低功率射頻器材試驗報告

產品名稱	Bluetooth GPS Logger
申請廠商	雙揚科技股份有限公司
廠　　牌	Mobile Action
型式 (號)	GT-120B
產品試驗依據之標準	低功率射頻器材技術規範(LP0002) 109 年 7 月 1 日
報告發行日期	110 年 11 月 17 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
33465 桃園市八德區長安街 140-1 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：低功率射頻器材技術規範(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。

2.本測試報告未經晶復科技股份有限公司書面同意，不得部分複製本報告內容。

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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	110 年 11 月 17 日	初版發行	鄭安蓁

低功率射頻器材測試證明書

產 品 名 稱　：Bluetooth GPS Logger

廠　　牌　：Mobile Action

型　　號　：GT-120B

申 請 廠 商　：雙揚科技股份有限公司

申請者地址　：新北市中和區板南路661號12樓

製 造 廠 商　：平成科技股份有限公司

待測物電壓　：DC 5 V, 200 mA

量 測 規 範　：低功率射頻器材技術規範(LP0002) 109年7月1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：110 年 10 月 08 日

試 驗 日 期　：110 年 10 月 18 日 ~ 110 年 11 月 05 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器材技術規範(LP0002)所規定的各項限制值。

特 此 證 明 ！

Approved By：Fly Lu

(Fly Lu)

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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	Bluetooth GPS Logger
廠牌	Mobile Action
型號	GT-120B
額定電源	DC 5 V, 200 mA
待測物電源類別	Power Adapter / Battery
調變方式	GFSK
頻率使用範圍	2402 MHz – 2480 MHz
天線廠牌	Invax
天線型號	IVX-CA2400-321605
天線型態	Chip Antenna
天線增益值	2.5 dBi
RF 最大輸出功率	LE, GFSK: 2.11 dBm/ 0.00163 W 2LE, GFSK: 2.09 dBm/ 0.00162 W BLR C2, GFSK: 2.08 dBm/ 0.00161 W BLR C8, GFSK: 2.10 dBm/ 0.00162 W

輸出/輸入埠說明：

輸出/入埠		數量	介面內容說明
1	USB Port	1	連接至電腦

附屬裝置表:

裝置名稱		廠牌	型號	備註
(A)	內建固定式電池	聚合源	JHY502535	DC 3.7 V, 380 mAh

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 Emission
Test Period: Oct. 19 ~ Oct. 23, 2021
Testing Engineer: JS Liao, Louis Shen

Use	Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
☒	Test Receiver	R&S	ESCI	100367	05/21/2021	1 year
☐	Test Receiver	R&S	ESCI	100722	10/28/2020	1 year
☐	Test Receiver	R&S	ESCI	101000	11/27/2020	1 year
☒	LISN	R&S	ENV216	101040	03/29/2021	1 year
☒	LISN	R&S	ENV216	101041	04/08/2021	1 year
☒	RF Cable	Woken	00100D1380194M	TE-02-03	05/28/2021	1 year
☒	Sorfware	EZ EMC	1.1.4.3	N/A	N.C.R.	---

For Conducted
Test Period: Oct. 18 ~ Nov. 05, 2021
Testing Engineer: Andy Lu, Peter Shui

Use	Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
☐	Power Sensor	Anritsu	MA2411B	1126022	09/03/2021	1 year
☐	Power Meter	Anritsu	ML2495A	1135009	09/03/2021	1 year
☒	Power Sensor	Agilent	N1921A	MY45241957	12/09/2020	1 year
☒	Power Meter	Agilent	N1911A	MY45101619	12/09/2020	1 year
☐	Spectrum Analyzer (10 Hz~26.5 GHz)	Keysight	N9010B	MY59071418	03/17/2021	1 year
☐	Spectrum Analyzer (9 kHz~26.5 GHz)	Agilent	N9010A	MY48030518	07/23/2021	1 year
☒	Spectrum Analyzer (20 Hz~26.5 GHz)	Agilent	N9020A	US47520902	09/09/2021	1 year
☐	Spectrum Analyzer (3 Hz~50 GHz)	Agilent	N9030A	MY53120541	01/08/2021	1 year
☐	Temperature & Humidity Chamber	TAICHY	MHU-225LA	980729	03/30/2021	1 year
☐	Signal Generator	Keysight	N5182B	MY53052569	04/20/2021	1 year
☐	Signal Generator	Keysight	N5182BX07	MY59360221	04/20/2021	1 year
☐	Bluetooth Tester	R&S	CBT	100350	03/17/2021	2 years
☐	Wireless Connectivity Tester	R&S	CMW270	102208	06/02/2021	1 year
☐	Power Supply	KEITHLEY	2303	4045290	02/01/2021	1 year
☐	RF Communication Test Set	HP	8920A	3344A03297	08/10/2021	1 year

Note: N.C.R. = No Calibration Request.

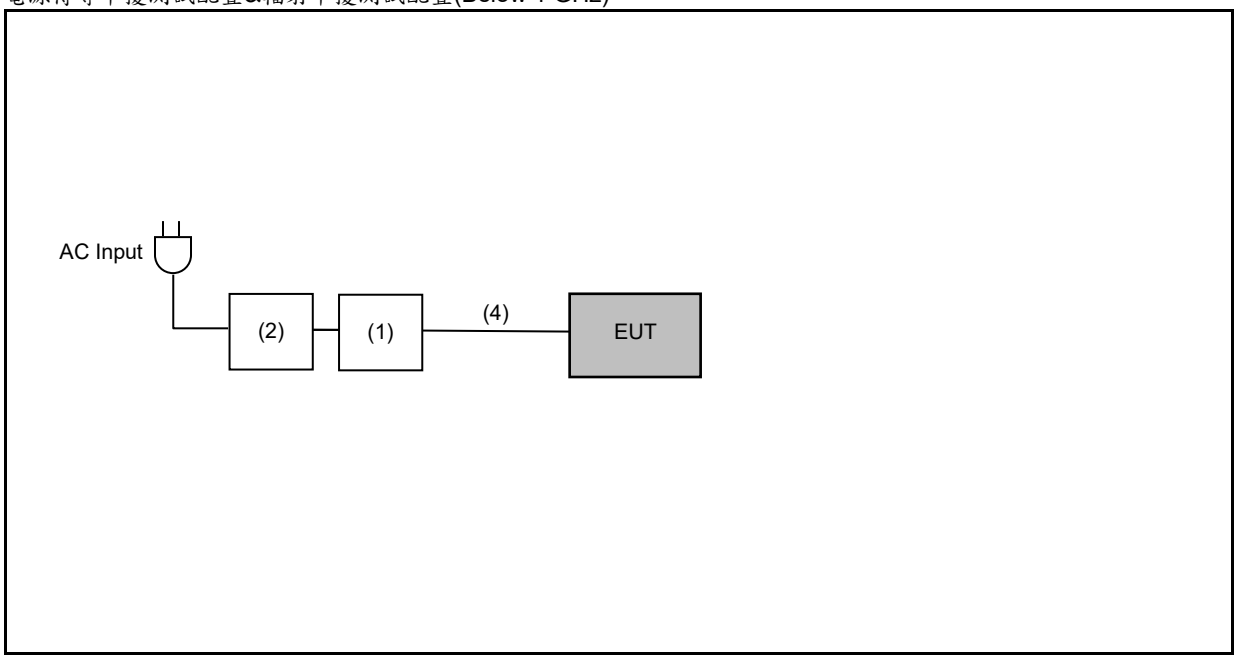
For Radiated Emissions
Test Period: Oct. 19, 2021
Testing Engineer: JS Liao

Radiation test sites		Semi Anechoic Room				
Use	Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
☒	Spectrum Analyzer (10 Hz~44 GHz)	Keysight	N9010A	MY52221312	01/18/2021	1 year
☐	Spectrum Analyzer (3 Hz~50 GHz)	Agilent	N9030A	MY53120541	01/08/2021	1 year
☐	Amplifier (100 kHz~1.3 GHz)	Agilent	8447D	2944A11119	01/15/2021	1 year
☒	Amplifier (100 kHz~1.3 GHz)	Agilent	8447D	2944A10961	07/06/2021	1 year
☒	Amplifier (1 GHz~26.5 GHz)	Agilent	8449B	3008A02237	10/21/2020	1 year
☐	Preamplifier (1 GHz~26.5 GHz)	EMCI	EMC012645SE	980289	01/15/2021	1 year
☐	Preamplifier (26.5 GHz~40 GHz)	EMCI	EMC2654045	980028	08/19/2021	1 year
☒	Loop Antenna (9 kHz~30 MHz)	COM-POWER CORPORATION	AL-130	121014	04/07/2021	1 year
☐	Trilog Broadband Antenna (30 kHz~1 GHz)	Schwarzbeck Mess-Elektronik	VULB9168	01146	07/19/2021	1 year
☒	Trilog Broadband Antenna (30 kHz~1 GHz)	Schwarzbeck Mess-Elektronik	VULB9168	416	11/11/2020	1 year
☐	Broadband Horn Antenna (1 GHz~18 GHz)	Schwarzbeck Mess-Elektronik	9120D	02207	07/09/2021	1 year
☒	Broadband Horn Antenna (1 GHz~18 GHz)	Schwarzbeck Mess-Elektronik	9120D	9120D-550	08/24/2021	1 year
☒	Broadband Horn Antenna (18 GHz~40 GHz)	Schwarzbeck Mess-Elektronik	9170	9170-320	08/24/2021	1 year
☐	Horn Antenna (18 GHz~40 GHz)	ETS	3116	00086467	12/03/2020	1 year
☒	Microwave Cable	EMCI	EMC104-SM-SM-13000	170814	02/19/2021	1 year
☒	Microwave Cable	SUHNER	suflex104	313229/4	02/19/2021	1 year
☐	Microwave Cable	EMCI	EMC102-KM-KM-14000	151001	02/19/2021	1 year
☒	RF Cable	EMCI	EMC104-N-N-2000	TE01-2	02/19/2021	1 year
☒	RF Cable	EMCI	EMC104-N-N-6000	TE01-1	02/19/2021	1 year
☒	RF Cable	EMCI	EMC 106-SM-NM-1000	171219 (TE01-3)	02/19/2021	1 year
☐	Bluetooth Tester	R&S	CBT	100350	03/17/2021	2 years
☐	Wireless Connectivity Tester	R&S	CMW270	102208	06/02/2021	1 year
☐	Power Supply	KEITHLEY	2303	4045290	02/01/2021	1 year
☒	Sorfware	EZ EMC	1.1.4.4	N/A	N.C.R.	---

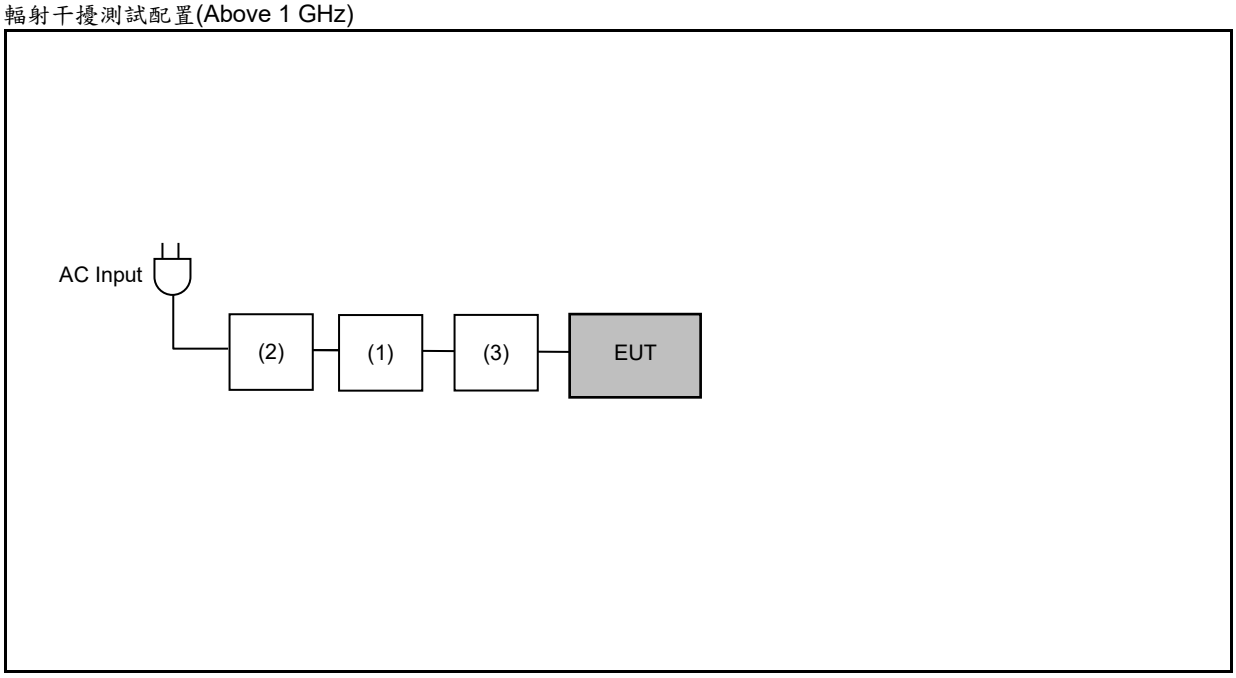
Note: N.C.R. = No Calibration Request.

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(Below 1 GHz)



輻射干擾測試配置(Above 1 GHz)



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)	Notebook	ASUS	P2430U	---	---	(實驗室提供)
(2)	AC Adapter	ASUS	ADP-65GD D	---	Non-Shielded, 0.8 m	INPUT : AC 100-240 V, 50/60 Hz, 1.5 A OUTPUT : DC 19 V, 3.42 A (實驗室提供)
(3)	治具板	Mobile Action	USB-UART	---	---	(申請者提供)
(4)	USB Cable	LG	EAD63769703	---	---	STD-A → Micro-B 長度 : 1.2 m (實驗室提供)

測試組合：

EUT Configure Mode	CE	RE<1G	RE≧1G	備註
內建固定式電池	V	V	V	
Notebook	V	V	V	測試週邊(1)
AC Adapter	V	V	V	測試週邊(2)
治具	X	X	V	測試週邊(3)
USB Cable	V	V	X	測試週邊(4)

RE≧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
---：No evaluation required
Blank Space：Pre-test mode

2.4 測試模式

使用定頻模式量測

Pre-Test Mode
Mode 1: Transmit Mode
Mode 2: LE, GFSK Continuous TX Mode
Mode 3: 2LE, GFSK Continuous TX Mode
Mode 4: BLR C2, GFSK Continuous TX Mode
Mode 5: BLR C8, GFSK Continuous TX Mode
Mode 6: Receiver Mode

Final-Test Mode
Mode 1: Transmit Mode
Mode 2: LE, GFSK Continuous TX Mode
Mode 3: 2LE, GFSK Continuous TX Mode
Mode 6: Receiver Mode

Test Mode	Frequency (MHz)	RF Power setting in Test Software	Test Software Version
Mode 2	2402	2.00	nRF Connect V3.6.1
	2440	3.00	
	2480	3.00	
Mode 3	2402	2.00	
	2440	3.00	
	2480	3.00	
Mode 4	2402	2.00	
	2440	3.00	
	2480	3.00	
Mode 5	2402	2.00	
	2440	3.00	
	2480	3.00	

2.5 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
Conducted Emission	150 kHz ~ 30 MHz	2.7 dB
Radiated Emission	9 kHz ~ 30 MHz	2.2 dB
	30 MHz ~ 1000 MHz	5.1 dB
	1000 MHz ~ 18000 MHz	5.2 dB
	18000 MHz ~ 26500 MHz	4.6 dB
	26500 MHz ~ 40000 MHz	4.6 dB
Conducted Output Power	1.1 dB	
RF Bandwidth	4.7 %	
Power Spectral Density	1.1 dB	

2.6 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 低功率射頻器材技術規範(LP0002)之檢驗法。

LE/2LE/BLR C2/BLR C8 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	電源線傳導干擾(*)	低功率射頻器材技術規範 3.3 節	請參閱 5.1 節	請參閱 2.1 節	符合
2	場強輻射 (1 GHz 以上)	低功率射頻器材技術規範 3.5 節、3.6 節、4.10.1.5 節	請參閱 5.2 節	請參閱 2.1 節	符合
3	場強輻射其它不必要之訊號 (1 GHz 以下) (*)	低功率射頻器材技術規範 3.5 節、3.6 節、4.10.1.5 節	請參閱 5.2 節	請參閱 2.1 節	符合
4	頻帶邊緣外之輻射發射	低功率射頻器材技術規範 4.10.1.5 節	請參閱 5.2 節	請參閱 2.1 節	符合
5	輸出峰值功率	低功率射頻器材技術規範 4.10.1.2(1)(C)節	請參閱 5.3 節	請參閱 2.1 節	符合
6	非必要頻帶	低功率射頻器材技術規範 4.10.1.5(1)節	請參閱 5.3 節	請參閱 2.1 節	符合
7	發射頻寬	低功率射頻器材技術規範 4.10.1.6(2)(A)節	請參閱 5.3 節	請參閱 2.1 節	符合
8	功率密度	低功率射頻器材技術規範 4.10.1.6(2)(B)節	請參閱 5.3 節	請參閱 2.1 節	符合
9	天線規格	低功率射頻器材技術規範 4.10.1.3(3)節、4.10.1.4 節	請參閱 4.7 節	-------	符合
10	電波暴露量之評估	低功率射頻器材技術規範 6.20.2 節	N/A	N/A	不適用

* 此項目為在 RF 功能作動下進行。

本產品透過預測試場強輻射確認 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 電源線傳導干擾之量測

合格標準:

依據 NCC 低功率射頻器材技術規範(LP0002)之 3.3 節，以市電為電源之低功率射頻器材，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 μH 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。

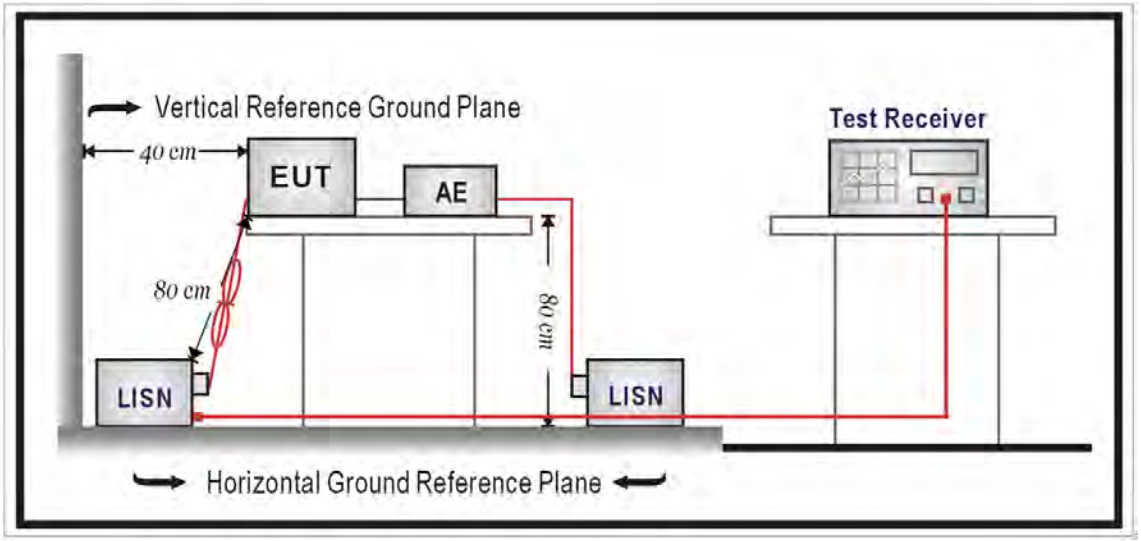
干擾值之計算

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 ：



4.2 場強輻射之量測

合格標準:

依據 NCC 低功率射頻器材技術規範(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 低功率射頻器材技術規範(LP0002)之 4.10.1.5(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 3.5 節禁用頻段之輻射發射，應符合第 3.6 節之規定。

依據 NCC 低功率射頻器材技術規範第 3.5 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 低功率射頻器材技術規範第 3.6 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。

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。

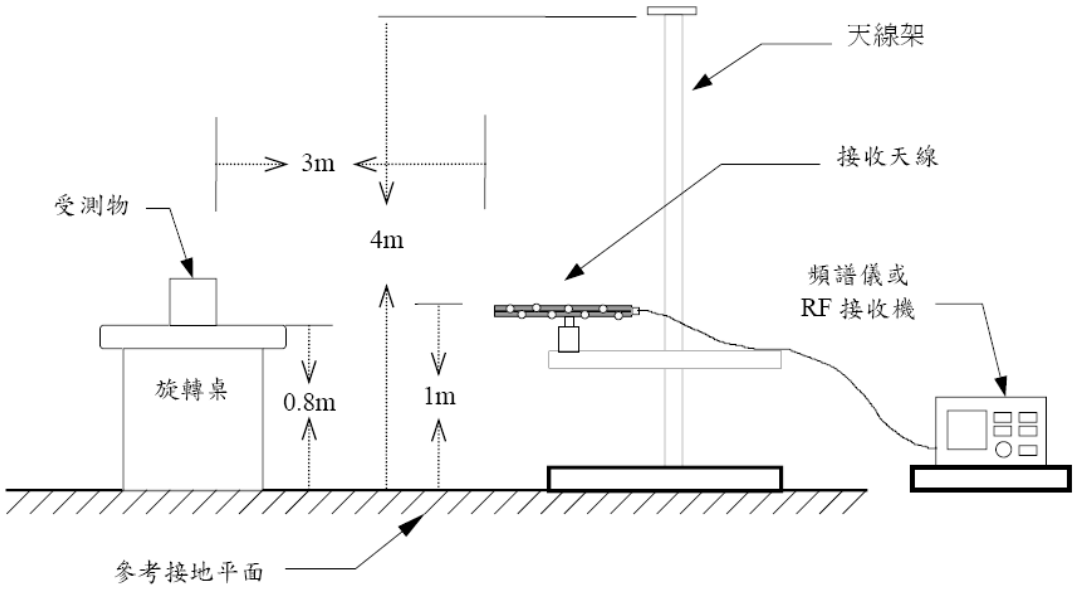
場強度之計算

場強之計算公式為：結果值 = 讀值 + 校正因子

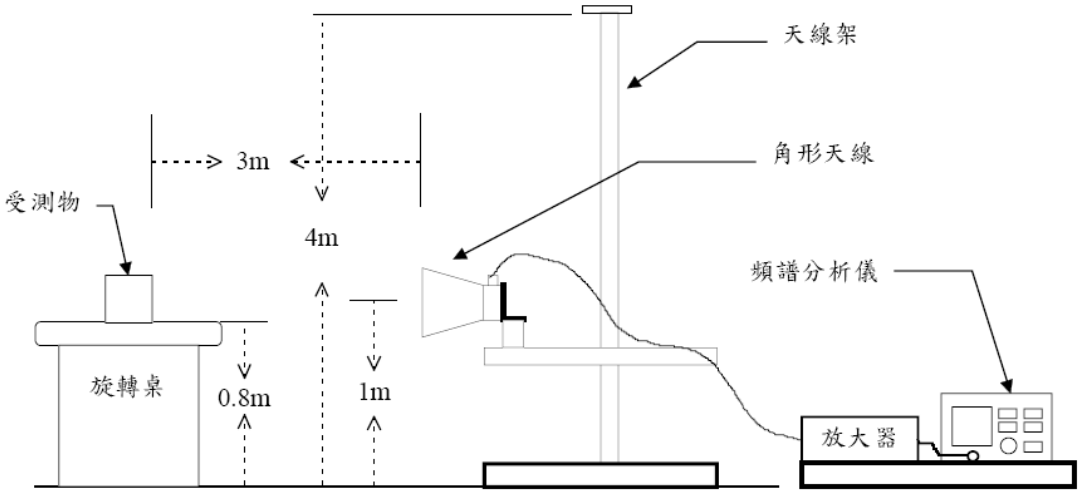
其中校正因子為： 天線因子+ 饋線損失 + 濾波器損失（若有使用） - 放大器增益（若有使用）

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



4.3 輸出峰值功率之量測

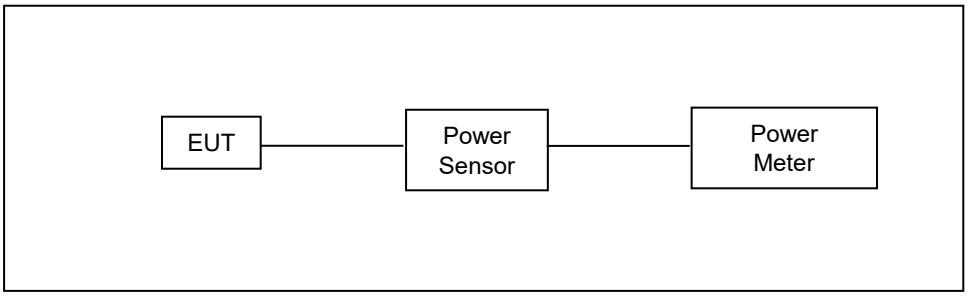
合格標準:

LE/2LE/BLR C2/BLR C8

依據 NCC 低功率射頻器材技術規範(LP0002)之 4.10.1.2(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 ：

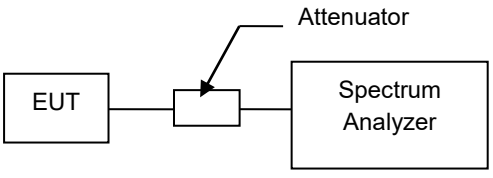


4.4 非必要頻帶之量測

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 ：



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。

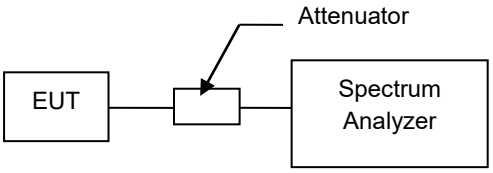
4.5 發射頻寬之要求

合格標準:

LE/2LE/BLR C2/BLR C8

依據 NCC 低功率射頻器材技術規範 4.10.1.6(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 ：

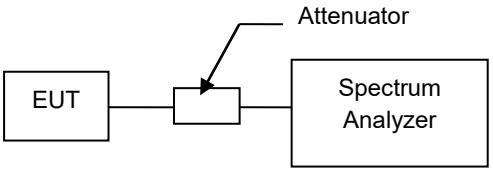


4.6 功率密度之要求

合格標準:

依據NCC低功率射頻器材技術規範(LP0002)之4.10.1.6(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 ：



4.7 天線規格之要求

合格標準:

依據 NCC 低功率射頻器材技術規範(LP0002)之 4.10.1.3(3)節之要求，除 4.10.1.3(1)及 4.10.1.3(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。

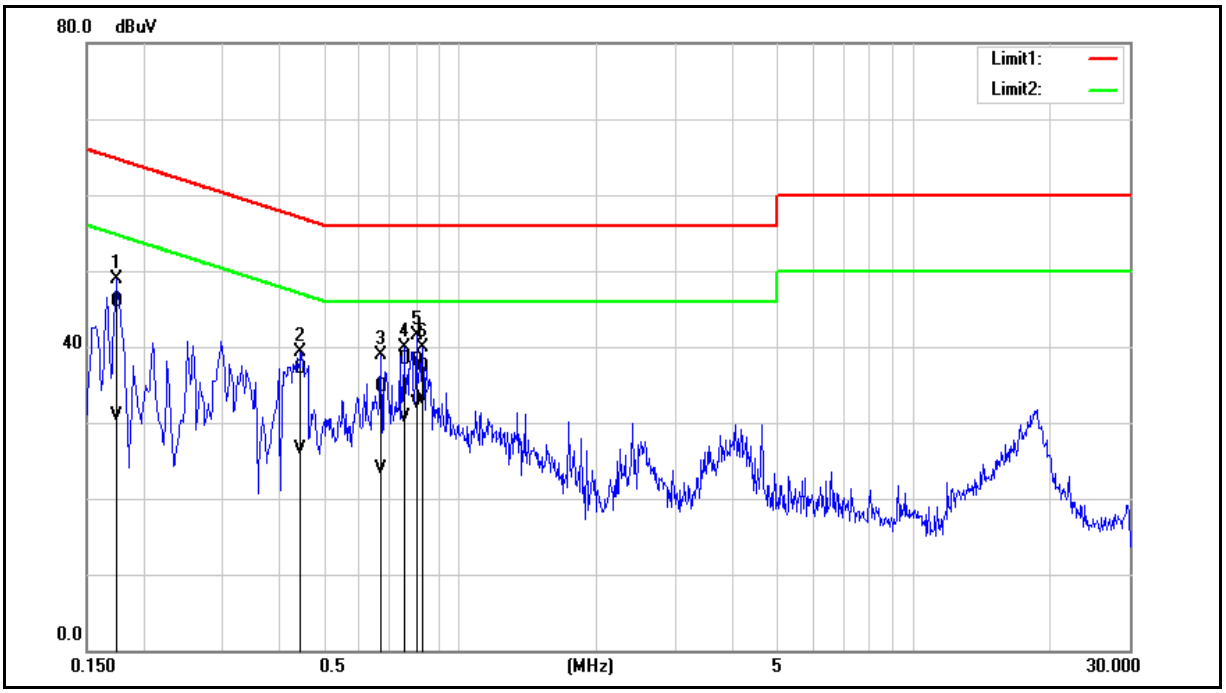
依據 NCC 低功率射頻器材技術規範(LP0002)之 4.10.1.4 節之要求，天線之規格不受第 3.2 節規定之限制

判定結果: 符合。

5. Test Results

5.1 Conducted Emission

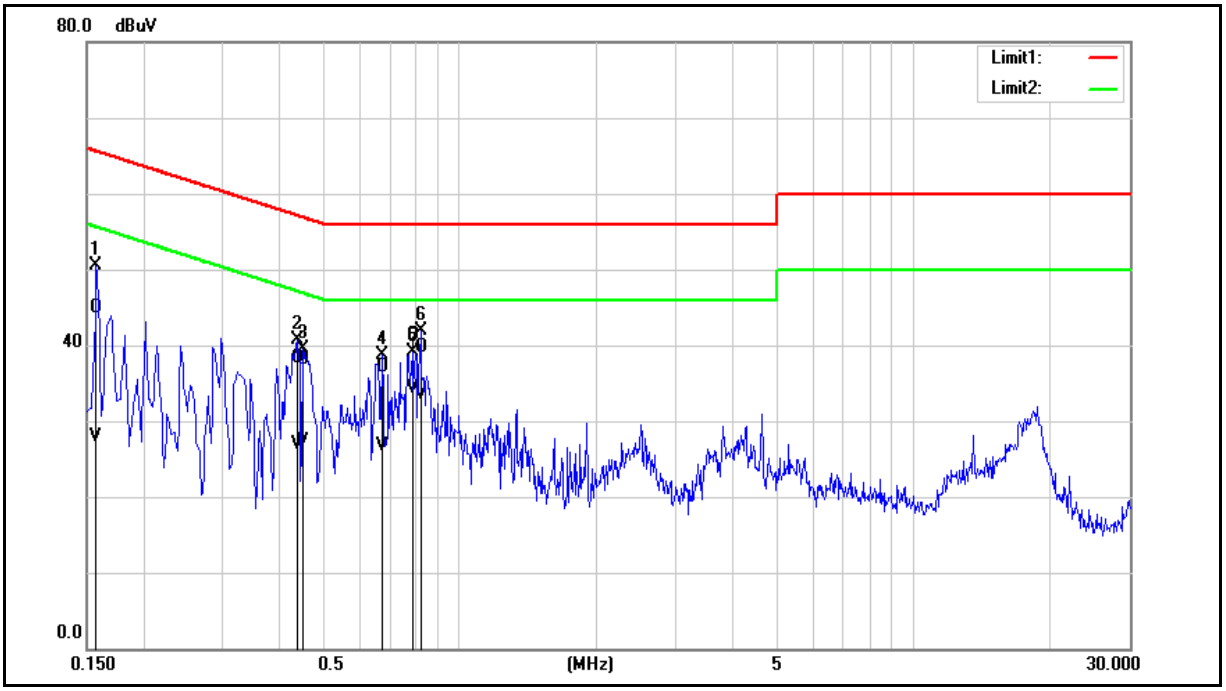
Standard:	LP0002	Line:	L1
Test item:	Conducted Emission	Power:	AC 110 V/60 Hz
Mode:	Mode 1		
Description:			



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	0.1740	36.11	21.12	9.74	45.85	30.86	64.77	54.77	-18.92	-23.91	Pass
2	0.4460	27.43	16.70	9.74	37.17	26.44	56.95	46.95	-19.78	-20.51	Pass
3	0.6700	24.88	14.11	9.75	34.63	23.86	56.00	46.00	-21.37	-22.14	Pass
4	0.7540	28.48	21.04	9.75	38.23	30.79	56.00	46.00	-17.77	-15.21	Pass
5	0.8020	28.45	22.78	9.75	38.20	32.53	56.00	46.00	-17.80	-13.47	Pass
6	0.8300	27.61	23.41	9.75	37.36	33.16	56.00	46.00	-18.64	-12.84	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:			



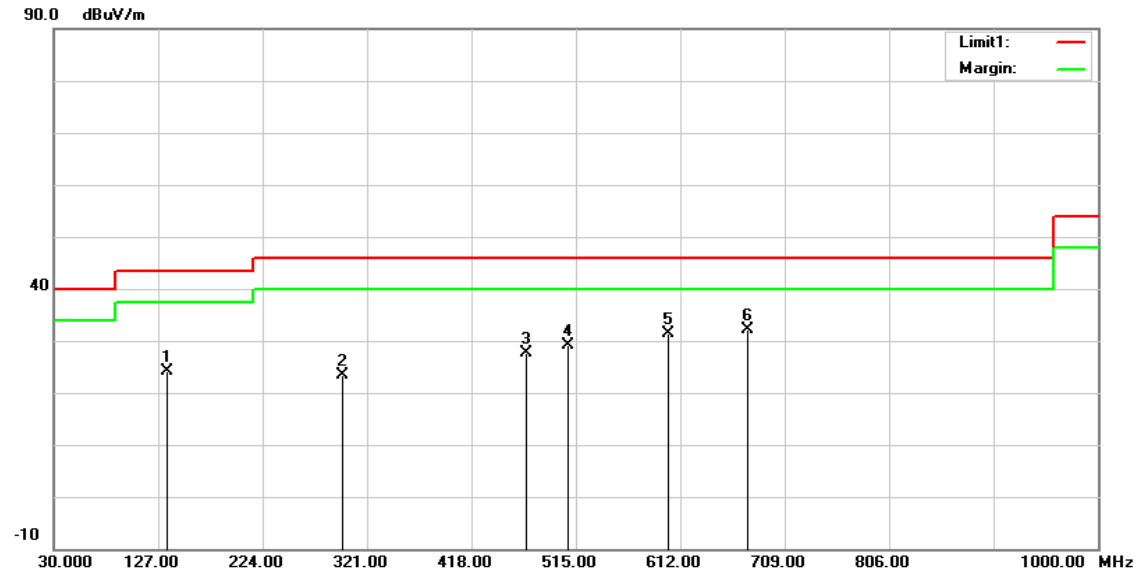
No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.1580	35.19	18.08	9.74	44.93	27.82	65.57	55.57	-20.64	-27.75	Pass
2	0.4380	28.66	17.17	9.73	38.39	26.90	57.10	47.10	-18.71	-20.20	Pass
3	0.4500	28.37	17.59	9.73	38.10	27.32	56.88	46.88	-18.78	-19.56	Pass
4	0.6740	27.36	17.06	9.74	37.10	26.80	56.00	46.00	-18.90	-19.20	Pass
5	0.7860	31.49	24.63	9.75	41.24	34.38	56.00	46.00	-14.76	-11.62	Pass
6	0.8180	29.89	23.77	9.75	39.64	33.52	56.00	46.00	-16.36	-12.48	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)。

5.2 Radiated Emission Measurement

其它不必要之訊號 (1 GHz 以下)

Standard:	LP0002	Test Distance:	3 m
Test item:	Radiated Emission		
Mode:	Mode 1		
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	135.7300	30.58	-6.38	24.20	43.50	-19.30	QP
2	298.6900	27.40	-4.09	23.31	46.00	-22.69	QP
3	469.4100	28.60	-0.93	27.67	46.00	-18.33	QP
4	508.2100	29.32	-0.23	29.09	46.00	-16.91	QP
5	600.3600	29.16	2.28	31.44	46.00	-14.56	QP
6	674.0800	28.83	3.31	32.14	46.00	-13.86	QP

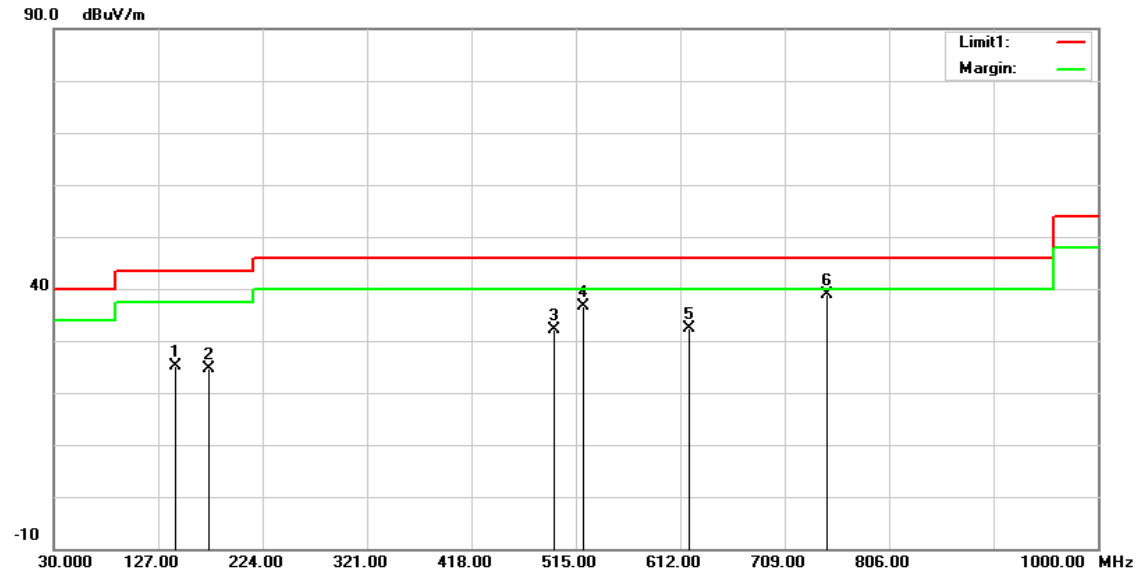
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

Example: 24.20 = -6.38 + 30.58

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		
Mode:	Mode 1		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	143.4900	31.02	-5.92	25.10	43.50	-18.40	QP
2	174.5300	31.11	-6.52	24.59	43.50	-18.91	QP
3	494.6300	32.60	-0.53	32.07	46.00	-13.93	QP
4	521.7900	36.41	0.12	36.53	46.00	-9.47	QP
5	620.7300	29.91	2.51	32.42	46.00	-13.58	QP
6	747.8000	33.75	5.15	38.90	46.00	-7.10	QP

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

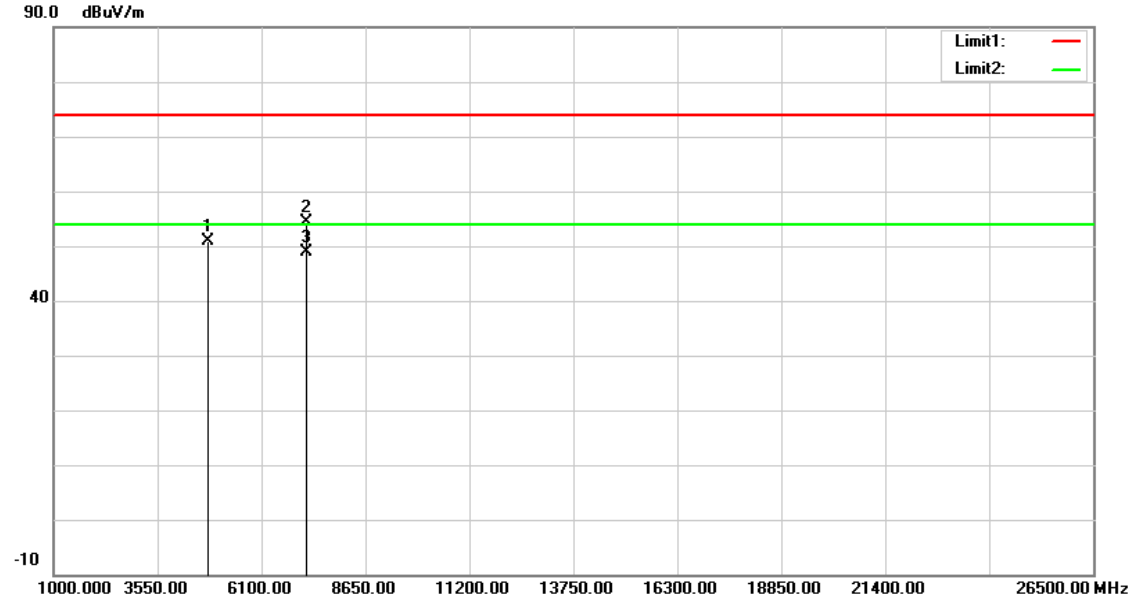
Example: 25.10 = -5.92 + 31.02

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	45.93	5.00	50.93	74.00	-23.07	peak
2	7206.000	42.15	12.19	54.34	74.00	-19.66	peak
3	7206.000	36.63	12.19	48.82	54.00	-5.18	AVG

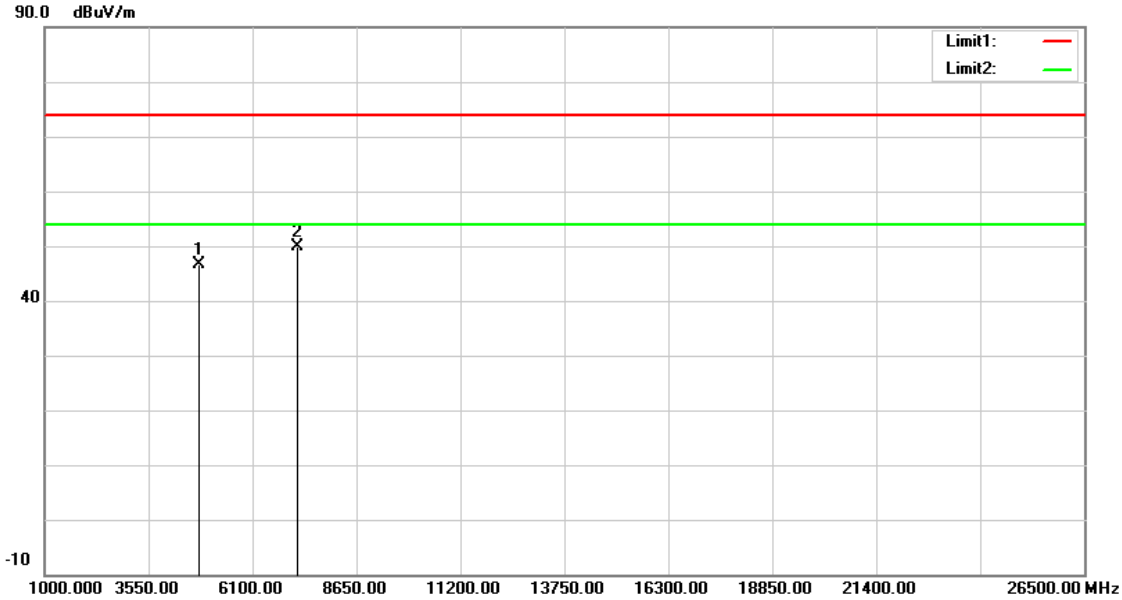
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

Example: 50.93 = 5.00 + 45.93

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	41.63	5.00	46.63	74.00	-27.37	peak
2	7206.000	37.63	12.19	49.82	74.00	-24.18	peak

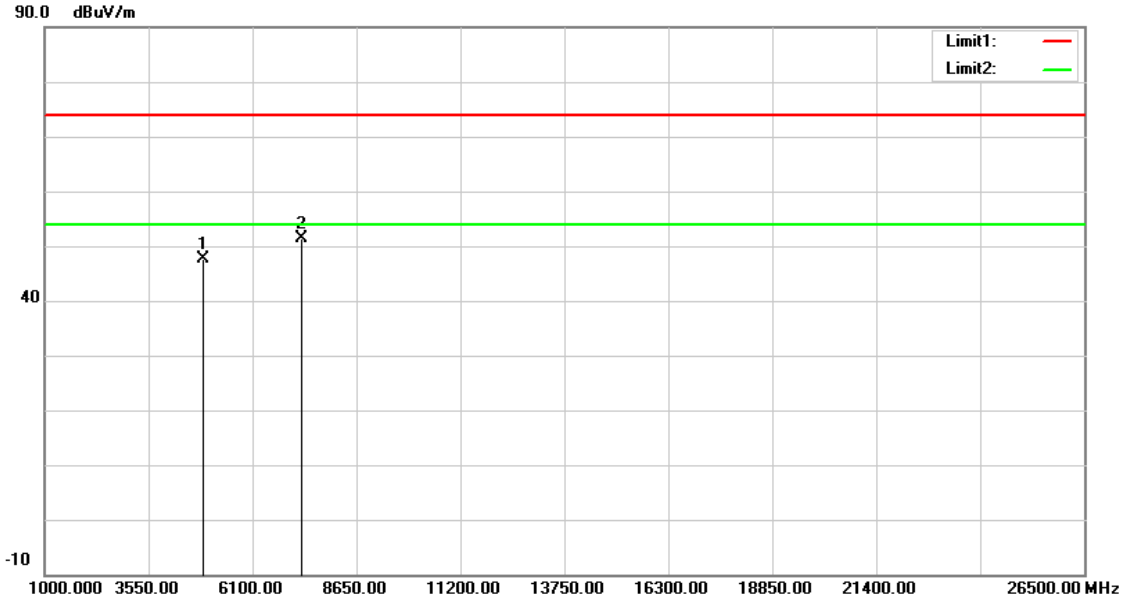
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

Example: 46.63 = 5.00 + 41.63

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 2		
Ant.Polar.:	Horizontal		



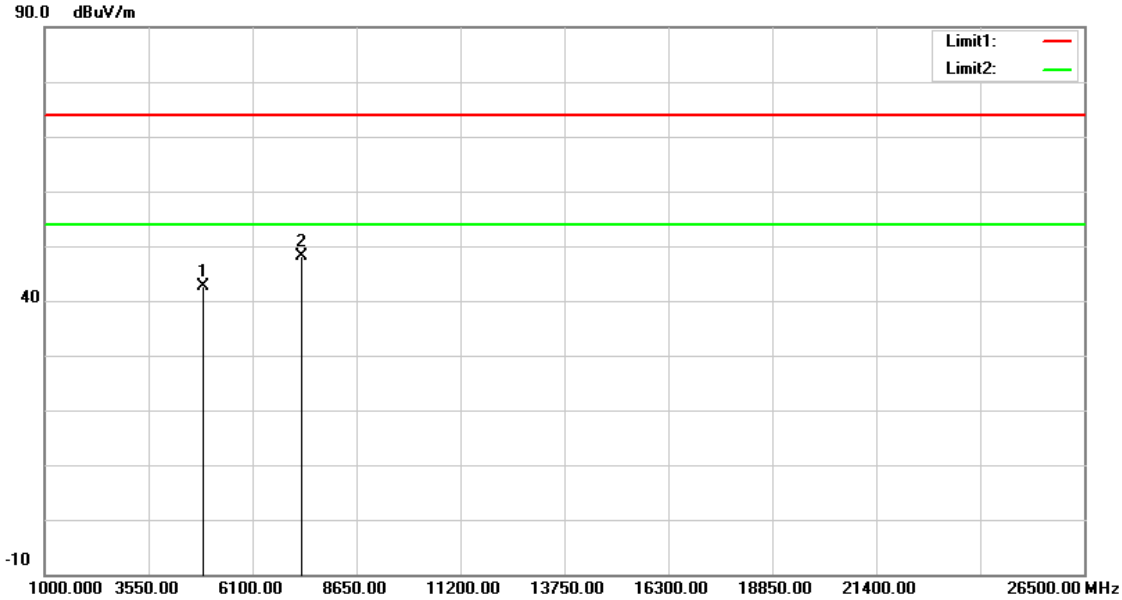
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4880.000	42.30	5.24	47.54	74.00	-26.46	peak
2	7320.000	39.07	12.40	51.47	74.00	-22.53	peak

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:	Harmonic		
Frequency:	2440 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



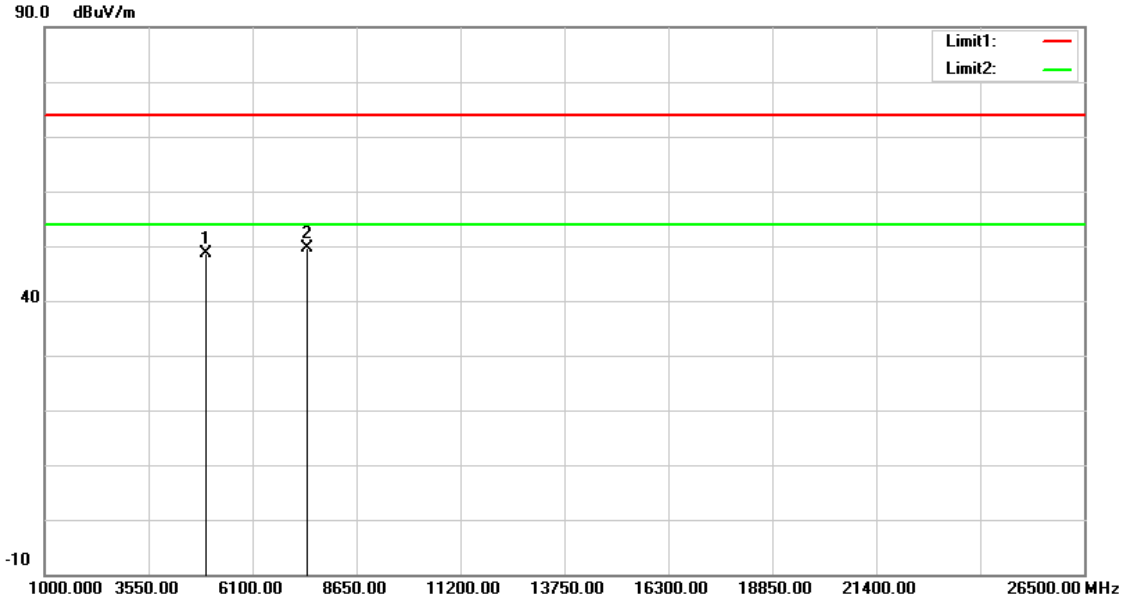
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4880.000	37.32	5.24	42.56	74.00	-31.44	peak
2	7320.000	35.71	12.40	48.11	74.00	-25.89	peak

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		



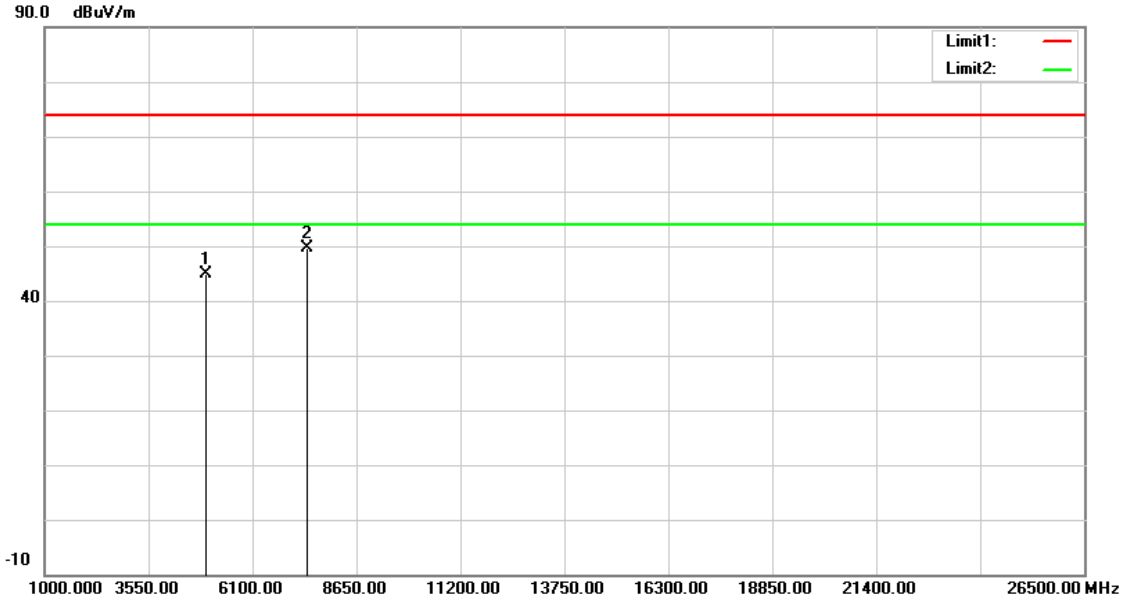
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	43.06	5.51	48.57	74.00	-25.43	peak
2	7440.000	36.96	12.62	49.58	74.00	-24.42	peak

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:	2480 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



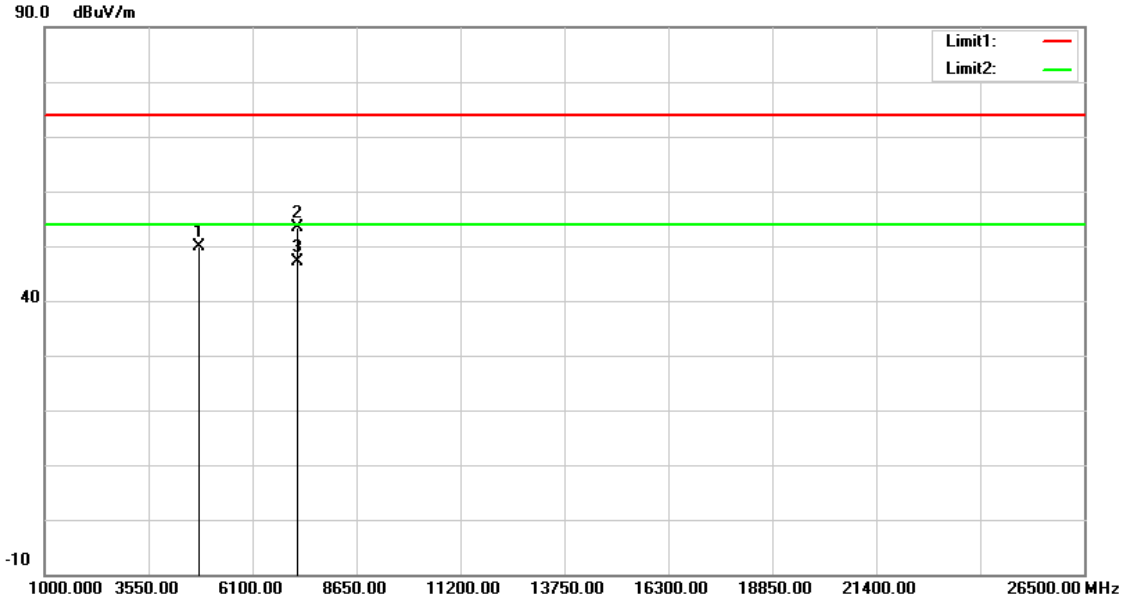
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	39.40	5.51	44.91	74.00	-29.09	peak
2	7440.000	37.05	12.62	49.67	74.00	-24.33	peak

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:	Harmonic		
Frequency:	2402 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



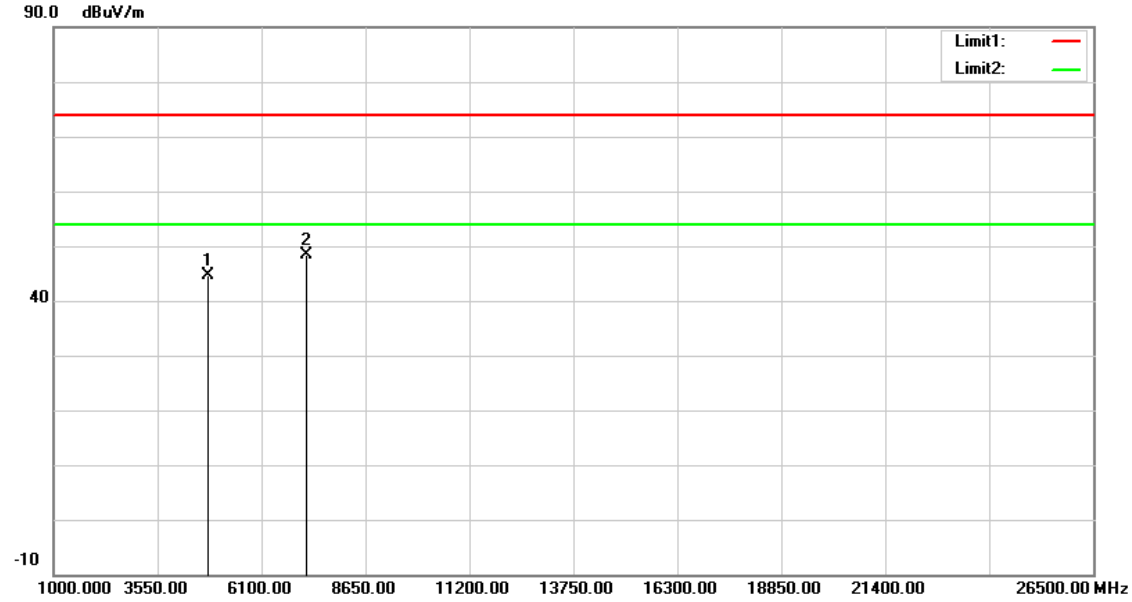
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.000	44.88	5.00	49.88	74.00	-24.12	peak
2	7206.000	41.10	12.19	53.29	74.00	-20.71	peak
3	7206.000	34.84	12.19	47.03	54.00	-6.97	AVG

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:	Harmonic		
Frequency:	2402 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



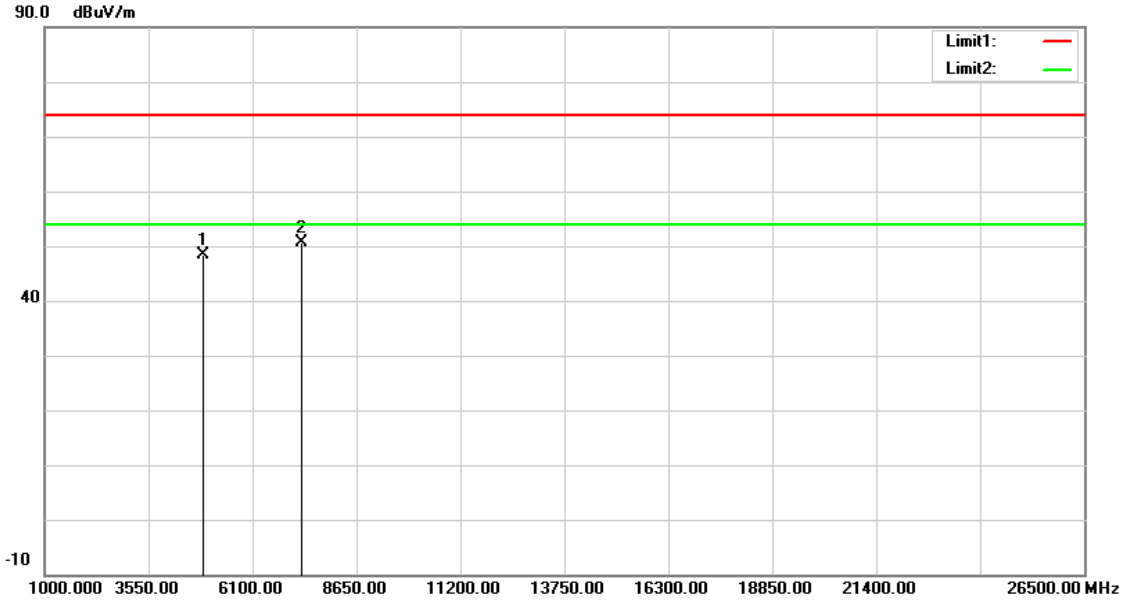
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.000	39.70	5.00	44.70	74.00	-29.30	peak
2	7206.000	36.20	12.19	48.39	74.00	-25.61	peak

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:	2440 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



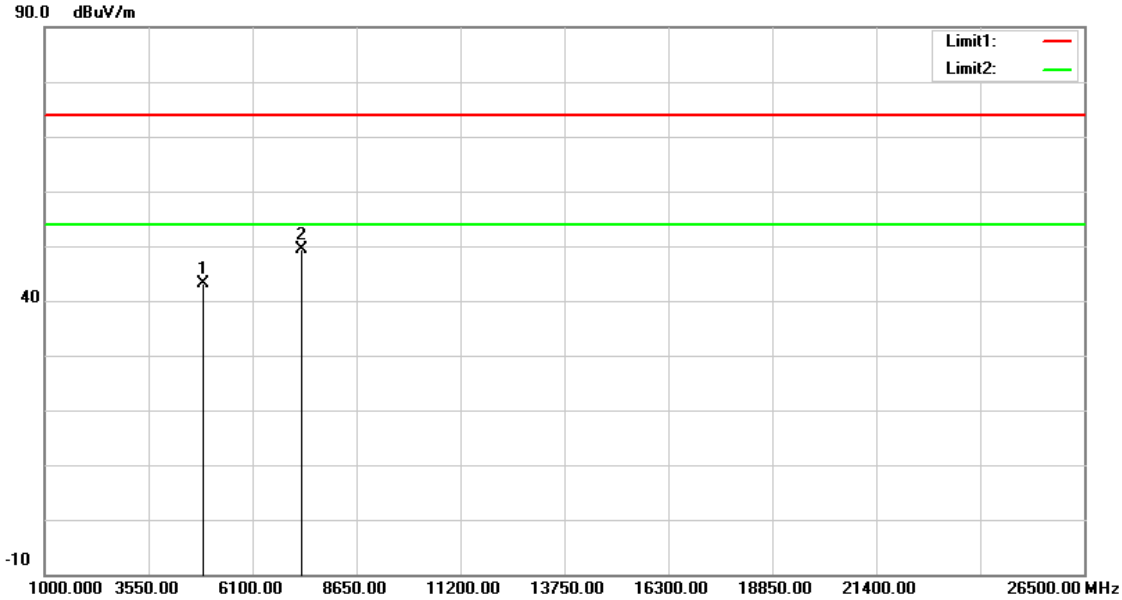
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4880.000	43.06	5.24	48.30	74.00	-25.70	peak
2	7320.000	38.34	12.40	50.74	74.00	-23.26	peak

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 3		
Ant.Polar.:	Vertical		



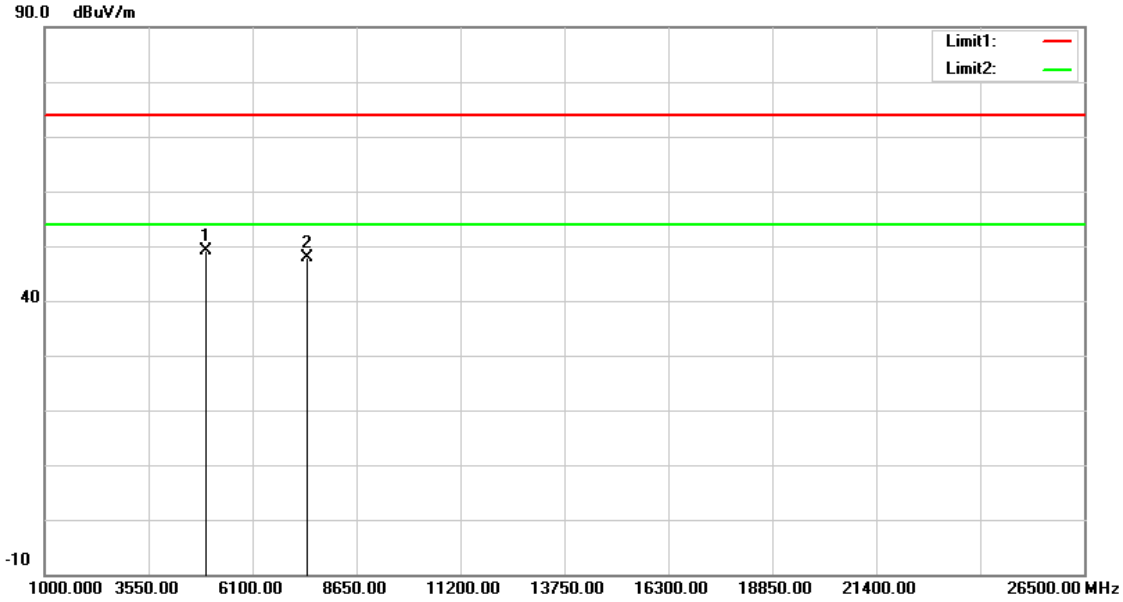
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4880.000	37.90	5.24	43.14	74.00	-30.86	peak
2	7320.000	36.87	12.40	49.27	74.00	-24.73	peak

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 3		
Ant.Polar.:	Horizontal		



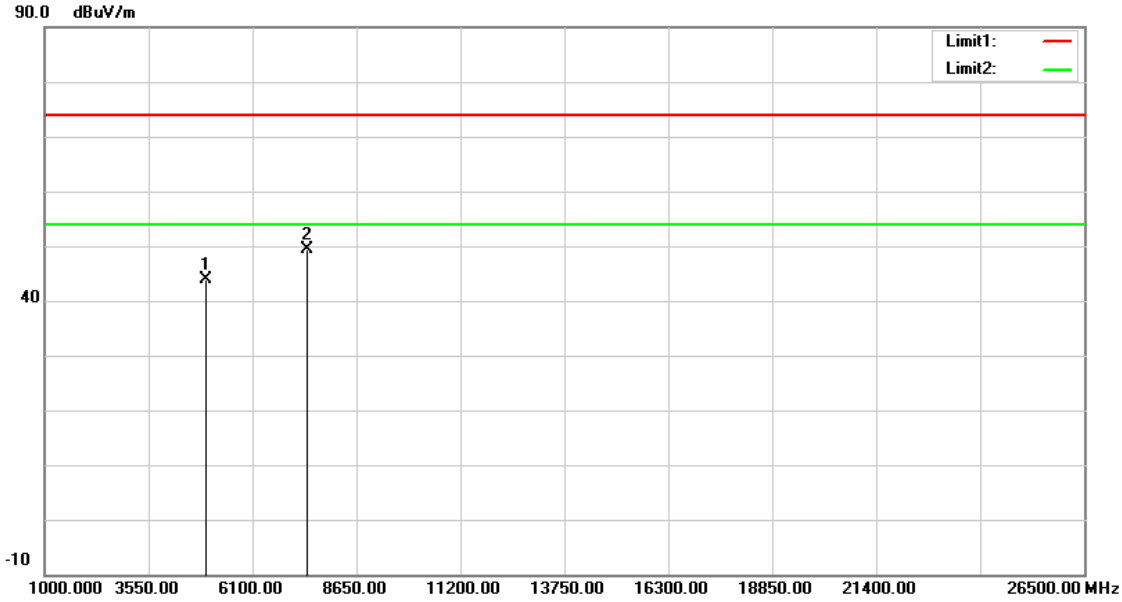
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	43.53	5.51	49.04	74.00	-24.96	peak
2	7440.000	35.21	12.62	47.83	74.00	-26.17	peak

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 3		
Ant.Polar.:	Vertical		



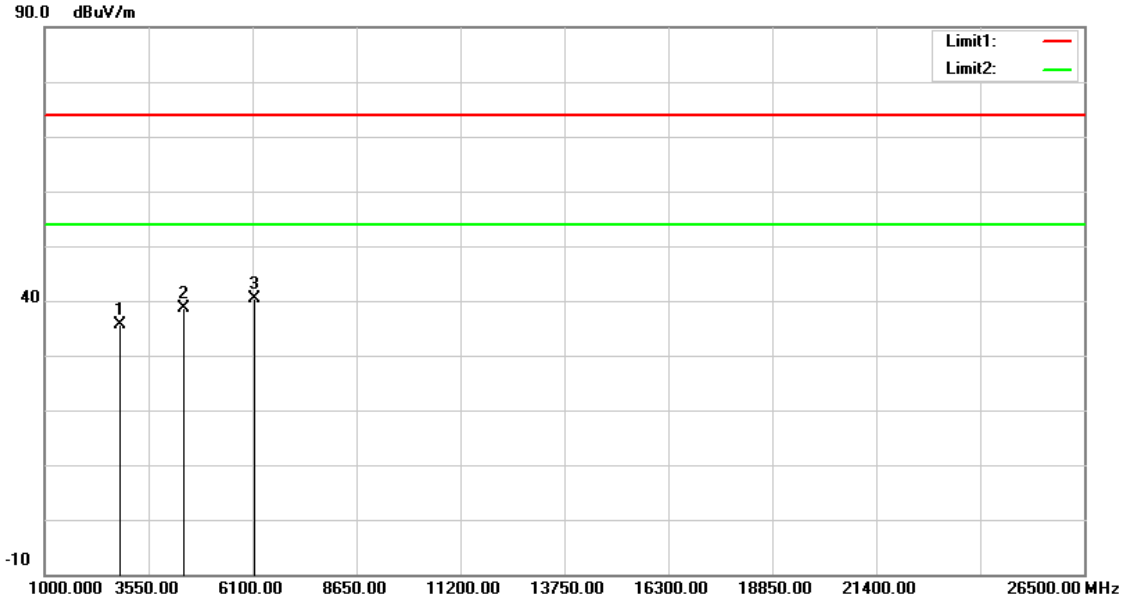
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	38.38	5.51	43.89	74.00	-30.11	peak
2	7440.000	36.74	12.62	49.36	74.00	-24.64	peak

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		
Mode:	Mode 6		
Ant.Polar.:	Horizontal		
Description:			



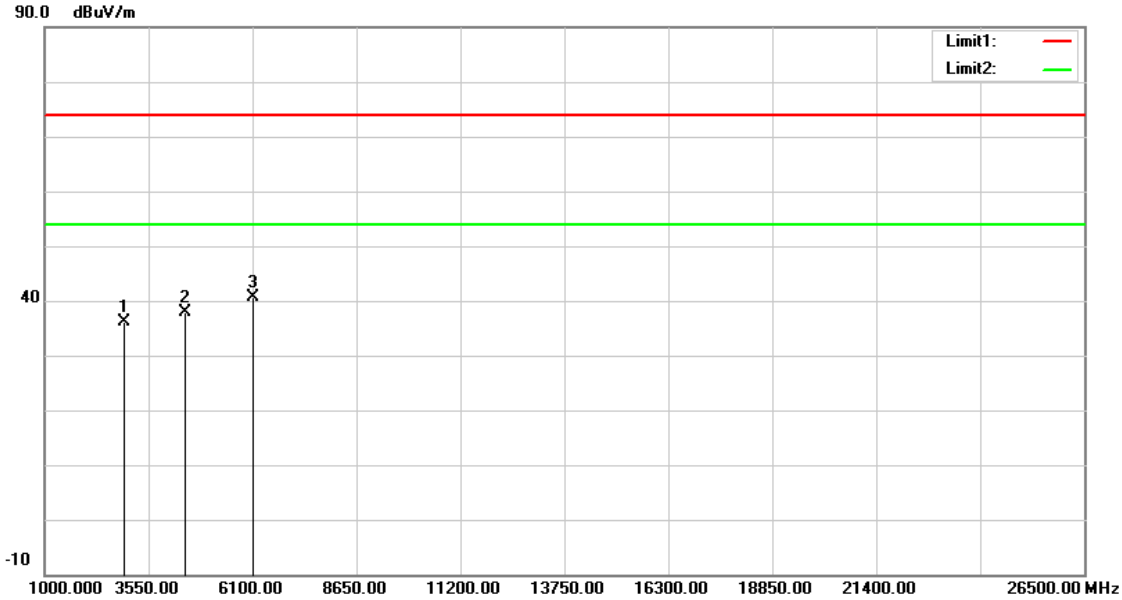
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2853.000	36.27	-0.52	35.75	74.00	-38.25	peak
2	4417.000	34.77	3.87	38.64	74.00	-35.36	peak
3	6134.000	32.21	8.12	40.33	74.00	-33.67	peak

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:	Harmonic		
Mode:	Mode 6		
Ant.Polar.:	Vertical		
Description:			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2921.000	36.42	-0.26	36.16	74.00	-37.84	peak
2	4434.000	34.08	3.90	37.98	74.00	-36.02	peak
3	6083.000	32.67	7.89	40.56	74.00	-33.44	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.

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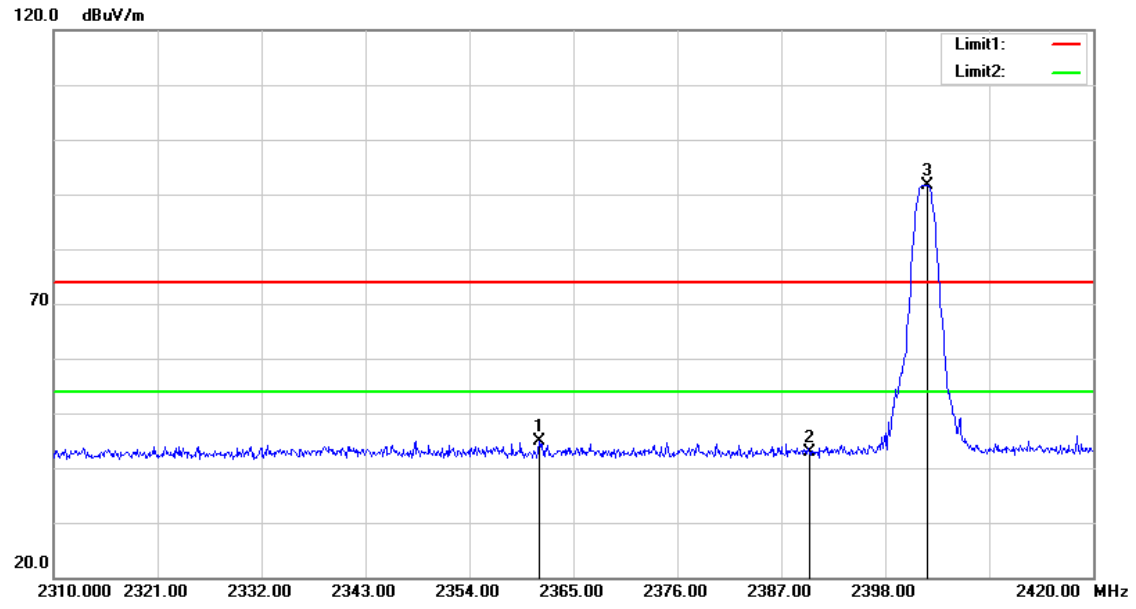
Peak

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



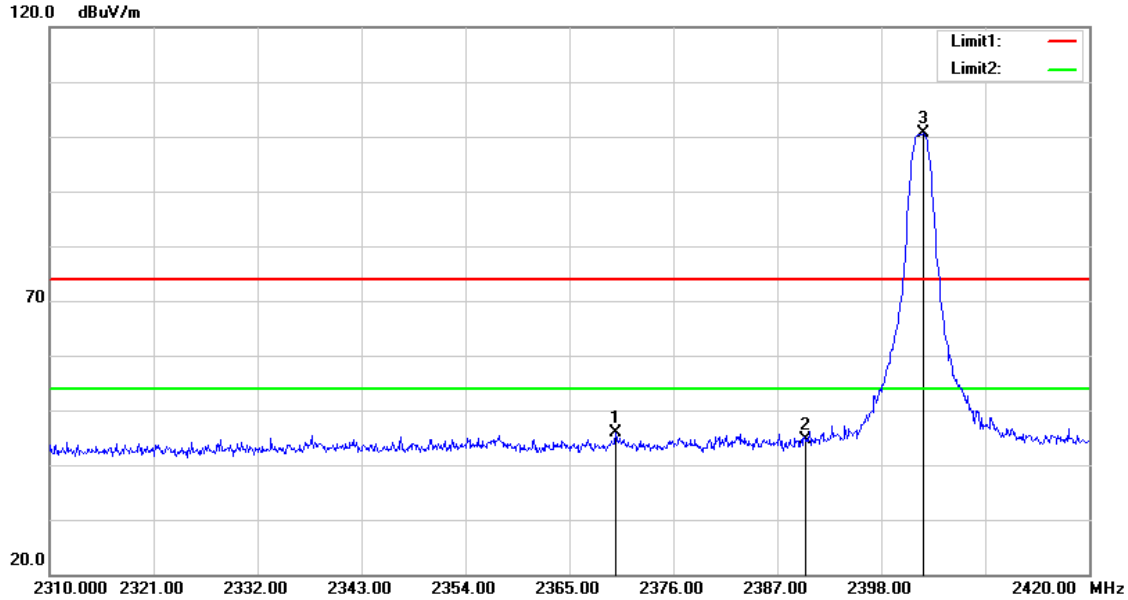
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2361.370	47.26	-2.40	44.86	74.00	-29.14	peak
2	2390.000	45.24	-2.28	42.96	74.00	-31.04	peak
3	2402.400	93.93	-2.22	91.71	--	--	peak

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:	Band edge		
Frequency:	2402 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



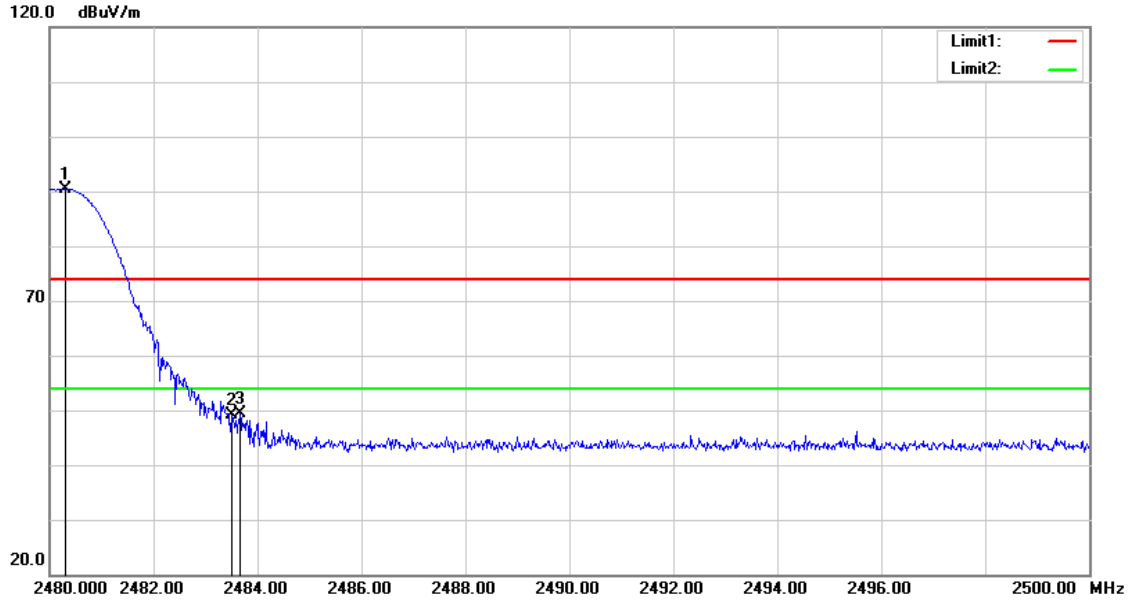
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2369.950	48.23	-2.36	45.87	74.00	-28.13	peak
2	2390.000	46.87	-2.28	44.59	74.00	-29.41	peak
3	2402.400	102.77	-2.22	100.55	--	--	peak

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		



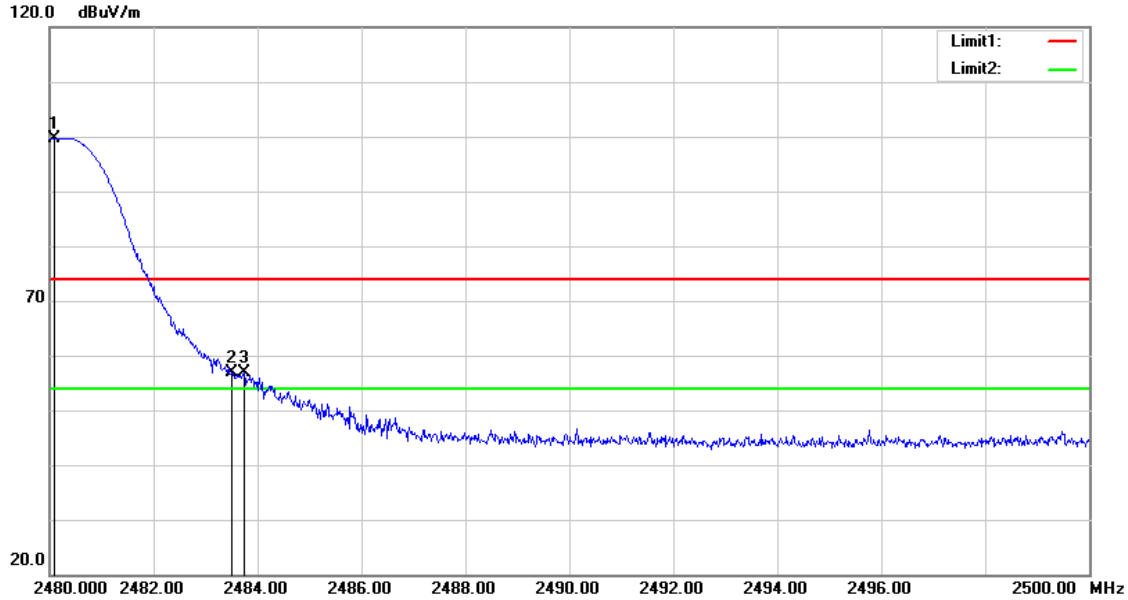
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.300	92.31	-1.91	90.40	--	--	peak
2	2483.500	50.99	-1.89	49.10	74.00	-24.90	peak
3	2483.660	51.17	-1.89	49.28	74.00	-24.72	peak

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		



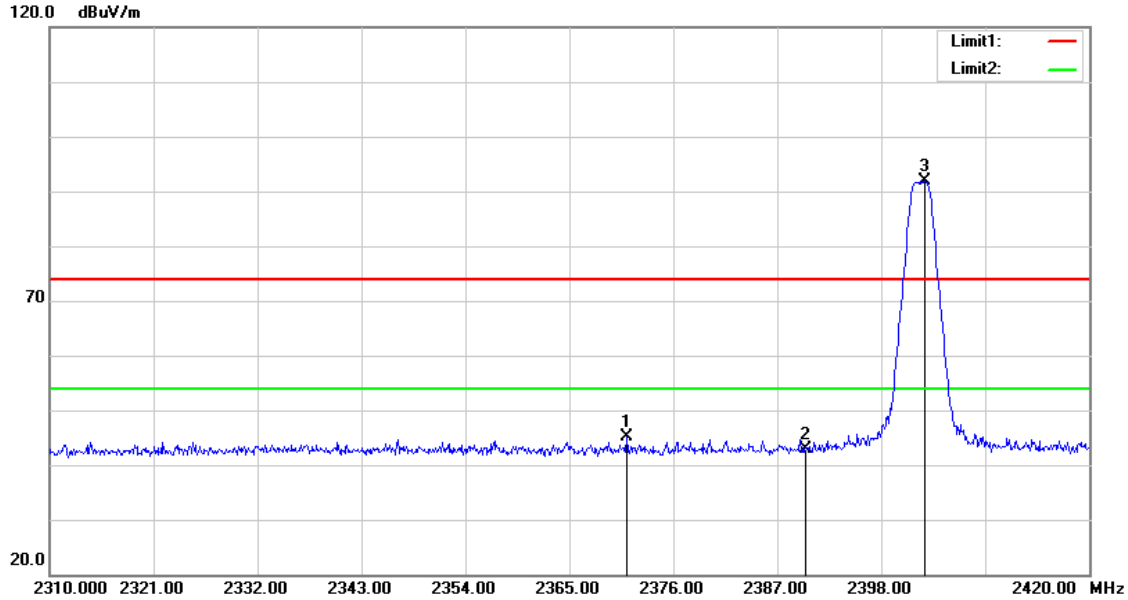
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.080	101.65	-1.91	99.74	--	--	peak
2	2483.500	58.66	-1.89	56.77	74.00	-17.23	peak
3	2483.740	58.77	-1.89	56.88	74.00	-17.12	peak

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		
Frequency:	2402 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



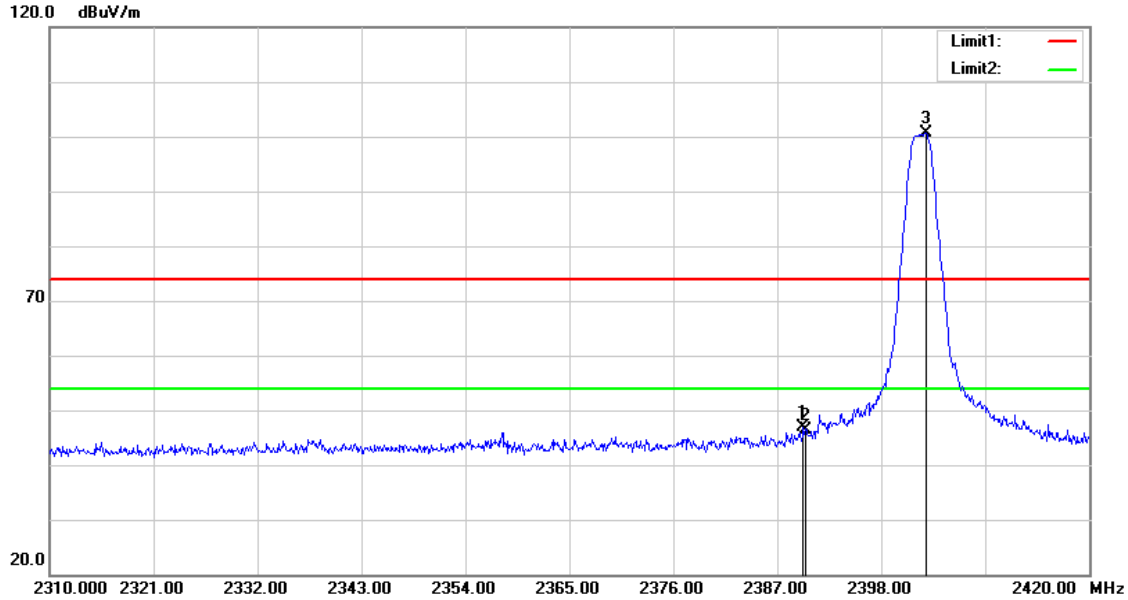
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2371.050	47.49	-2.36	45.13	74.00	-28.87	peak
2	2390.000	45.11	-2.28	42.83	74.00	-31.17	peak
3	2402.620	94.03	-2.22	91.81	--	--	peak

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:	Band edge		
Frequency:	2402 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



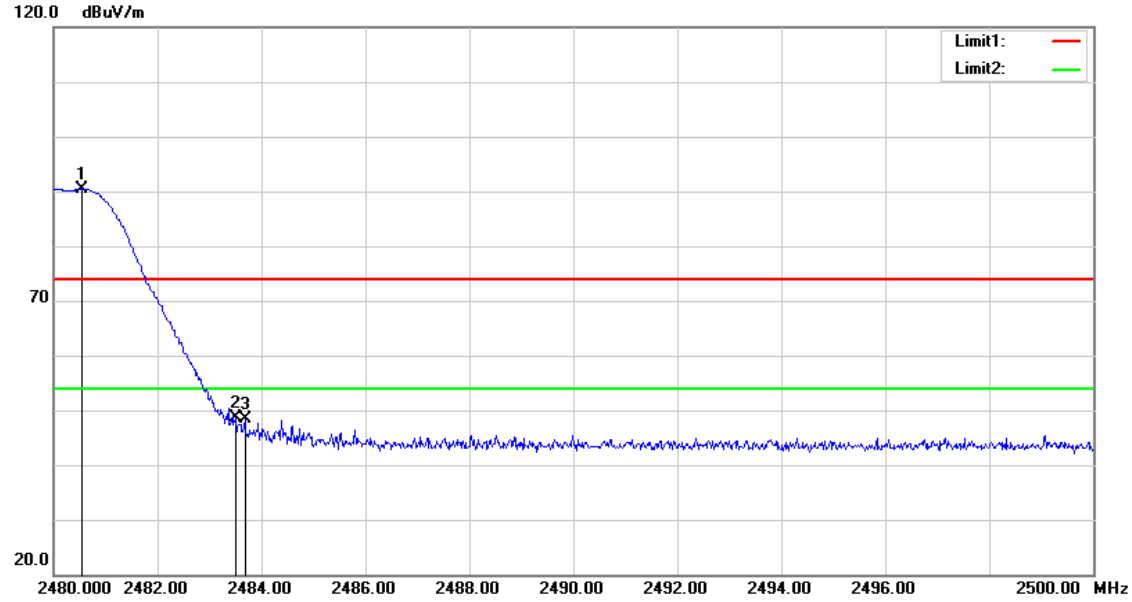
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.750	49.12	-2.28	46.84	74.00	-27.16	peak
2	2390.000	48.61	-2.28	46.33	74.00	-27.67	peak
3	2402.730	102.81	-2.22	100.59	--	--	peak

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:	Band edge		
Frequency:	2480 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



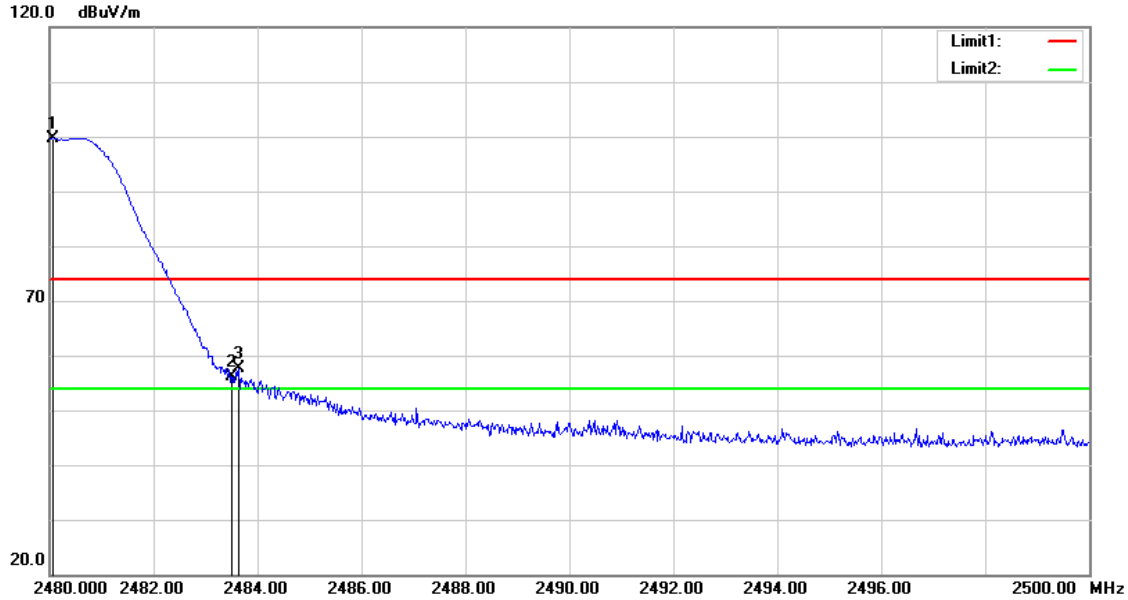
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.540	92.35	-1.90	90.45	--	--	peak
2	2483.500	50.58	-1.89	48.69	74.00	-25.31	peak
3	2483.680	50.29	-1.89	48.40	74.00	-25.60	peak

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 3		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.060	101.66	-1.91	99.75	--	--	peak
2	2483.500	57.90	-1.89	56.01	74.00	-17.99	peak
3	2483.640	59.57	-1.89	57.68	74.00	-16.32	peak

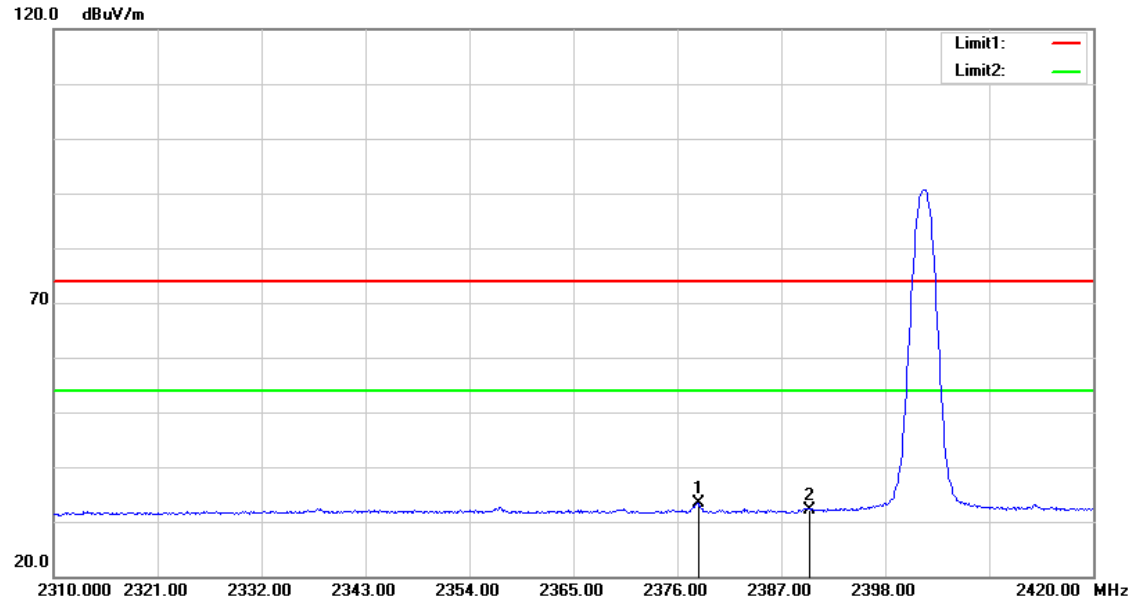
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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.

Average

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



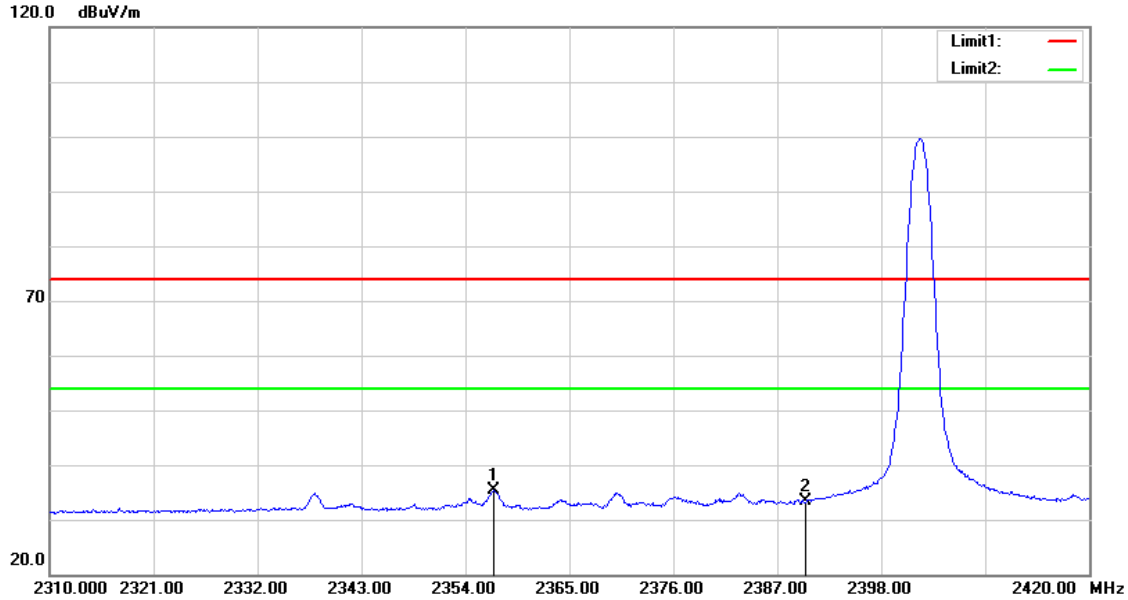
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2378.200	35.63	-2.33	33.30	54.00	-20.70	AVG
2	2390.000	34.47	-2.28	32.19	54.00	-21.81	AVG

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 2		
Ant.Polar.:	Vertical		



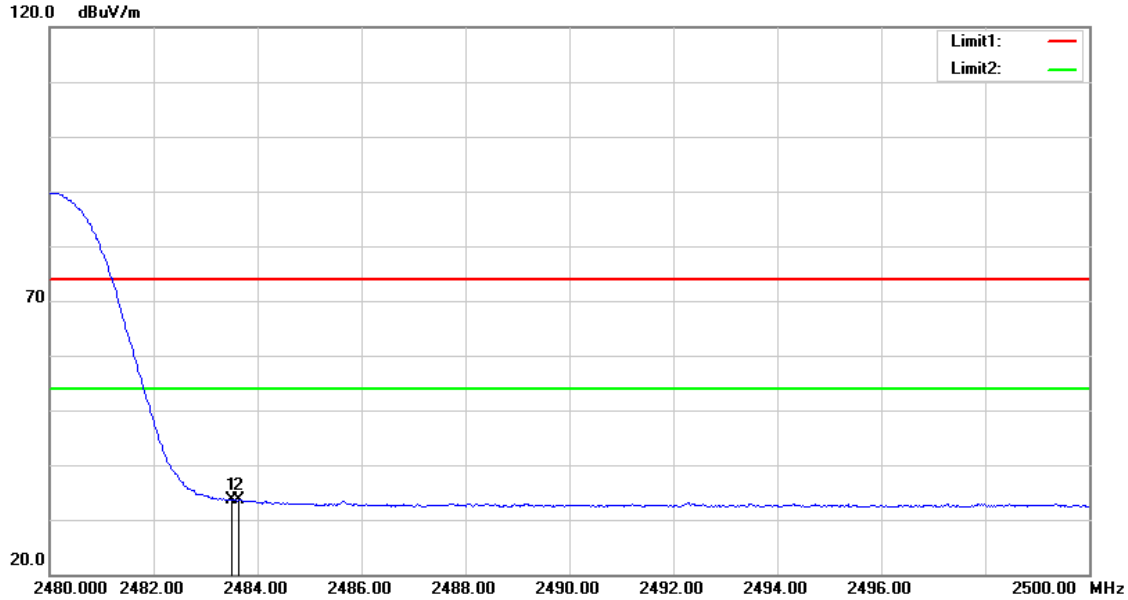
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2356.970	37.71	-2.42	35.29	54.00	-18.71	AVG
2	2390.000	35.70	-2.28	33.42	54.00	-20.58	AVG

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:	2480 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



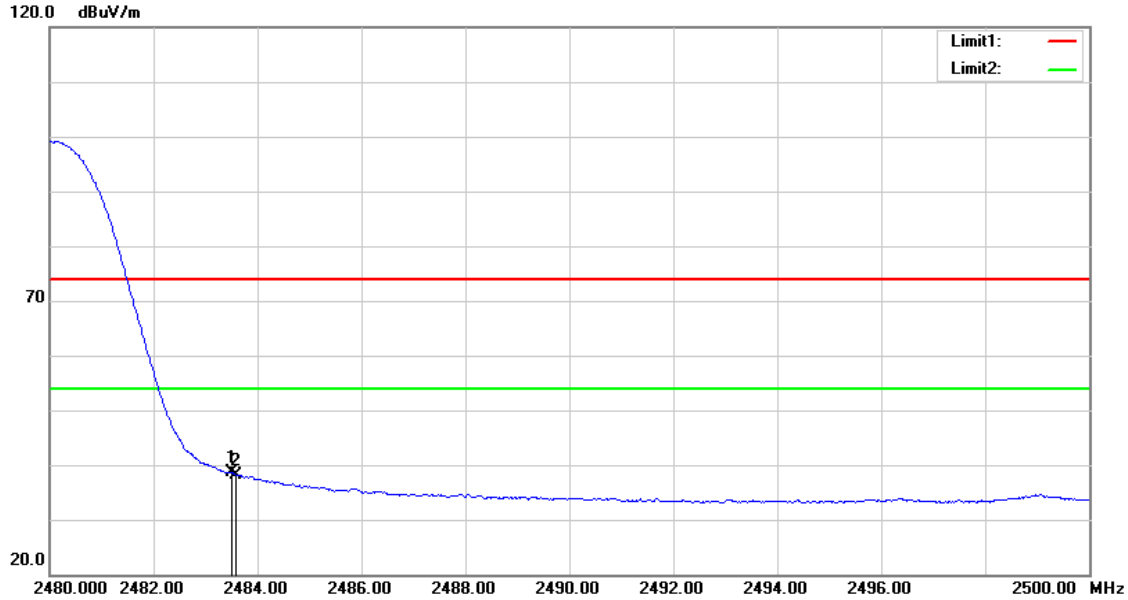
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	35.41	-1.89	33.52	54.00	-20.48	AVG
2	2483.640	35.49	-1.89	33.60	54.00	-20.40	AVG

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:	2480 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



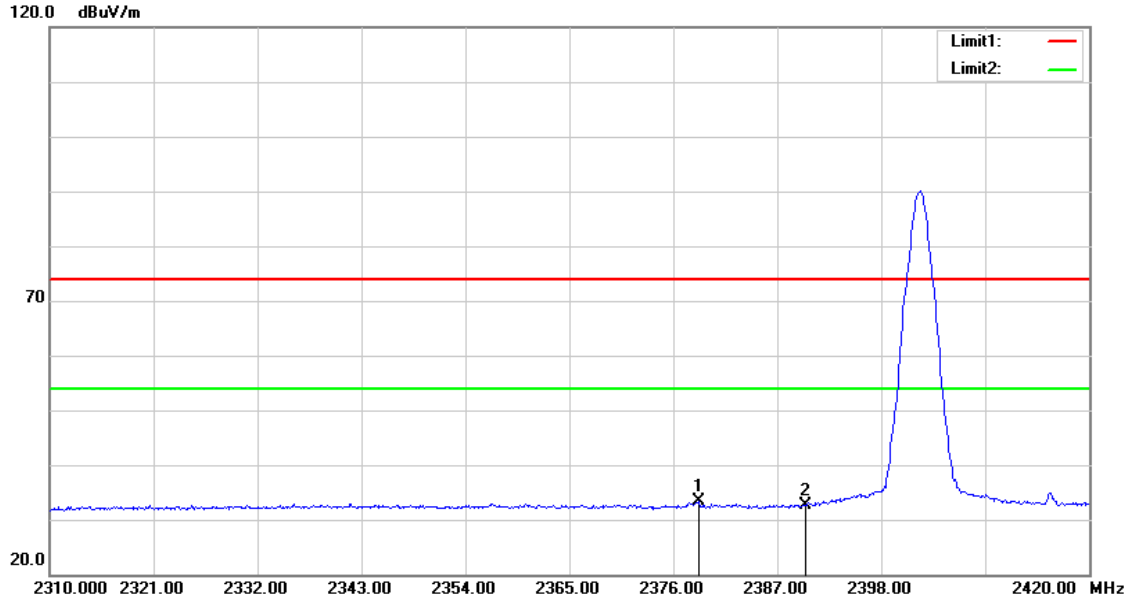
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	40.44	-1.89	38.55	54.00	-15.45	AVG
2	2483.580	40.11	-1.89	38.22	54.00	-15.78	AVG

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 3		
Ant.Polar.:	Horizontal		



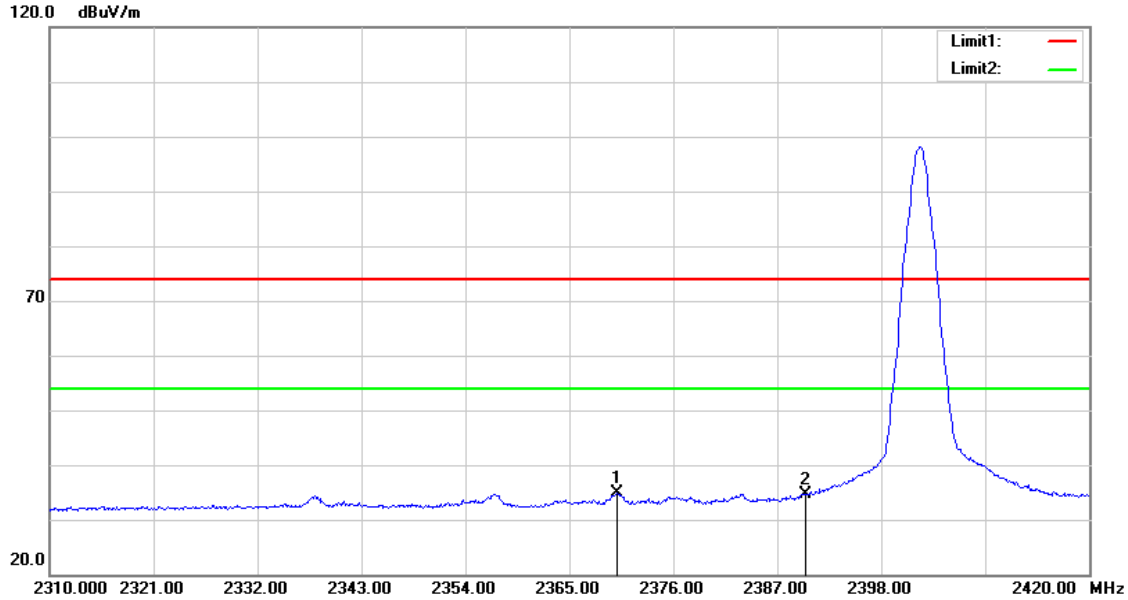
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2378.750	35.68	-2.33	33.35	54.00	-20.65	AVG
2	2390.000	34.85	-2.28	32.57	54.00	-21.43	AVG

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 3		
Ant.Polar.:	Vertical		



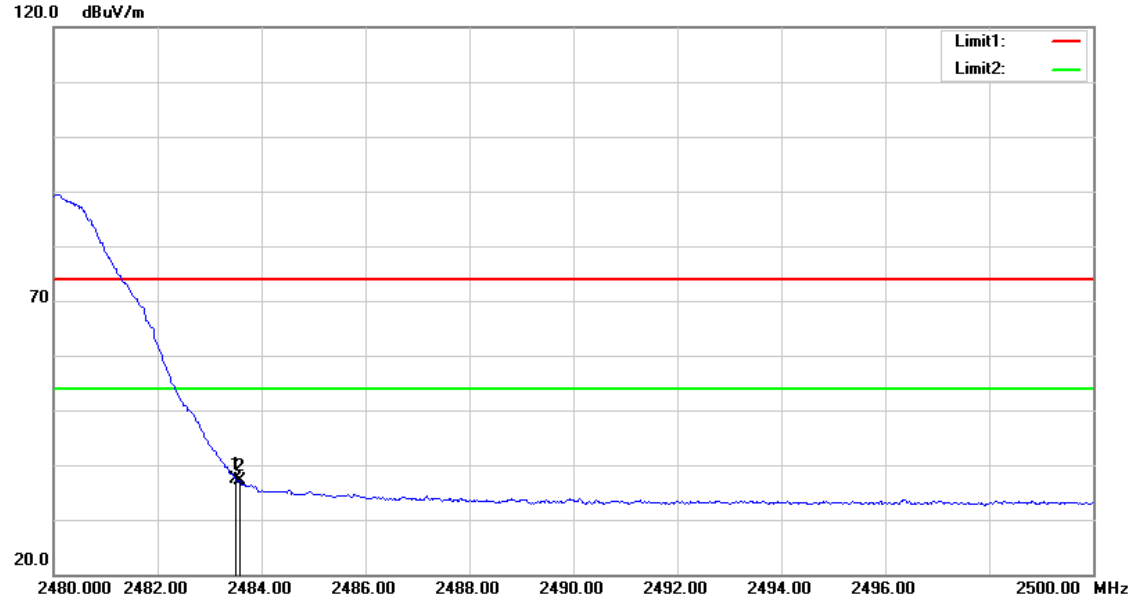
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2370.060	37.22	-2.36	34.86	54.00	-19.14	AVG
2	2390.000	36.89	-2.28	34.61	54.00	-19.39	AVG

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:	2480 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



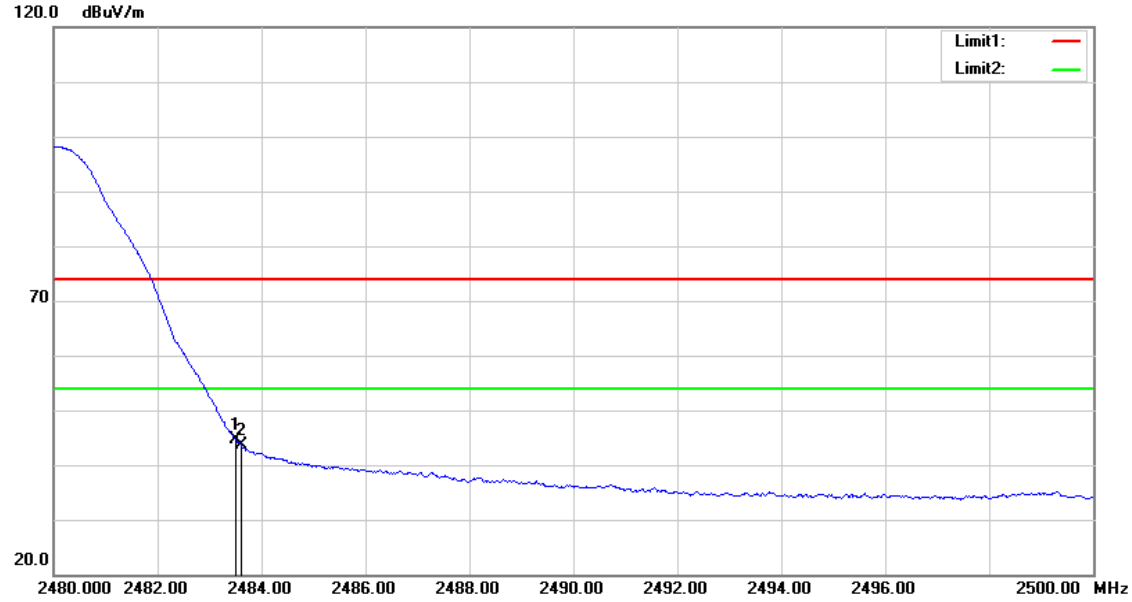
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	39.31	-1.89	37.42	54.00	-16.58	AVG
2	2483.580	39.05	-1.89	37.16	54.00	-16.84	AVG

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:	2480 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	46.59	-1.89	44.70	54.00	-9.30	AVG
2	2483.620	45.52	-1.89	43.63	54.00	-10.37	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.

5.3 Conducted Test Results

輸出峰值功率之量測

操作模式 ： Mode 2: 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	1.32	0.00136	1.45	0.00140	≦1
中頻道	1.97	0.00157	**2.11**	**0.00163**	≦1
高頻道	1.31	0.00135	1.42	0.00139	≦1

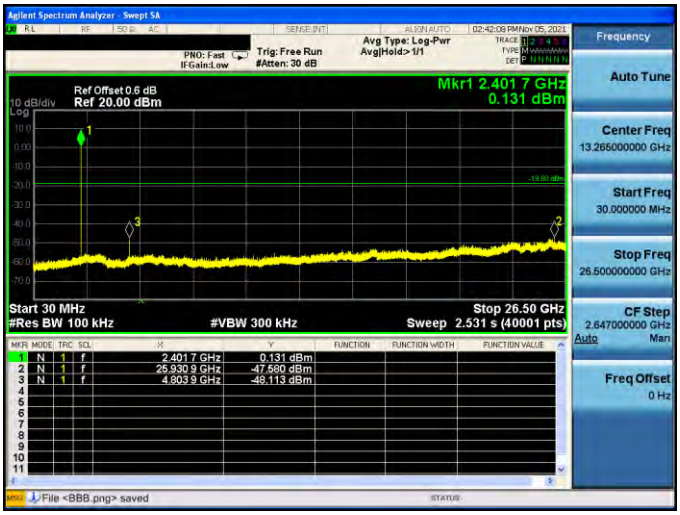
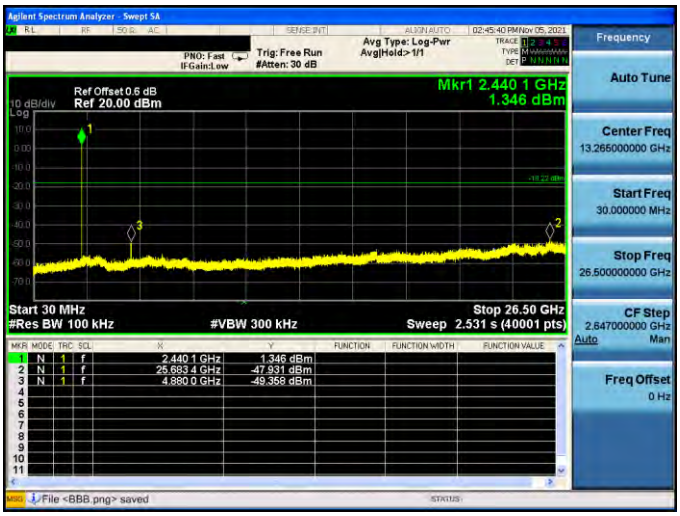
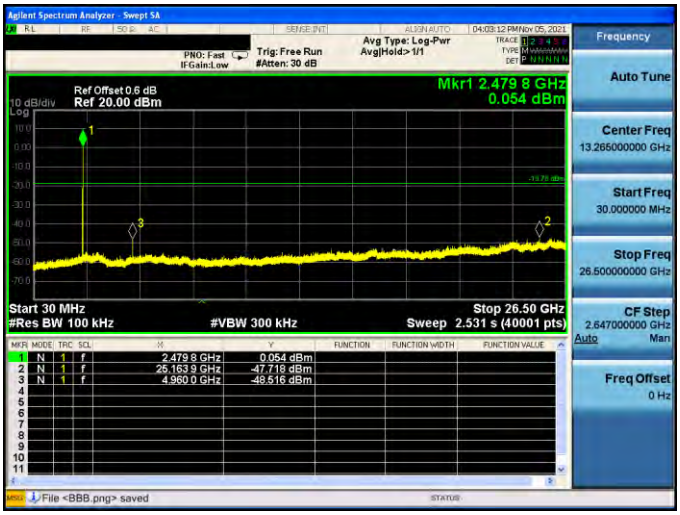
操作模式 ： Mode 3: 2LE, GFSK Continuous TX Mode					
頻道	輸出功率(Average)		輸出功率(Peak)		限制值
	dBm	W	dBm	W	W
低頻道	1.24	0.00133	1.38	0.00137	≦1
中頻道	1.95	0.00157	**2.09**	**0.00162**	≦1
高頻道	1.29	0.00135	1.40	0.00138	≦1

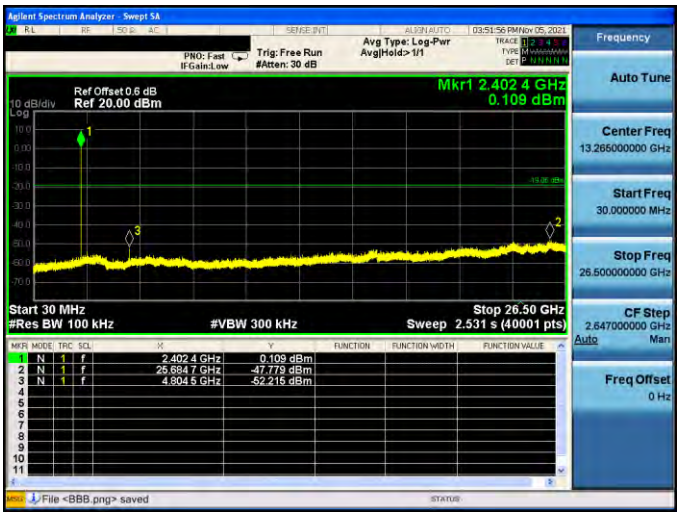
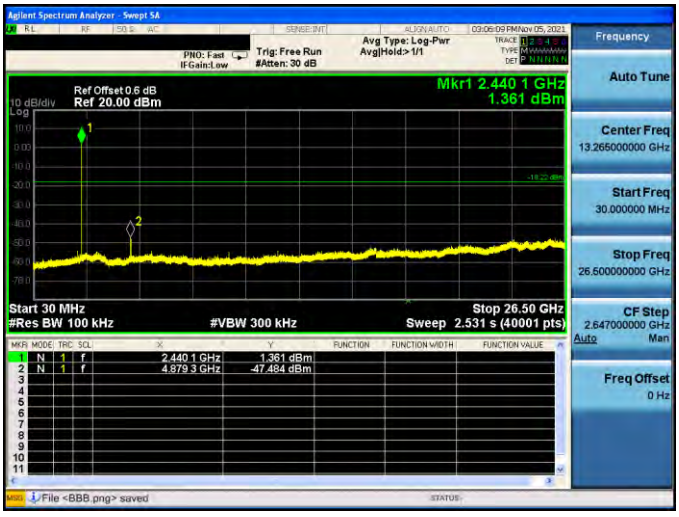
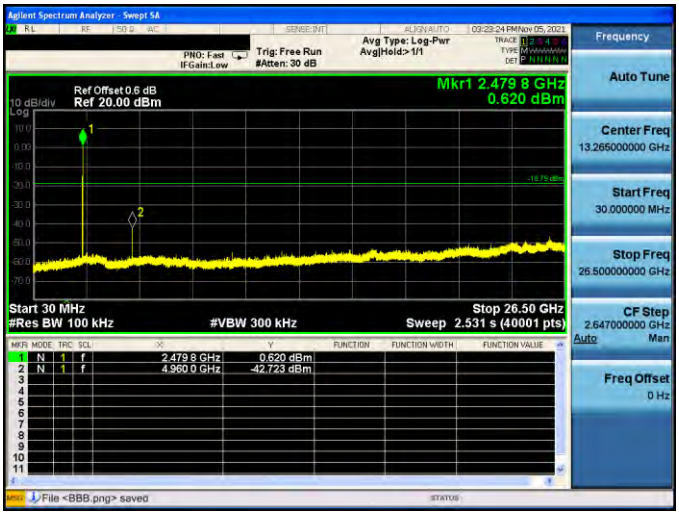
操作模式 ： Mode 4: BLR C2, GFSK Continuous TX Mode					
頻道	輸出功率(Average)		輸出功率(Peak)		限制值
	dBm	W	dBm	W	W
低頻道	1.30	0.00135	1.44	0.00139	≦1
中頻道	1.95	0.00157	**2.08**	**0.00161**	≦1
高頻道	1.28	0.00134	1.39	0.00138	≦1

操作模式 ： Mode 5: BLR C8, 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	1.29	0.00135	1.42	0.00139	≦1
中頻道	1.96	0.00157	**2.10**	**0.00162**	≦1
高頻道	1.27	0.00134	1.37	0.00137	≦1

非必要頻帶之量測

Out of Band Conducted Spurious Emission

Mode 2: LE, GFSK Continuous TX Mode	
低頻道	
中頻道	
高頻道	

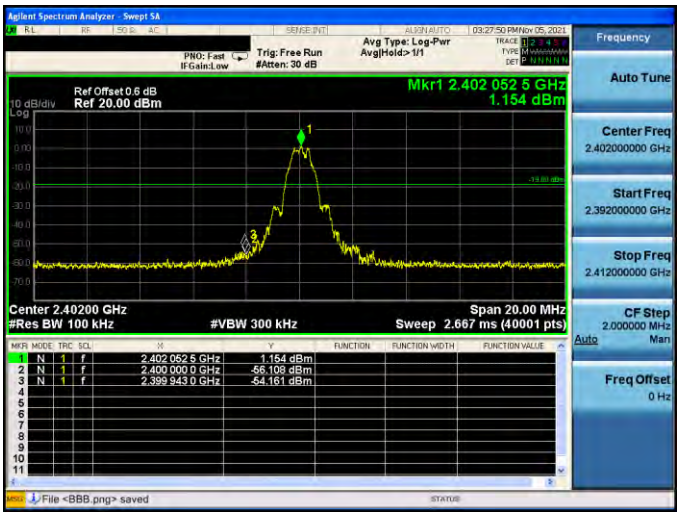
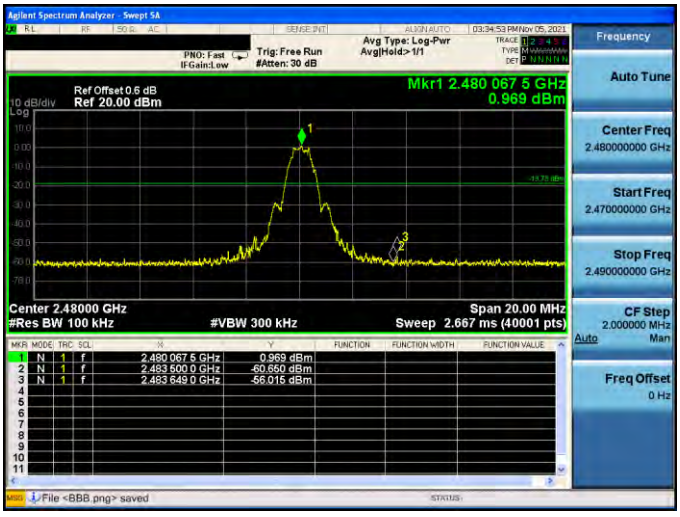
Mode 3: 2LE, GFSK Continuous TX Mode	
低頻道	
中頻道	
高頻道	

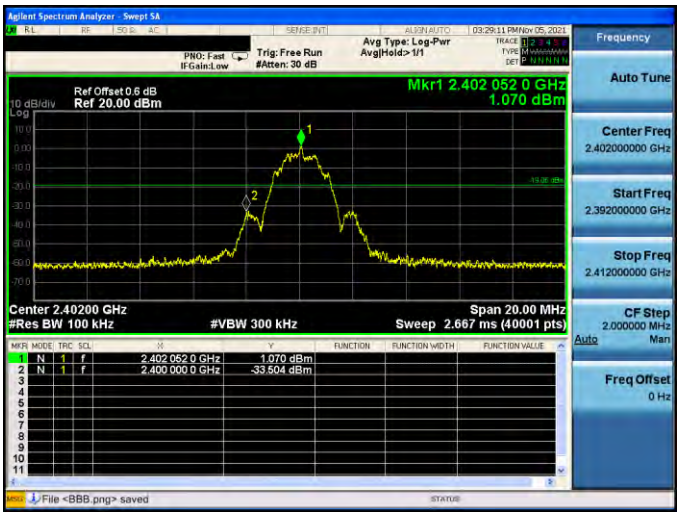
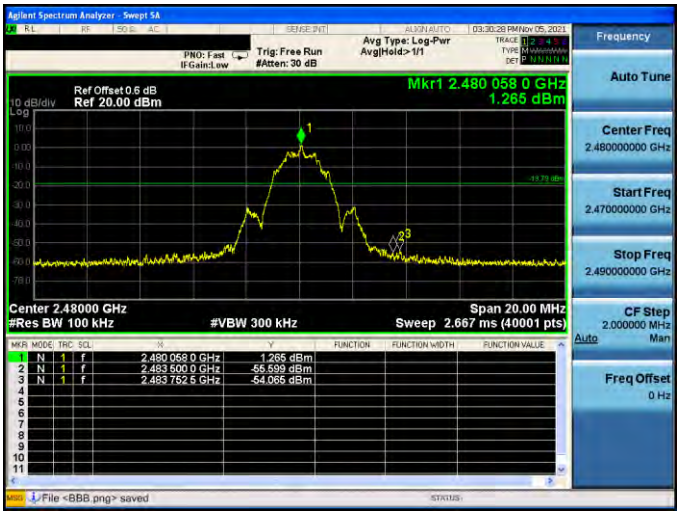
Reference level

Mode 2: LE, GFSK Continuous TX Mode	
低頻道	
中頻道	
高頻道	

Mode 3: 2LE, GFSK Continuous TX Mode	
低頻道	
中頻道	
高頻道	

Conducted Band Edge

Mode 2: LE, GFSK Continuous TX Mode	
低頻道	
高頻道	

Mode 3: 2LE, GFSK Continuous TX Mode	
低頻道	
高頻道	

發射頻寬之要求

操作模式 ：	Mode 2: LE, GFSK Continuous TX Mode Mode 3: 2LE, 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 2	低頻道	688.600	≥ 500
	中頻道	664.600	≥ 500
	高頻道	675.200	≥ 500
Mode 3	低頻道	1140.000	≥ 500
	中頻道	1146.000	≥ 500
	高頻道	1155.000	≥ 500

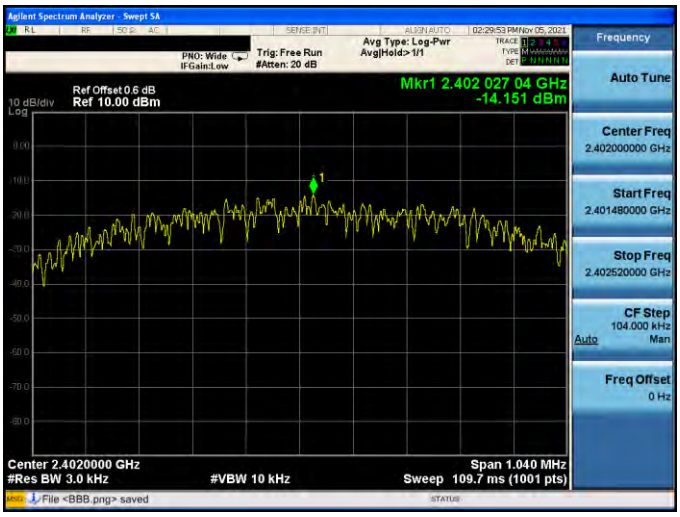
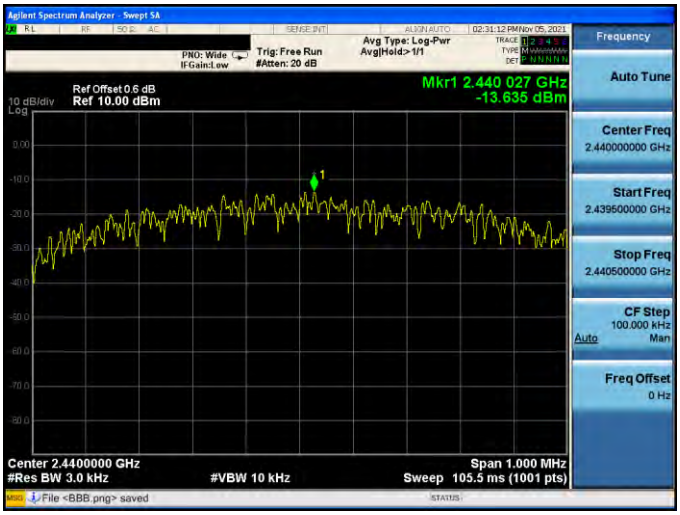
Mode 2: LE, GFSK Continuous TX Mode	
低頻道	
中頻道	
高頻道	

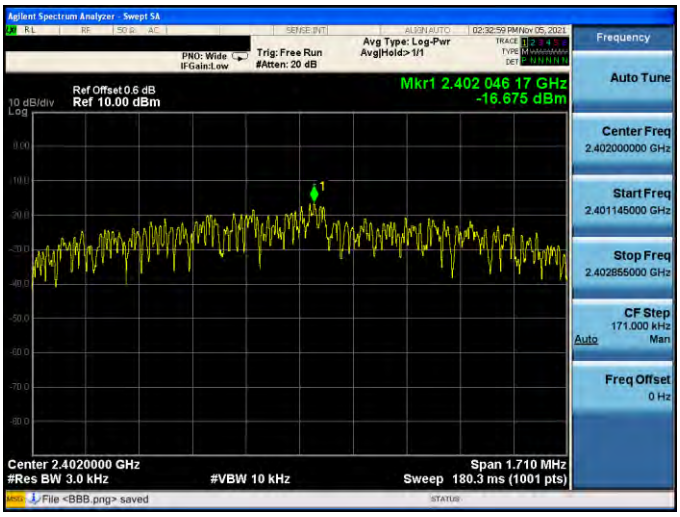
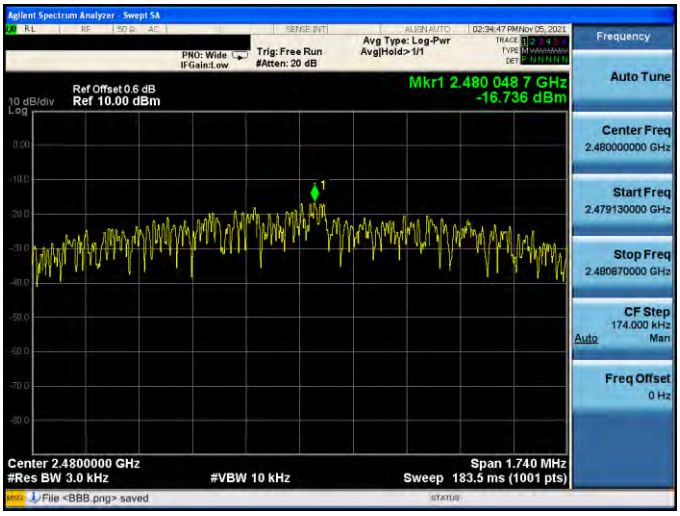
Mode 3: 2LE, GFSK Continuous TX Mode	
低頻道	
中頻道	
高頻道	

功率密度之要求

操作模式 ：	Mode 2: LE, GFSK Continuous TX Mode Mode 3: 2LE, GFSK Continuous TX Mode

操作模式	頻道	量測值 (dBm/3 kHz)	限制值 (dBm/3 kHz)
Mode 2	低頻道	-14.151	≤ 8
	中頻道	-13.635	≤ 8
	高頻道	-14.293	≤ 8
Mode 3	低頻道	-16.675	≤ 8
	中頻道	-15.957	≤ 8
	高頻道	-16.736	≤ 8

Mode 2: LE, GFSK Continuous TX Mode	
低頻道	
中頻道	
高頻道	

Mode 3: 2LE, GFSK Continuous TX Mode	
低頻道	
中頻道	
高頻道	

6. EUT Photos

請參照 文件編號: 21-1443_EUT External Photos 和 21-1443_EUT Internal Photos。

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