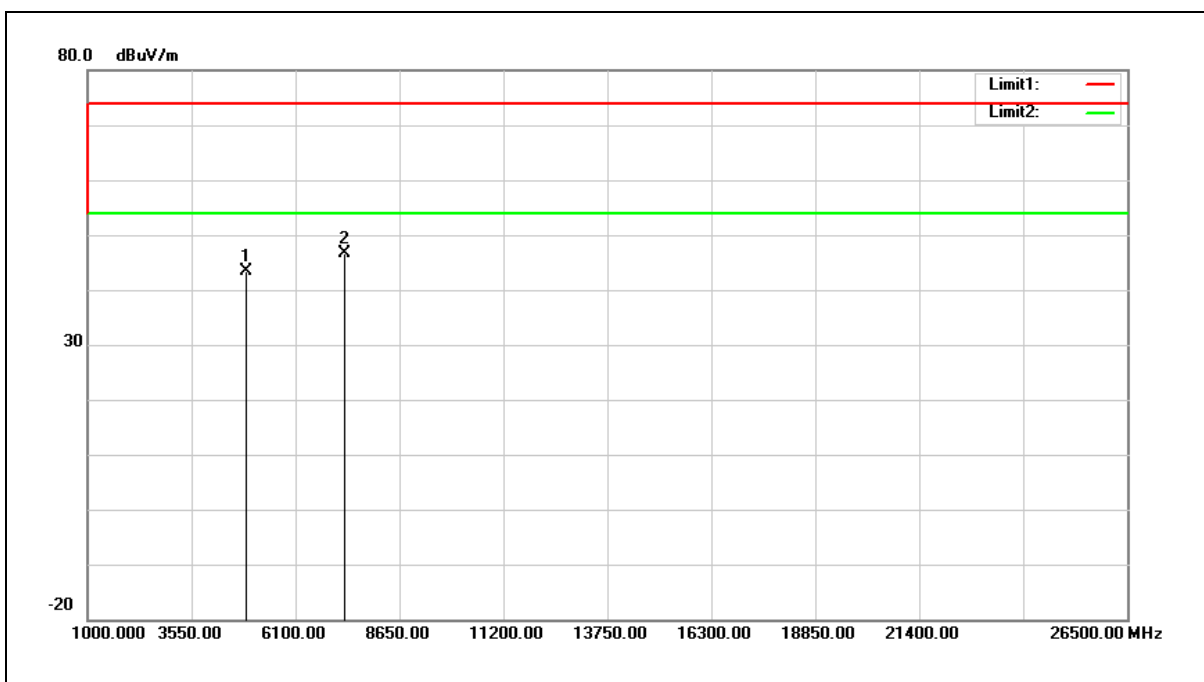
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4882.000	50.20	-5.45	44.75	74.00	-29.25	peak
2	7323.000	46.91	-1.18	45.73	74.00	-28.27	peak

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:	Harmonic	Power:	DC 3.7 V
Frequency:	2441 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 2		
Ant.Polar.:	Vertical		



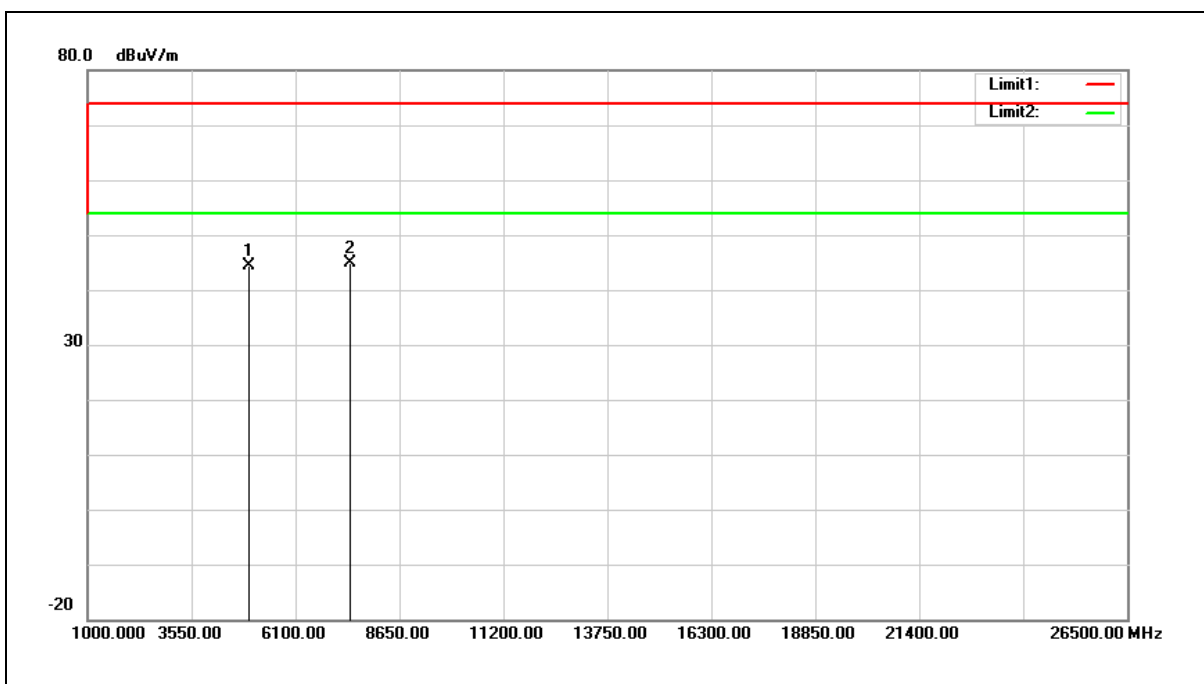
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4882.000	48.80	-5.45	43.35	74.00	-30.65	peak
2	7323.000	47.77	-1.18	46.59	74.00	-27.41	peak

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	Power:	DC 3.7 V
Frequency:	2480 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



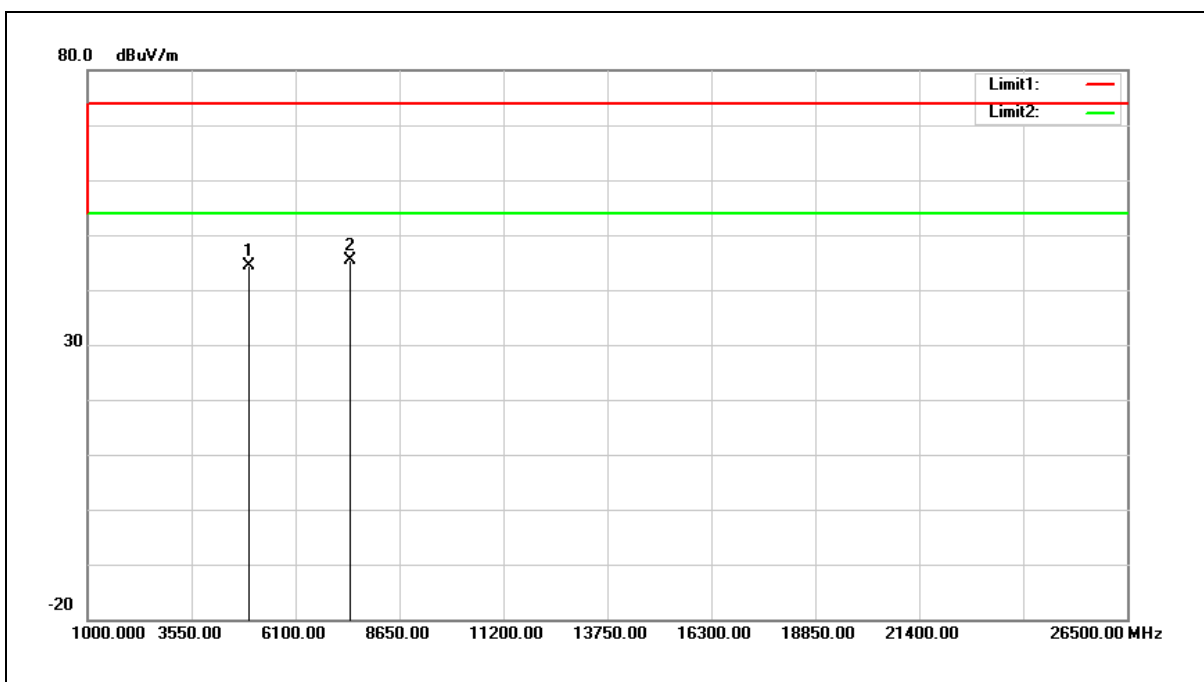
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	49.79	-5.33	44.46	74.00	-29.54	peak
2	7440.000	45.97	-1.00	44.97	74.00	-29.03	peak

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	Power:	DC 3.7 V
Frequency:	2480 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 2		
Ant.Polar.:	Vertical		



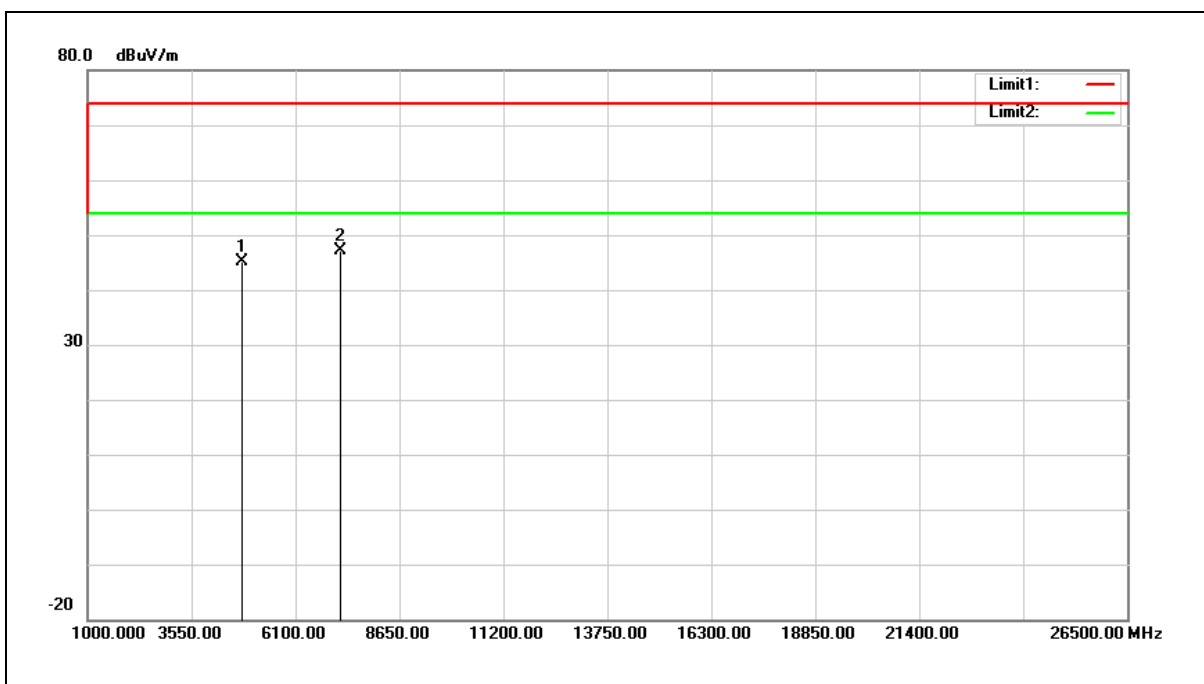
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	49.78	-5.33	44.45	74.00	-29.55	peak
2	7440.000	46.26	-1.00	45.26	74.00	-28.74	peak

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	Power:	DC 3.7 V
Frequency:	2402 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 4		
Ant.Polar.:	Horizontal		



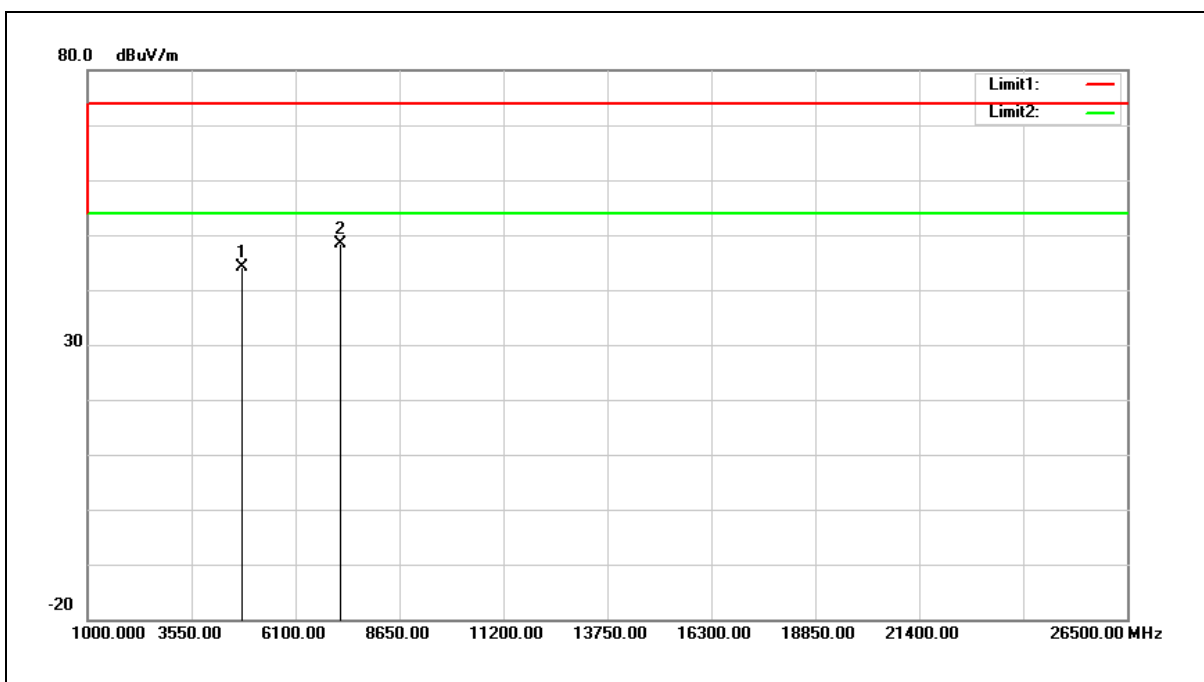
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.000	50.58	-5.57	45.01	74.00	-28.99	peak
2	7206.000	48.55	-1.37	47.18	74.00	-26.82	peak

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	Power:	DC 3.7 V
Frequency:	2402 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 4		
Ant.Polar.:	Vertical		



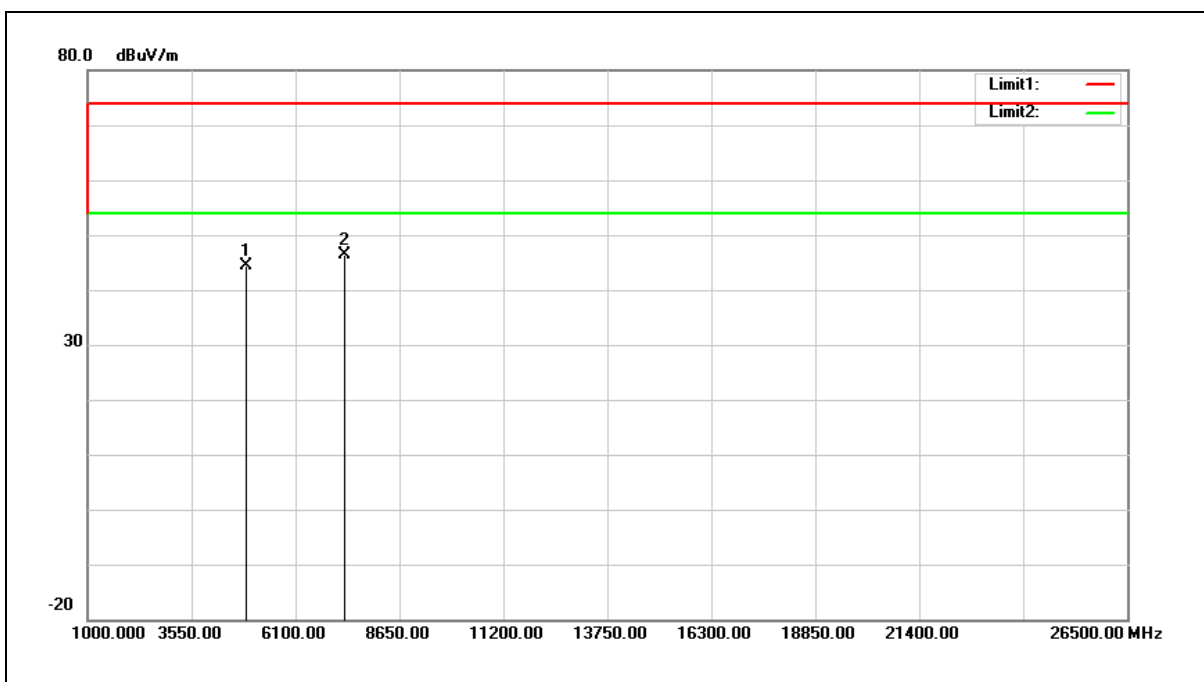
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.000	49.81	-5.57	44.24	74.00	-29.76	peak
2	7206.000	49.86	-1.37	48.49	74.00	-25.51	peak

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	Power:	DC 3.7 V
Frequency:	2441 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 4		
Ant.Polar.:	Horizontal		



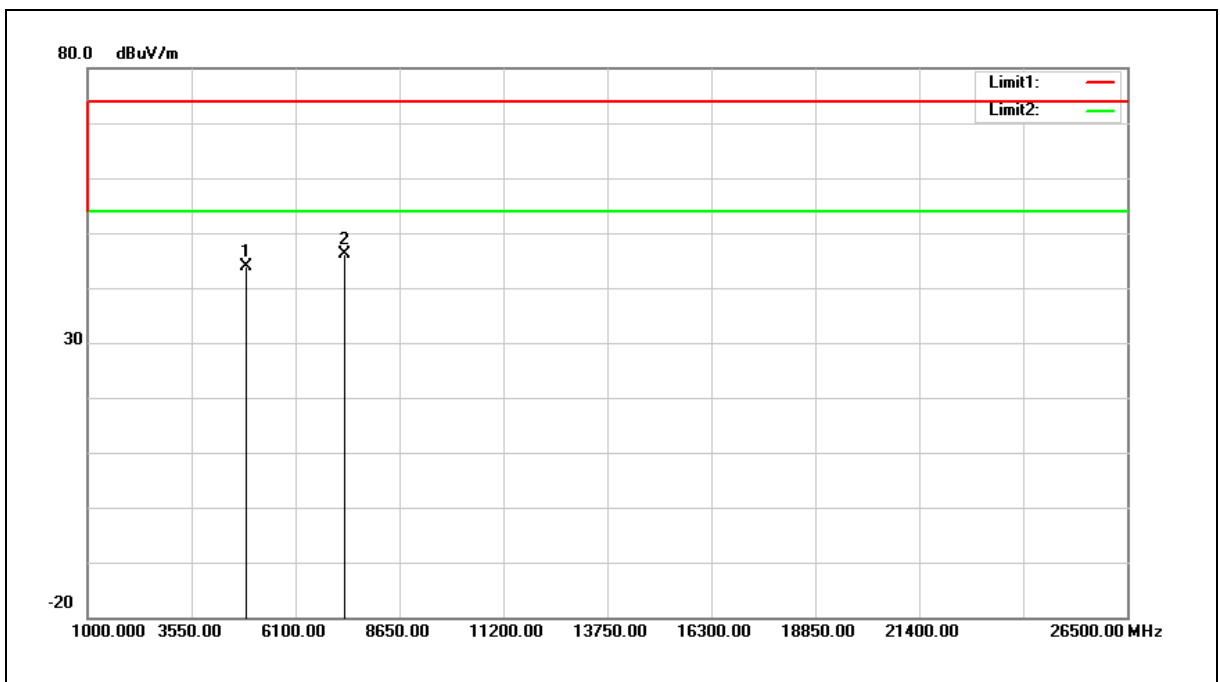
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4882.000	49.73	-5.45	44.28	74.00	-29.72	peak
2	7323.000	47.48	-1.18	46.30	74.00	-27.70	peak

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	Power:	DC 3.7 V
Frequency:	2441 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 4		
Ant.Polar.:	Vertical		



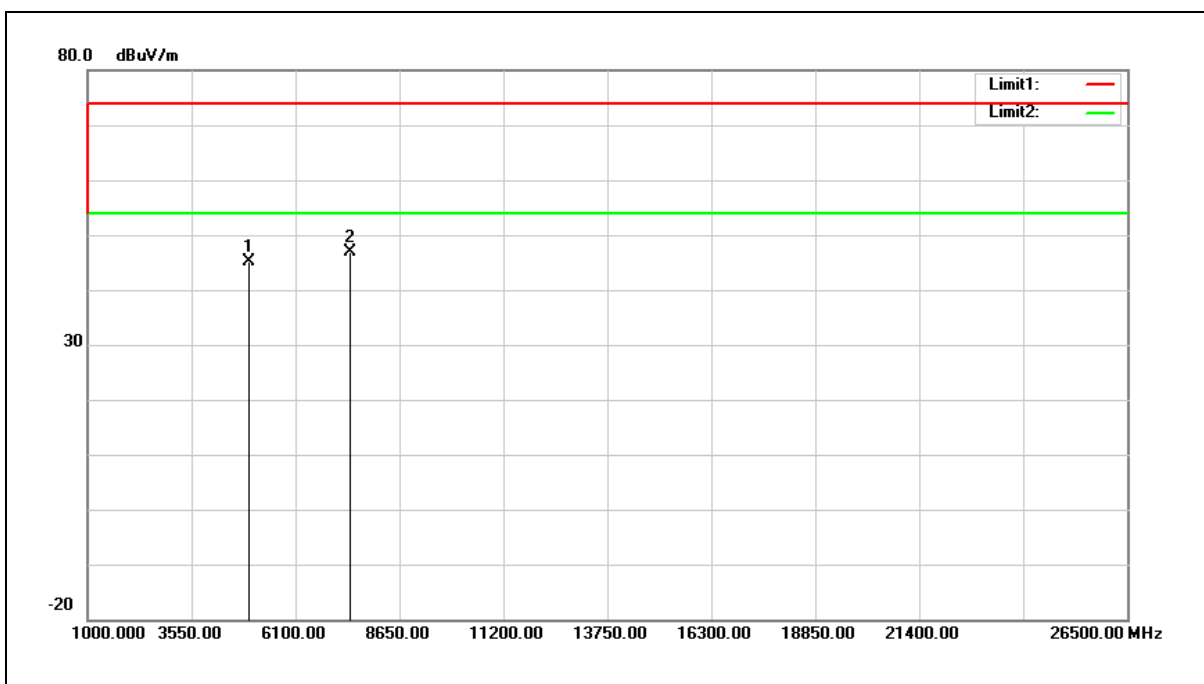
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4882.000	49.41	-5.45	43.96	74.00	-30.04	peak
2	7323.000	47.23	-1.18	46.05	74.00	-27.95	peak

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	Power:	DC 3.7 V
Frequency:	2480 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 4		
Ant.Polar.:	Horizontal		



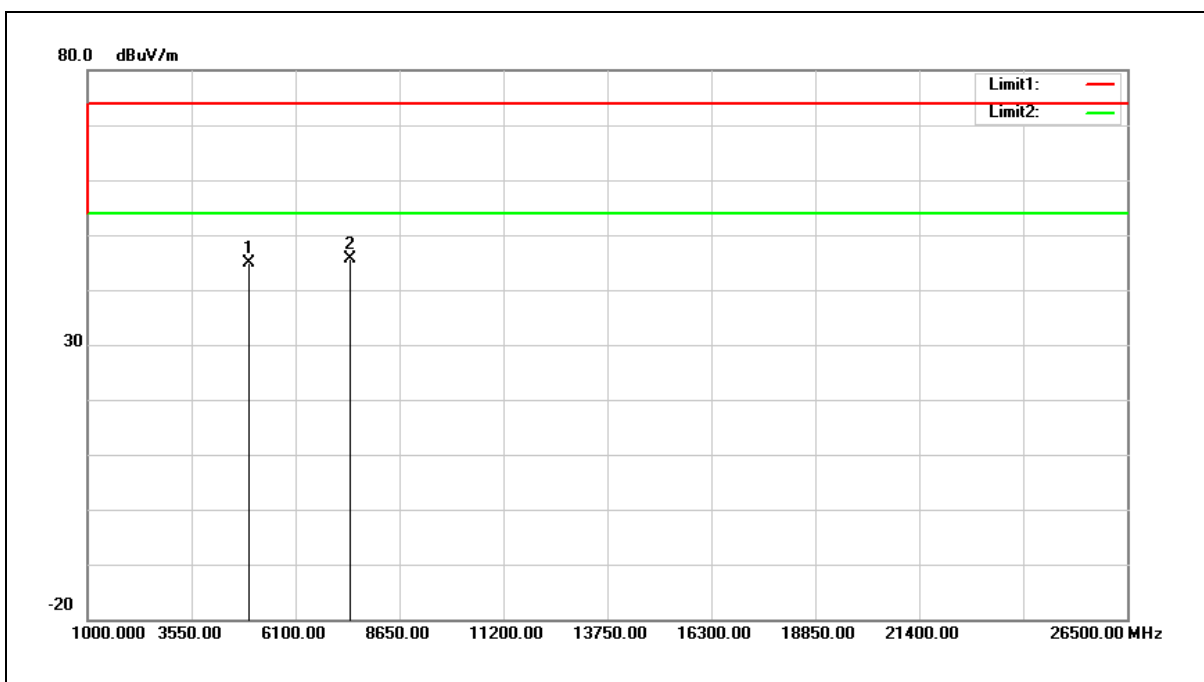
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	50.36	-5.33	45.03	74.00	-28.97	peak
2	7440.000	47.86	-1.00	46.86	74.00	-27.14	peak

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	Power:	DC 3.7 V
Frequency:	2480 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 4		
Ant.Polar.:	Vertical		



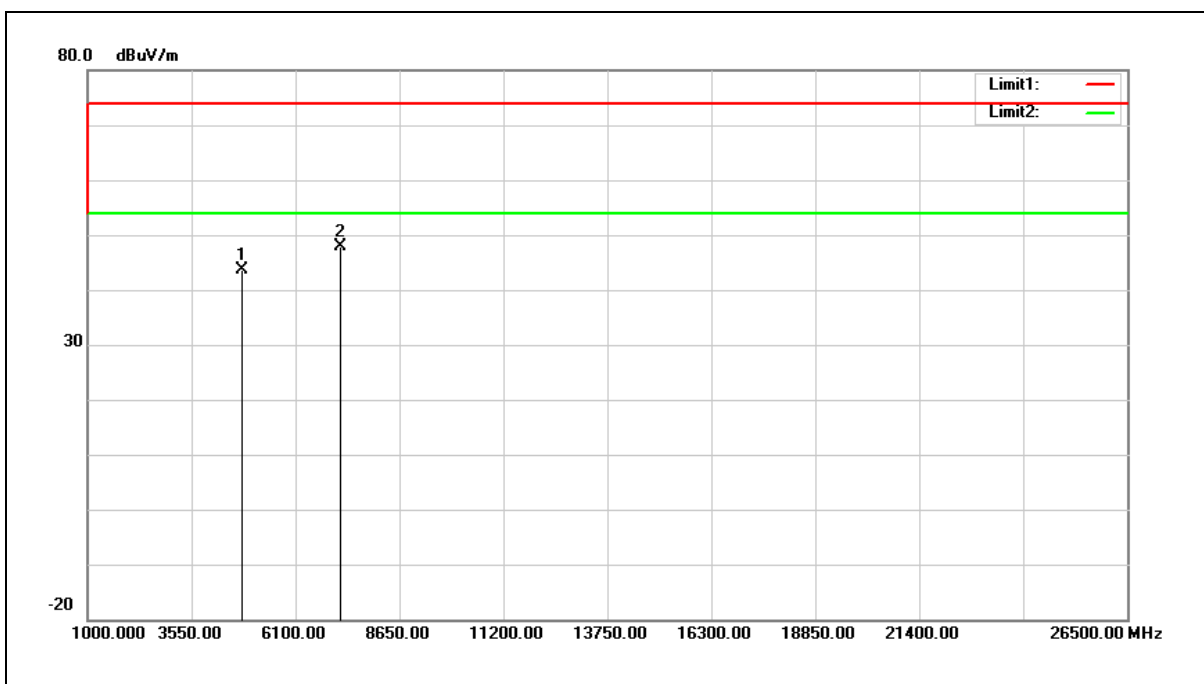
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	50.25	-5.33	44.92	74.00	-29.08	peak
2	7440.000	46.62	-1.00	45.62	74.00	-28.38	peak

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	Power:	DC 3.7 V
Frequency:	2402 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 5		
Ant.Polar.:	Horizontal		



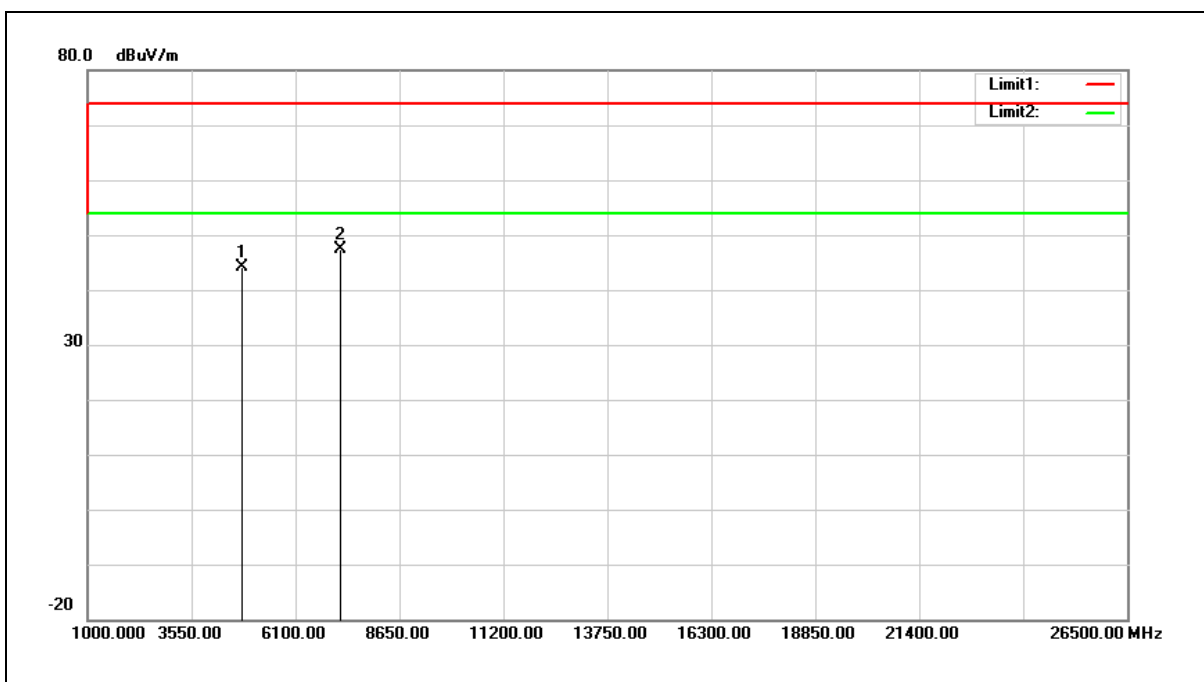
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.000	49.12	-5.57	43.55	74.00	-30.45	peak
2	7206.000	49.14	-1.37	47.77	74.00	-26.23	peak

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	Power:	DC 3.7 V
Frequency:	2402 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 5		
Ant.Polar.:	Vertical		



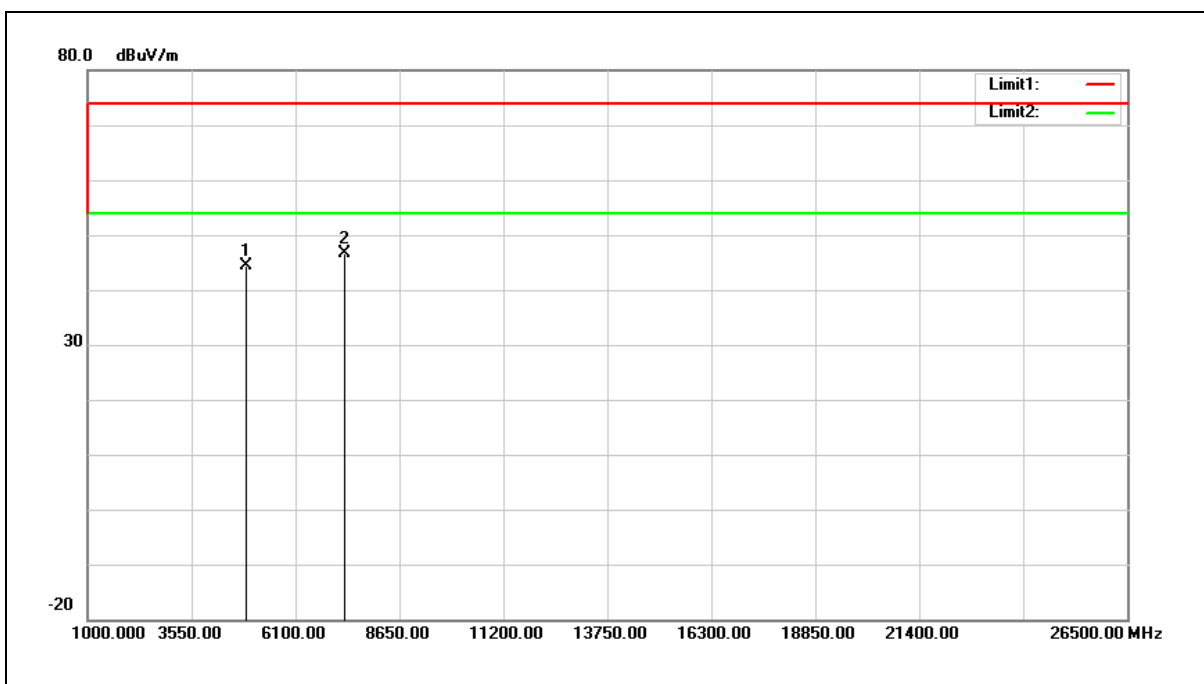
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.000	49.77	-5.57	44.20	74.00	-29.80	peak
2	7206.000	48.76	-1.37	47.39	74.00	-26.61	peak

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	Power:	DC 3.7 V
Frequency:	2440 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 5		
Ant.Polar.:	Horizontal		



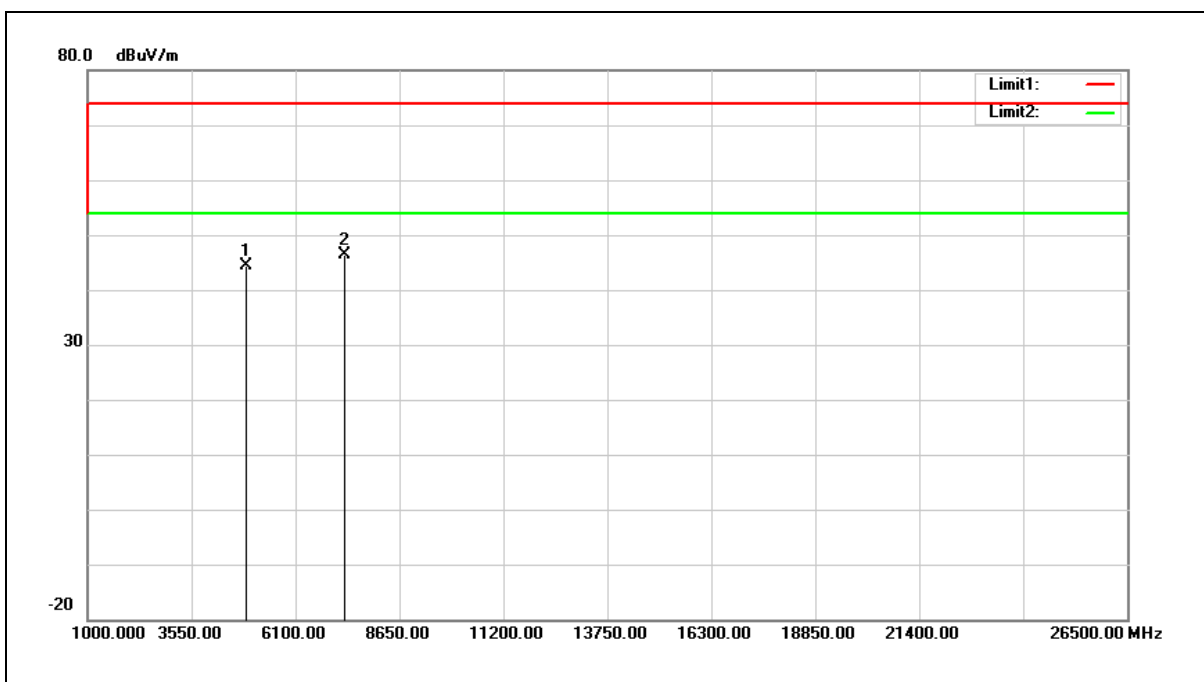
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4880.000	49.92	-5.45	44.47	74.00	-29.53	peak
2	7320.000	47.85	-1.19	46.66	74.00	-27.34	peak

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	Power:	DC 3.7 V
Frequency:	2440 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 5		
Ant.Polar.:	Vertical		



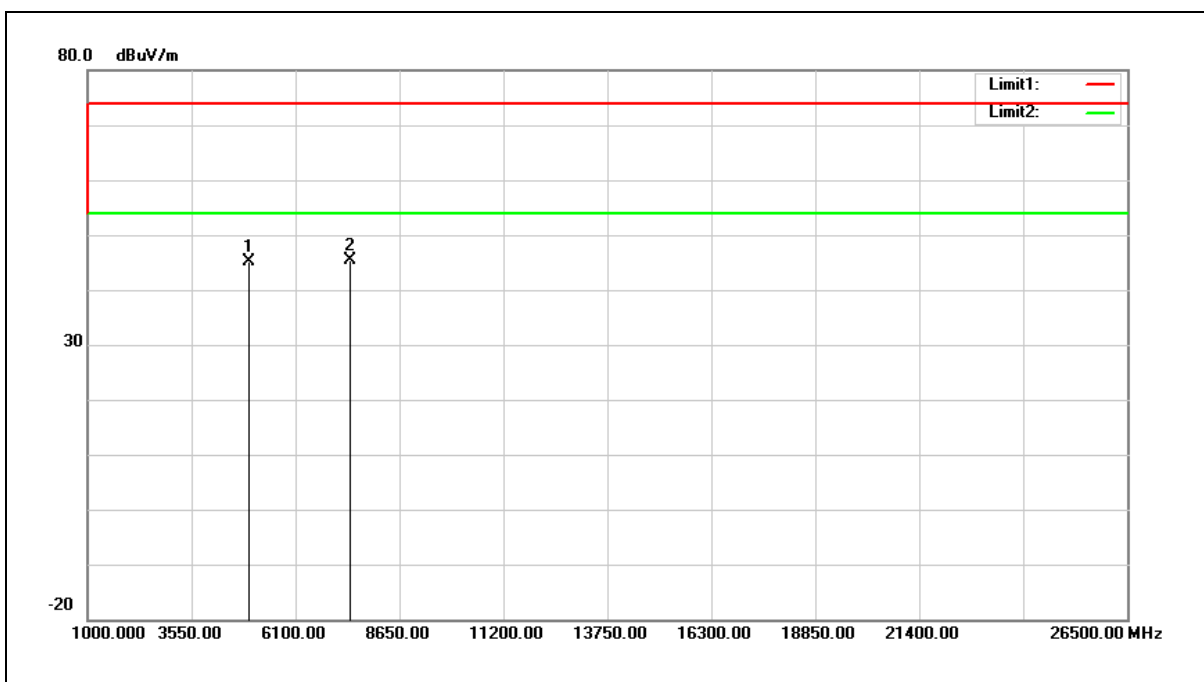
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4880.000	49.81	-5.45	44.36	74.00	-29.64	peak
2	7320.000	47.48	-1.19	46.29	74.00	-27.71	peak

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	Power:	DC 3.7 V
Frequency:	2480 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 5		
Ant.Polar.:	Horizontal		



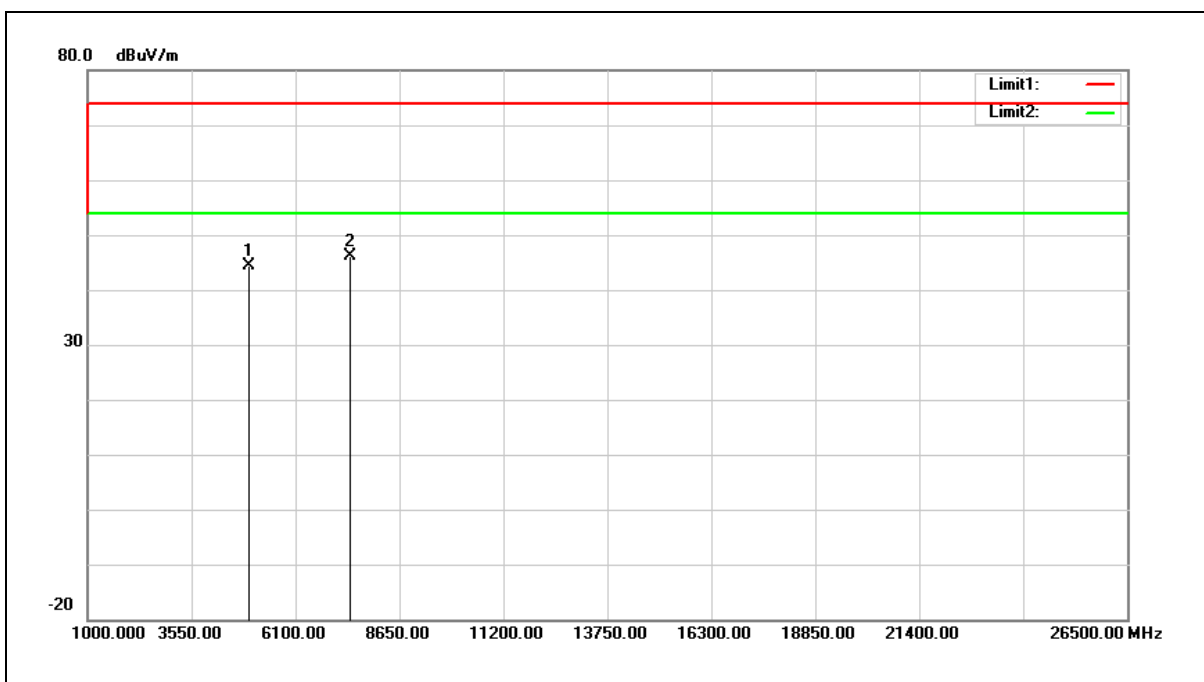
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	50.46	-5.33	45.13	74.00	-28.87	peak
2	7440.000	46.26	-1.00	45.26	74.00	-28.74	peak

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	Power:	DC 3.7 V
Frequency:	2480 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 5		
Ant.Polar.:	Vertical		



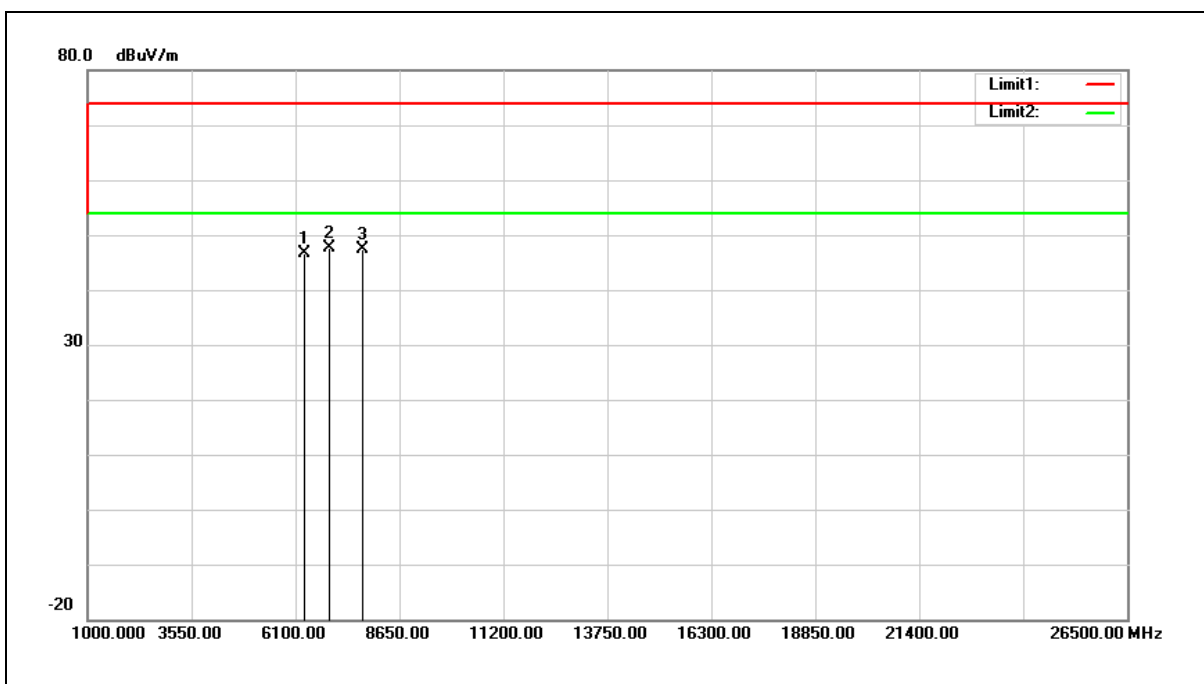
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	49.71	-5.33	44.38	74.00	-29.62	peak
2	7440.000	47.09	-1.00	46.09	74.00	-27.91	peak

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	Power:	DC 3.7 V
Mode:	Mode 6	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Ant.Polar.:	Horizontal		
Description:			



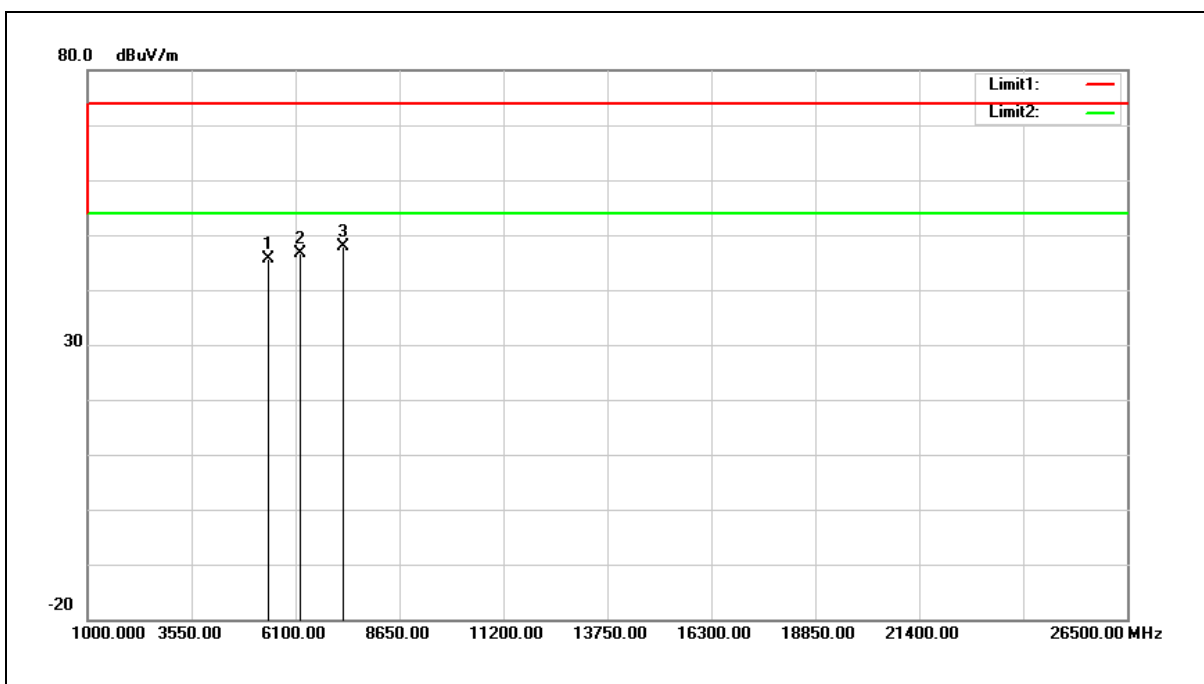
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	6329.500	48.82	-2.29	46.53	74.00	-27.47	peak
2	6941.500	49.24	-1.73	47.51	74.00	-26.49	peak
3	7732.000	47.75	-0.37	47.38	74.00	-26.62	peak

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:	Harmonic	Power:	DC 3.7 V
Mode:	Mode 6	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Ant.Polar.:	Vertical		
Description:			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	5437.000	49.97	-4.24	45.73	74.00	-28.27	peak
2	6202.000	49.10	-2.40	46.70	74.00	-27.30	peak
3	7273.000	49.06	-1.26	47.80	74.00	-26.20	peak

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

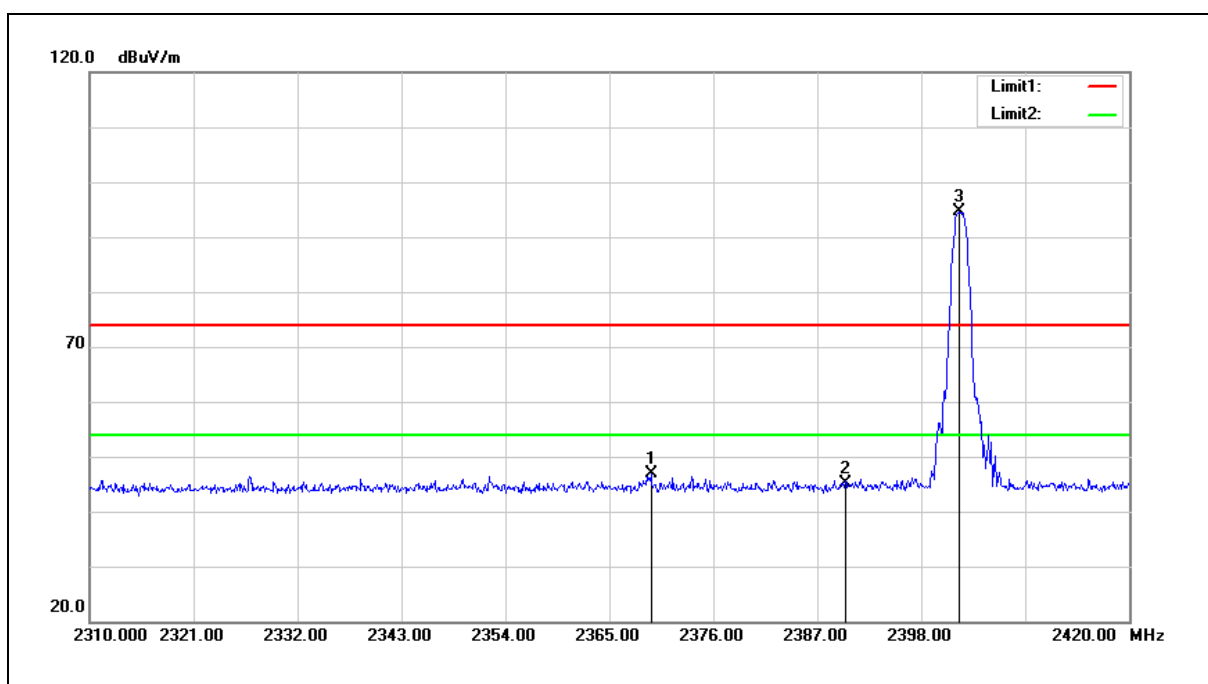
2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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	Power:	DC 3.7 V
Frequency:	2402 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



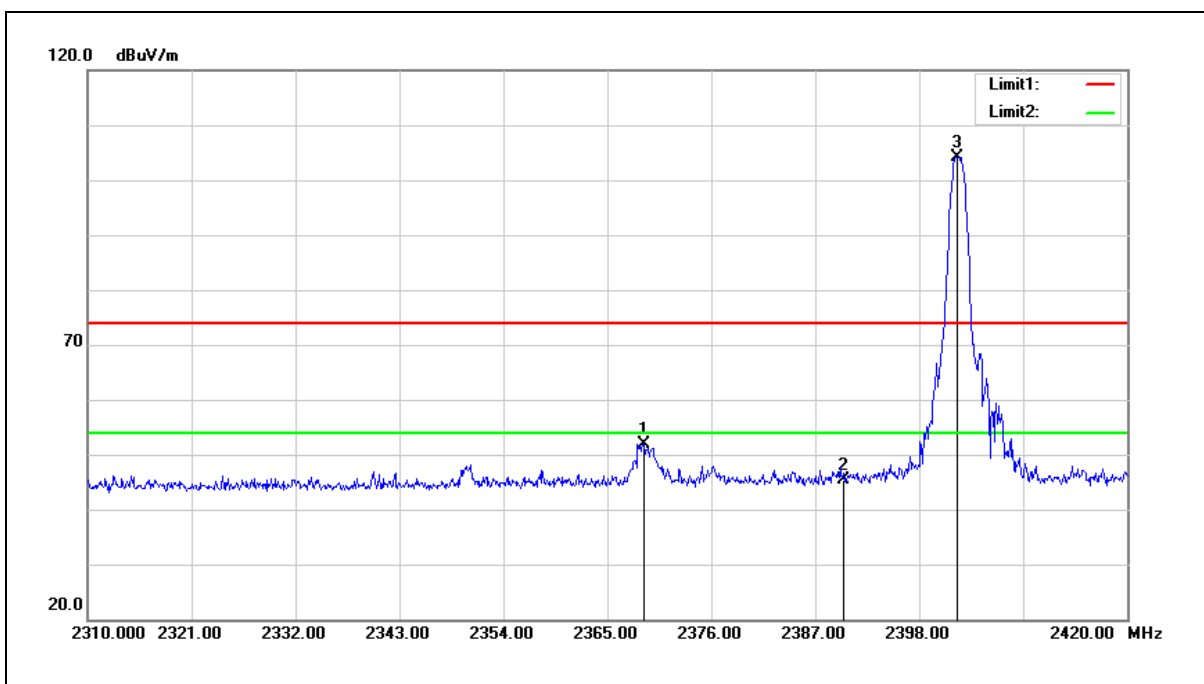
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2369.400	57.64	-10.88	46.76	74.00	-27.24	peak
2	2390.000	55.97	-10.85	45.12	74.00	-28.88	peak
3	2401.960	105.36	-10.82	94.54	---	---	peak

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	Power:	DC 3.7 V
Frequency:	2402 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 2		
Ant.Polar.:	Vertical		



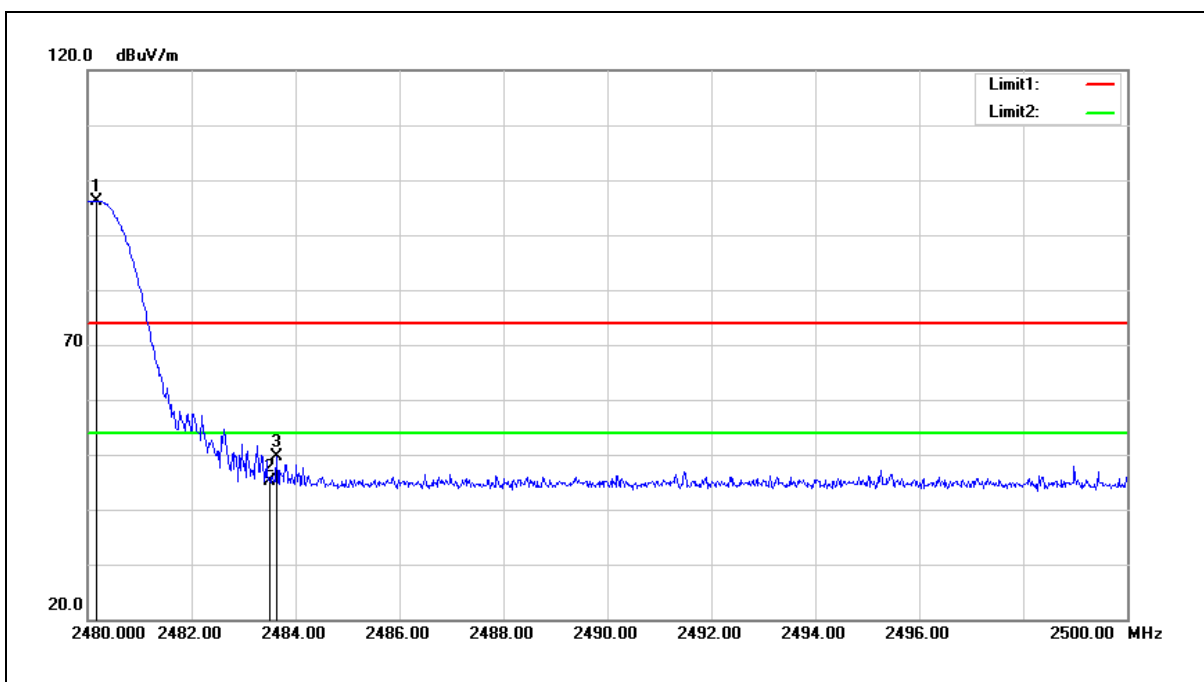
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2368.850	62.86	-10.88	51.98	74.00	-22.02	peak
2	2390.000	56.19	-10.85	45.34	74.00	-28.66	peak
3	2401.960	114.94	-10.82	104.12	---	---	peak

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	Power:	DC 3.7 V
Frequency:	2480 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



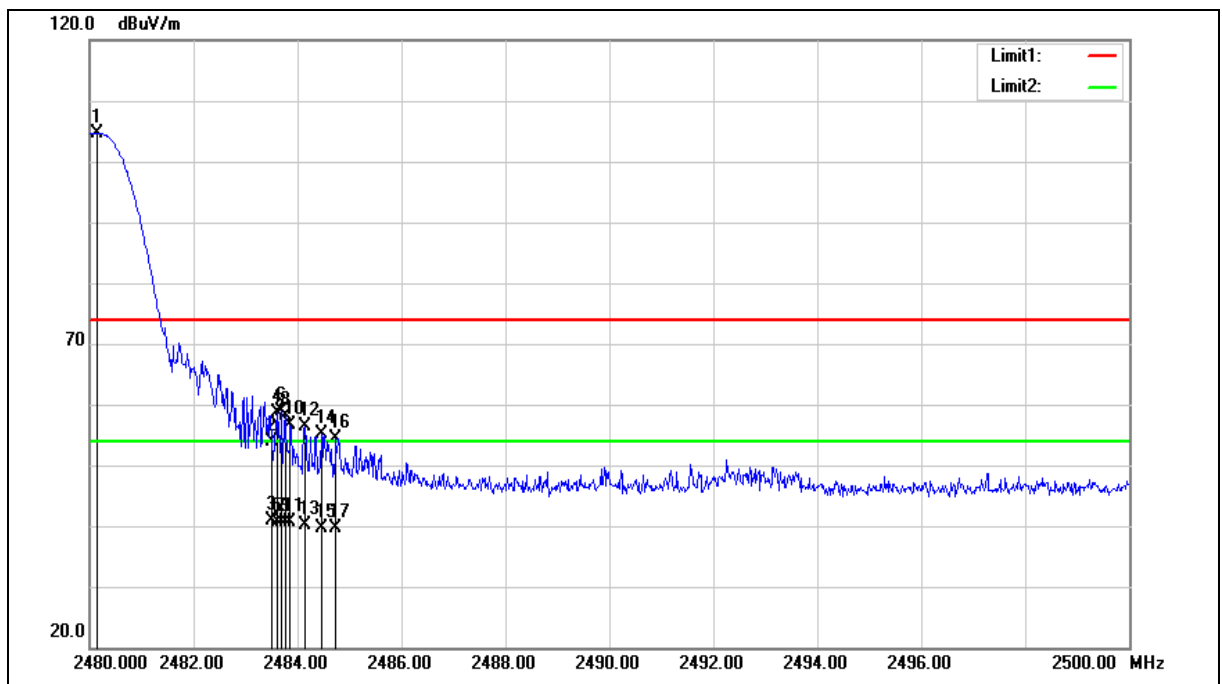
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.160	106.87	-10.66	96.21	---	---	peak
2	2483.500	55.71	-10.65	45.06	74.00	-28.94	peak
3	2483.640	60.16	-10.65	49.51	74.00	-24.49	peak

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	Power:	DC 3.7 V
Frequency:	2480 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 2		
Ant.Polar.:	Vertical		



Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge	Power:	DC 3.7 V
Frequency:	2480 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 2		
Ant.Polar.:	Vertical		

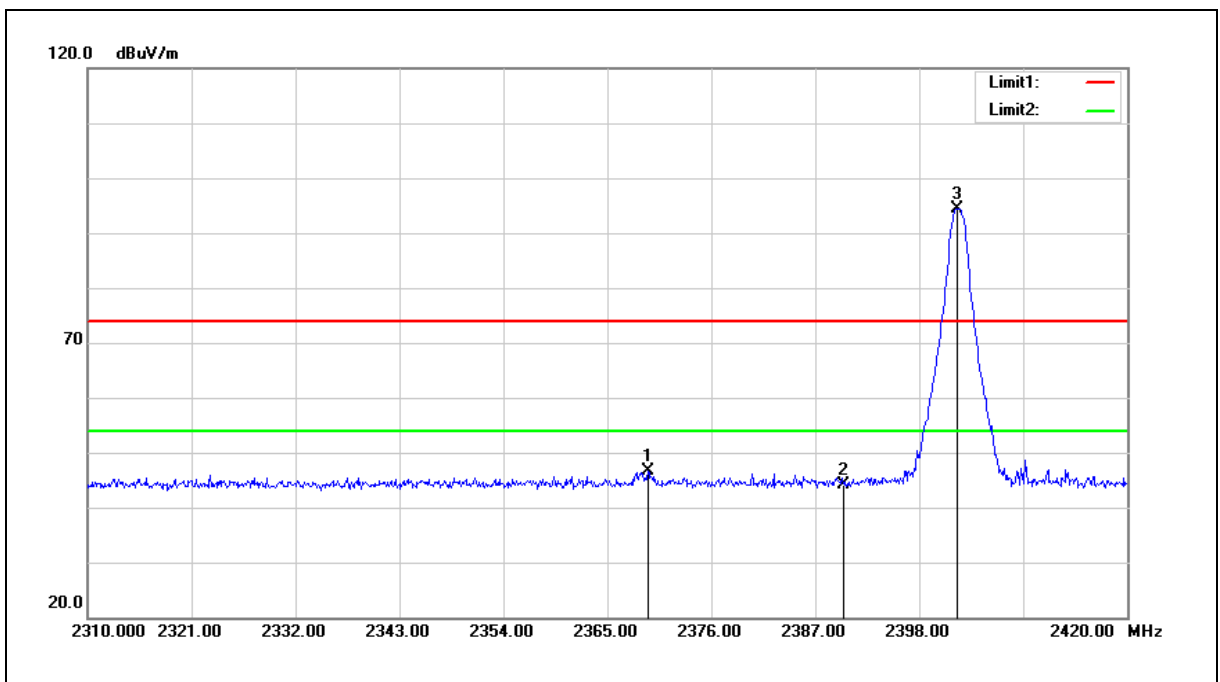
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.140	115.36	-10.66	104.70	---	---	peak
2	2483.500	64.52	-10.65	53.87	74.00	-20.13	peak
3	2483.500	51.59	-10.65	40.94	54.00	-13.06	AVG
4	2483.600	69.27	-10.65	58.62	74.00	-15.38	peak
5	2483.600	51.27	-10.65	40.62	54.00	-13.38	AVG
6	2483.700	69.49	-10.65	58.84	74.00	-15.16	peak
7	2483.700	51.40	-10.65	40.75	54.00	-13.25	AVG
8	2483.760	68.67	-10.65	58.02	74.00	-15.98	peak
9	2483.760	51.31	-10.65	40.66	54.00	-13.34	AVG
10	2483.860	67.20	-10.65	56.55	74.00	-17.45	peak
11	2483.860	51.18	-10.65	40.53	54.00	-13.47	AVG
12	2484.140	67.08	-10.65	56.43	74.00	-17.57	peak
13	2484.140	50.75	-10.65	40.10	54.00	-13.90	AVG
14	2484.460	65.82	-10.65	55.17	74.00	-18.83	peak
15	2484.460	50.39	-10.65	39.74	54.00	-14.26	AVG
16	2484.740	65.00	-10.65	54.35	74.00	-19.65	peak
17	2484.740	50.27	-10.65	39.62	54.00	-14.38	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	Power:	DC 3.7 V
Frequency:	2402 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 4		
Ant.Polar.:	Horizontal		



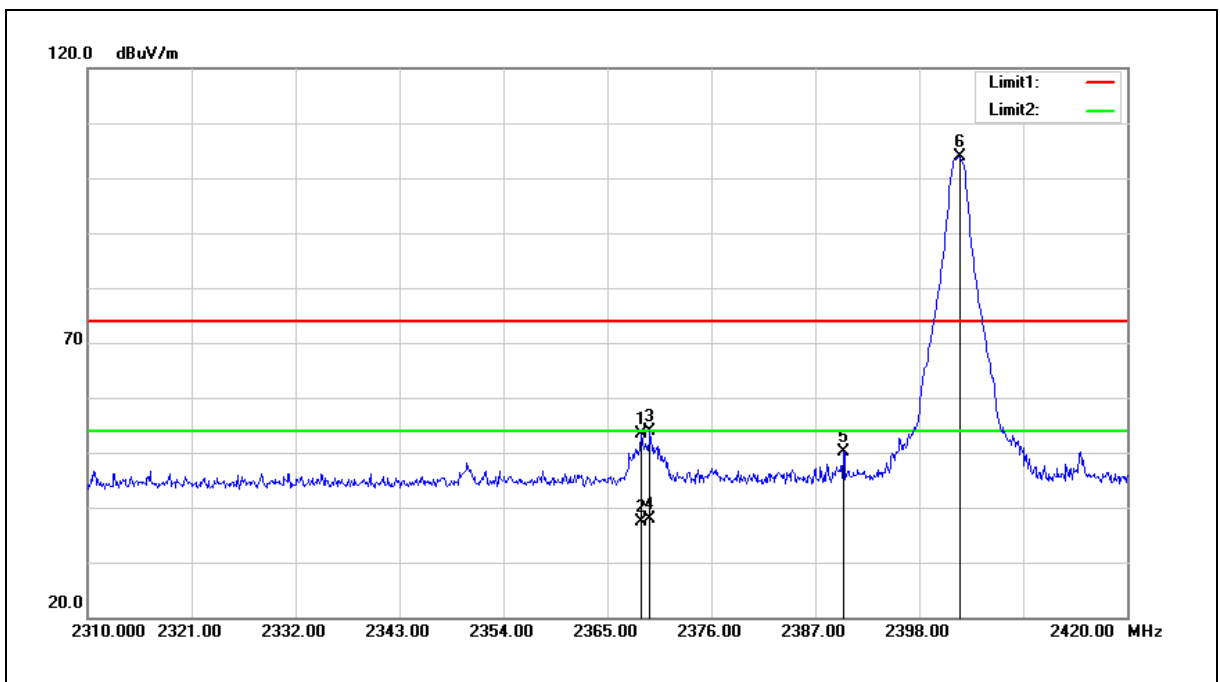
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2369.290	57.54	-10.88	46.66	74.00	-27.34	peak
2	2390.000	54.90	-10.85	44.05	74.00	-29.95	peak
3	2401.960	105.15	-10.82	94.33	---	---	peak

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	Power:	DC 3.7 V
Frequency:	2402 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 4		
Ant.Polar.:	Vertical		



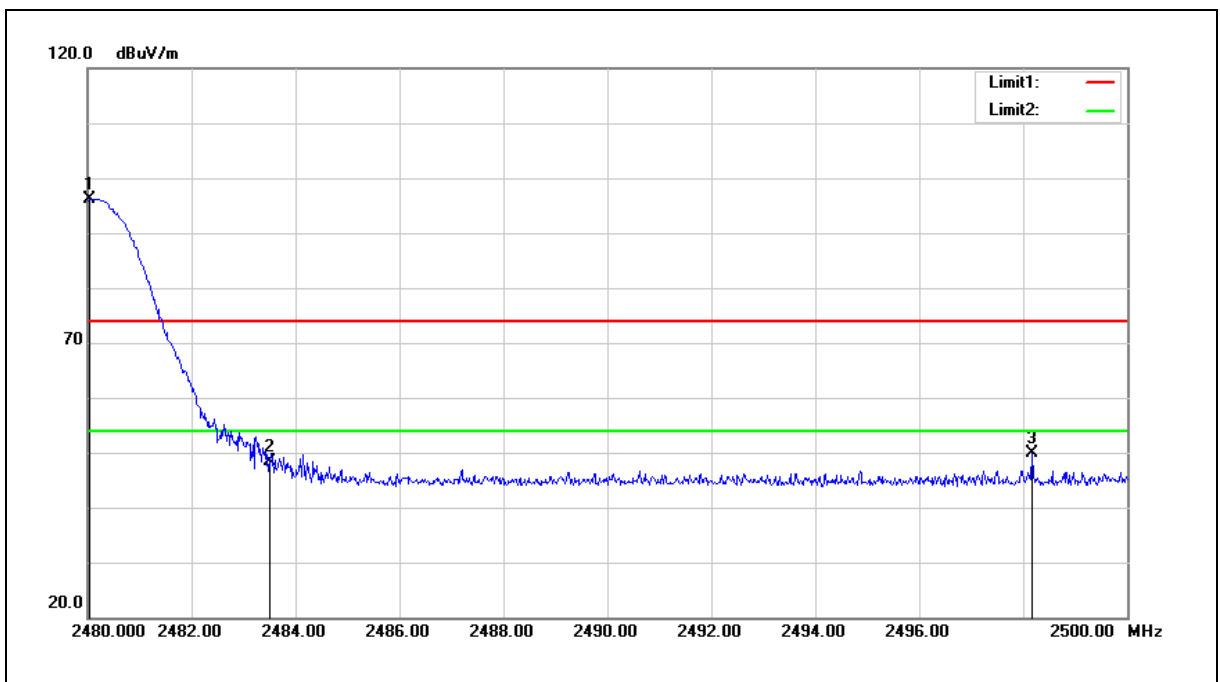
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2368.630	64.27	-10.89	53.38	74.00	-20.62	peak
2	2368.630	48.32	-10.89	37.43	54.00	-16.57	AVG
3	2369.510	64.72	-10.88	53.84	74.00	-20.16	peak
4	2369.510	48.77	-10.88	37.89	54.00	-16.11	AVG
5	2390.000	60.86	-10.85	50.01	74.00	-23.99	peak
6	2402.290	114.73	-10.82	103.91	---	---	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	Power:	DC 3.7 V
Frequency:	2480 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 4		
Ant.Polar.:	Horizontal		



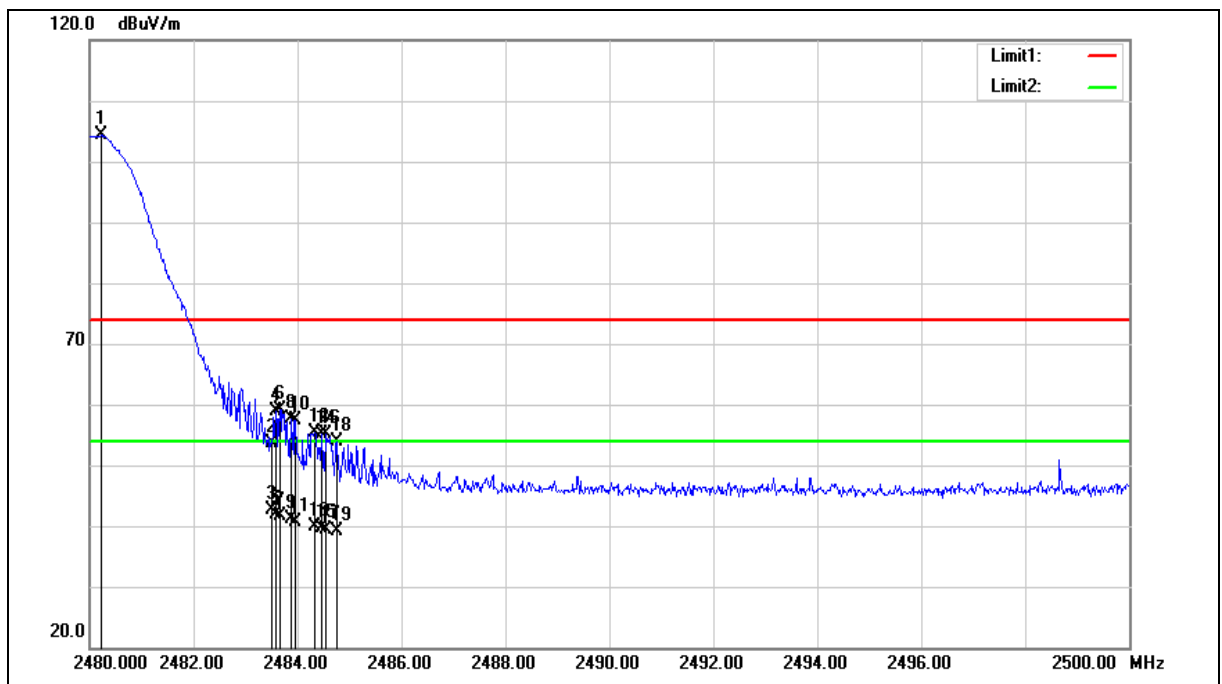
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.040	106.78	-10.66	96.12	---	---	peak
2	2483.500	59.09	-10.65	48.44	74.00	-25.56	peak
3	2498.160	60.41	-10.62	49.79	74.00	-24.21	peak

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	Power:	DC 3.7 V
Frequency:	2480 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 4		
Ant.Polar.:	Vertical		



Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge	Power:	DC 3.7 V
Frequency:	2480 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 4		
Ant.Polar.:	Vertical		

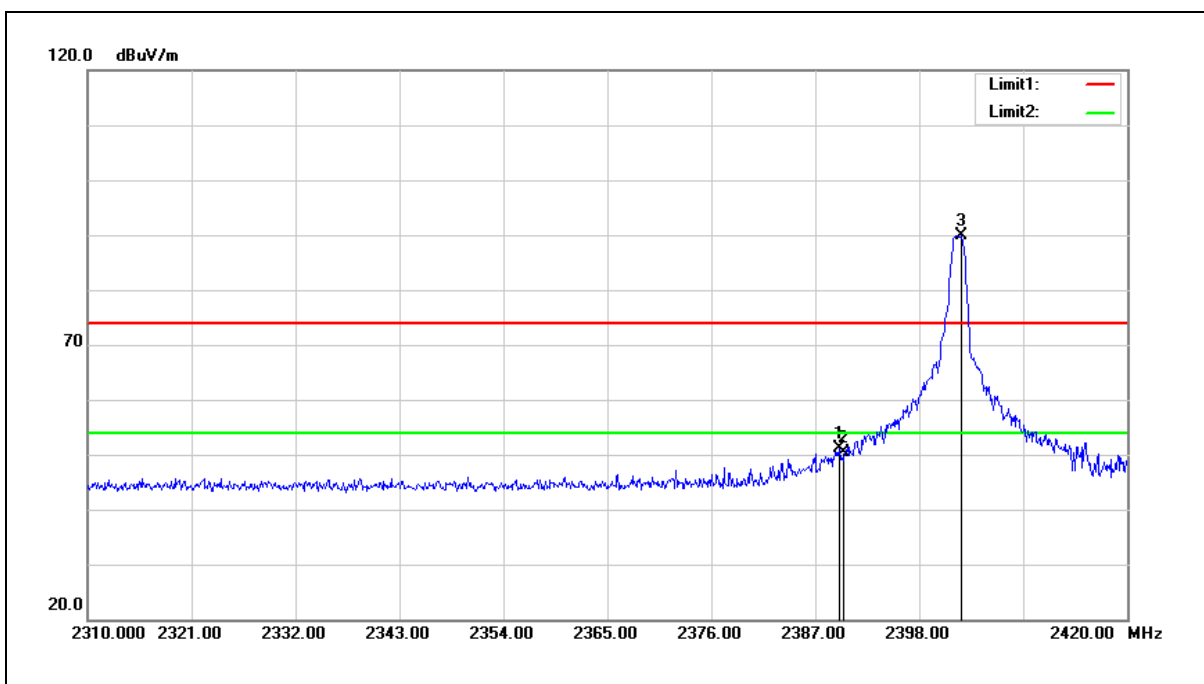
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.220	114.94	-10.66	104.28	---	---	peak
2	2483.500	64.32	-10.65	53.67	74.00	-20.33	peak
3	2483.500	53.21	-10.65	42.56	54.00	-11.44	AVG
4	2483.580	69.55	-10.65	58.90	74.00	-15.10	peak
5	2483.580	52.59	-10.65	41.94	54.00	-12.06	AVG
6	2483.660	69.83	-10.65	59.18	74.00	-14.82	peak
7	2483.660	52.21	-10.65	41.56	54.00	-12.44	AVG
8	2483.880	68.36	-10.65	57.71	74.00	-16.29	peak
9	2483.880	51.69	-10.65	41.04	54.00	-12.96	AVG
10	2483.960	68.09	-10.65	57.44	74.00	-16.56	peak
11	2483.960	51.28	-10.65	40.63	54.00	-13.37	AVG
12	2484.340	66.07	-10.65	55.42	74.00	-18.58	peak
13	2484.340	50.46	-10.65	39.81	54.00	-14.19	AVG
14	2484.460	65.85	-10.65	55.20	74.00	-18.80	peak
15	2484.460	50.21	-10.65	39.56	54.00	-14.44	AVG
16	2484.540	65.68	-10.65	55.03	74.00	-18.97	peak
17	2484.540	50.06	-10.65	39.41	54.00	-14.59	AVG
18	2484.760	64.55	-10.65	53.90	74.00	-20.10	peak
19	2484.760	49.75	-10.65	39.10	54.00	-14.90	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	Power:	DC 3.7 V
Frequency:	2402 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 5		
Ant.Polar.:	Horizontal		



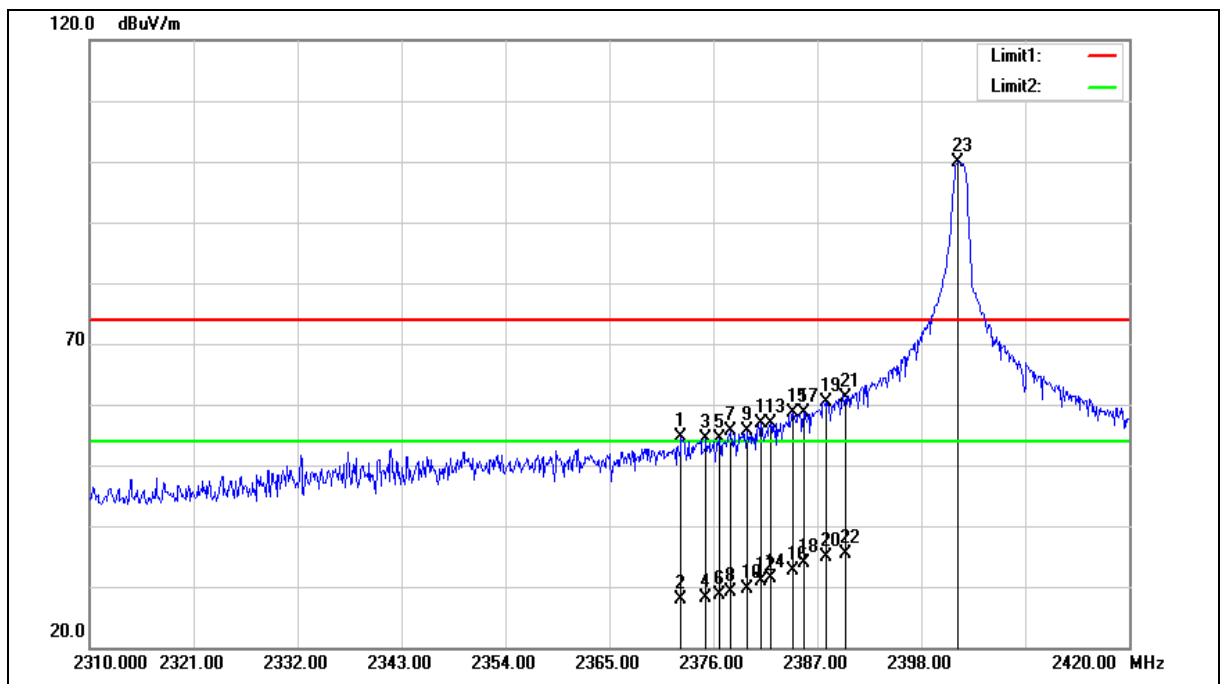
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.530	61.94	-10.85	51.09	74.00	-22.91	peak
2	2390.000	61.32	-10.85	50.47	74.00	-23.53	peak
3	2402.400	100.66	-10.82	89.84	---	---	peak

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:	Band edge	Power:	DC 3.7 V
Frequency:	2402 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 5		
Ant.Polar.:	Vertical		



Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge	Power:	DC 3.7 V
Frequency:	2402 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 5		
Ant.Polar.:	Vertical		

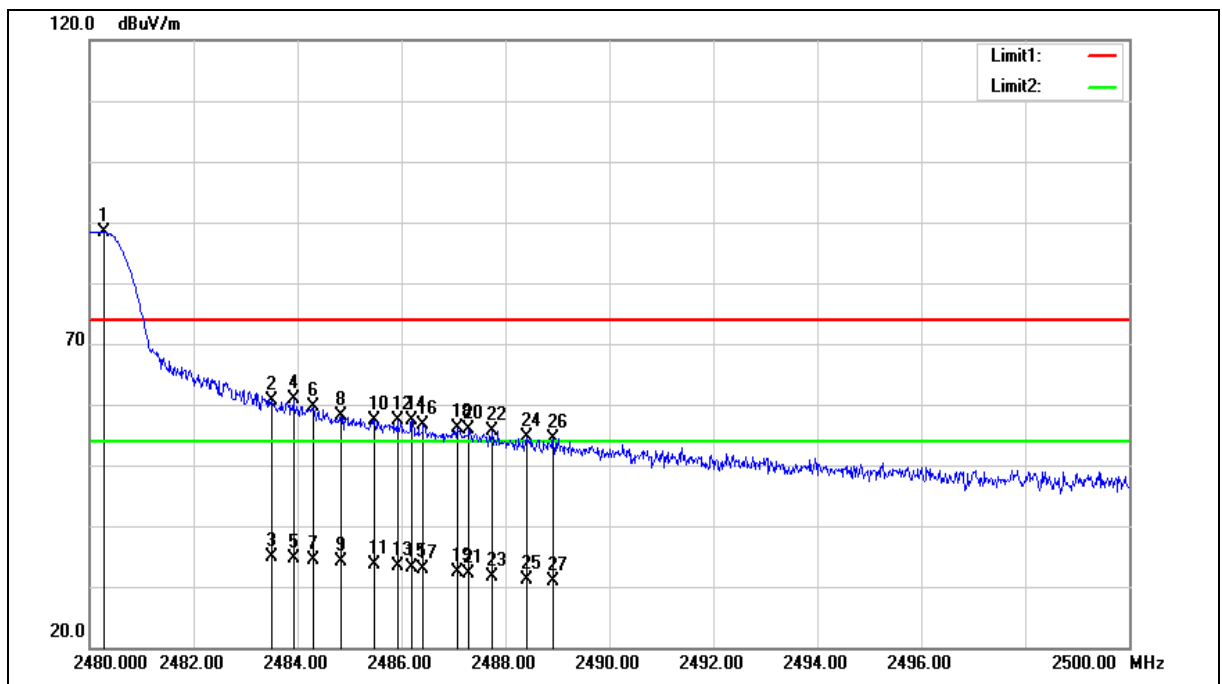
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2372.590	65.41	-10.88	54.53	74.00	-19.47	peak
2	2372.590	38.74	-10.88	27.86	54.00	-26.14	AVG
3	2375.230	65.26	-10.87	54.39	74.00	-19.61	peak
4	2375.230	38.93	-10.87	28.06	54.00	-25.94	AVG
5	2376.660	65.28	-10.87	54.41	74.00	-19.59	peak
6	2376.660	39.48	-10.87	28.61	54.00	-25.39	AVG
7	2377.870	66.54	-10.87	55.67	74.00	-18.33	peak
8	2377.870	40.01	-10.87	29.14	54.00	-24.86	AVG
9	2379.630	66.58	-10.87	55.71	74.00	-18.29	peak
10	2379.630	40.53	-10.87	29.66	54.00	-24.34	AVG
11	2381.060	67.71	-10.87	56.84	74.00	-17.16	peak
12	2381.060	41.82	-10.87	30.95	54.00	-23.05	AVG
13	2382.050	67.82	-10.86	56.96	74.00	-17.04	peak
14	2382.050	42.14	-10.86	31.28	54.00	-22.72	AVG
15	2384.360	69.38	-10.85	58.53	74.00	-15.47	peak
16	2384.360	43.60	-10.85	32.75	54.00	-21.25	AVG
17	2385.570	69.53	-10.85	58.68	74.00	-15.32	peak
18	2385.570	44.76	-10.85	33.91	54.00	-20.09	AVG
19	2387.990	71.22	-10.85	60.37	74.00	-13.63	peak
20	2387.990	45.71	-10.85	34.86	54.00	-19.14	AVG
21	2390.000	72.02	-10.85	61.17	74.00	-12.83	peak
22	2390.000	46.25	-10.85	35.40	54.00	-18.60	AVG
23	2401.850	110.62	-10.82	99.80	---	---	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	Power:	DC 3.7 V
Frequency:	2480 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 5		
Ant.Polar.:	Horizontal		



Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge	Power:	DC 3.7 V
Frequency:	2480 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
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	2480.280	99.16	-10.66	88.50	---	---	peak
2	2483.500	71.22	-10.65	60.57	74.00	-13.43	peak
3	2483.500	45.44	-10.65	34.79	54.00	-19.21	AVG
4	2483.920	71.42	-10.65	60.77	74.00	-13.23	peak
5	2483.920	45.28	-10.65	34.63	54.00	-19.37	AVG
6	2484.300	70.35	-10.65	59.70	74.00	-14.30	peak
7	2484.300	44.96	-10.65	34.31	54.00	-19.69	AVG
8	2484.840	68.76	-10.65	58.11	74.00	-15.89	peak
9	2484.840	44.74	-10.65	34.09	54.00	-19.91	AVG
10	2485.480	67.93	-10.65	57.28	74.00	-16.72	peak
11	2485.480	44.26	-10.65	33.61	54.00	-20.39	AVG
12	2485.920	67.95	-10.65	57.30	74.00	-16.70	peak
13	2485.920	43.93	-10.65	33.28	54.00	-20.72	AVG
14	2486.200	68.08	-10.65	57.43	74.00	-16.57	peak
15	2486.200	43.66	-10.65	33.01	54.00	-20.99	AVG
16	2486.420	67.32	-10.65	56.67	74.00	-17.33	peak
17	2486.420	43.52	-10.65	32.87	54.00	-21.13	AVG
18	2487.080	66.69	-10.65	56.04	74.00	-17.96	peak
19	2487.080	42.91	-10.65	32.26	54.00	-21.74	AVG
20	2487.300	66.44	-10.65	55.79	74.00	-18.21	peak
21	2487.300	42.70	-10.65	32.05	54.00	-21.95	AVG
22	2487.740	66.40	-10.65	55.75	74.00	-18.25	peak
23	2487.740	42.18	-10.65	31.53	54.00	-22.47	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	Power:	DC 3.7 V
Frequency:	2480 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 5		
Ant.Polar.:	Horizontal		

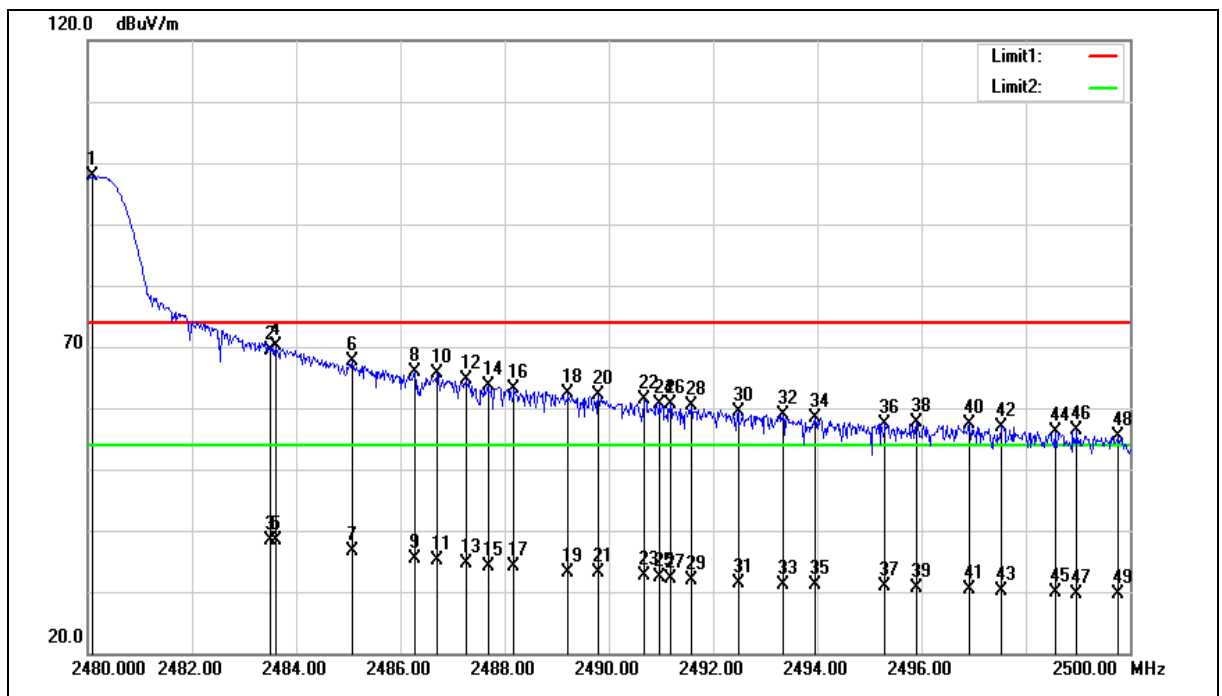
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
24	2488.400	65.33	-10.64	54.69	74.00	-19.31	peak
25	2488.400	41.83	-10.64	31.19	54.00	-22.81	AVG
26	2488.920	64.97	-10.64	54.33	74.00	-19.67	peak
27	2488.920	41.64	-10.64	31.00	54.00	-23.00	AVG

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	Power:	DC 3.7 V
Frequency:	2480 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 5		
Ant.Polar.:	Vertical		



Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge	Power:	DC 3.7 V
Frequency:	2480 MHz	Temp.(°C)/Hum. (%RH):	26(°C)/60 %RH
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	2480.100	108.44	-10.66	97.78	---	---	peak
2	2483.500	80.15	-10.65	69.50	74.00	-4.50	peak
3	2483.500	49.03	-10.65	38.38	54.00	-15.62	AVG
4	2483.600	80.79	-10.65	70.14	74.00	-3.86	peak
5	2483.600	48.94	-10.65	38.29	54.00	-15.71	AVG
6	2485.080	78.19	-10.65	67.54	74.00	-6.46	peak
7	2485.080	47.27	-10.65	36.62	54.00	-17.38	AVG
8	2486.280	76.46	-10.65	65.81	74.00	-8.19	peak
9	2486.280	46.01	-10.65	35.36	54.00	-18.64	AVG
10	2486.700	76.22	-10.65	65.57	74.00	-8.43	peak
11	2486.700	45.73	-10.65	35.08	54.00	-18.92	AVG
12	2487.260	75.20	-10.65	64.55	74.00	-9.45	peak
13	2487.260	45.30	-10.65	34.65	54.00	-19.35	AVG
14	2487.680	74.26	-10.65	63.61	74.00	-10.39	peak
15	2487.680	44.89	-10.65	34.24	54.00	-19.76	AVG
16	2488.180	73.76	-10.64	63.12	74.00	-10.88	peak
17	2488.180	44.65	-10.64	34.01	54.00	-19.99	AVG
18	2489.220	73.06	-10.64	62.42	74.00	-11.58	peak
19	2489.220	43.89	-10.64	33.25	54.00	-20.75	AVG
20	2489.800	72.81	-10.64	62.17	74.00	-11.83	peak
21	2489.800	43.71	-10.64	33.07	54.00	-20.93	AVG
22	2490.680	72.03	-10.64	61.39	74.00	-12.61	peak
23	2490.680	43.39	-10.64	32.75	54.00	-21.25	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	Power:	DC 3.7 V
Frequency:	2480 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 5		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
24	2490.980	71.39	-10.64	60.75	74.00	-13.25	peak
25	2490.980	43.05	-10.64	32.41	54.00	-21.59	AVG
26	2491.180	71.34	-10.64	60.70	74.00	-13.30	peak
27	2491.180	42.84	-10.64	32.20	54.00	-21.80	AVG
28	2491.580	70.92	-10.64	60.28	74.00	-13.72	peak
29	2491.580	42.64	-10.64	32.00	54.00	-22.00	AVG
30	2492.480	70.07	-10.64	59.43	74.00	-14.57	peak
31	2492.480	42.07	-10.64	31.43	54.00	-22.57	AVG
32	2493.340	69.52	-10.64	58.88	74.00	-15.12	peak
33	2493.340	41.75	-10.64	31.11	54.00	-22.89	AVG
34	2493.960	69.03	-10.63	58.40	74.00	-15.60	peak
35	2493.960	41.65	-10.63	31.02	54.00	-22.98	AVG
36	2495.300	68.13	-10.63	57.50	74.00	-16.50	peak
37	2495.300	41.51	-10.63	30.88	54.00	-23.12	AVG
38	2495.900	68.22	-10.63	57.59	74.00	-16.41	peak
39	2495.900	41.17	-10.63	30.54	54.00	-23.46	AVG
40	2496.920	67.93	-10.62	57.31	74.00	-16.69	peak
41	2496.920	40.88	-10.62	30.26	54.00	-23.74	AVG
42	2497.520	67.61	-10.62	56.99	74.00	-17.01	peak
43	2497.520	40.70	-10.62	30.08	54.00	-23.92	AVG
44	2498.560	66.77	-10.62	56.15	74.00	-17.85	peak
45	2498.560	40.52	-10.62	29.90	54.00	-24.10	AVG
46	2498.980	67.09	-10.62	56.47	74.00	-17.53	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	Power:	DC 3.7 V
Frequency:	2480 MHz	Temp.(°C)/Hum.(%RH):	26(°C)/60 %RH
Mode:	Mode 5		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
47	2498.980	40.37	-10.62	29.75	54.00	-24.25	AVG
48	2499.760	66.03	-10.62	55.41	74.00	-18.59	peak
49	2499.760	40.16	-10.62	29.54	54.00	-24.46	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).

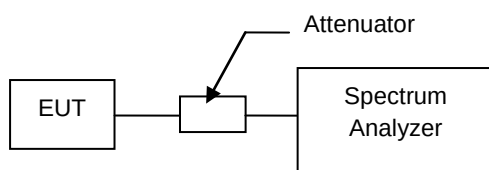
3.When the peak results are less than average limit, so not need to evaluate the average.

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，須衰減 20 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
測試結果	: 合格
量測之結果掃圖如下頁所示	

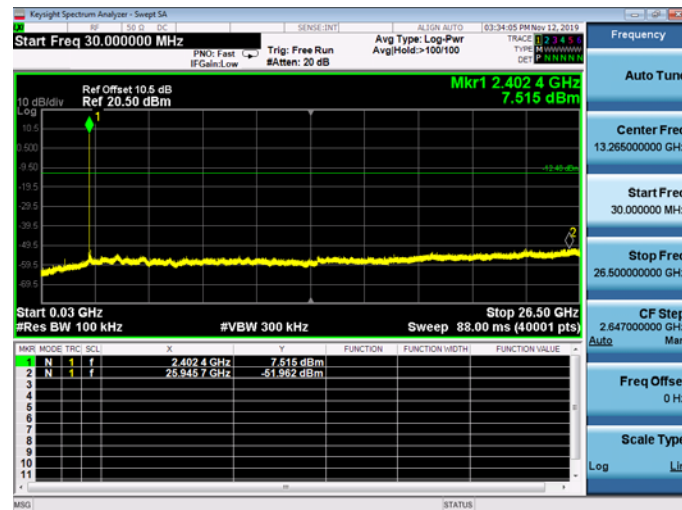
附註 1: 於使用頻帶範圍之任意 100 千赫 (kHz)內，發射器所產生的射頻功率相較於使用頻帶範圍中包含最高所需功率之 100 千赫 (kHz)內的射頻功率，衰減 20 分貝(dB)以上，符合規定。

附註 2: 測試結果頻帶外之輻射雜訊皆小於主頻 TX 20 dB。

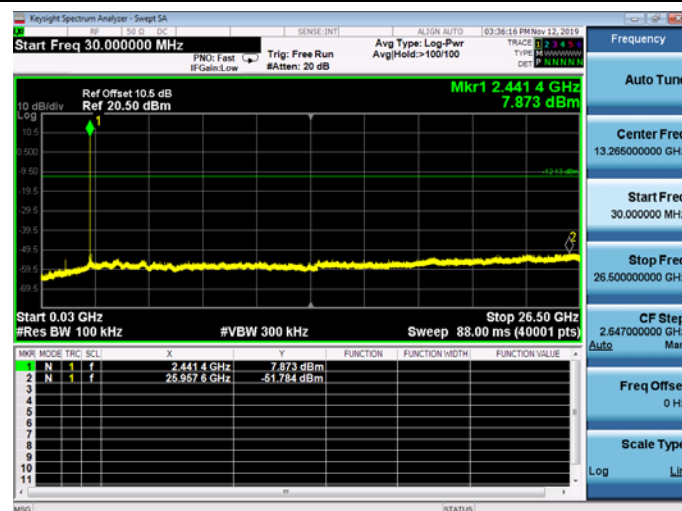
Out of Band Conducted Spurious Emission

Mode 2: BR,GFSK Continuous TX Mode

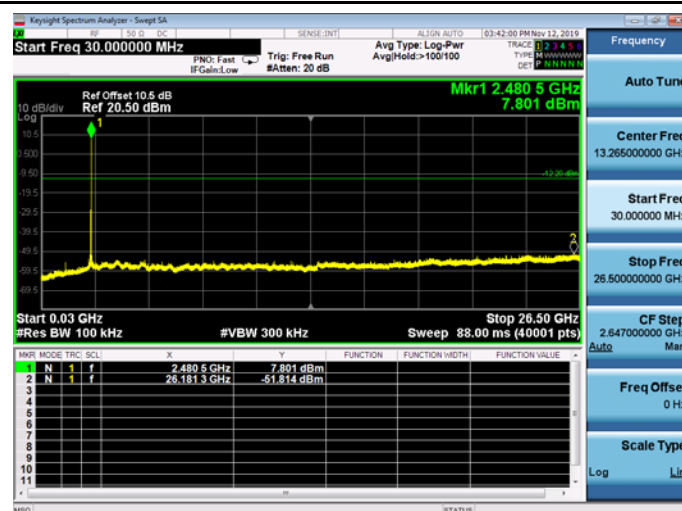
低頻道



中頻道



高頻道

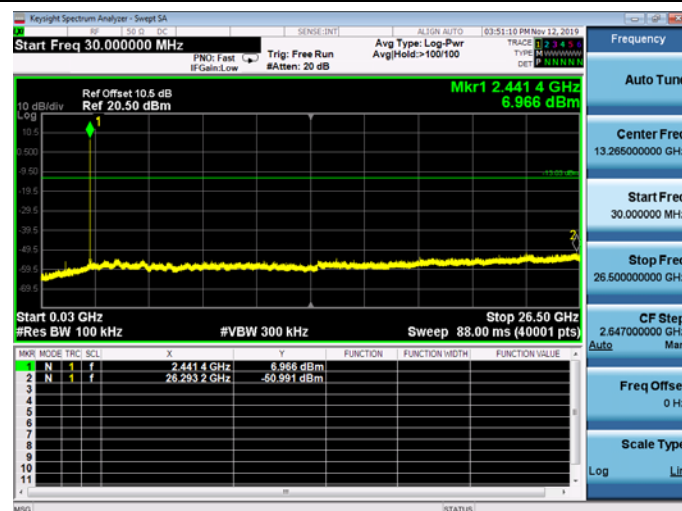


Mode 4: EDR, 8DPSK Continuous TX Mode

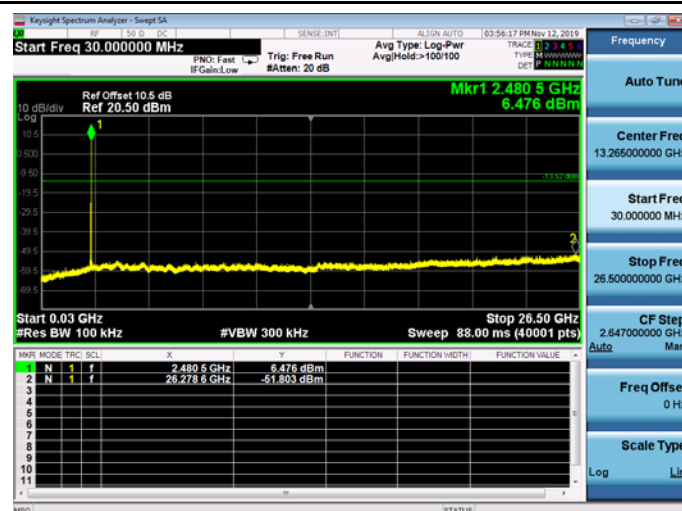
低頻道



中頻道

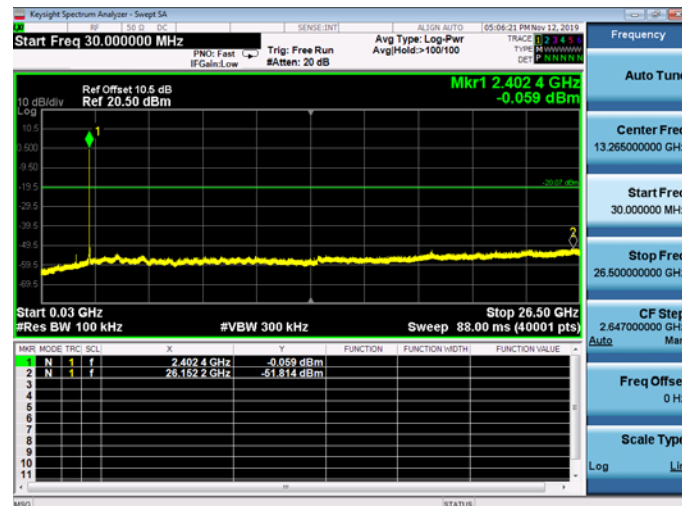


高頻道

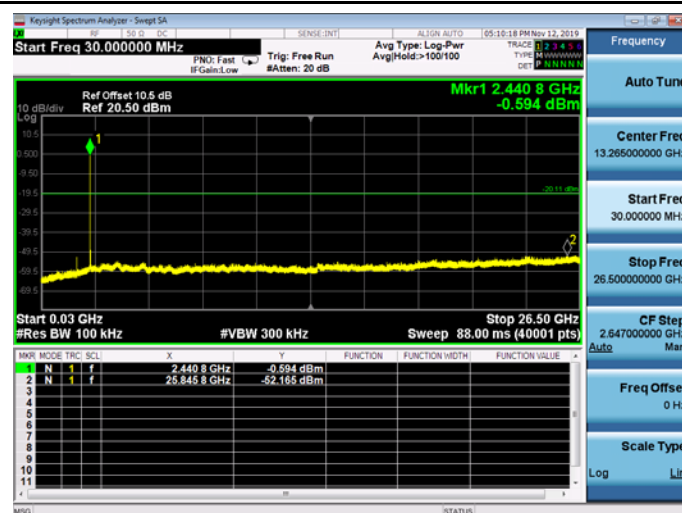


Mode 5: LE, GFSK Continuous TX Mode

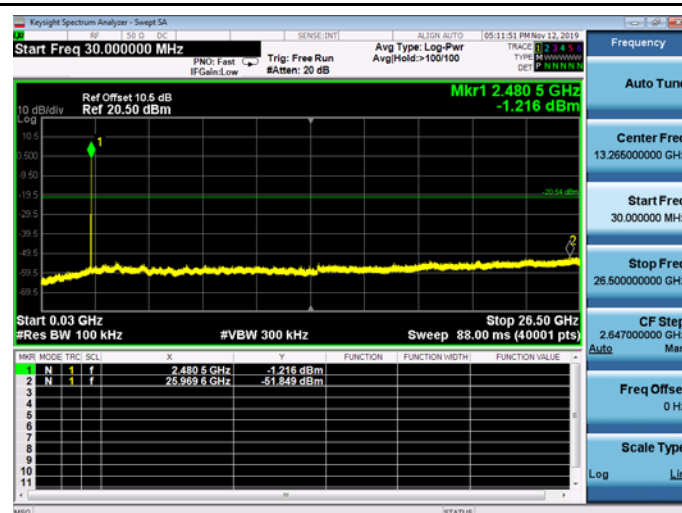
低頻道



中頻道



高頻道



Reference level

Mode 5: LE, GFSK Continuous TX Mode

低頻道



中頻道



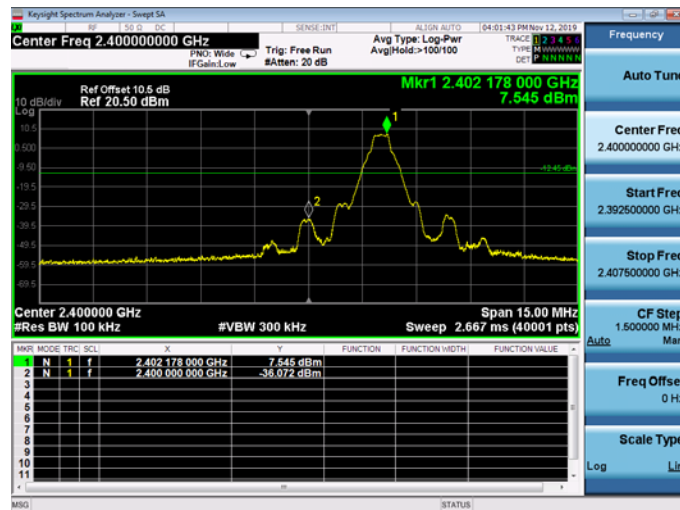
高頻道



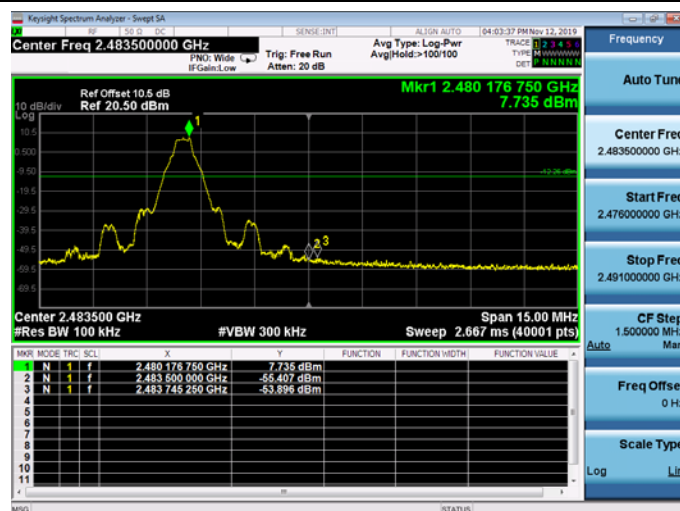
Conducted Band Edge

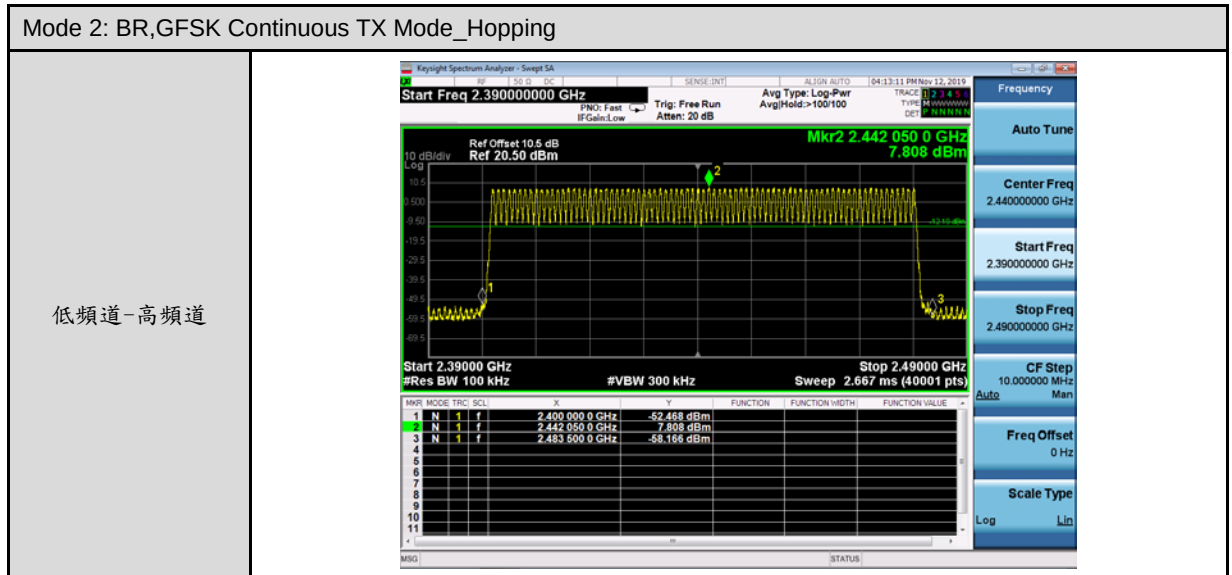
Mode 2: BR,GFSK Continuous TX Mode_Un-hopping

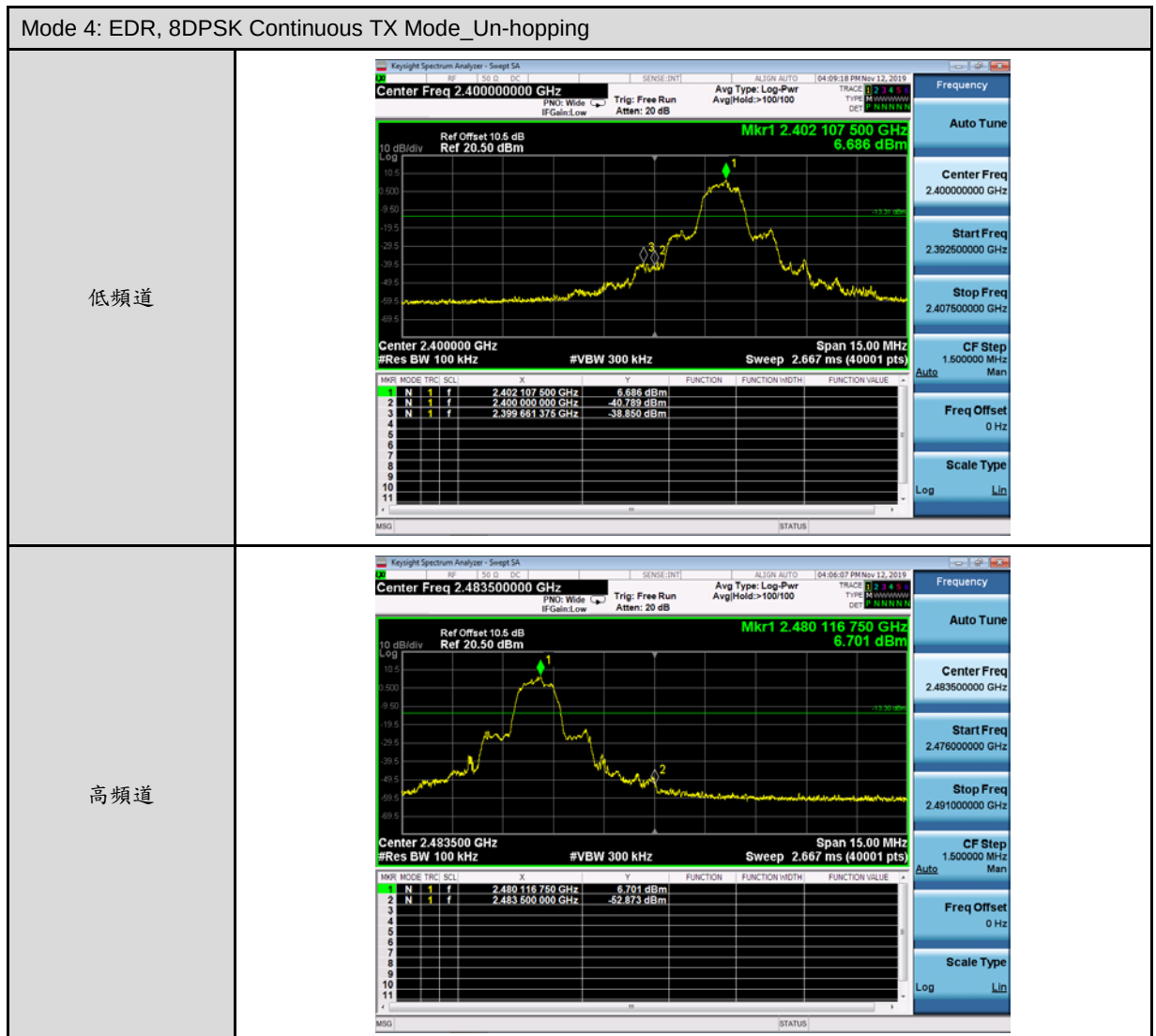
低頻道

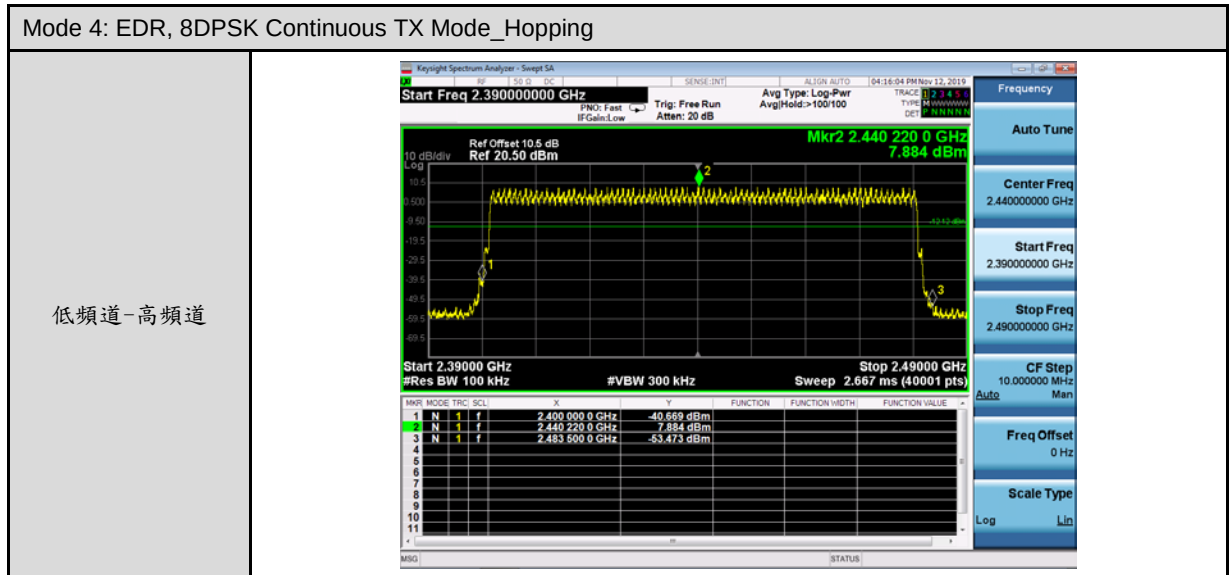


高頻道











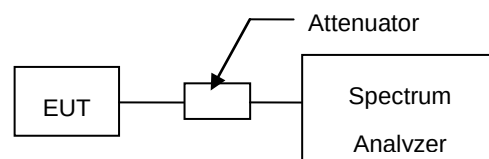
4.5 頻率範圍之要求

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。

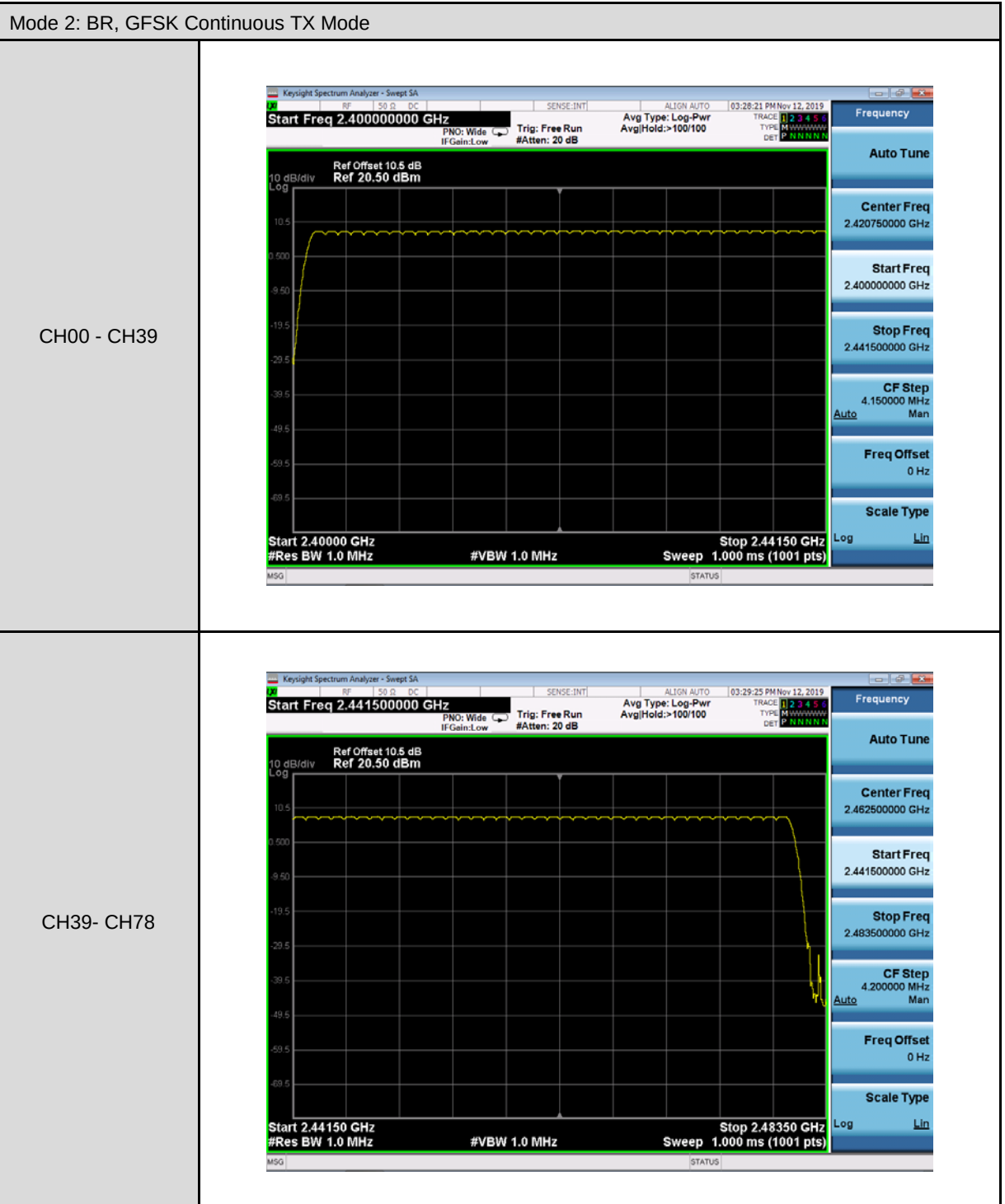
測試架構圖：

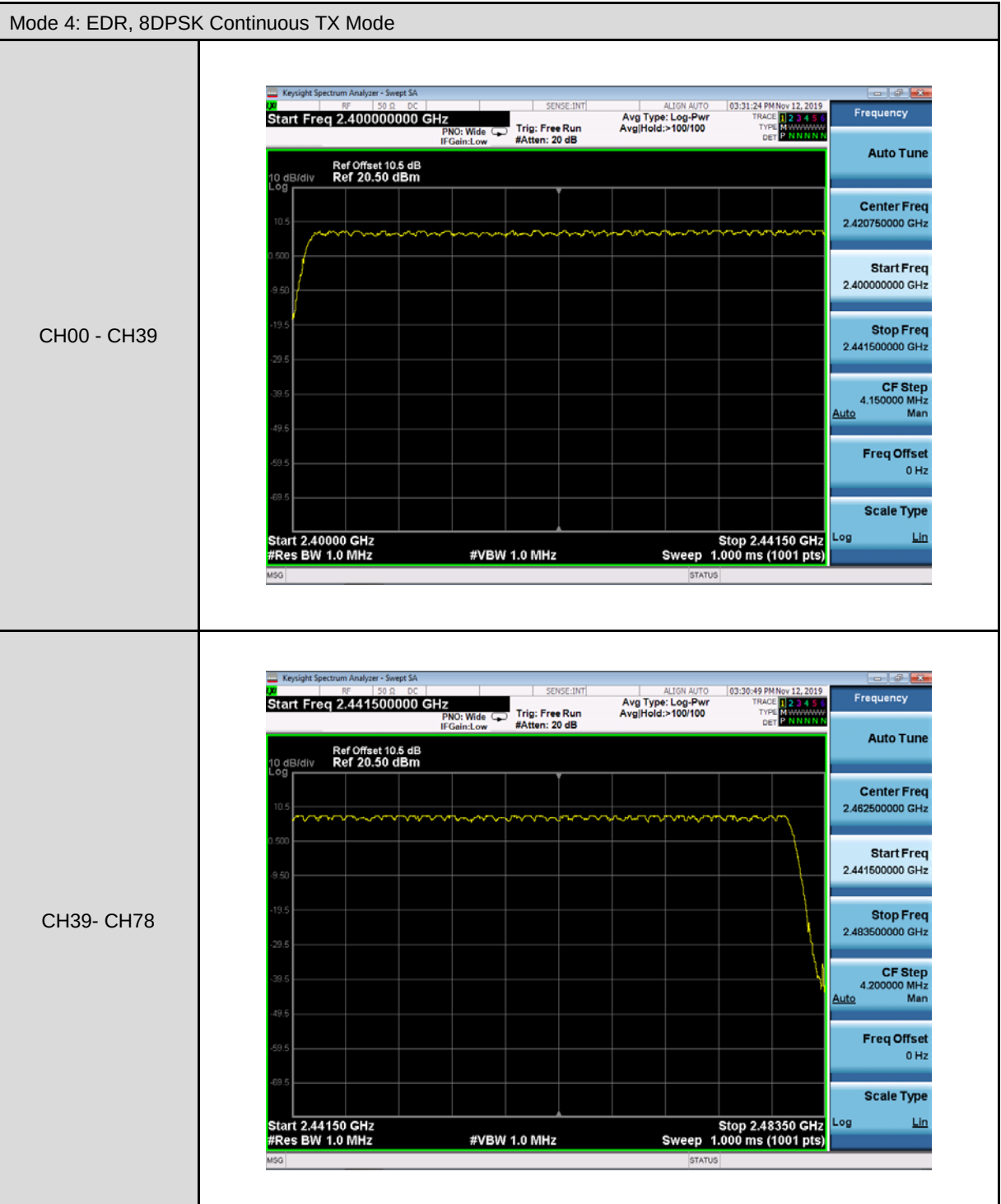
測試場地測試配置如圖所示。



測試結果：

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





4.6 發射頻寬之要求

合格標準:

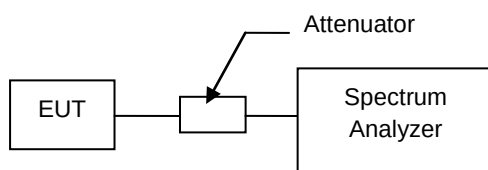
BR/EDR

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

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)。

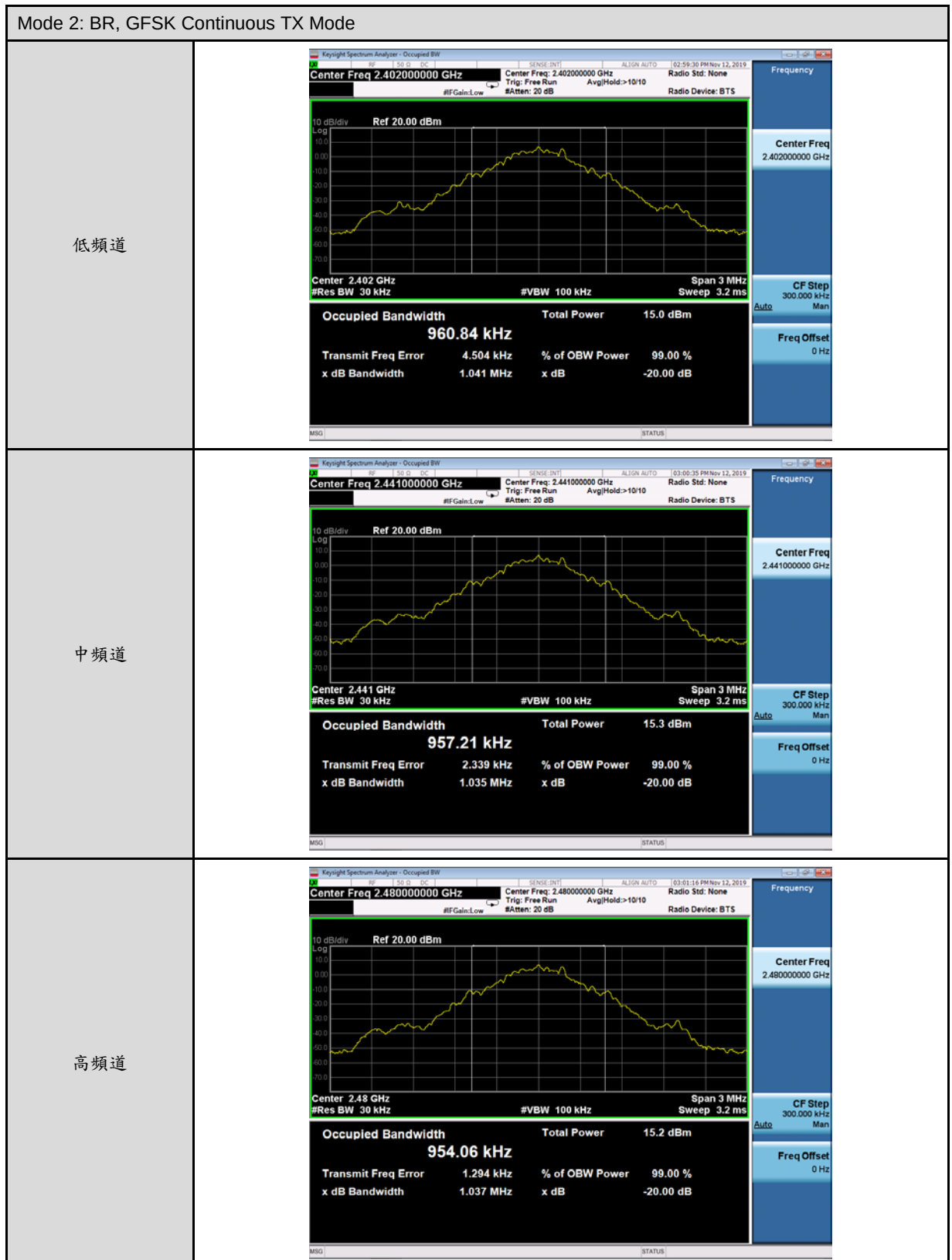
測試架構圖：

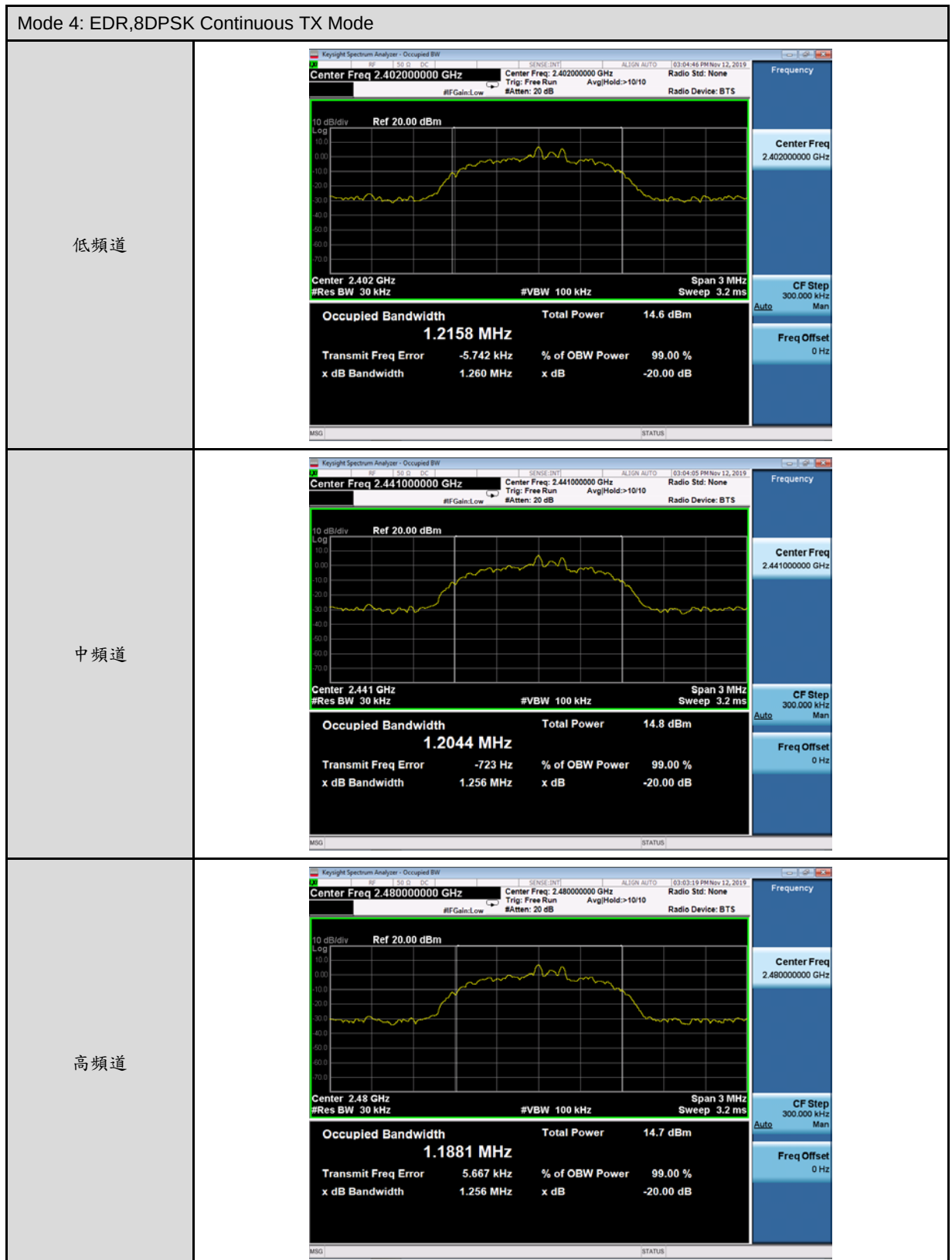


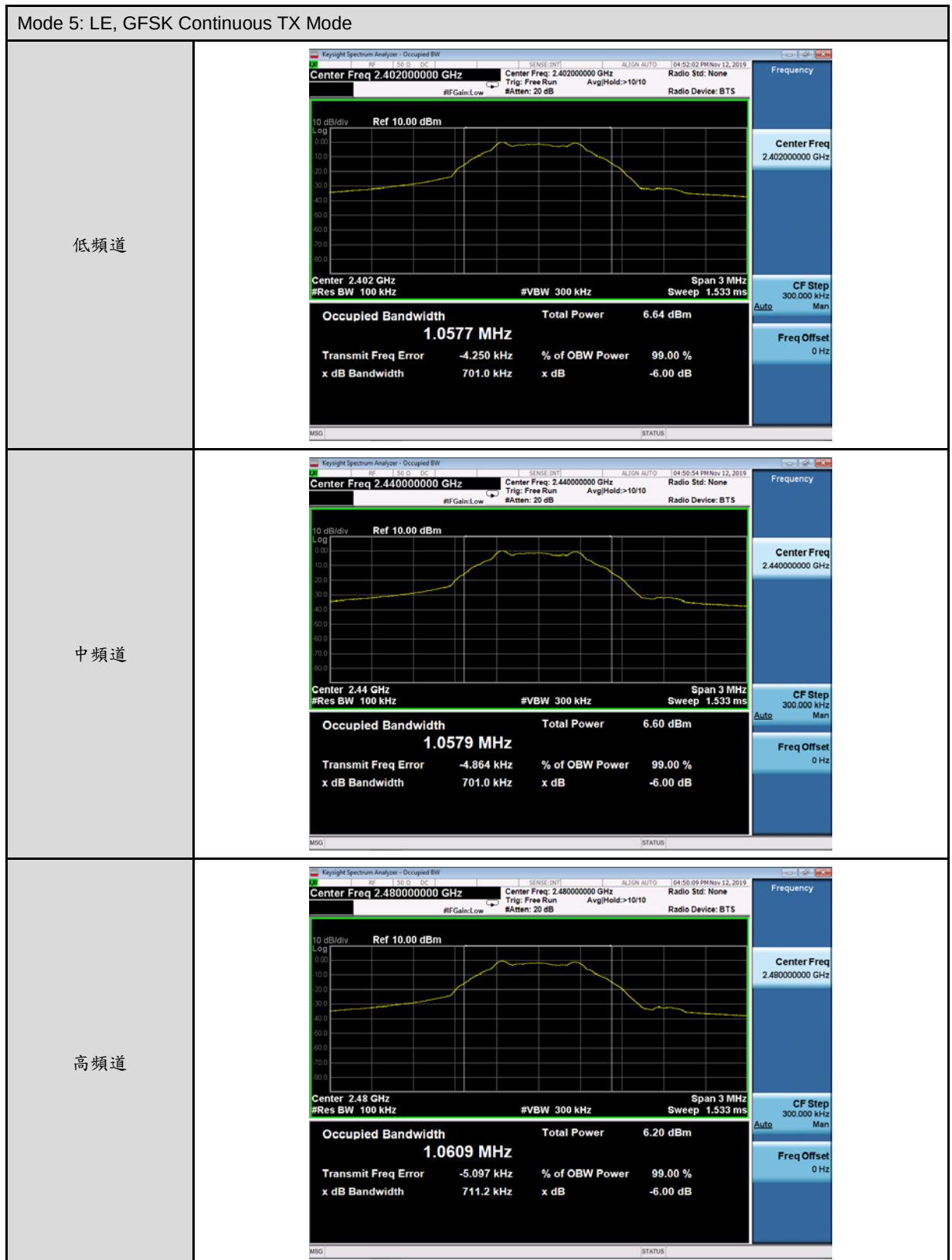
測試結果:

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	1.041	0.694	-----
	中頻道	1.035	0.690	-----
	高頻道	1.037	0.691	-----
Mode 4	低頻道	1.260	0.840	-----
	中頻道	1.256	0.837	-----
	高頻道	1.256	0.837	-----
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			
操作模式	頻道	發射頻寬(6 dB)	
		量測值 (kHz)	限制值 (kHz)
Mode 5	低頻道	701.000	≥ 500
	中頻道	701.000	≥ 500
	高頻道	711.200	≥ 500
測試掃描圖請參考下頁。			





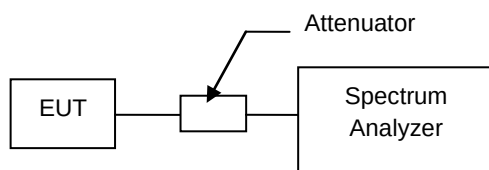


4.7 頻道數之要求

合格標準:

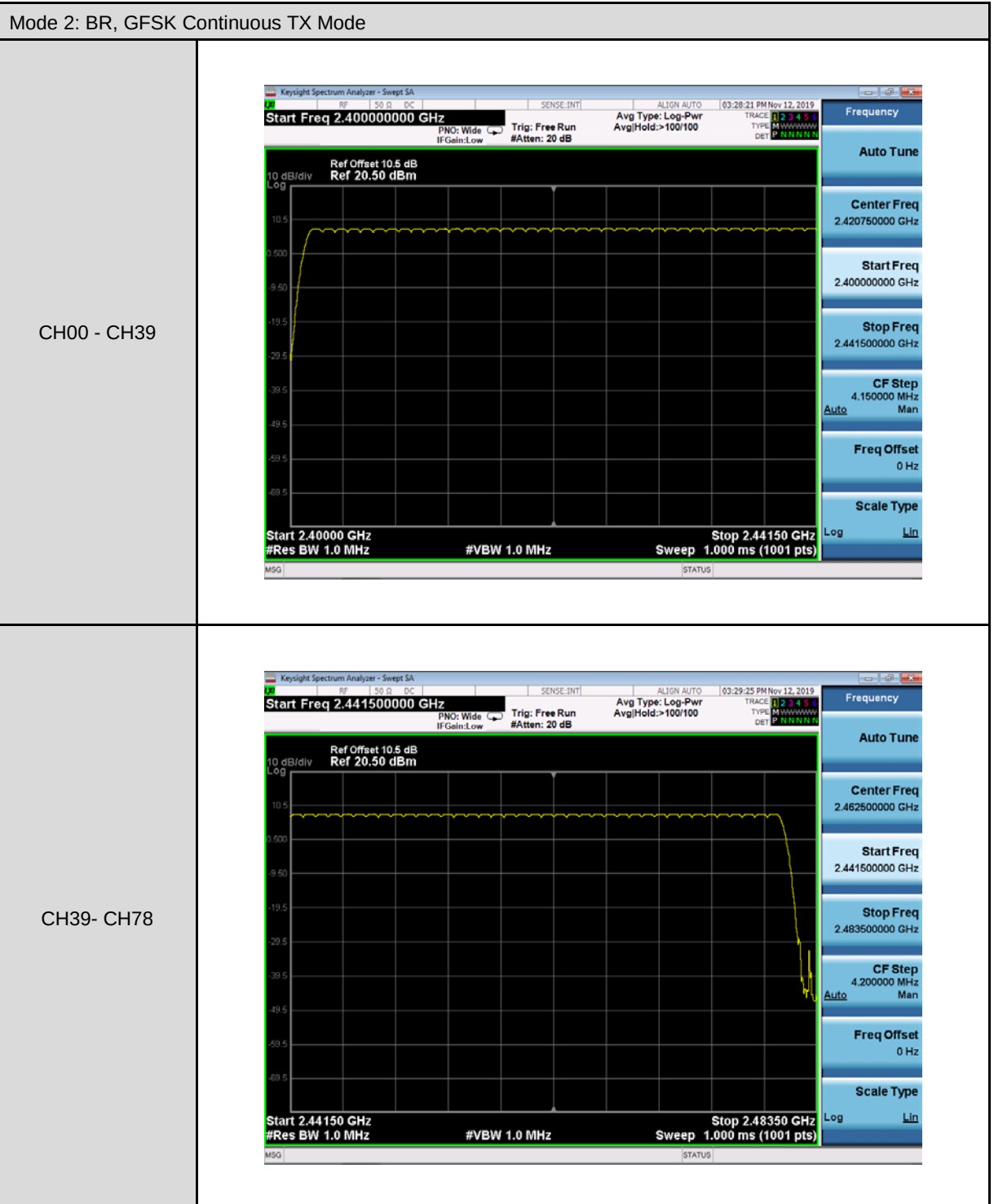
對跳頻系統(Frequency Hopping System)而言,依據 NCC 低功率射頻電機技術規範(LP0002)之 3.10.1.6(1)(A)(a)節之要求,至少使用 15 個無重疊之頻道(複合系統時,關閉數位調變作業狀態檢驗)。

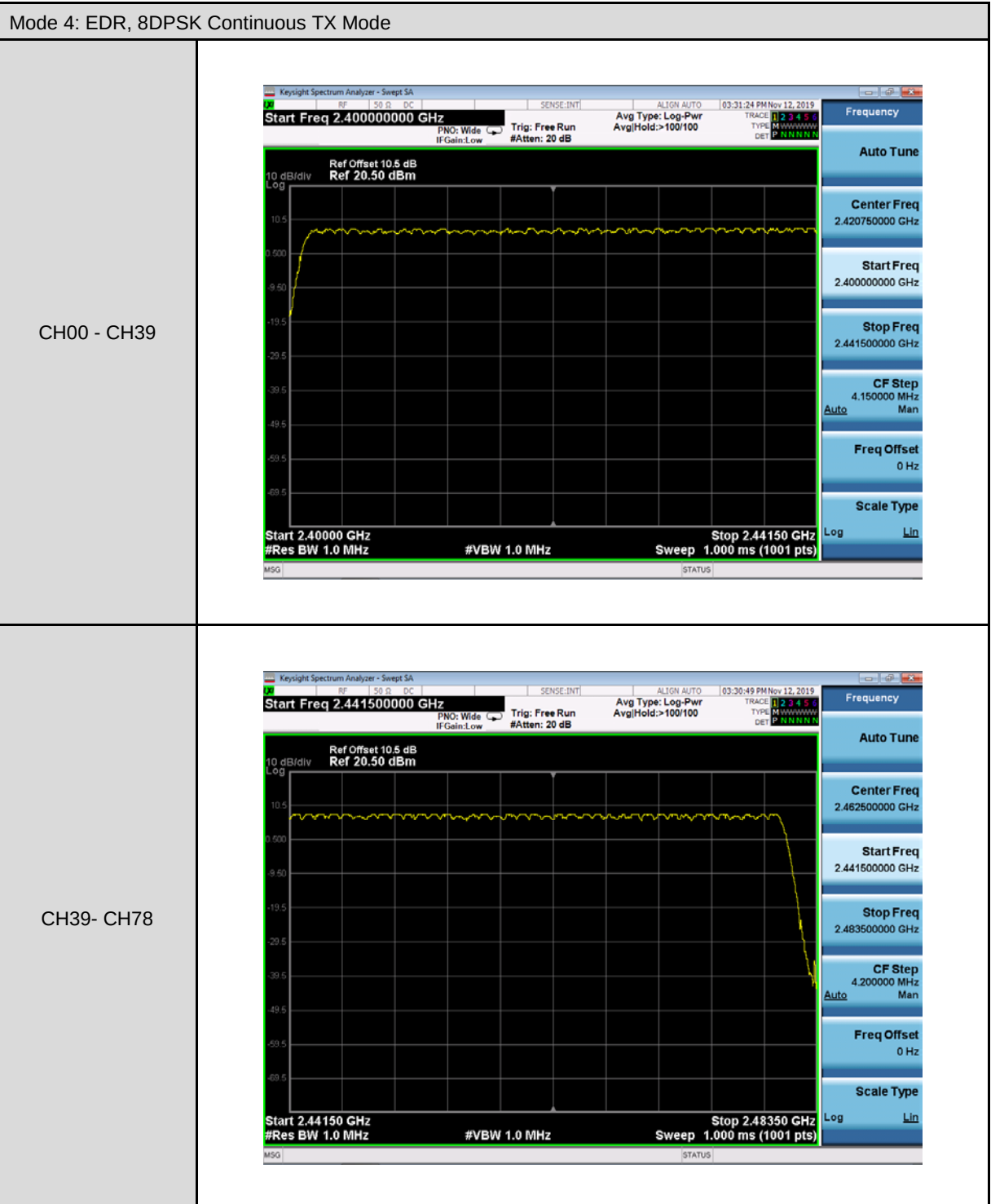
測試架構圖:



測試結果:

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



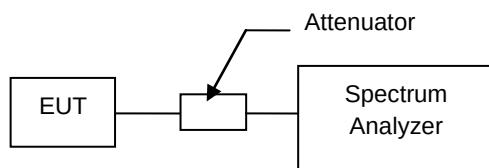


4.8 跳頻系統之載波頻率頻道間隔之量測

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：

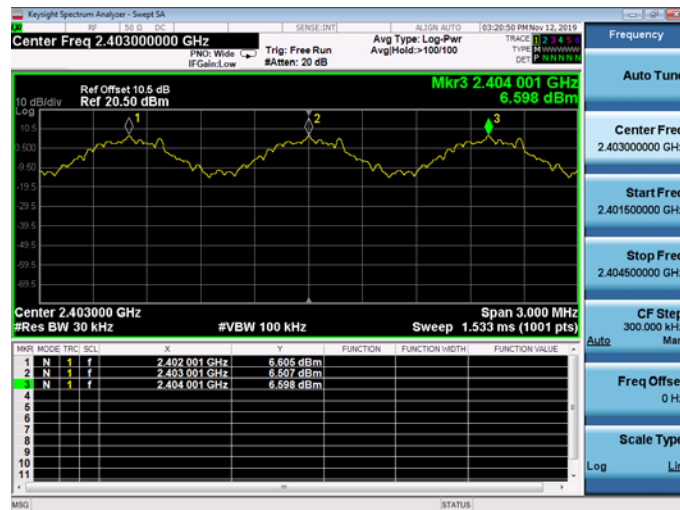


測試結果:

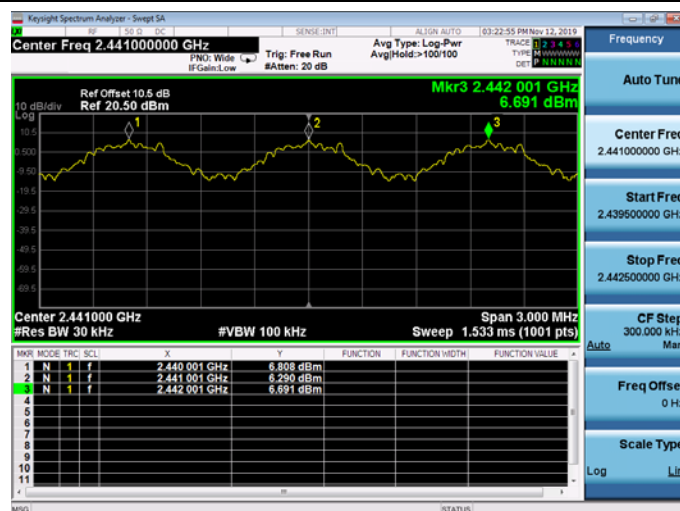
操作模式： Mode 2: BR, GFSK Continuous TX Mode Mode 4: EDR, 8DPSK Continuous TX Mode			
操作模式	頻道	鄰頻道載波間隔	
		量測值 (MHz)	限制值 (MHz)
Mode 2	低頻道	1.000	≥ 0.694
	中頻道	1.000	≥ 0.690
	高頻道	1.000	≥ 0.691
Mode 4	低頻道	1.000	≥ 0.840
	中頻道	1.000	≥ 0.837
	高頻道	1.000	≥ 0.837

Mode 2: BR, GFSK Continuous TX Mode

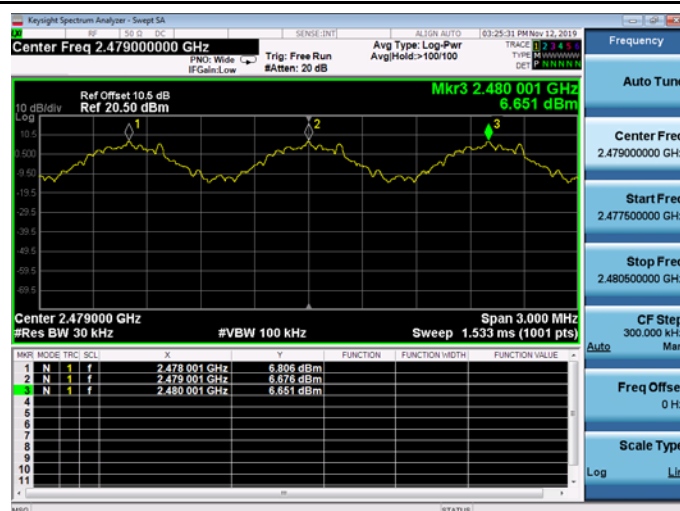
低頻道



中頻道

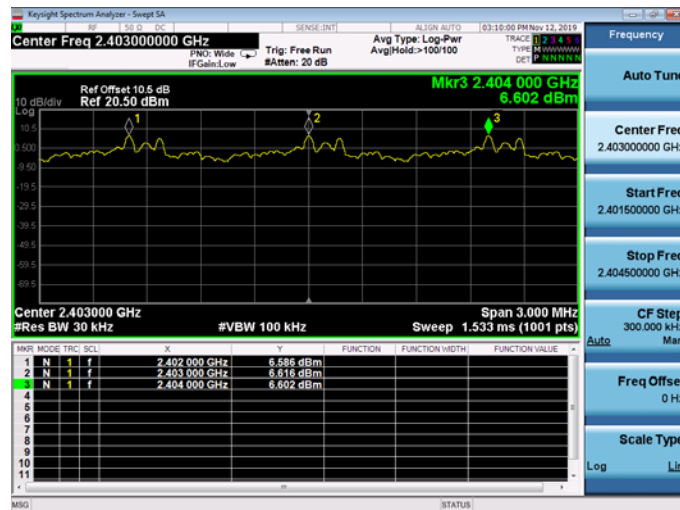


高頻道

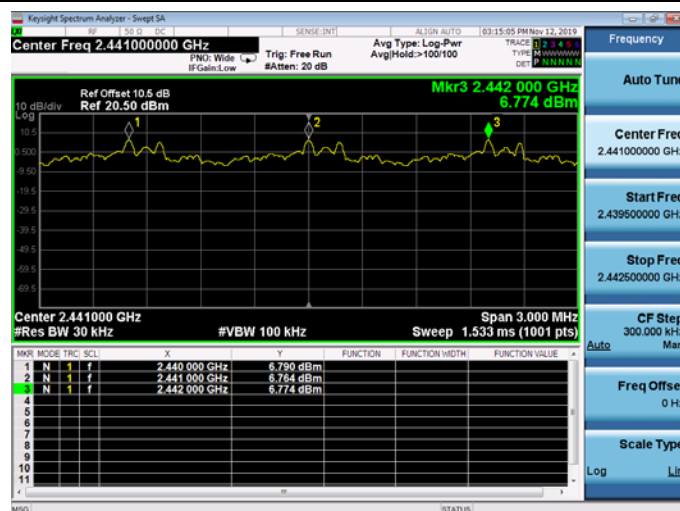


Mode 4: EDR, 8DPSK Continuous TX Mode

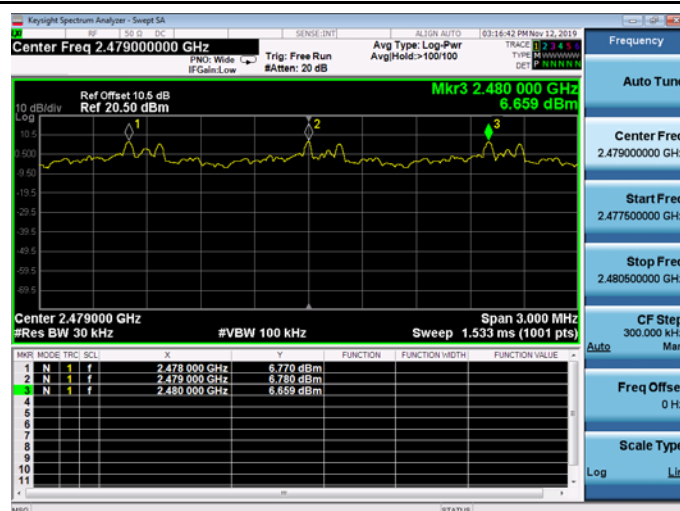
低頻道



中頻道



高頻道

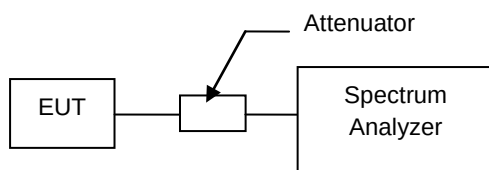


4.9 跳頻系統之任一頻率佔用之平均時間之量測

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
測試結果	: 合格
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。	

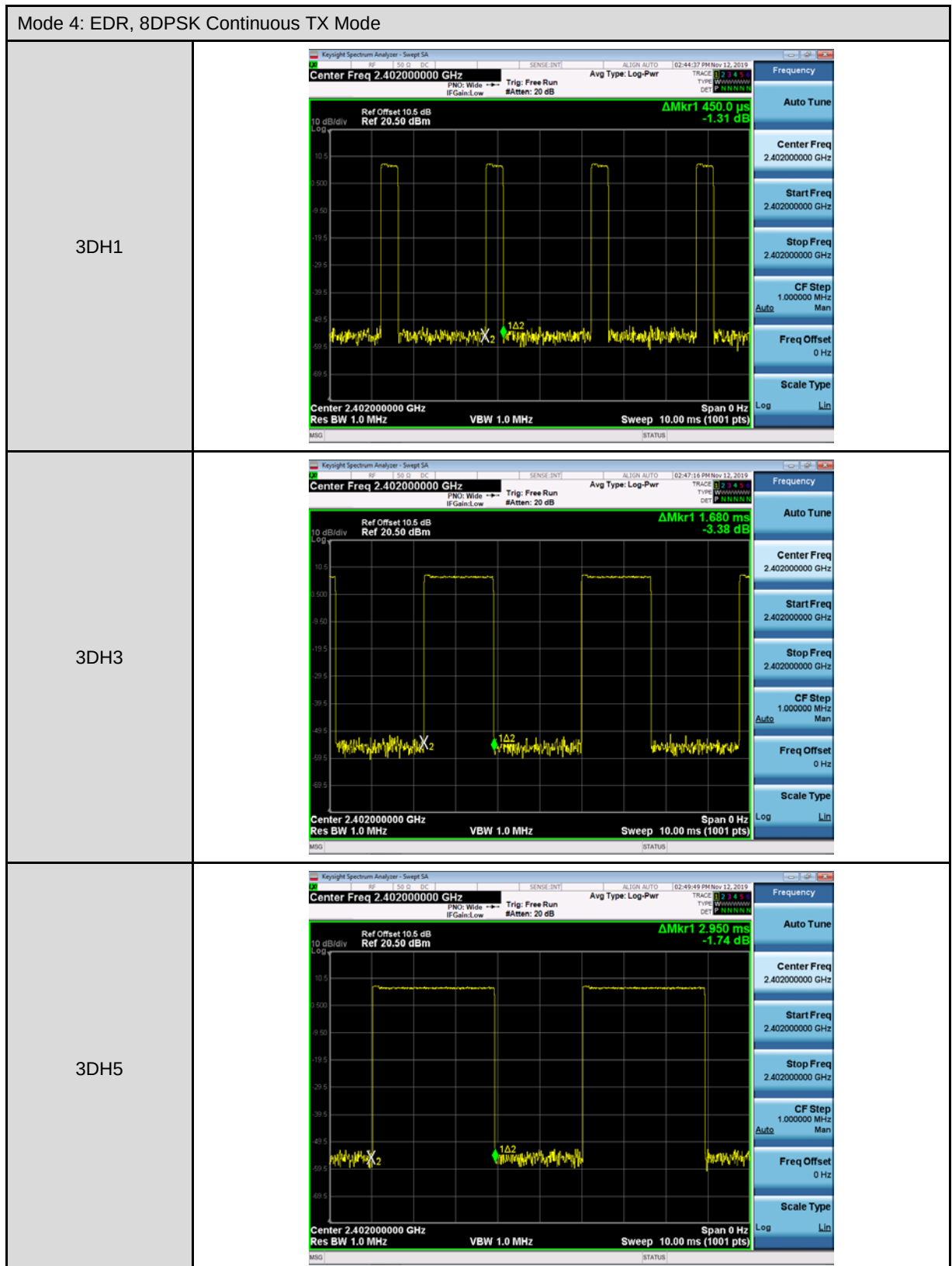
Mode 2: BR, GFSK Continuous TX Mode	
DH1 模式	
需量測之週期(秒)	$79\text{CH} * 0.4 = 31.6$ (秒)
待測物每秒跳頻之總次數	1600(藍牙通訊協定標準)
頻道每秒佔用之次數	$800/79\text{CH} = 10.13$ (次/秒)
頻道每次佔用之時間(1)	0.450 ms (秒)
週期內頻道佔用之總次數(2)	$31.6 * 10.13 = 320.108$ (次)
週期內佔用的平均時間(1) * (2)	144.049 ms (秒)
LIMIT(msec)	≤ 400
DH3 模式	
需量測之週期(秒)	$79\text{CH} * 0.4 = 31.6$ (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)	1.680 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)	268.625 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)	2.950 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)	315.084 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 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)	0.450 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)	144.049 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)	1.680 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)	268.625 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)	2.950 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)	315.084 ms (秒)
LIMIT(msec)	≤ 400

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



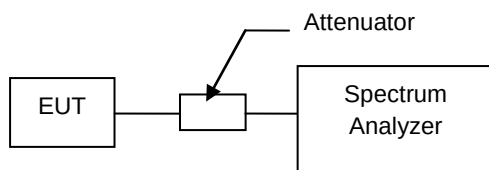
4.10 功率密度之要求

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)。

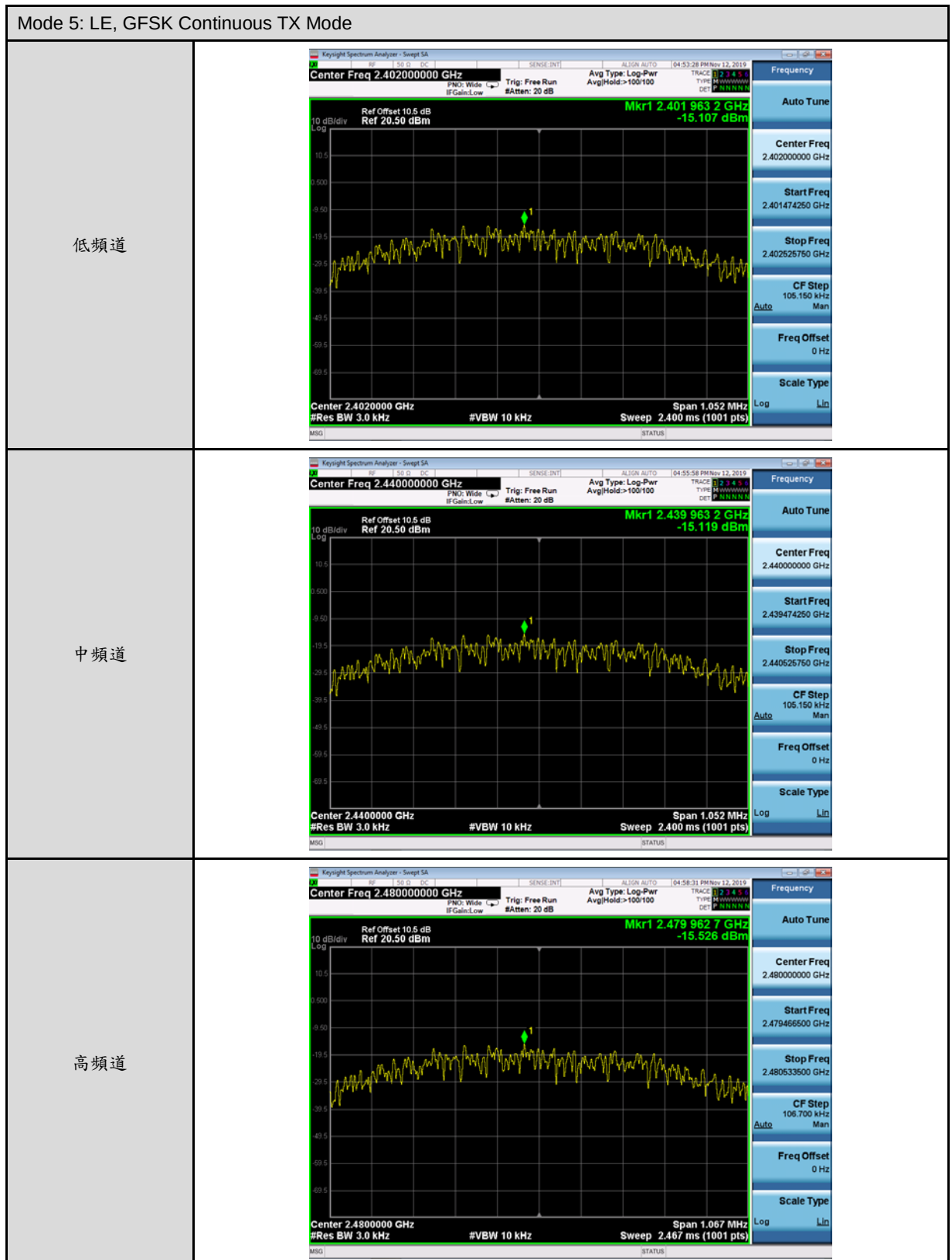
測試架構圖：

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			
測試結果： 合格			
操作模式	頻道	量測值 (dBm/3 kHz)	限制值 (dBm/3 kHz)
Mode 5	低頻道	-15.107	≤ 8
	中頻道	-15.119	≤ 8
	高頻道	-15.526	≤ 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，本產品使用 **PIFA Antenna**

(製造商: SOUTH STAR TECHNOLOGY HONG KONG COMPANY LIMITED, 型號: N12-6173-R0A)

，最大增益值 3.34 dBi。

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