



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	2009DR49
版本(Rev.)	01
產品名稱	Amazfit GTS2
申請廠商	安徽華米信息科技有限公司
廠牌	AMAZFIT
型式(號)	A1969
產品試驗依據之標準	低功率射頻電機技術規範(LP0002) 107 年 1 月 10 日
報告發行日期	109 年 10 月 16 日

填發本型式認可報告之試驗機構 (認可代號)

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財團法人全國認證基金會
認證編號 : 1330
認證有效期間 : 108.09.06 ~ 111.09.05
認可能量範圍 : 低功率射頻電機技術規範(LP0002) (頻率範圍:9 kHz to 40 GHz)

免責聲明

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

版本 (Rev.)	發行日期	修訂內容	修訂者
00	109 年 09 月 23 日	初版發行	趙翊如
01	109 年 10 月 16 日	更新 2.5 章節 (P.10)	趙翊如

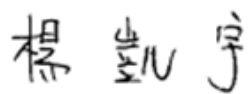
低功率射頻電機測試證明書

產品名稱：Amazfit GTS2
廠牌：AMAZFIT
型號：A1969
申請廠商：安徽華米信息科技有限公司
申請者地址：中國合肥市高新區望江西路800號國家動漫基地A4樓1201室
製造廠商：安徽華米信息科技有限公司
製造商地址：中國合肥市高新區望江西路800號國家動漫基地A4樓1201室
待測物電壓：DC 5 V, 500 mA
試驗電壓：110 Vac, 60 Hz
量測規範：低功率射頻電機技術規範(LP0002) 107年1月10日
試驗實驗室：晶復科技股份有限公司(桃園市八德區長安街140-1號)
樣品接受日期：109 年 09 月 14 日
試驗日期：109 年 09 月 17 日~109 年 09 月 22 日

報告中所描述之測試結果與待測設備之架構組合，均根據實際量測情況作詳實的記錄。
由測試結果顯示，上述待測設備樣機確實已符合低功率射頻電機技術規範(LP0002)所規定的各項限制值。

特此證明！

審核者：



(楊 凱 宇)

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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	Amazfit GTS2			
廠 牌	AMAZFIT			
型 號	A1969			
額 定 電 源	DC 5 V, 500 mA			
調 變 方 式	IEEE 802.11b: DSSS			
	IEEE 802.11g: OFDM			
	IEEE 802.11n 2.4 GHz 20 MHz: OFDM			
頻 率 使 用 範 圍	Mode		Frequency Range (MHz)	
	IEEE 802.11b / IEEE 802.11g / IEEE 802.11n 2.4 GHz 20 MHz		2412 – 2462	
天 線 廠 牌	AMAZFIT			
天 線 型 號	A1969 GPS&BLE antenna			
天 線 型 態	slot antenna			
天 線 增 益 值	-6.36 dBi			
R F 最 大 輸 出 功 率	Mode		Power	
	IEEE 802.11b		10.22 dBm	0.011 W
	IEEE 802.11g		15.18 dBm	0.033 W
	IEEE 802.11n 2.4 GHz 20 MHz		15.13 dBm	0.033 W

輸出/輸入埠說明：

輸 出 / 入 埠		數量	介面內容說明
1	DC Power Port	1	連接至充電底座

待測設備外圍說明：

電 源 線 類 別	本產品透過充電底座供電
附 屬 裝 置	請參見下列附屬裝置表

附屬裝置表：

裝置名稱	廠牌	型號	備註
內建固定式電池	ATL	PL471822	3.85 VDC, 240 mAh
充電底座	AMAZFIT	A1969	INPUT : 5 VDC, 500 mA OUTPUT : 5 VDC, 500 mA

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. 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: Sep. 17 ~ Sep. 22, 2020

測試者: 申世傑, 徐基哲

名稱	廠牌	型號	序號	本次校驗日期	校驗年限
Spectrum Analyzer	KEYSIGHT	N9010B	MY59071418	03/17/2020	1 year
Power Sensor	Anritsu	MA2411B	1126022	09/01/2020	1 year
Power Meter	Anritsu	ML2495A	1135009	09/01/2020	1 year

For Conducted Emission

Test Period: Sep. 19, 2020

測試者: 邱孝儒

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

For Radiated Emissions

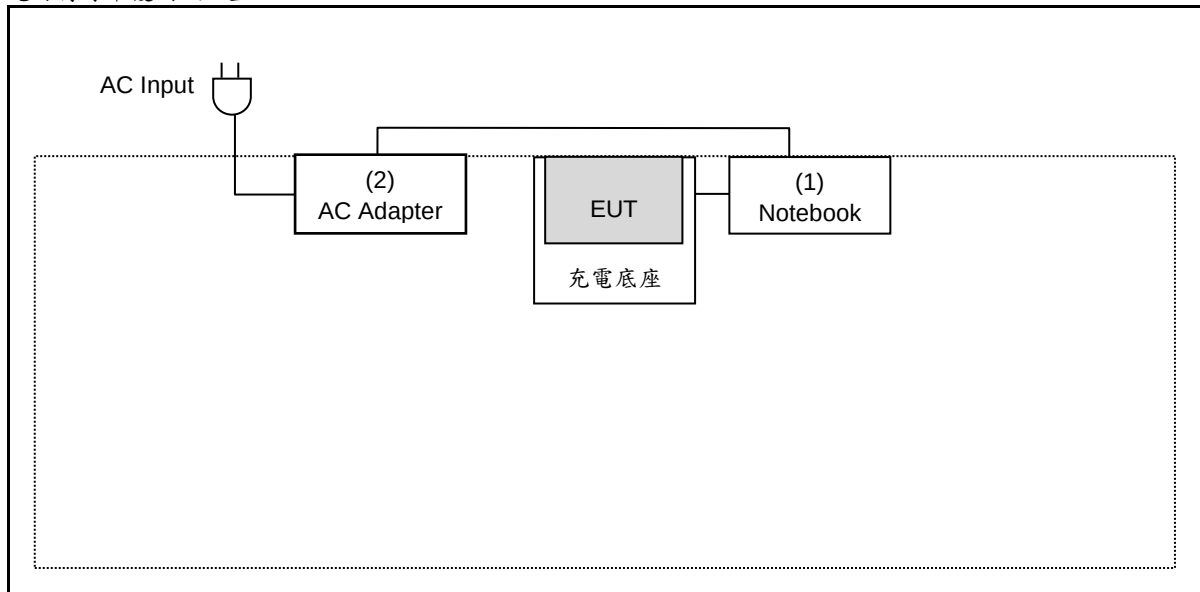
Test Period: Sep. 17 ~ Sep. 21, 2020

測試者: 葉佳原, 劉彥聖, 廖經雄

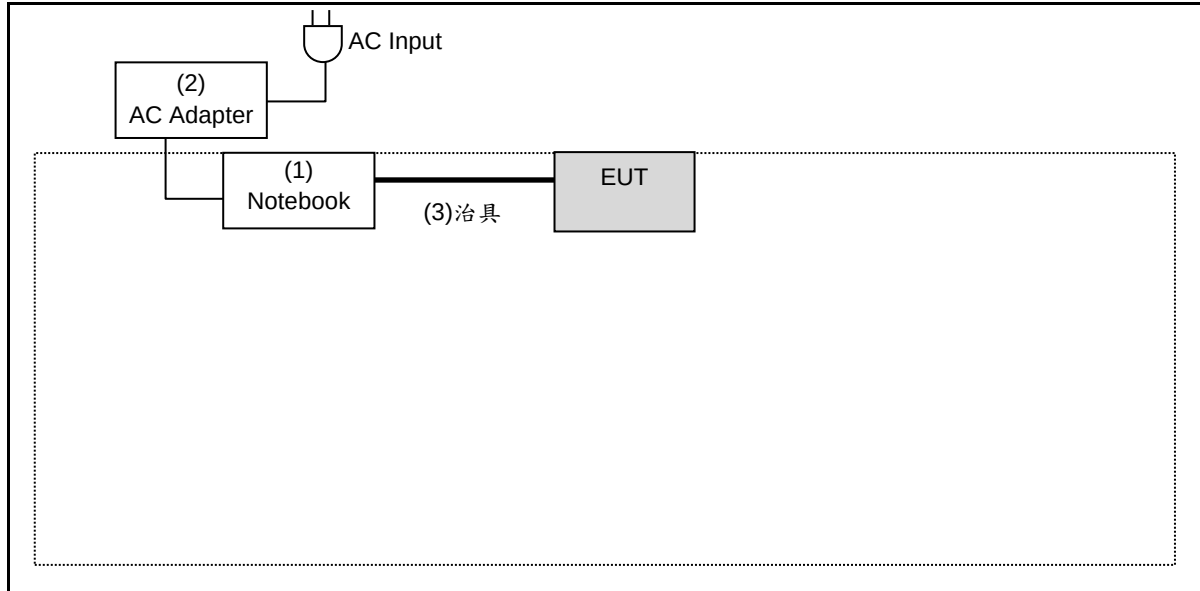
名稱	廠牌	型號	序號	本次校驗日期	校驗年限
Spectrum Analyzer	KEYSIGHT	N9030B	MY57143537	04/14/2020	1 year
Amplifier	Agilent	8449B	3008A02237	10/18/2019	1 year
Amplifier	Agilent	8447D	2944A11119	01/15/2020	1 year
天線	SCHWARZBECK MESS-ELEKTRONIK	VULB9168	01146	07/03/2020	1 year
天線(1~18 GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	02207	06/30/2020	1 year
天線(18~40 GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	08/18/2020	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		廠牌	型號	序號	電源線	備註
(1)	Notebook	ASUS	P1448U	---	---	(實驗室提供)
(2)	AC Adapter	ASUS	ADP-65GD D	---	Non-Shielded, 0.8 m	INPUT : 100-240 VAC, 50/60 Hz, 1.5 A OUTPUT : 19 VDC , 3.42 A (實驗室提供)
(3)	治具	AMAZFIT	A1969	--	--	(申請者提供)
(4)	AC Adapter	HUAWEI	HW-050100U01	---	---	INPUT : 100-240 VAC, 50/60 Hz, 0.2 A OUTPUT : 5 VDC, 1 A (實驗室提供)

註：本案經申請者切結器材不提供隨貨配件，配件由實驗室(或申請者)提供併同檢驗。

2.4 測試軟體版本

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

2.5 測試模式

使用定頻模式量測

Test Mode
Mode 1: Transmit Mode
Mode 2: IEEE 802.11b Continuous TX Mode
Mode 3: IEEE 802.11g Continuous TX Mode
Mode 4: IEEE 802.11n 2.4 GHz 20 MHz Continuous TX Mode
Mode 5: Receiver Mode

測試搭配組合：

EUT Configure Mode	CE	RE<1 GHz	RE $\geq$ 1 GHz	備註	
內建固定式電池	V	V	V		
充電底座	V		---		
Notebook	V (Note)	V	V	測試週邊(1)	Test Mode使用
AC Adapter	V (Note)	V	V	測試週邊(2)	Test Mode使用
治具	x	V	V	測試週邊(3)	Test Mode使用
AC Adapter			---	測試週邊(4)	

Note: 使用 Notebook 供電

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

RE<1 GHz : Radiated Emission below 1 GHz

CE : Conducted Emission

V : Final mode

X : Non support

--- : No evaluation required

Blank Space : Pre-test mode

Test Mode	ANT-0
Mode 2	V
Mode 3	V
Mode 4	V

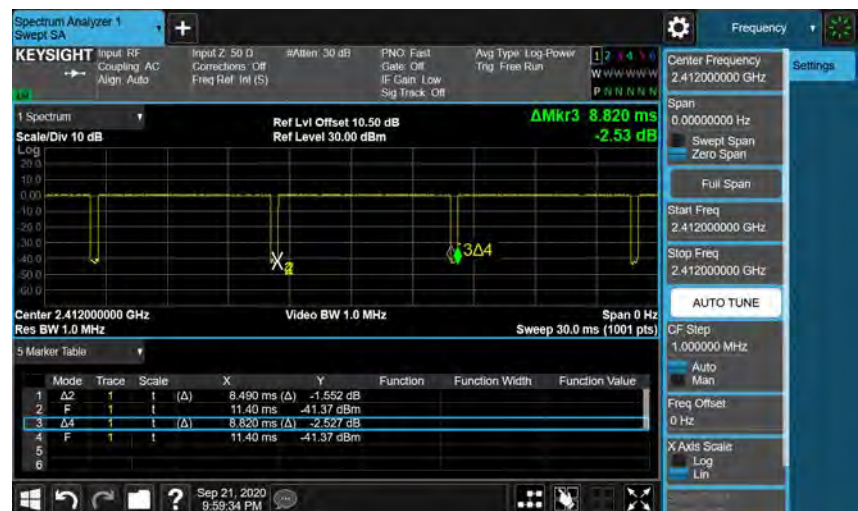
Test Mode	Antenna Delivery	Data Rate (Mbps)	Test Channel
Mode 2	1TX / 1RX	1	1, 6, 11
Mode 3	1TX / 1RX	6	1, 6, 11
Mode 4	1TX / 1RX	6.5	1, 6, 11

Duty cycle

Test Mode	Frequency (MHz)	on time (ms)	on+off time (ms)	Duty cycle	Duty Factor (dB)	1/T Minimun VBW (kHz)
Mode 2	2412	8.490	8.820	0.963	0.166	0.118
Mode 3	2412	1.410	1.800	0.783	1.061	0.709
Mode 4	2412	1.330	2.320	0.573	2.416	0.752

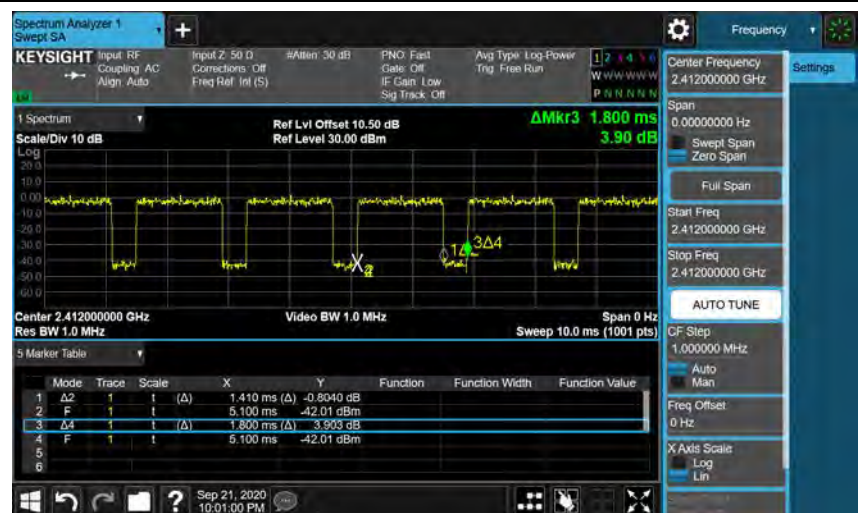
Mode 2: IEEE 802.11b Continuous TX Mode

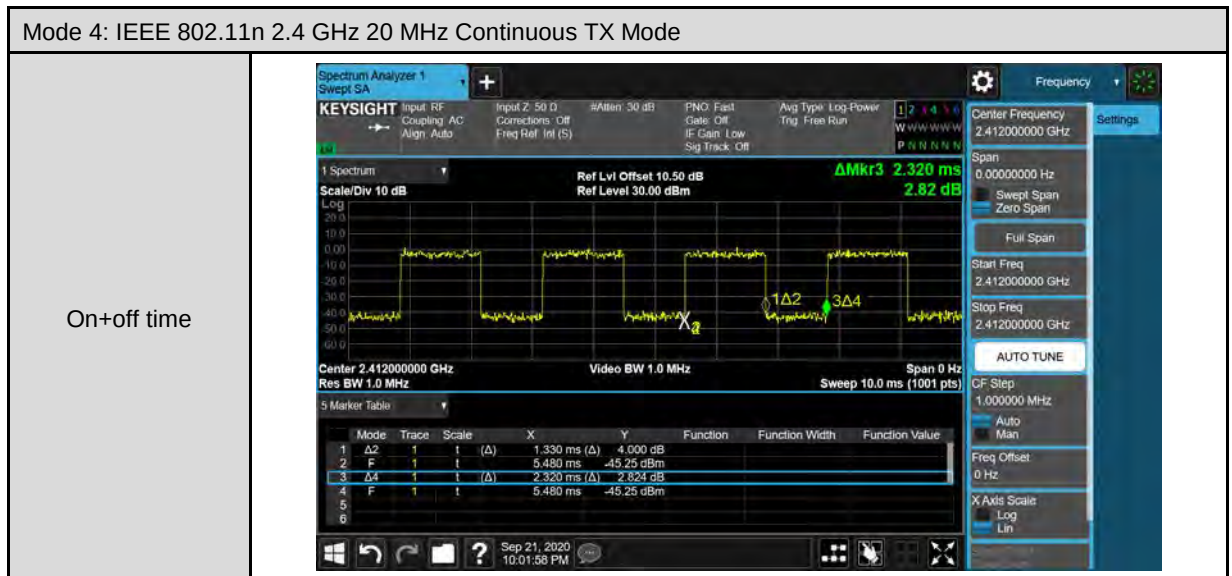
On+off time



Mode 3: IEEE 802.11g Continuous TX Mode

On+off time





2.6 量測不確定度

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

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

2.7 試驗環境

產品測試時之實驗室環境條件如下：

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

3. 測試項目與結果判定總表

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

2.4 GHz 頻段適用下列表格

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	低功率射頻電機技術規範 2.3 節	請參閱 4.1 節	請參閱 2.1 節	符合
2	場強輻射	低功率射頻電機技術規範 2.8 節、2.9 節、3.10.1.5.(1)節	請參閱 4.2.1 節	請參閱 2.1 節	符合
3	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.(1)節	請參閱 4.2.1 節	請參閱 2.1 節	符合
4	峰值傳導輸出功率	低功率射頻電機技術規範 3.10.1.2(1)(C)節	請參閱 4.2.2 節	請參閱 2.1 節	符合
5	天線規格	低功率射頻電機技術規範 3.10.1.3(3)、3.10.1.4 節	請參閱 4.2.3 節	-----	符合
6	非必要頻帶	低功率射頻電機技術規範 3.10.1.5(1)節	請參閱 4.2.4 節	請參閱 2.1 節	符合
7	6 dB 頻寬	低功率射頻電機技術規範 3.10.1.6(2)(A)節	請參閱 4.2.5 節	請參閱 2.1 節	符合
8	峰值發射功率頻譜密度	低功率射頻電機技術規範 3.10.1.6(2)(B)節	請參閱 4.2.6 節	請參閱 2.1 節	符合
9	電波暴露量之評估	低功率射頻電機技術規範 5.20.2.1 節、5.20.2.2 節	請參閱 4.2.7 節	請參閱 2.1 節	符合

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

Decision Rule

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

4. 測試項目表列

4.1 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 0.15MHz 至 30 MHz 之間之電源線傳導放射強度。

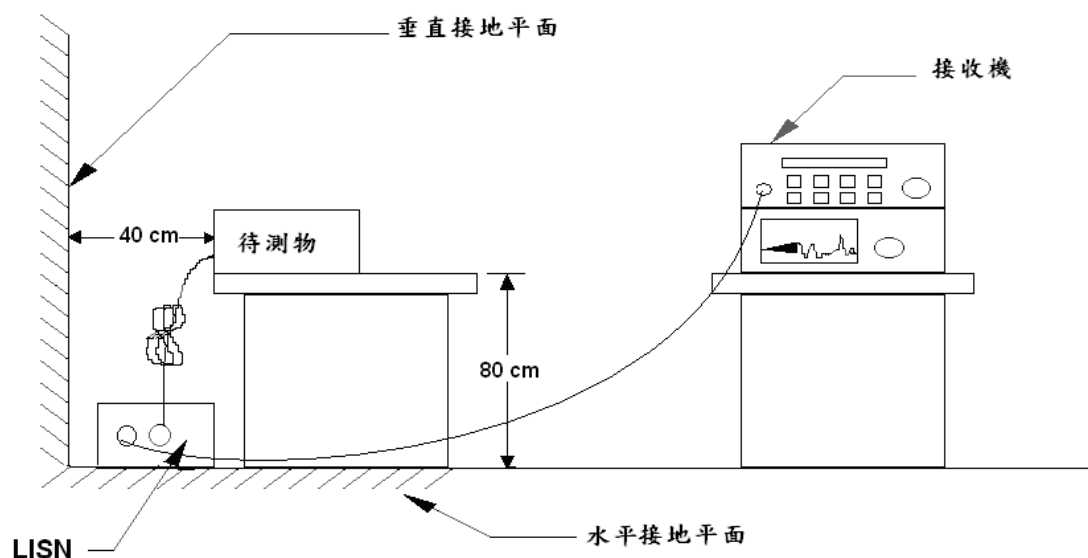
干擾值之計算

電源傳導干擾電壓之計算公式如下

結果值 = 儀器讀值(QP/AV) + 校正因子

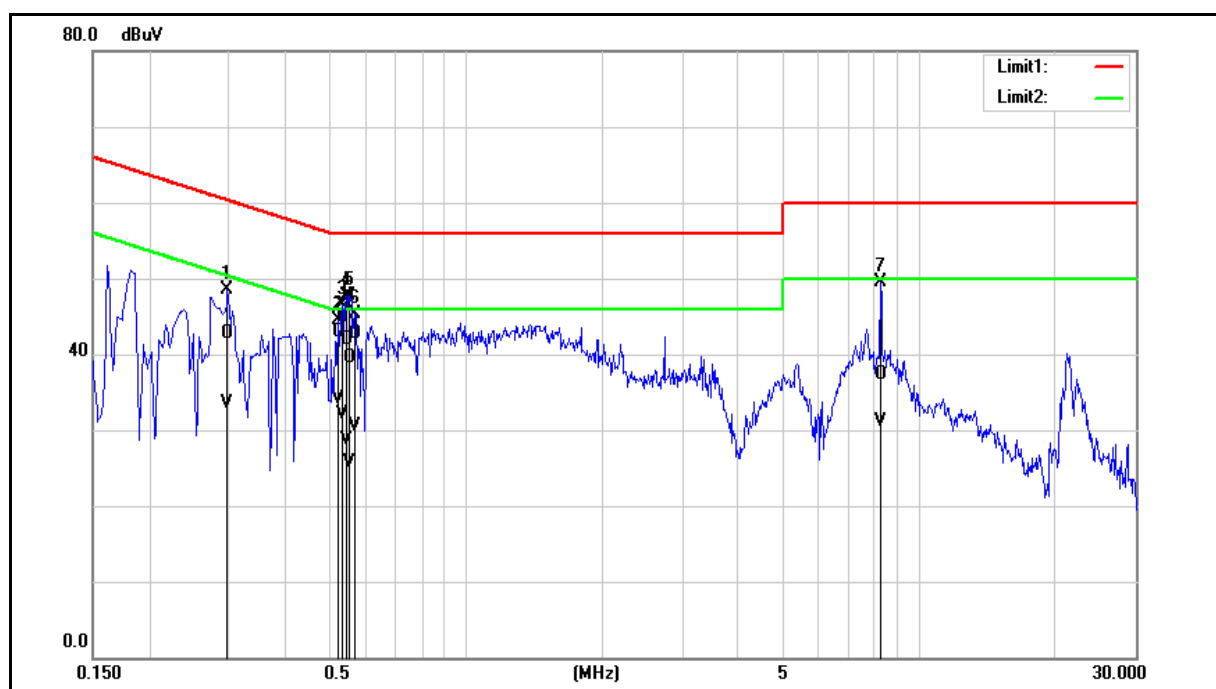
其中校正因子為：饋線損失 + 電源阻抗模擬網路損失

測試架構圖：



測試結果:

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

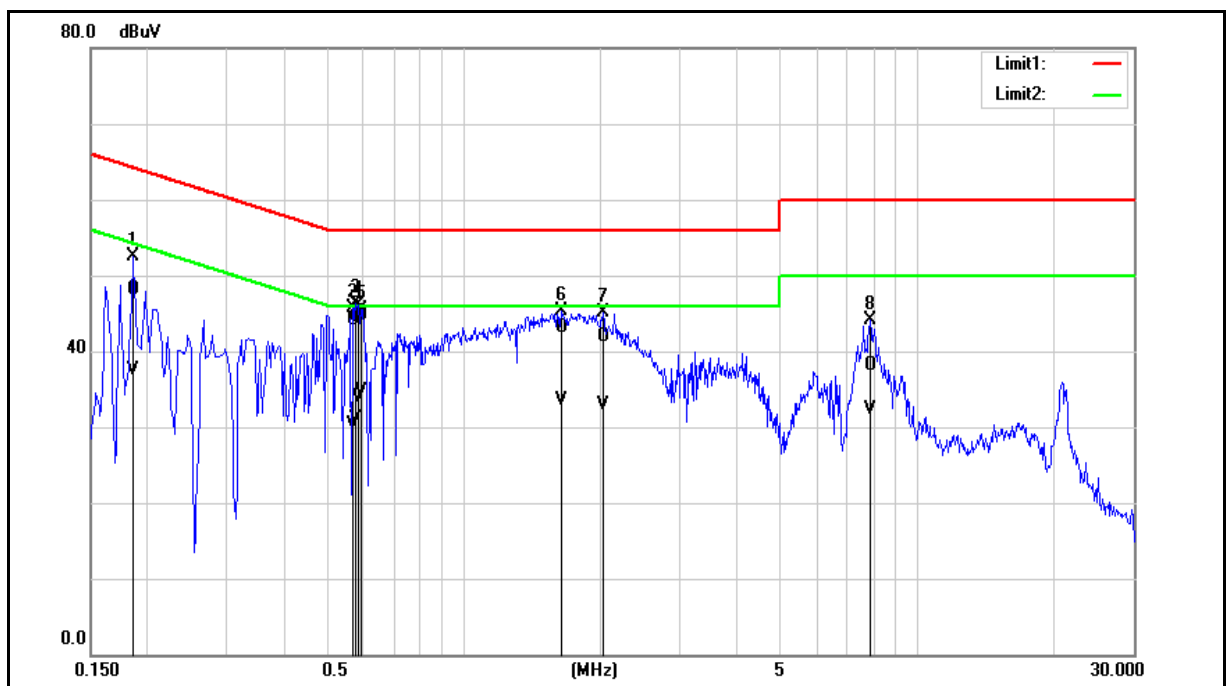


No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.2980	32.96	23.70	9.71	42.67	33.41	60.30	50.30	-17.63	-16.89	Pass
2	0.5220	33.12	24.35	9.71	42.83	34.06	56.00	46.00	-13.17	-11.94	Pass
3	0.5340	35.14	22.32	9.71	44.85	32.03	56.00	46.00	-11.15	-13.97	Pass
4	0.5460	32.15	18.94	9.71	41.86	28.65	56.00	46.00	-14.14	-17.35	Pass
5	0.5540	29.80	15.92	9.71	39.51	25.63	56.00	46.00	-16.49	-20.37	Pass
6	0.5700	32.96	20.85	9.71	42.67	30.56	56.00	46.00	-13.33	-15.44	Pass
7	8.2220	27.38	21.20	9.85	37.23	31.05	60.00	50.00	-22.77	-18.95	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	0.1860	38.47	27.89	9.69	48.16	37.58	64.21	54.21	-16.05	-16.63	Pass
2	0.5700	34.46	20.67	9.70	44.16	30.37	56.00	46.00	-11.84	-15.63	Pass
3	0.5780	34.85	21.41	9.70	44.55	31.11	56.00	46.00	-11.45	-14.89	Pass
4	0.5860	35.31	24.17	9.70	45.01	33.87	56.00	46.00	-10.99	-12.13	Pass
5	0.5940	35.07	24.94	9.70	44.77	34.64	56.00	46.00	-11.23	-11.36	Pass
6	1.6420	33.44	23.85	9.74	43.18	33.59	56.00	46.00	-12.82	-12.41	Pass
7	2.0260	32.08	23.19	9.75	41.83	32.94	56.00	46.00	-14.17	-13.06	Pass
8	7.8700	28.34	22.53	9.85	38.19	32.38	60.00	50.00	-21.81	-17.62	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)。

4.2 2.4 GHz 檢驗項目

4.2.1 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 3.10.1.2(1)(C)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($\mu\text{V}/\text{m}$)	測距(m)
0.009 - 0.490(含)	2,400/頻率(千赫)	300
0.490 (不含) – 1.705 (含)	24,000/頻率(千赫)	30
1.705(不含) – 30 (不含)	30	30
30 (含) – 88 (含)	100	3
88 (不含)- 216 (含)	150	3
216 (不含)- 960 (含)	200	3
960 (不含)以上	500	3

測試方法：

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

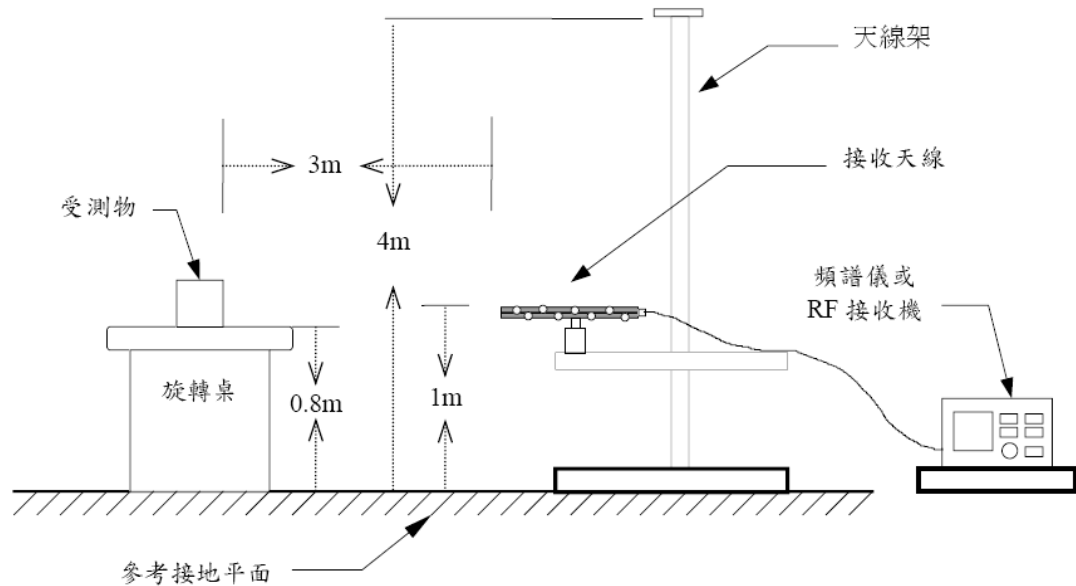
場強度之計算

場強之計算公式為：結果值 = 讀值 + 校正因子

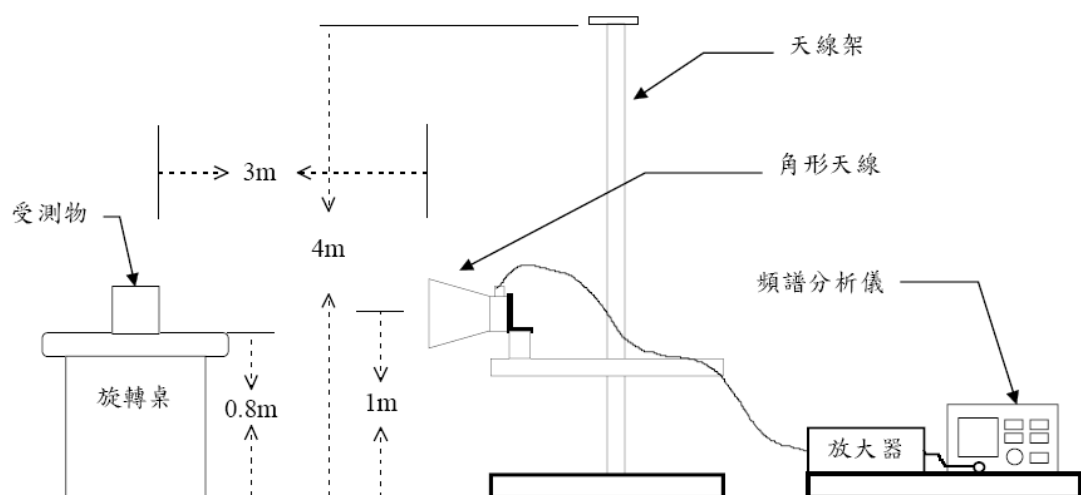
其中校正因子為：天線因子+ 饋線損失 + 濾波器損失（若有使用） - 放大器增益（若有使用）

測試架構圖：

量測頻率低於 1 GHz 以下之測試配置

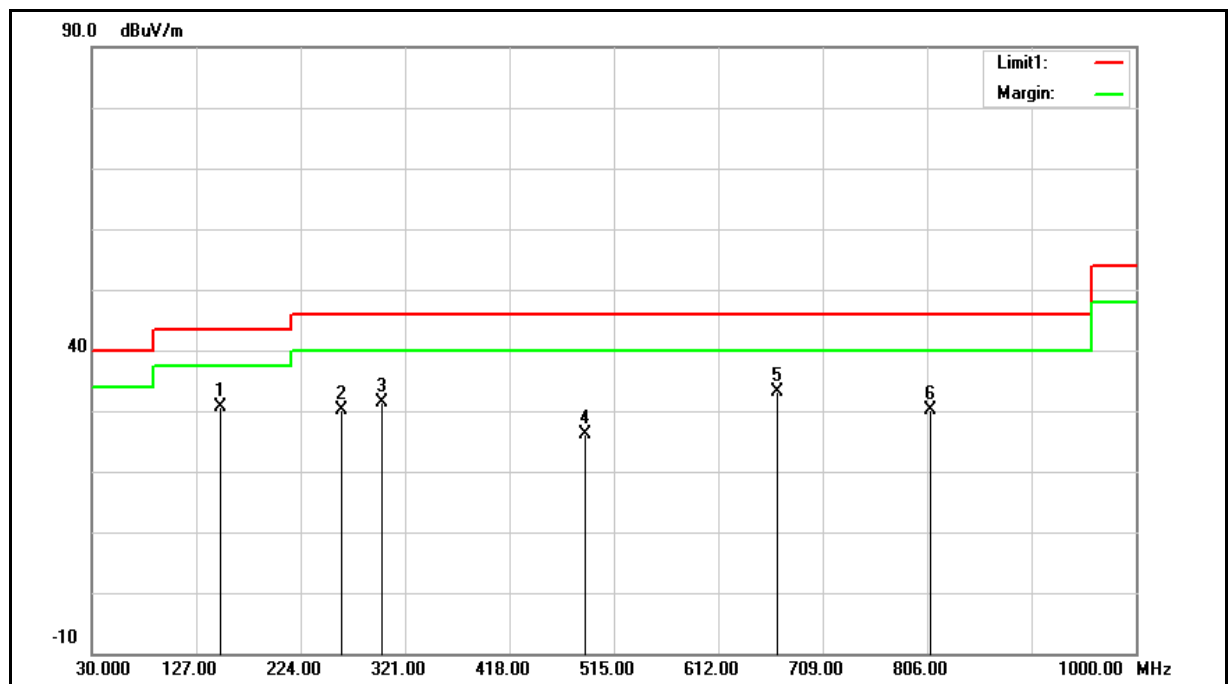


量測頻率高於 1 GHz 以上之測試配置



其它不必要之訊號 (1 GHz 以下)

Standard:	LP0002	Test Distance:	3 m
Test item:	Radiated Emission		
Frequency:	2462 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	149.3100	38.47	-7.73	30.74	43.50	-12.76	QP
2	261.8300	38.20	-8.06	30.14	46.00	-15.86	QP
3	299.6600	37.95	-6.59	31.36	46.00	-14.64	QP
4	488.8100	29.84	-3.77	26.07	46.00	-19.93	QP
5	666.3200	33.77	-0.55	33.22	46.00	-12.78	QP
6	808.9100	28.47	1.64	30.11	46.00	-15.89	QP

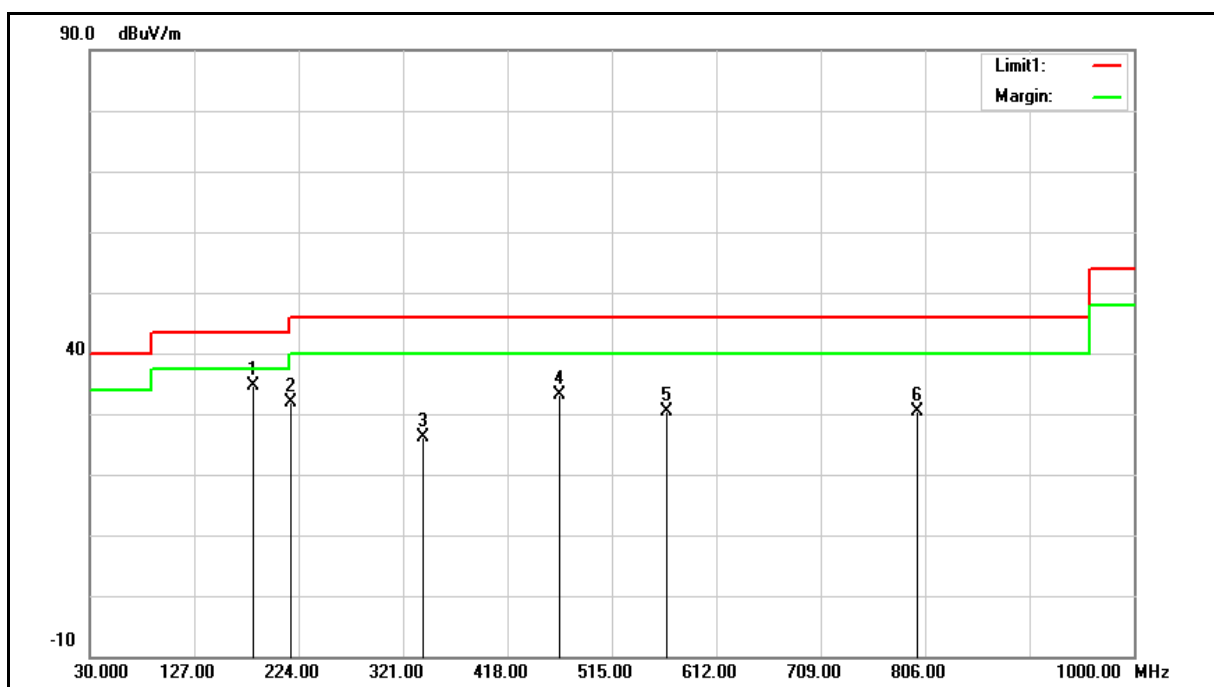
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

Example: 30.74 = -7.73 + 38.47

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

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

Standard:	LP0002	Test Distance:	3 m
Test item:	Radiated Emission		
Frequency:	2462 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	181.3200	43.72	-9.20	34.52	43.50	-8.98	QP
2	217.2100	41.65	-9.71	31.94	46.00	-14.06	QP
3	339.4300	32.03	-5.85	26.18	46.00	-19.82	QP
4	466.5000	36.96	-3.88	33.08	46.00	-12.92	QP
5	565.4400	32.57	-2.15	30.42	46.00	-15.58	QP
6	799.2100	28.80	1.52	30.32	46.00	-15.68	QP

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

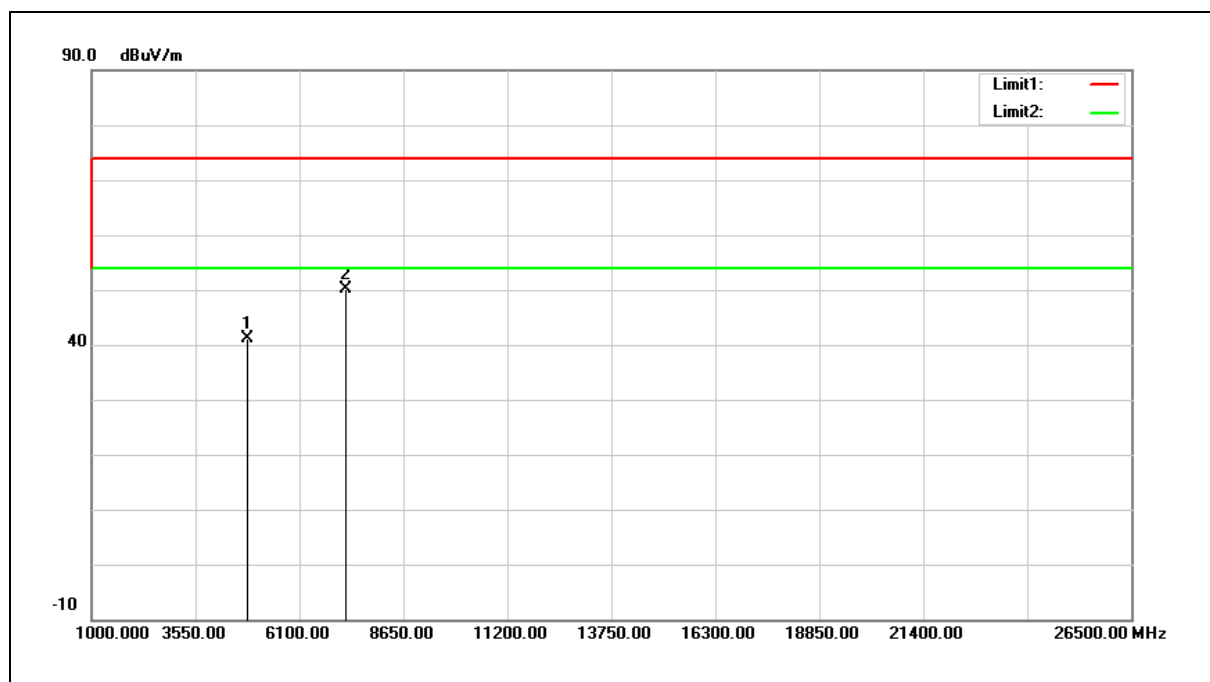
Example: $34.52 = -9.20 + 43.72$

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.

場強輻射量側 (1 GHz 以上)

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2412 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	4824.000	38.38	2.84	41.22	74.00	-32.78	peak
2	7236.000	41.14	8.91	50.05	74.00	-23.95	peak

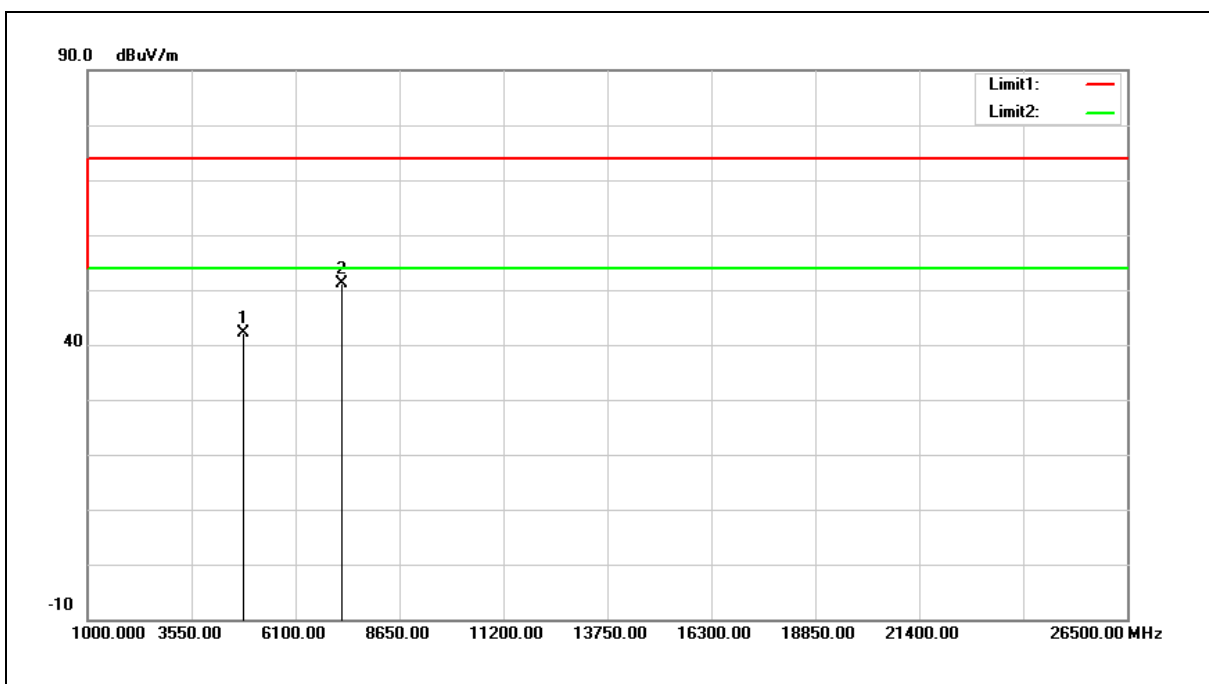
Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

Example: $41.22 = 2.84 + 38.38$

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:	2412 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	4824.000	39.41	2.84	42.25	74.00	-31.75	peak
2	7236.000	42.17	8.91	51.08	74.00	-22.92	peak

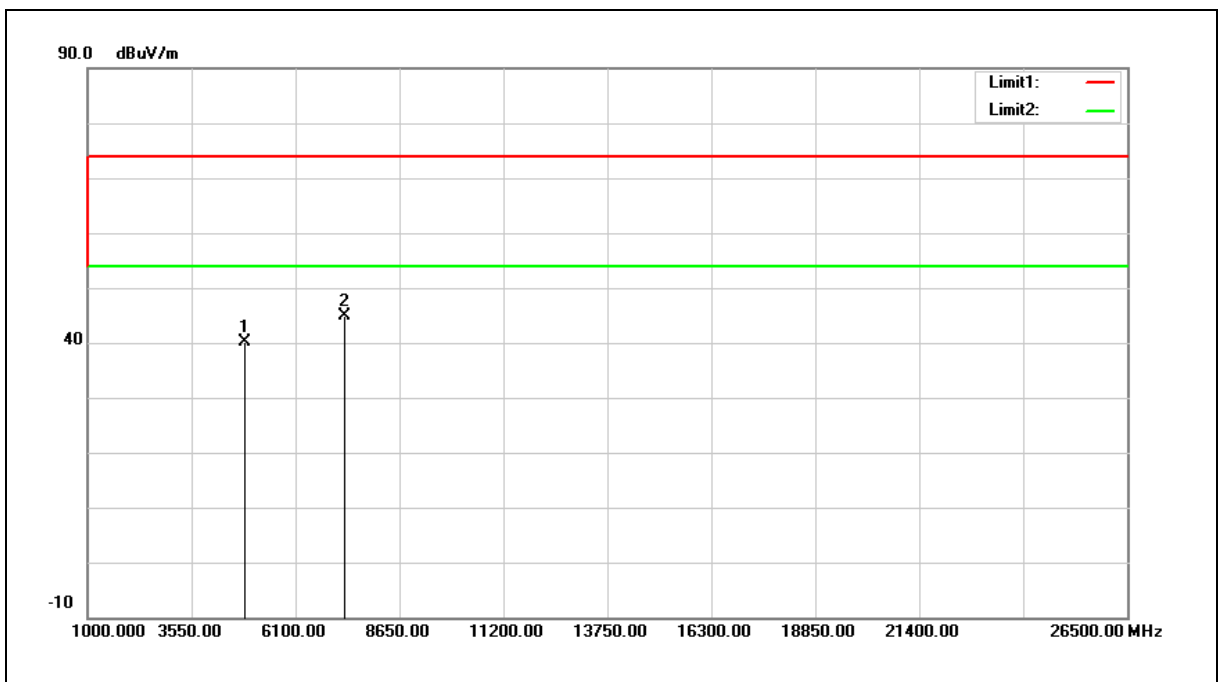
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

Example: $42.25 = 2.84 + 39.41$

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:	2437 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



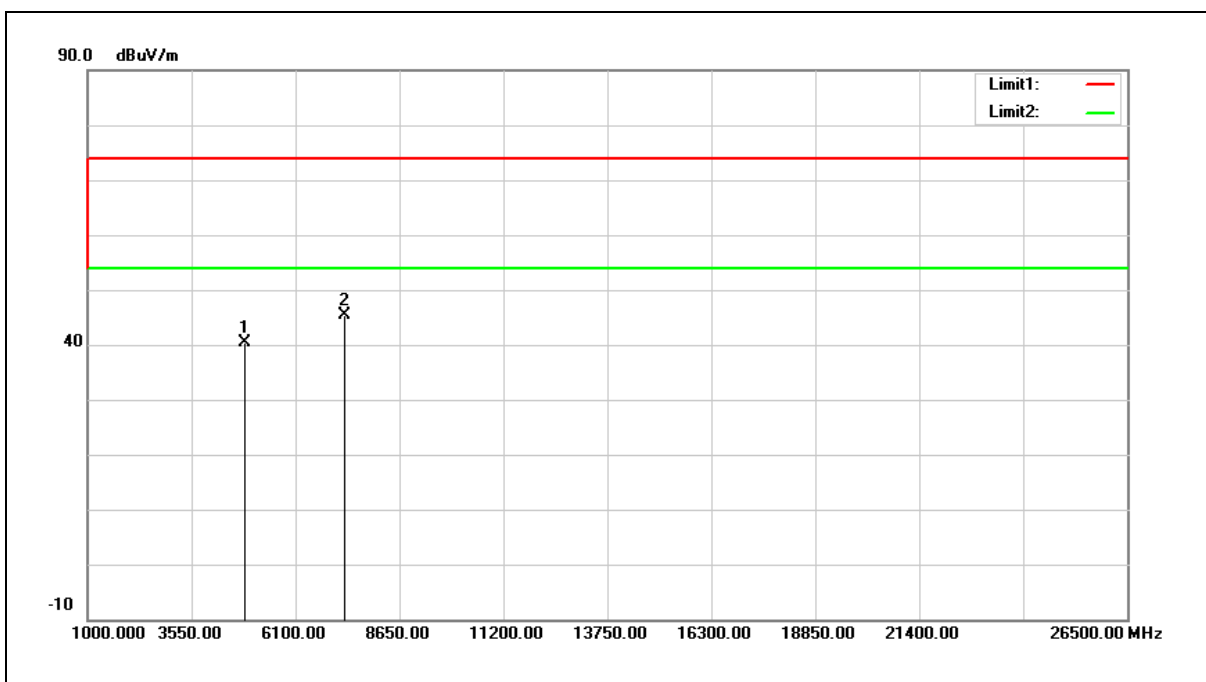
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	37.10	2.96	40.06	74.00	-33.94	peak
2	7311.000	35.62	9.14	44.76	74.00	-29.24	peak

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:	2437 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



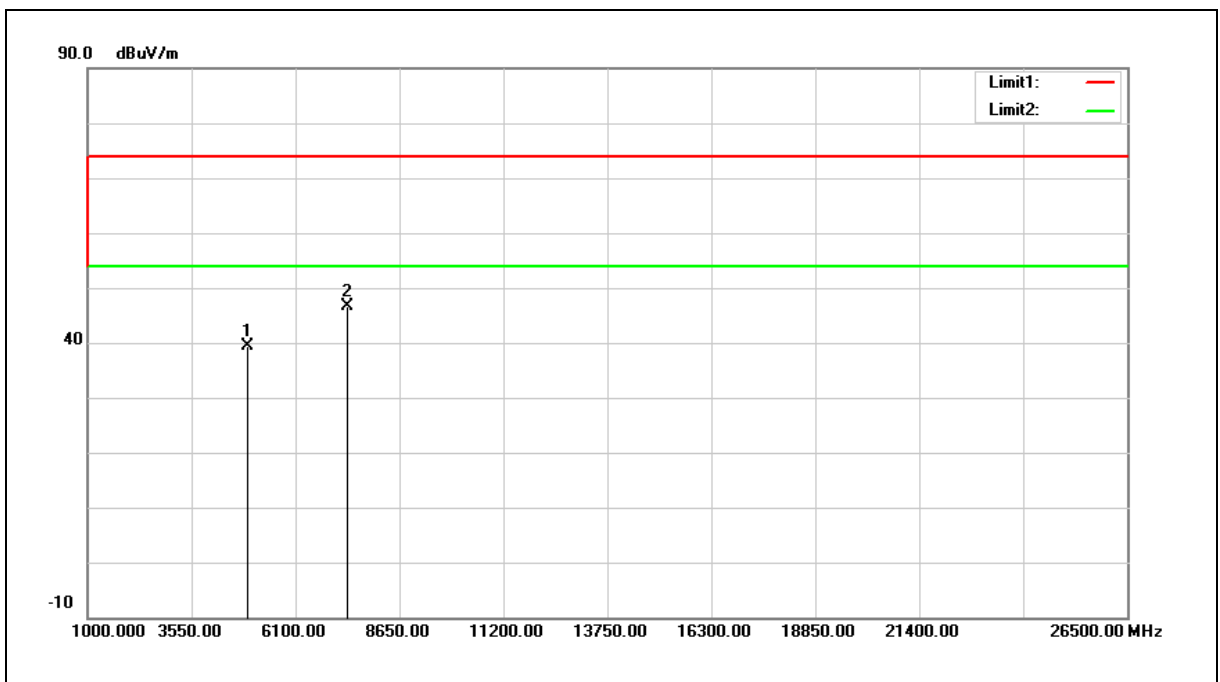
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	37.41	2.96	40.37	74.00	-33.63	peak
2	7311.000	36.35	9.14	45.49	74.00	-28.51	peak

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		
Frequency:	2462 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



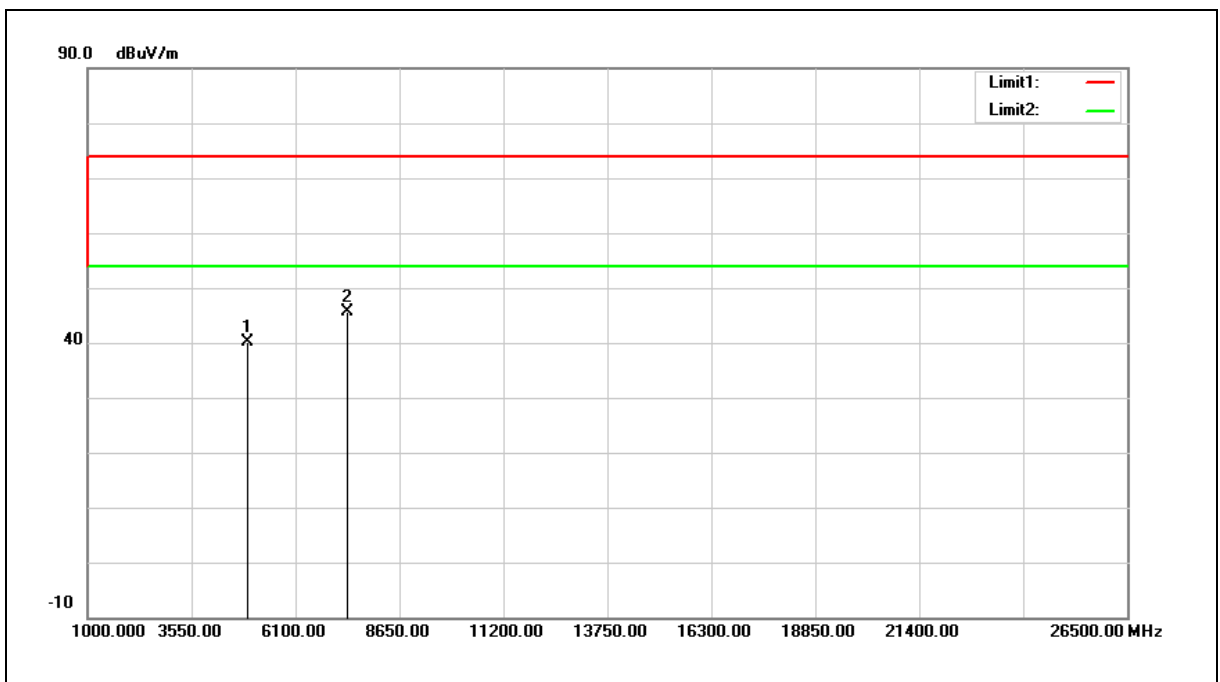
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	36.22	3.08	39.30	74.00	-34.70	peak
2	7386.000	37.21	9.38	46.59	74.00	-27.41	peak

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		
Frequency:	2462 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



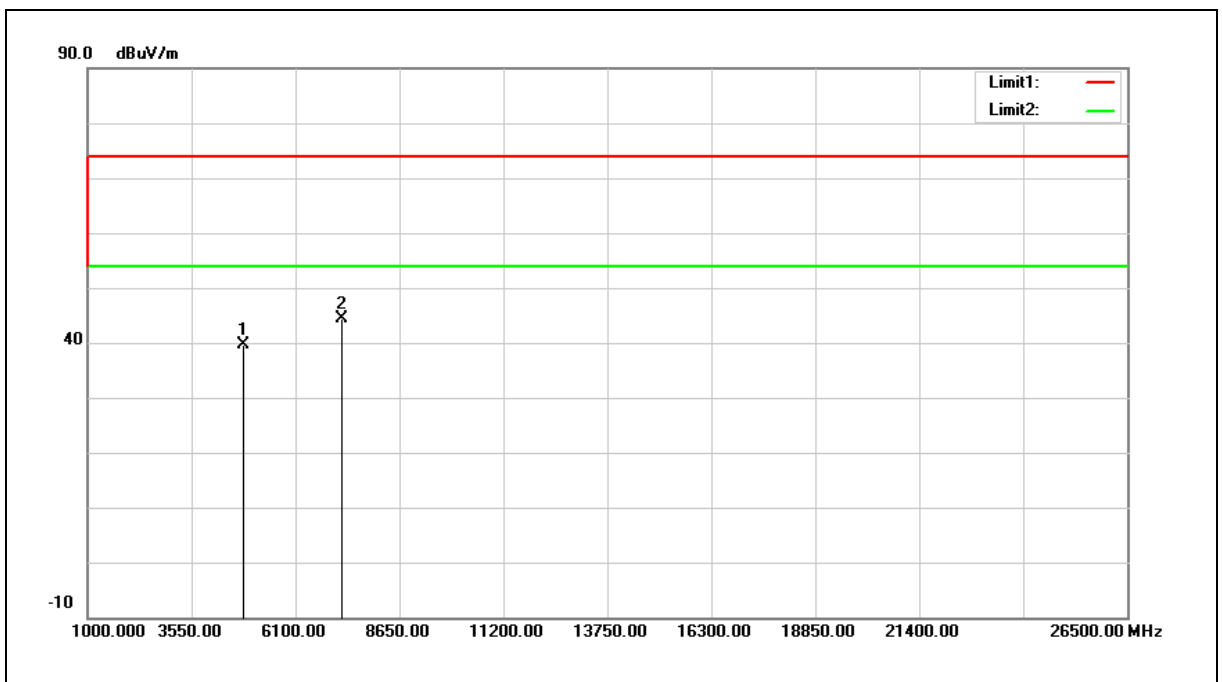
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	36.94	3.08	40.02	74.00	-33.98	peak
2	7386.000	36.29	9.38	45.67	74.00	-28.33	peak

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:	2412 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



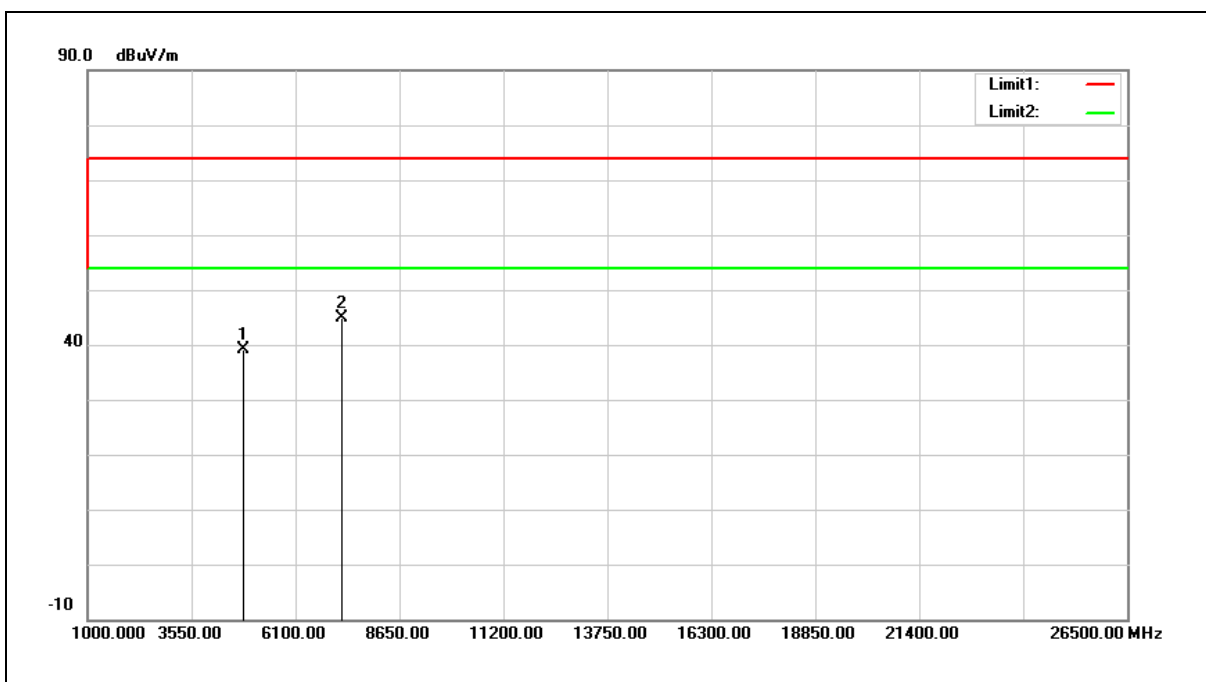
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.000	36.86	2.84	39.70	74.00	-34.30	peak
2	7236.000	35.37	8.91	44.28	74.00	-29.72	peak

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:	Harmonic		
Frequency:	2412 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



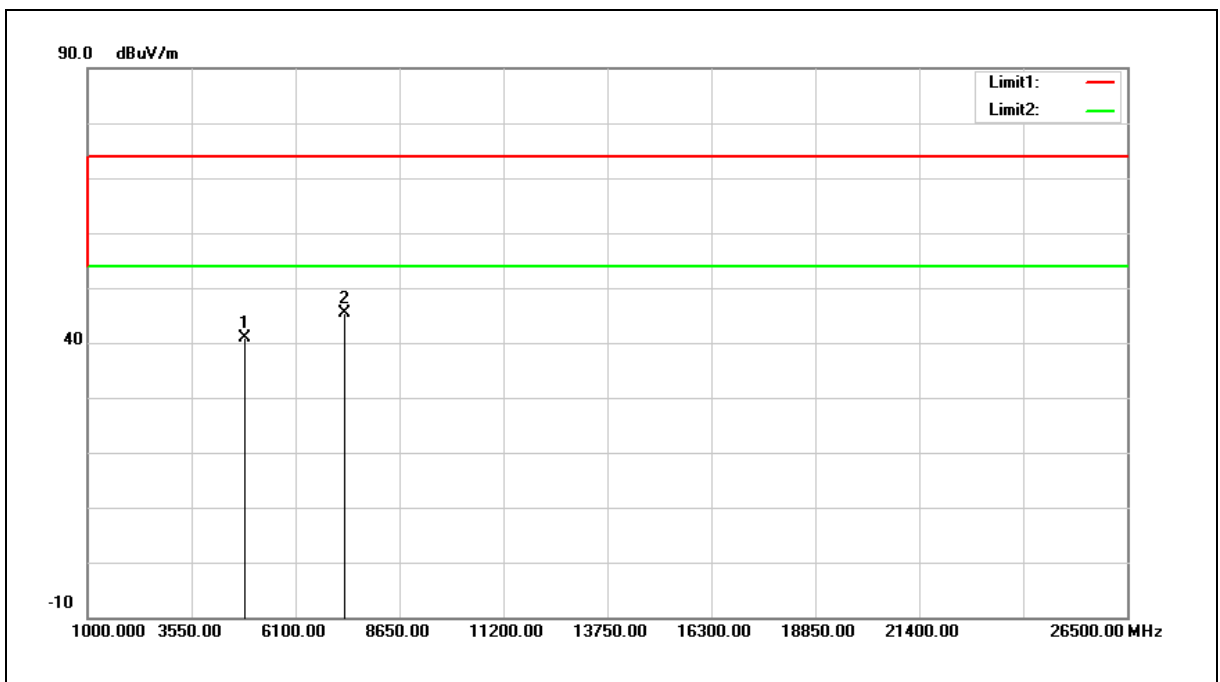
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.000	36.25	2.84	39.09	74.00	-34.91	peak
2	7236.000	35.97	8.91	44.88	74.00	-29.12	peak

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:	Harmonic		
Frequency:	2437 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



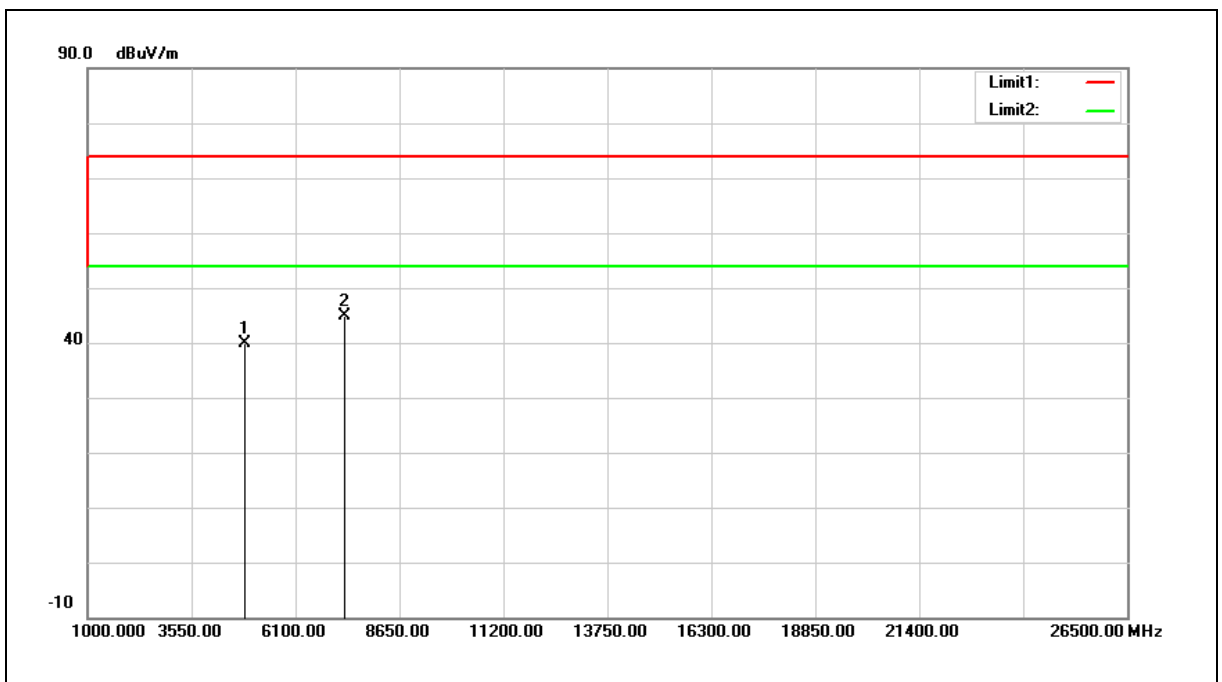
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	37.97	2.96	40.93	74.00	-33.07	peak
2	7311.000	36.25	9.14	45.39	74.00	-28.61	peak

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

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

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

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2437 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



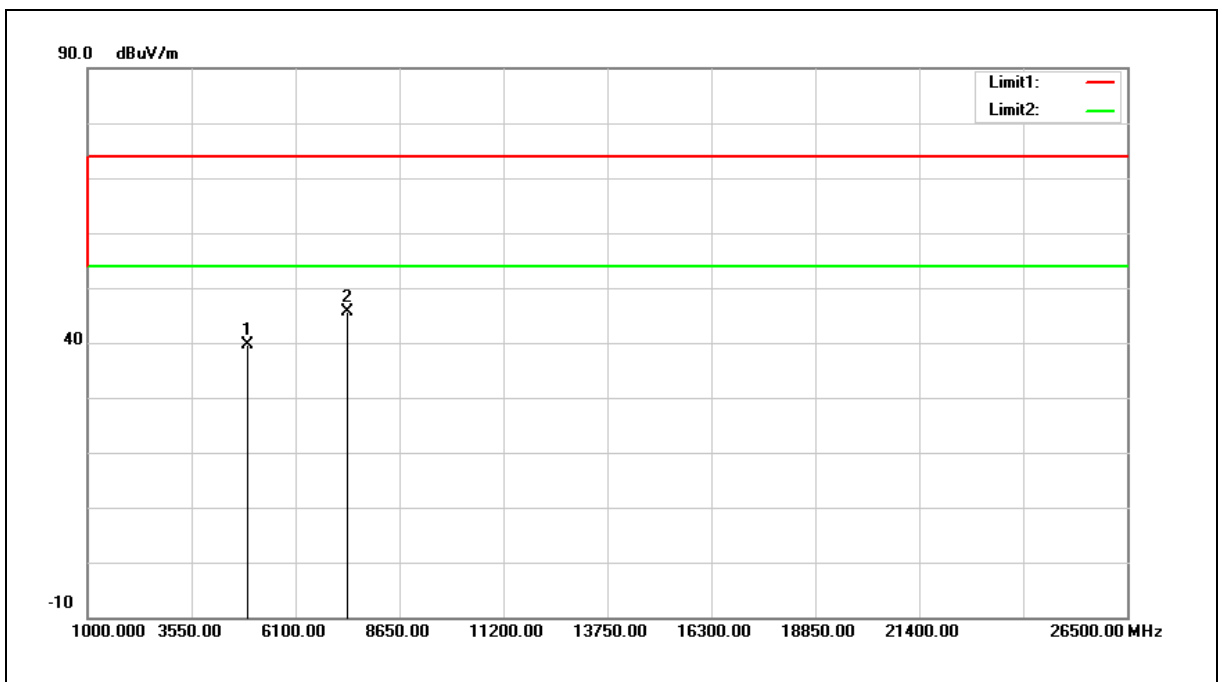
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	36.90	2.96	39.86	74.00	-34.14	peak
2	7311.000	35.78	9.14	44.92	74.00	-29.08	peak

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:	2462 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



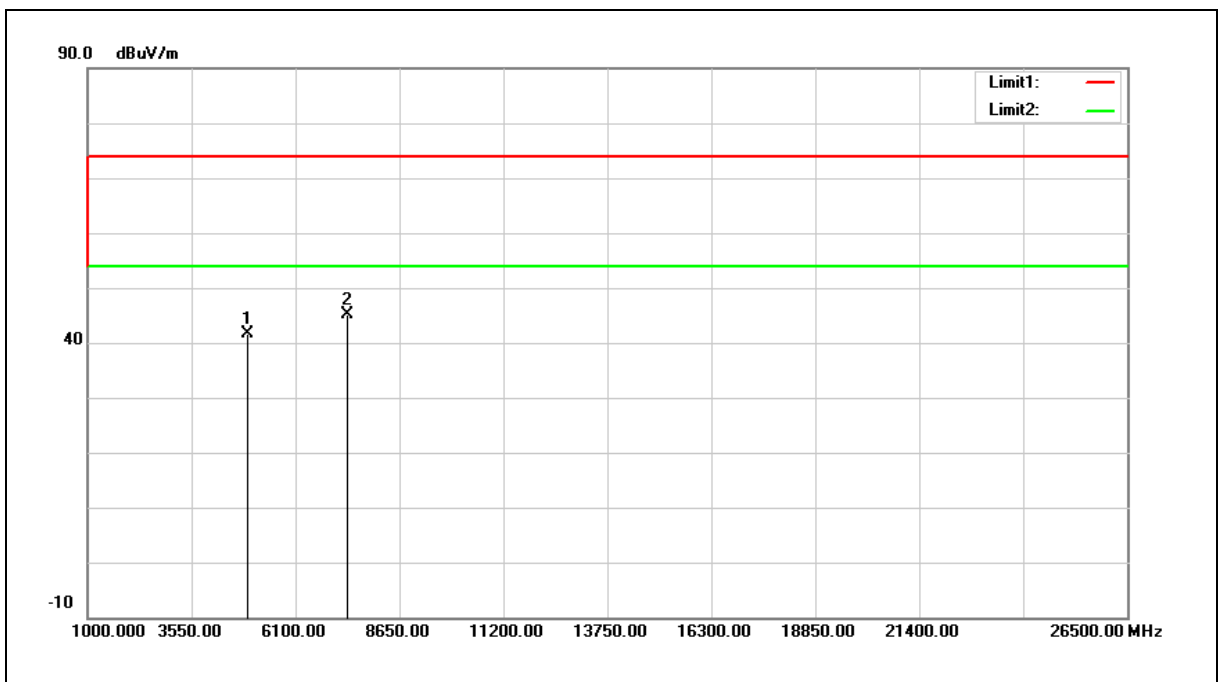
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	36.44	3.08	39.52	74.00	-34.48	peak
2	7386.000	36.27	9.38	45.65	74.00	-28.35	peak

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:	2462 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



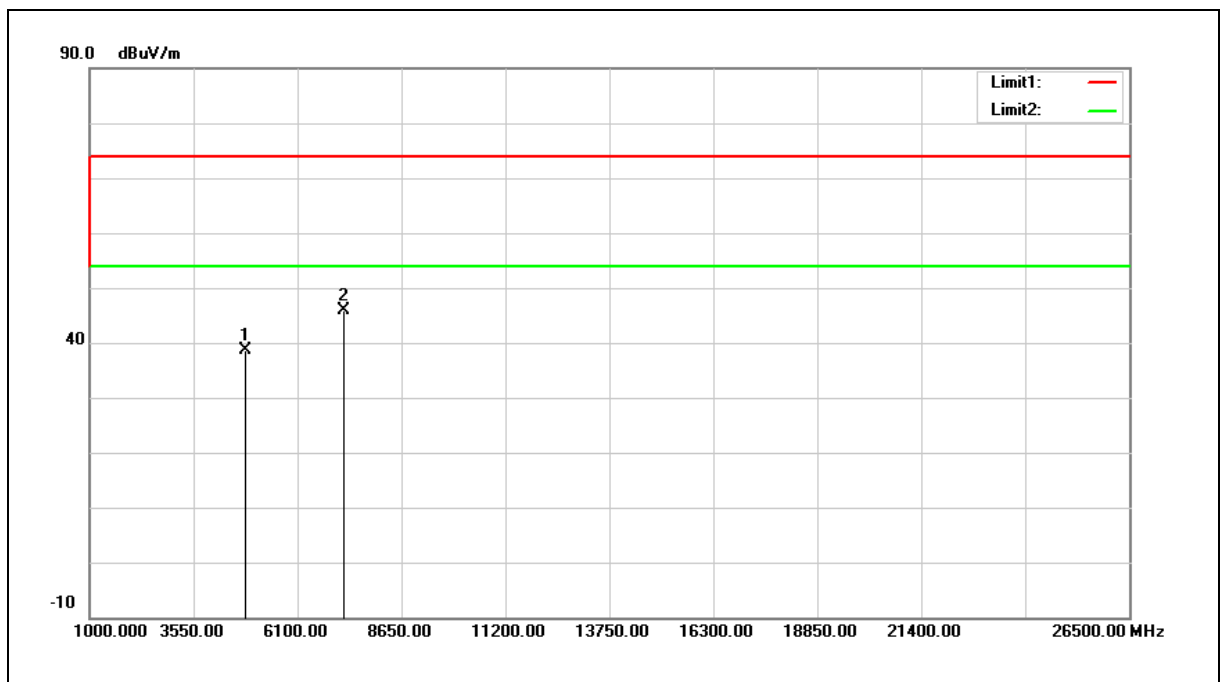
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	38.43	3.08	41.51	74.00	-32.49	peak
2	7386.000	35.73	9.38	45.11	74.00	-28.89	peak

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:	2412 MHz		
Mode:	Mode 4		
Ant.Polar.:	Horizontal		



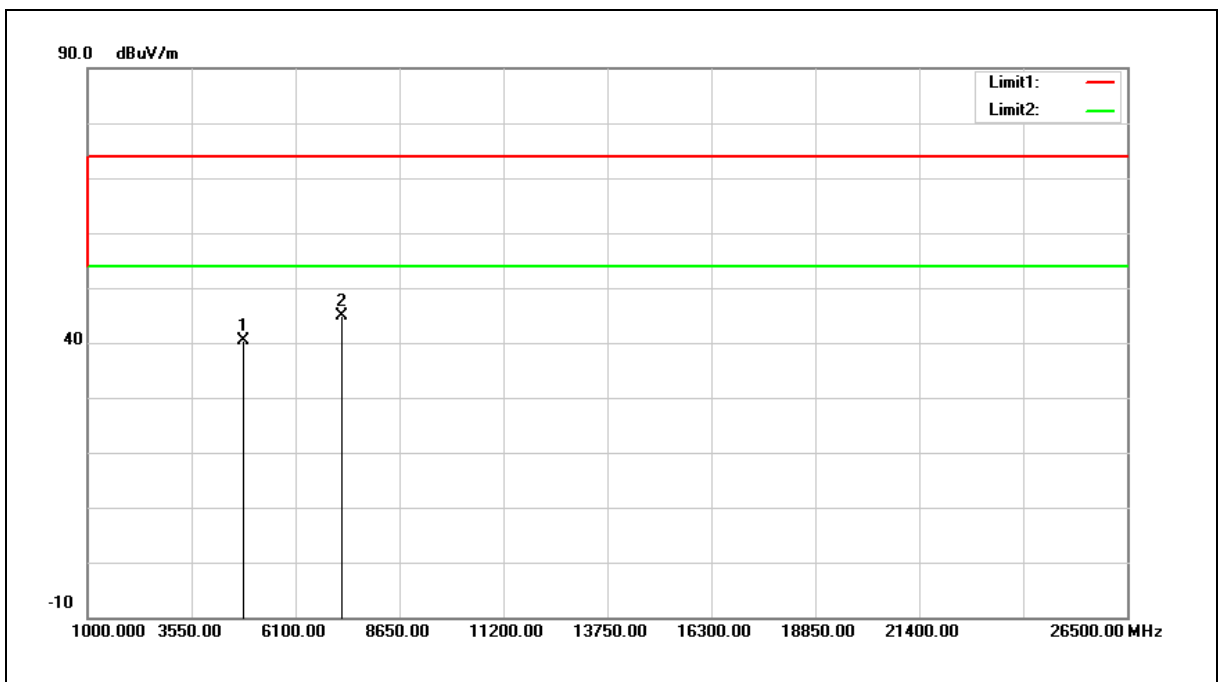
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.000	35.84	2.84	38.68	74.00	-35.32	peak
2	7236.000	37.08	8.91	45.99	74.00	-28.01	peak

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:	2412 MHz		
Mode:	Mode 4		
Ant.Polar.:	Vertical		



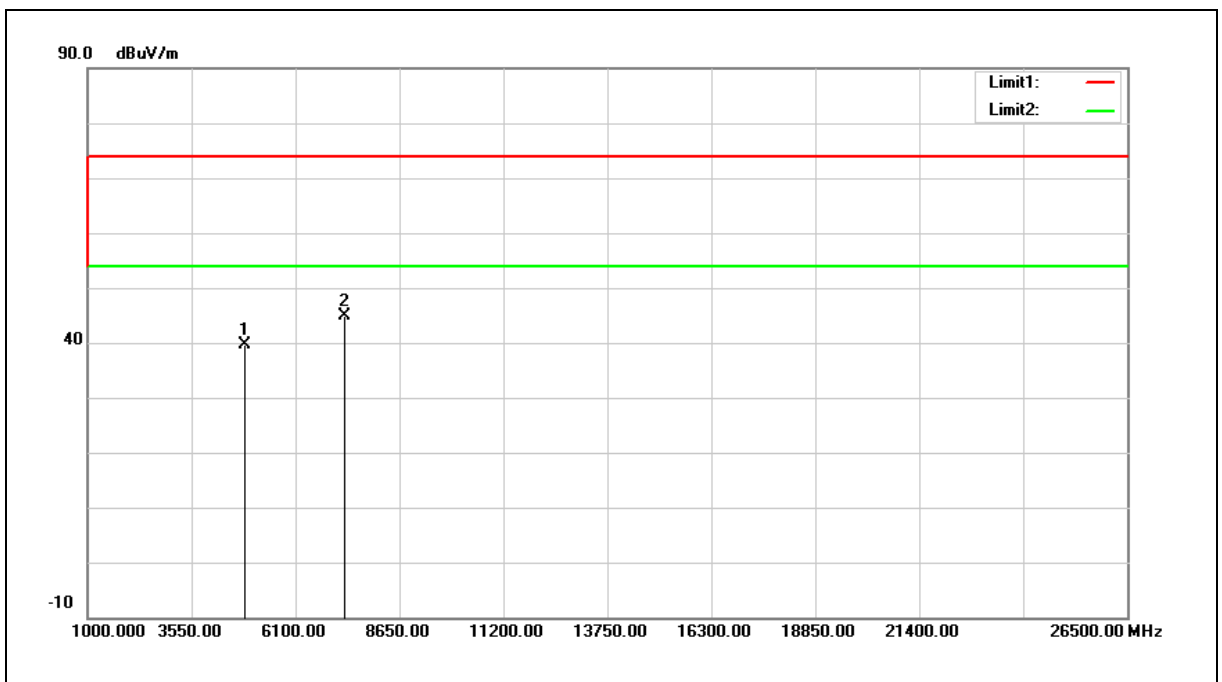
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4824.000	37.48	2.84	40.32	74.00	-33.68	peak
2	7236.000	35.98	8.91	44.89	74.00	-29.11	peak

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:	2437 MHz		
Mode:	Mode 4		
Ant.Polar.:	Horizontal		



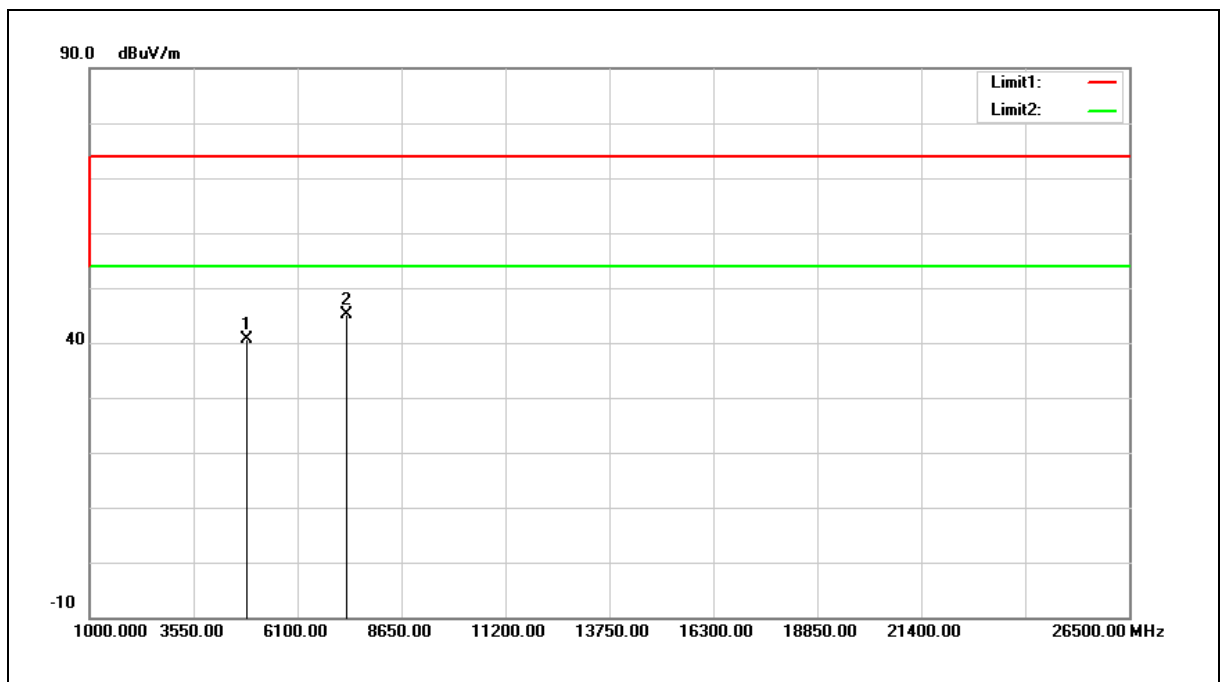
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	36.76	2.96	39.72	74.00	-34.28	peak
2	7311.000	35.77	9.14	44.91	74.00	-29.09	peak

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:	2437 MHz		
Mode:	Mode 4		
Ant.Polar.:	Vertical		



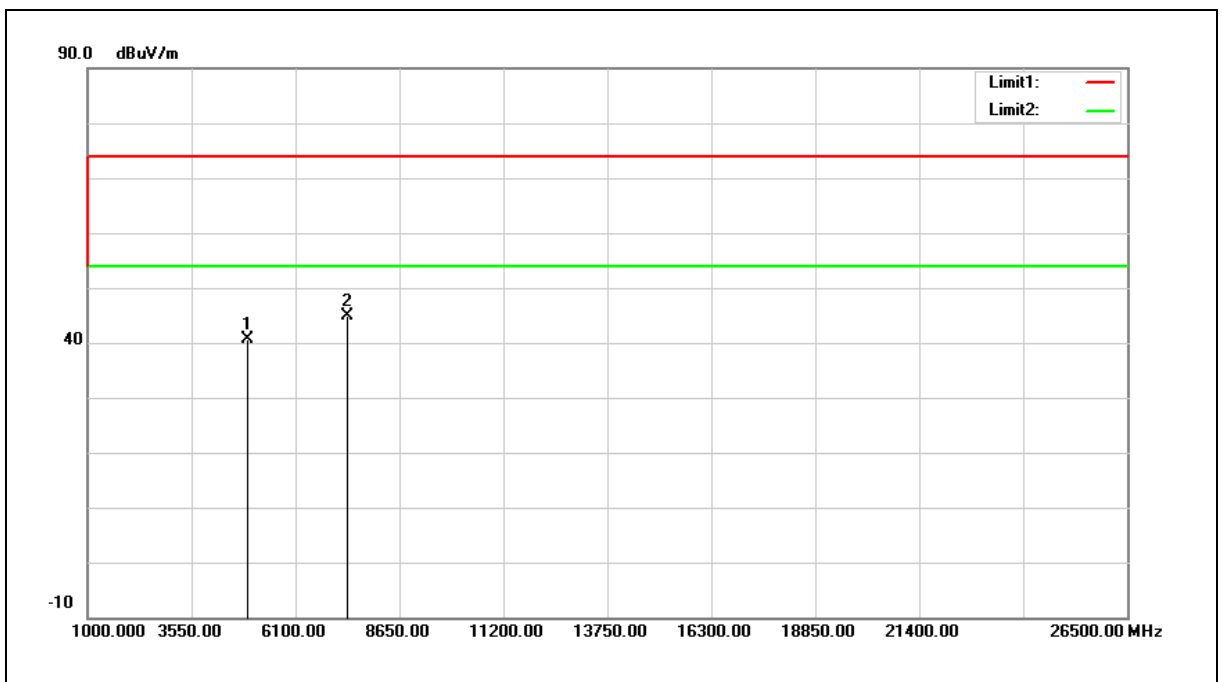
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4874.000	37.73	2.96	40.69	74.00	-33.31	peak
2	7311.000	36.08	9.14	45.22	74.00	-28.78	peak

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

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

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

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2462 MHz		
Mode:	Mode 4		
Ant.Polar.:	Horizontal		



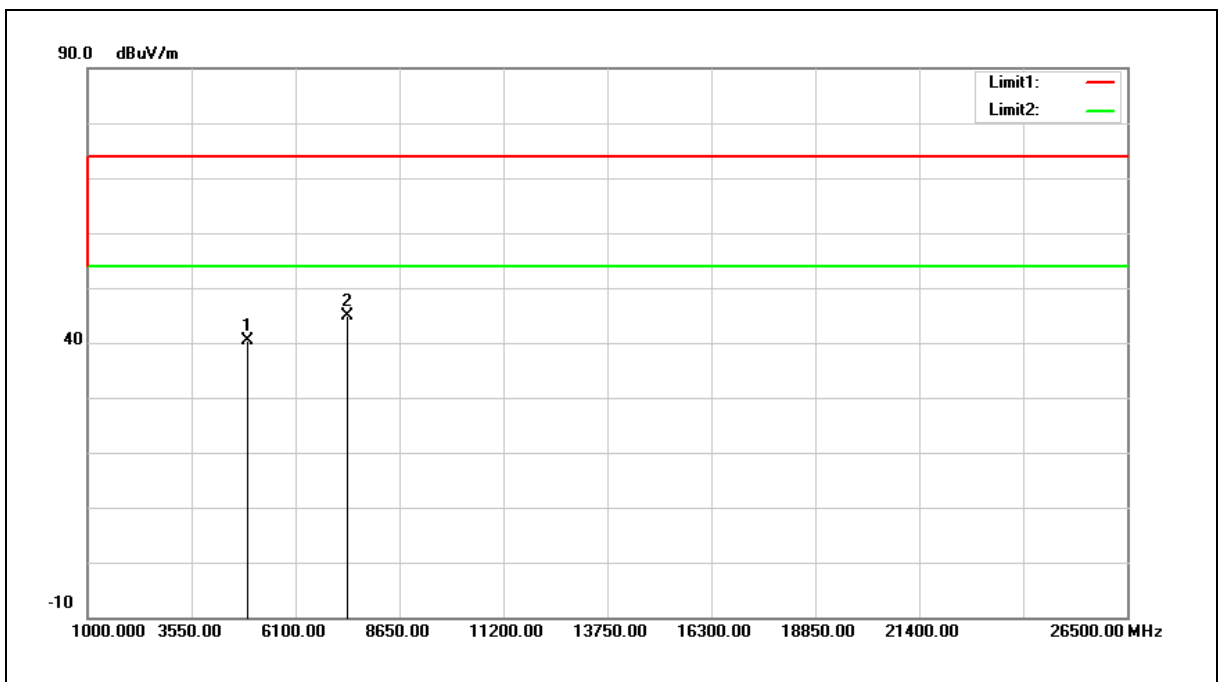
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	37.56	3.08	40.64	74.00	-33.36	peak
2	7386.000	35.40	9.38	44.78	74.00	-29.22	peak

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:	2462 MHz		
Mode:	Mode 4		
Ant.Polar.:	Vertical		



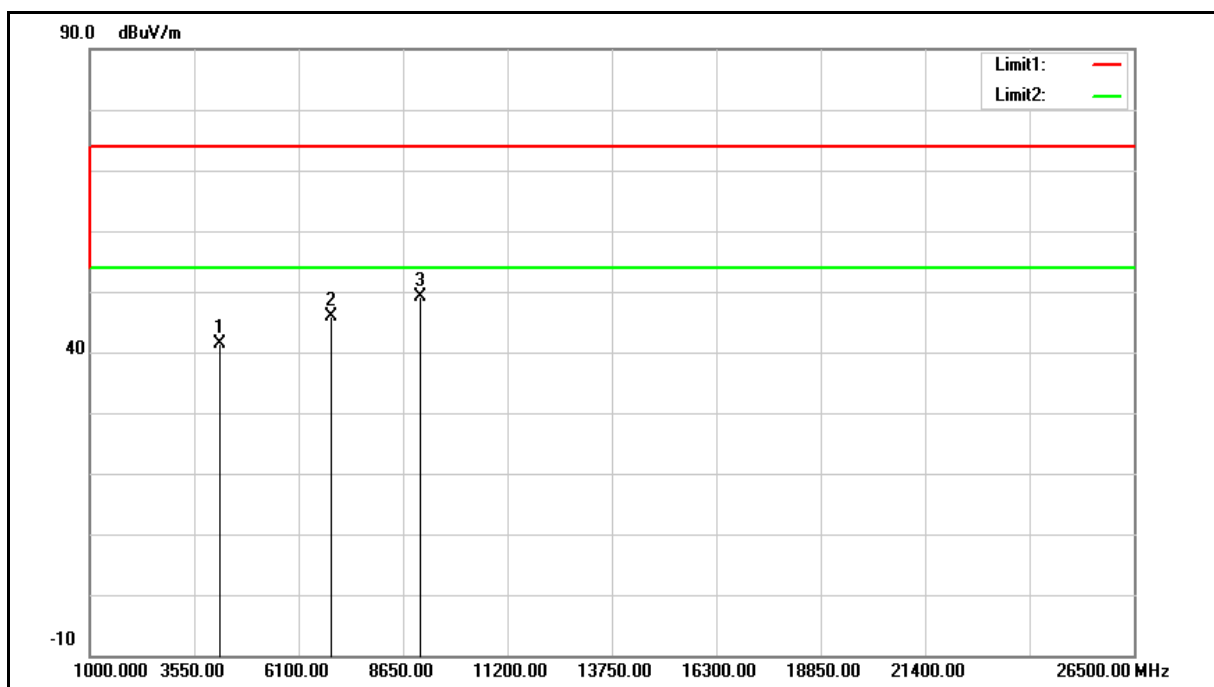
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4924.000	37.35	3.08	40.43	74.00	-33.57	peak
2	7386.000	35.57	9.38	44.95	74.00	-29.05	peak

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

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

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

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Mode:	Simultaneous Transmitting		
	(Bluetooth + WLAN 2.4 GHz)		
Ant.Polar.:	Horizontal		



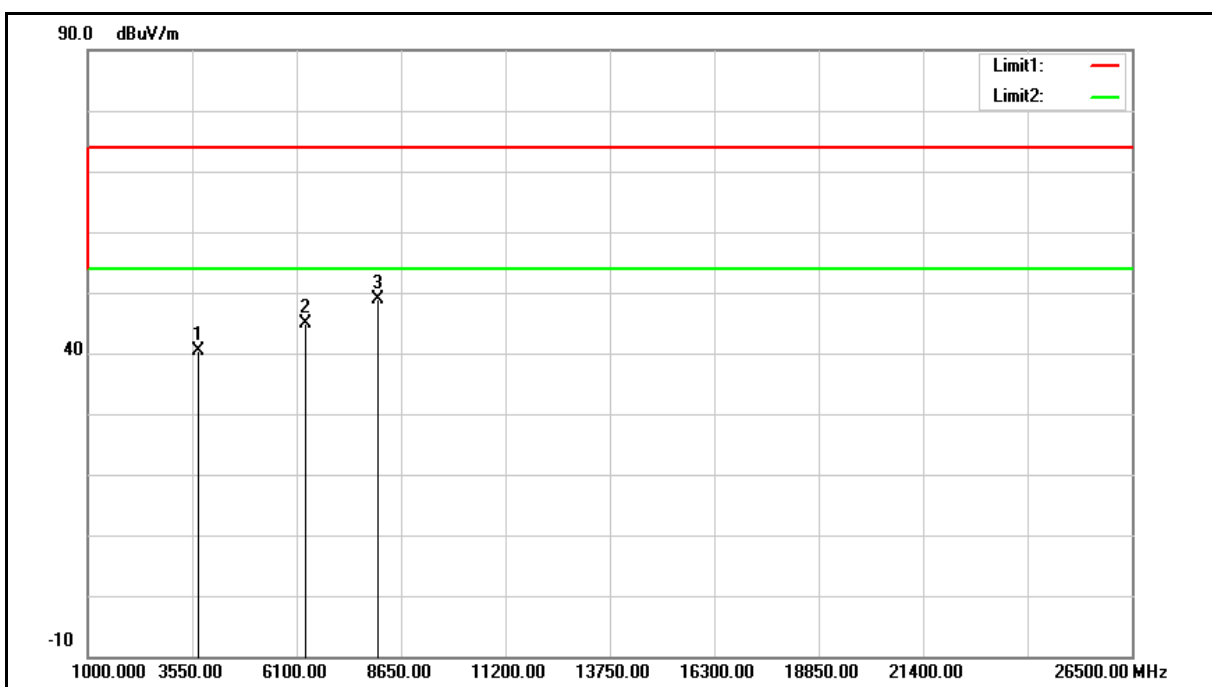
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4145.000	40.30	1.20	41.50	74.00	-32.50	peak
2	6882.000	38.19	7.80	45.99	74.00	-28.01	peak
3	9058.000	38.53	10.53	49.06	74.00	-24.94	peak

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

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

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

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Mode:	Simultaneous Transmitting (Bluetooth + WLAN 2.4 GHz)		
Ant.Polar.:	Vertical		



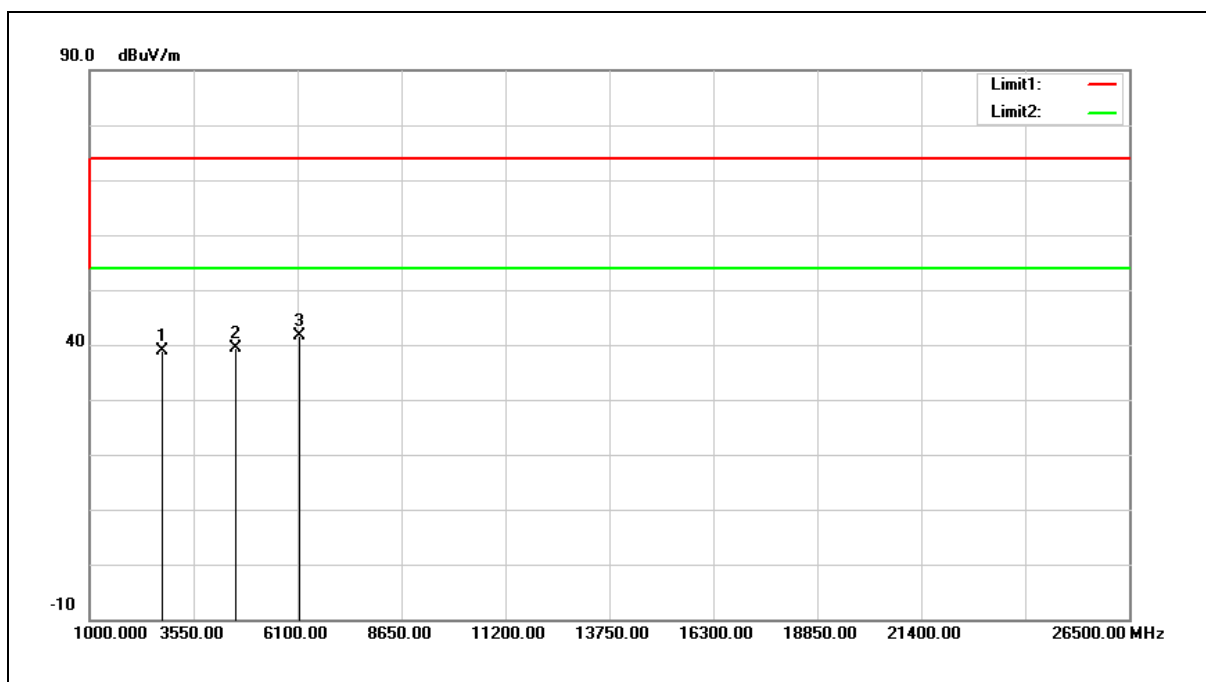
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	3703.000	40.49	0.01	40.50	74.00	-33.50	peak
2	6321.000	38.78	6.01	44.79	74.00	-29.21	peak
3	8089.000	38.73	10.20	48.93	74.00	-25.07	peak

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 5		
Ant.Polar.:	Horizontal		
Description:			



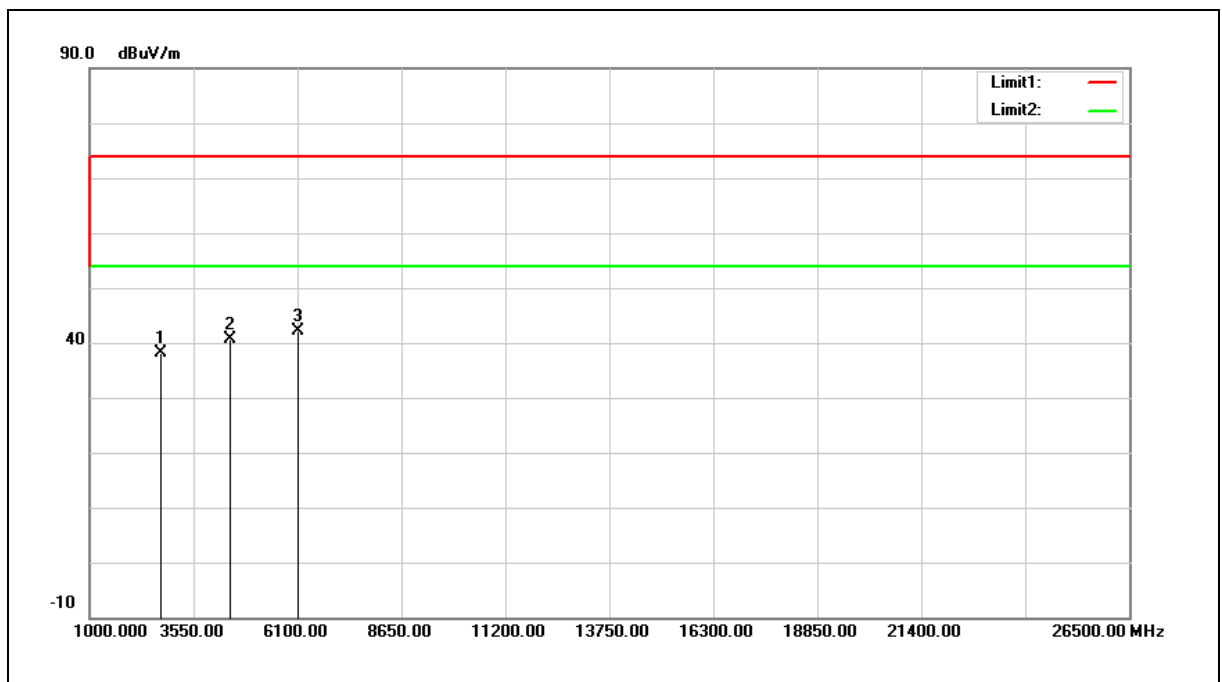
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2785.000	40.76	-1.83	38.93	74.00	-35.07	peak
2	4570.000	37.13	2.22	39.35	74.00	-34.65	peak
3	6134.000	36.34	5.40	41.74	74.00	-32.26	peak

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		
Mode:	Mode 5		
Ant.Polar.:	Vertical		
Description:			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2751.000	39.98	-1.96	38.02	74.00	-35.98	peak
2	4434.000	38.79	1.89	40.68	74.00	-33.32	peak
3	6117.000	36.74	5.35	42.09	74.00	-31.91	peak

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

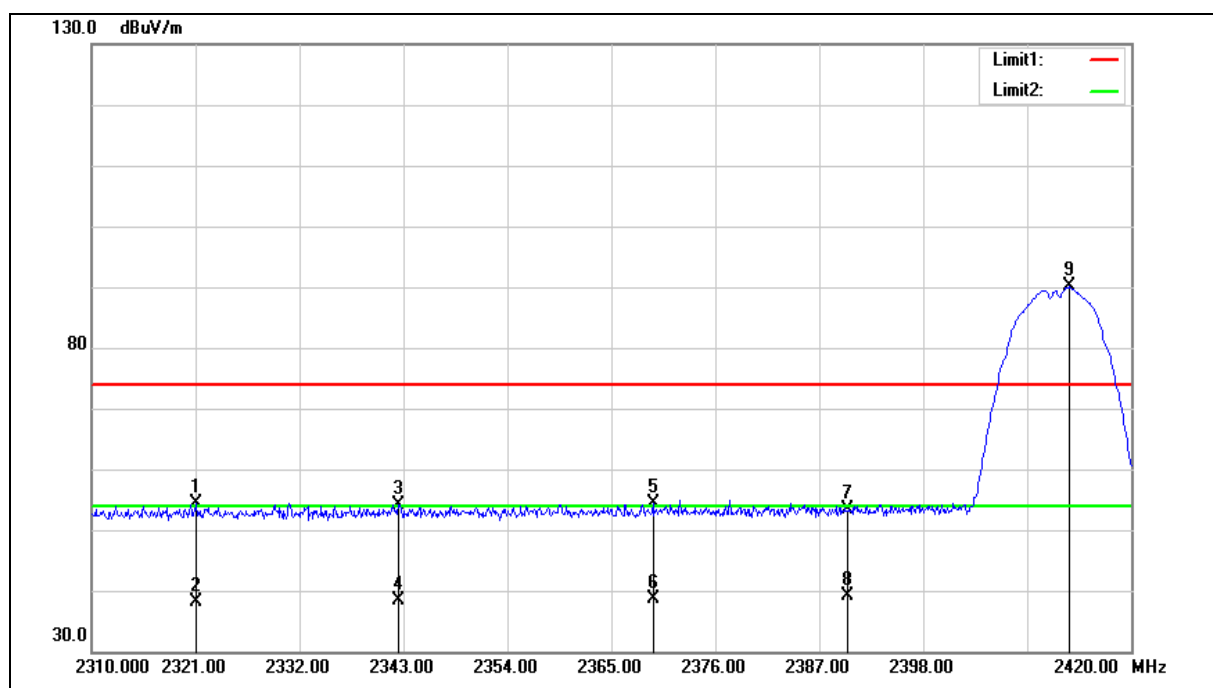
2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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

頻帶邊緣

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

Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2412 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2412 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		

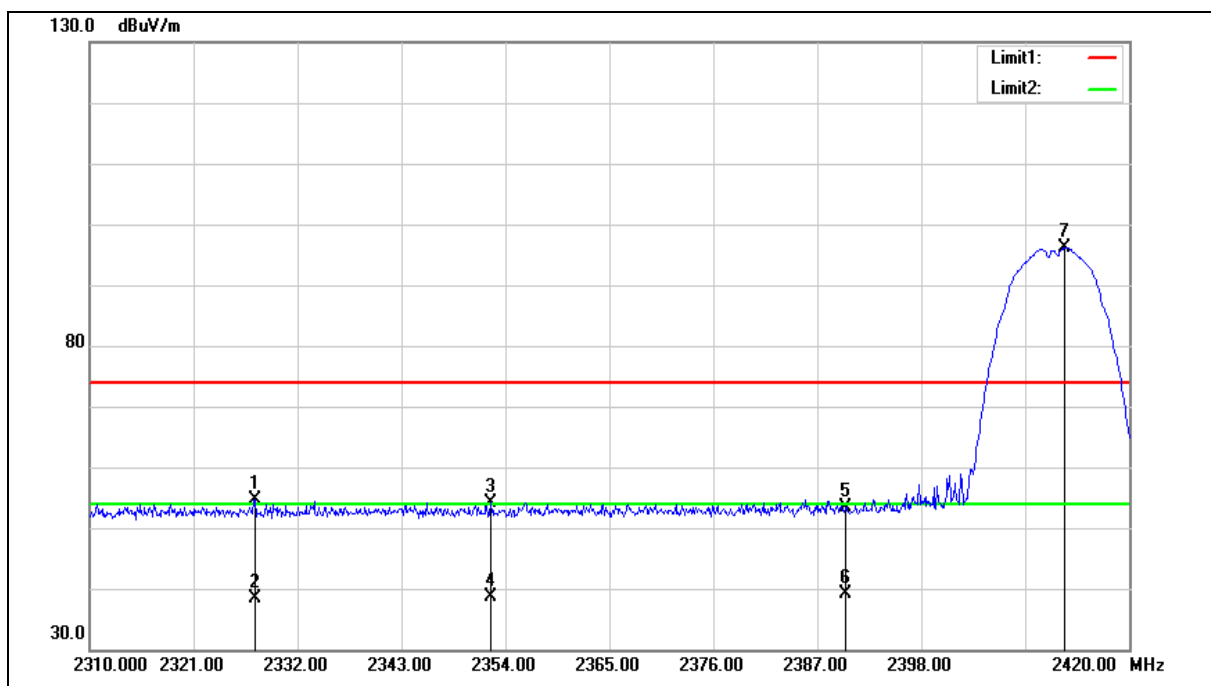
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2321.110	57.83	-3.53	54.30	74.00	-19.70	peak
2	2321.110	41.65	-3.53	38.12	54.00	-15.88	AVG
3	2342.450	57.68	-3.45	54.23	74.00	-19.77	peak
4	2342.450	41.74	-3.45	38.29	54.00	-15.71	AVG
5	2369.400	57.81	-3.36	54.45	74.00	-19.55	peak
6	2369.400	41.98	-3.36	38.62	54.00	-15.38	AVG
7	2390.000	56.57	-3.28	53.29	74.00	-20.71	peak
8	2390.000	42.29	-3.28	39.01	54.00	-14.99	AVG
9	2413.400	93.21	-3.19	90.02	--	--	peak

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

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

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

Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2412 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2412 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		

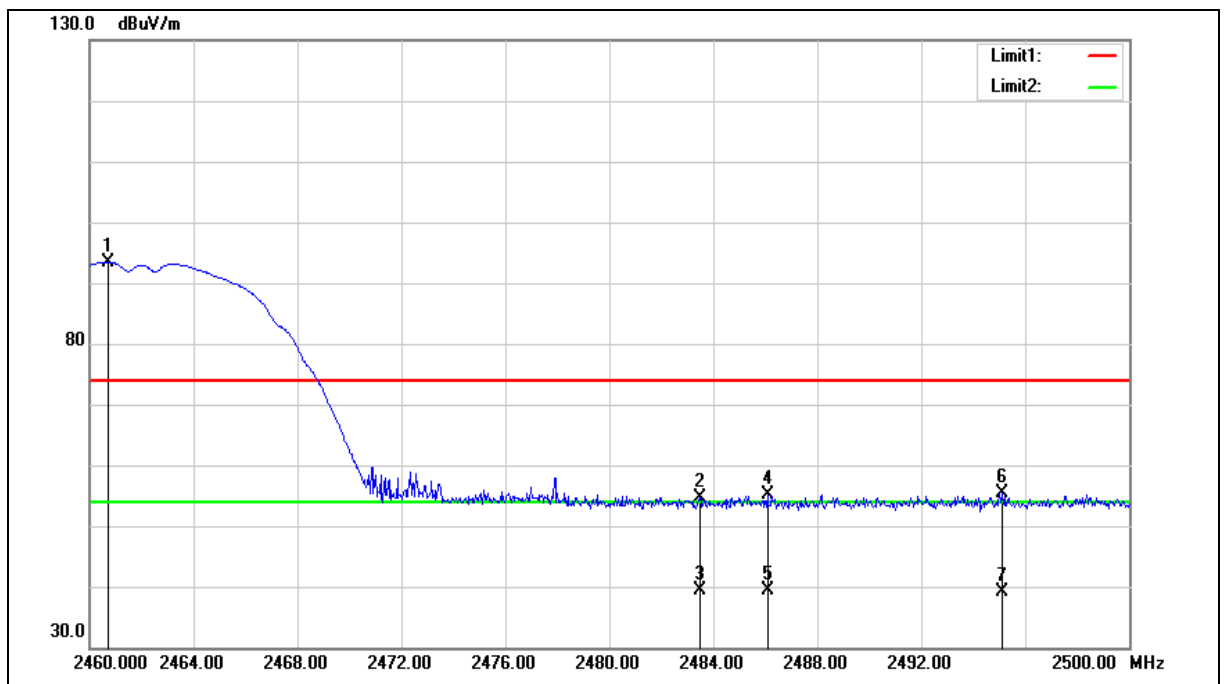
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2327.490	58.17	-3.51	54.66	74.00	-19.34	peak
2	2327.490	41.99	-3.51	38.48	54.00	-15.52	AVG
3	2352.460	57.60	-3.41	54.19	74.00	-19.81	peak
4	2352.460	42.08	-3.41	38.67	54.00	-15.33	AVG
5	2390.000	56.68	-3.28	53.40	74.00	-20.60	peak
6	2390.000	42.32	-3.28	39.04	54.00	-14.96	AVG
7	2413.180	99.34	-3.19	96.15	--	--	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:	2462 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		



Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2462 MHz		
Mode:	Mode 2		
Ant.Polar.:	Horizontal		

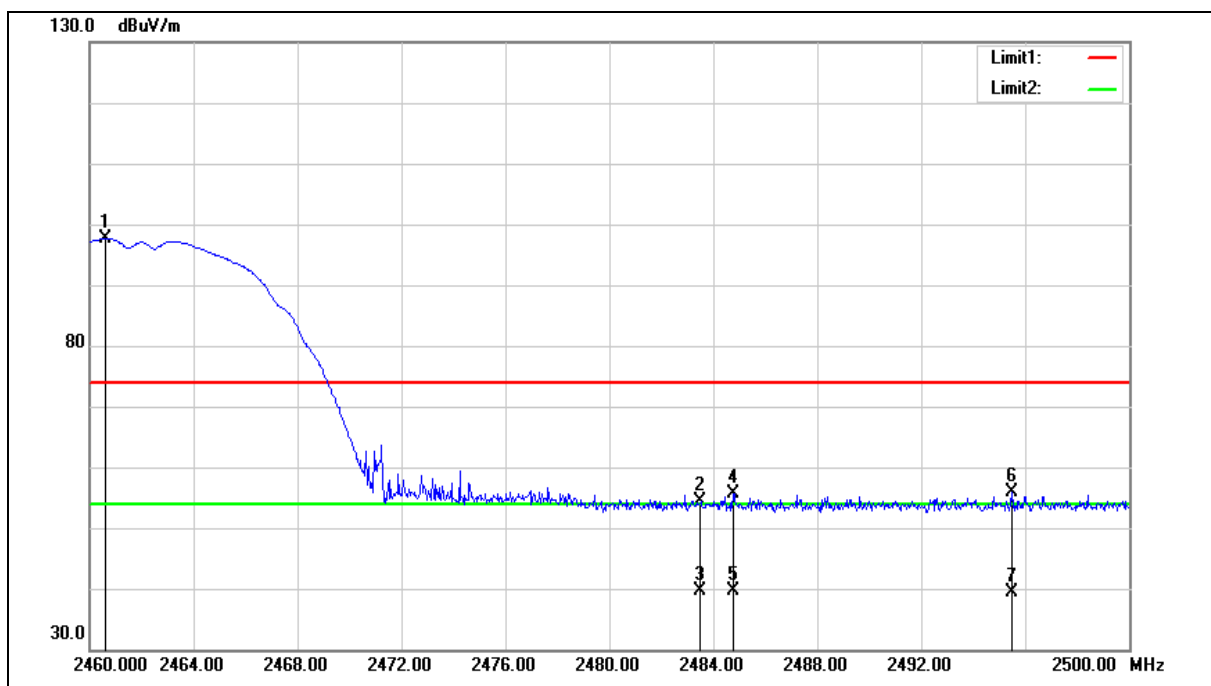
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2460.720	96.48	-3.02	93.46	--	--	peak
2	2483.500	57.47	-2.93	54.54	74.00	-19.46	peak
3	2483.500	42.39	-2.93	39.46	54.00	-14.54	AVG
4	2486.080	58.10	-2.92	55.18	74.00	-18.82	peak
5	2486.080	42.27	-2.92	39.35	54.00	-14.65	AVG
6	2495.120	58.25	-2.88	55.37	74.00	-18.63	peak
7	2495.120	41.97	-2.88	39.09	54.00	-14.91	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:	2462 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		



Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2462 MHz		
Mode:	Mode 2		
Ant.Polar.:	Vertical		

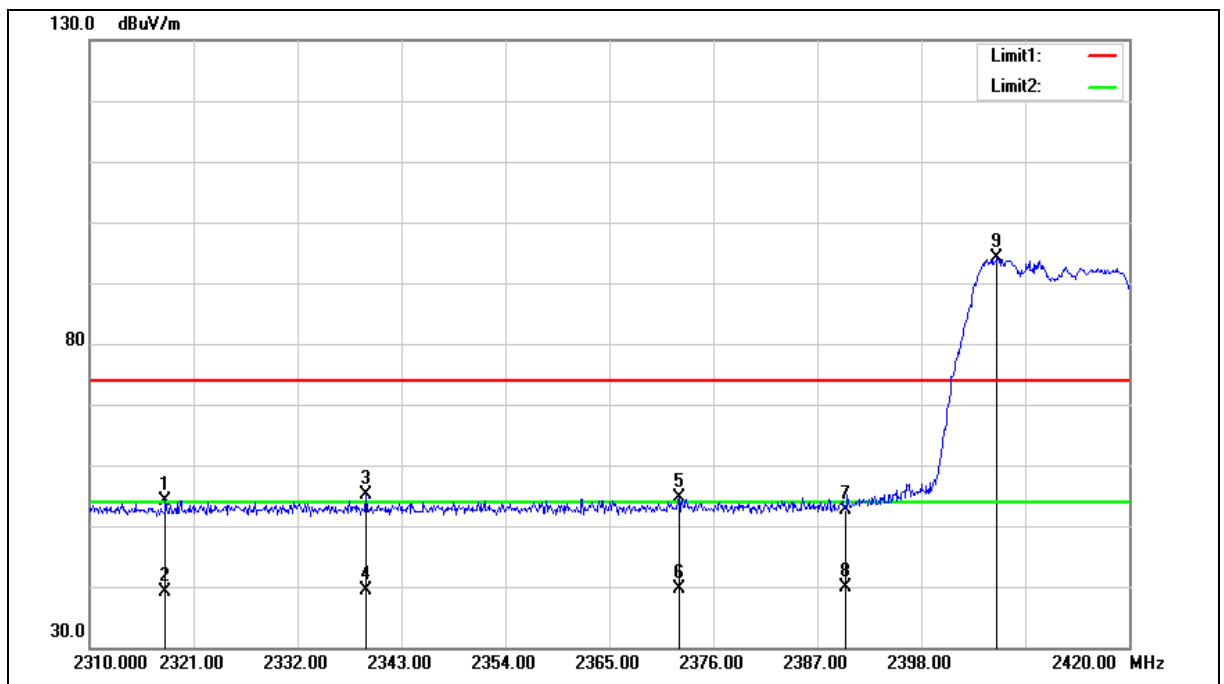
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2460.600	100.65	-3.02	97.63	--	--	peak
2	2483.500	57.33	-2.93	54.40	74.00	-19.60	peak
3	2483.500	42.60	-2.93	39.67	54.00	-14.33	AVG
4	2484.760	58.62	-2.93	55.69	74.00	-18.31	peak
5	2484.760	42.45	-2.93	39.52	54.00	-14.48	AVG
6	2495.480	58.64	-2.88	55.76	74.00	-18.24	peak
7	2495.480	42.25	-2.88	39.37	54.00	-14.63	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:	2412 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2412 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		

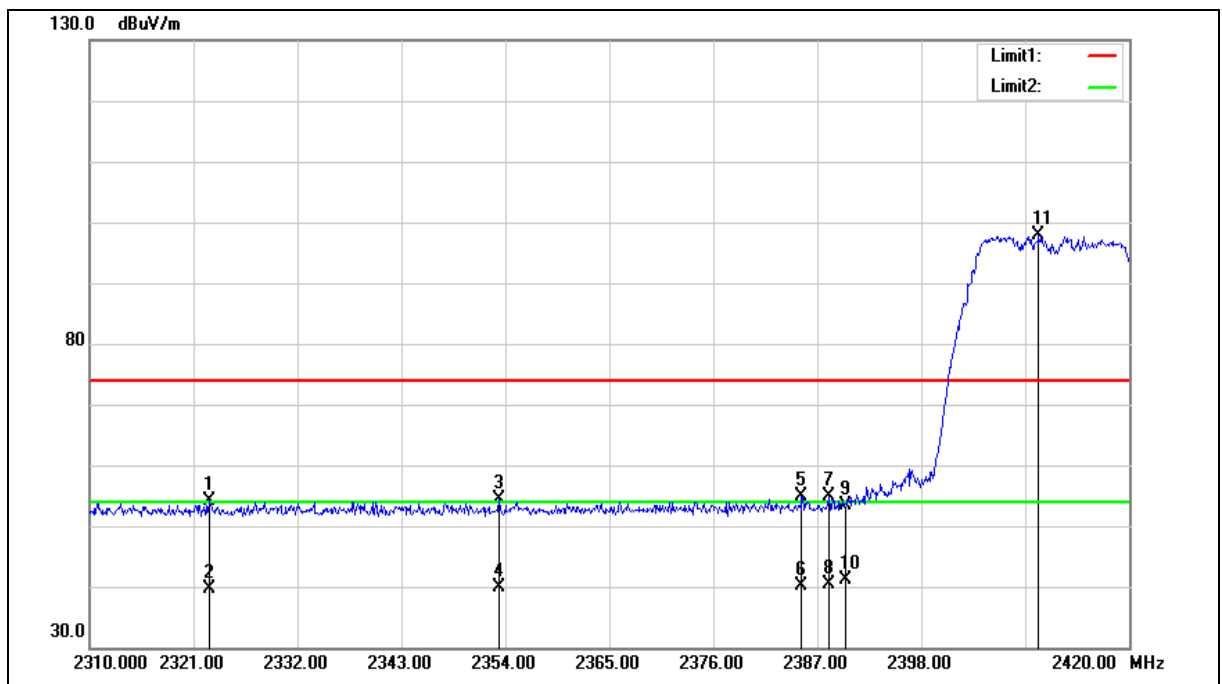
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2318.030	57.79	-3.54	54.25	74.00	-19.75	peak
2	2318.030	42.70	-3.54	39.16	54.00	-14.84	AVG
3	2339.260	58.51	-3.46	55.05	74.00	-18.95	peak
4	2339.260	42.92	-3.46	39.46	54.00	-14.54	AVG
5	2372.370	57.99	-3.34	54.65	74.00	-19.35	peak
6	2372.370	43.05	-3.34	39.71	54.00	-14.29	AVG
7	2390.000	55.97	-3.28	52.69	74.00	-21.31	peak
8	2390.000	43.26	-3.28	39.98	54.00	-14.02	AVG
9	2406.030	97.27	-3.22	94.05	--	--	peak

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

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

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

Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2412 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2412 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		

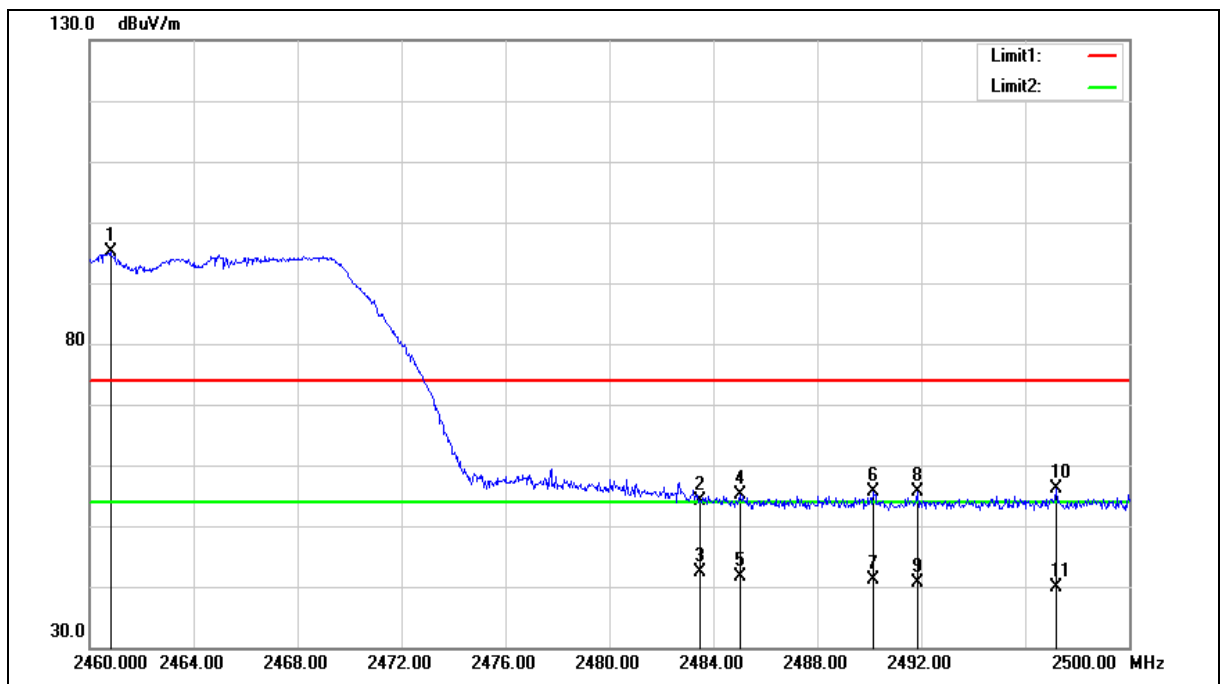
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2322.650	57.75	-3.52	54.23	74.00	-19.77	peak
2	2322.650	43.12	-3.52	39.60	54.00	-14.40	AVG
3	2353.340	57.80	-3.41	54.39	74.00	-19.61	peak
4	2353.340	43.23	-3.41	39.82	54.00	-14.18	AVG
5	2385.350	58.15	-3.29	54.86	74.00	-19.14	peak
6	2385.350	43.34	-3.29	40.05	54.00	-13.95	AVG
7	2388.210	58.17	-3.29	54.88	74.00	-19.12	peak
8	2388.210	43.75	-3.29	40.46	54.00	-13.54	AVG
9	2390.000	56.71	-3.28	53.43	74.00	-20.57	peak
10	2390.000	44.38	-3.28	41.10	54.00	-12.90	AVG
11	2410.430	101.00	-3.21	97.79	--	--	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:	2462 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		



Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2462 MHz		
Mode:	Mode 3		
Ant.Polar.:	Horizontal		

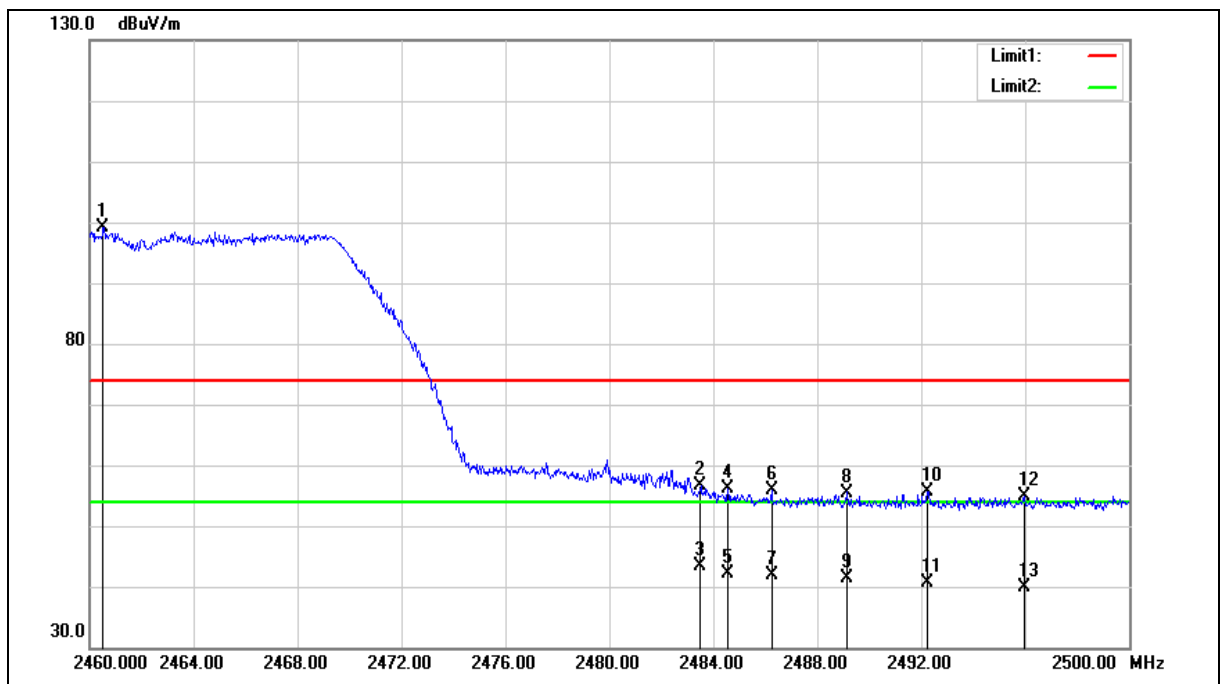
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2460.800	98.16	-3.02	95.14	--	--	peak
2	2483.500	57.13	-2.93	54.20	74.00	-19.80	peak
3	2483.500	45.32	-2.93	42.39	54.00	-11.61	AVG
4	2485.040	57.94	-2.92	55.02	74.00	-18.98	peak
5	2485.040	44.67	-2.92	41.75	54.00	-12.25	AVG
6	2490.160	58.57	-2.91	55.66	74.00	-18.34	peak
7	2490.160	44.10	-2.91	41.19	54.00	-12.81	AVG
8	2491.840	58.63	-2.90	55.73	74.00	-18.27	peak
9	2491.840	43.57	-2.90	40.67	54.00	-13.33	AVG
10	2497.200	58.91	-2.88	56.03	74.00	-17.97	peak
11	2497.200	42.86	-2.88	39.98	54.00	-14.02	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:	2462 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		



Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2462 MHz		
Mode:	Mode 3		
Ant.Polar.:	Vertical		

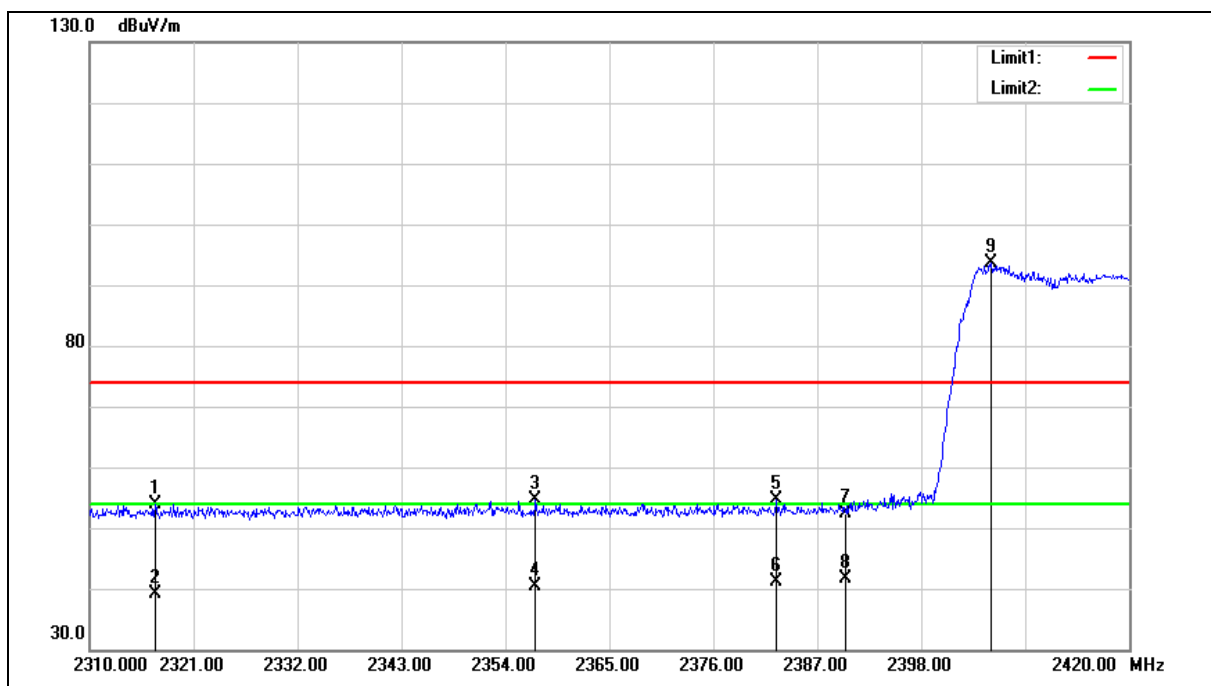
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2460.520	102.17	-3.02	99.15	--	--	peak
2	2483.500	59.50	-2.93	56.57	74.00	-17.43	peak
3	2483.500	46.23	-2.93	43.30	54.00	-10.70	AVG
4	2484.560	59.15	-2.93	56.22	74.00	-17.78	peak
5	2484.560	45.16	-2.93	42.23	54.00	-11.77	AVG
6	2486.240	58.71	-2.92	55.79	74.00	-18.21	peak
7	2486.240	44.74	-2.92	41.82	54.00	-12.18	AVG
8	2489.160	58.41	-2.91	55.50	74.00	-18.50	peak
9	2489.160	44.25	-2.91	41.34	54.00	-12.66	AVG
10	2492.240	58.55	-2.90	55.65	74.00	-18.35	peak
11	2492.240	43.43	-2.90	40.53	54.00	-13.47	AVG
12	2495.960	57.86	-2.88	54.98	74.00	-19.02	peak
13	2495.960	42.74	-2.88	39.86	54.00	-14.14	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:	2412 MHz		
Mode:	Mode 4		
Ant.Polar.:	Horizontal		



Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2412 MHz		
Mode:	Mode 4		
Ant.Polar.:	Horizontal		

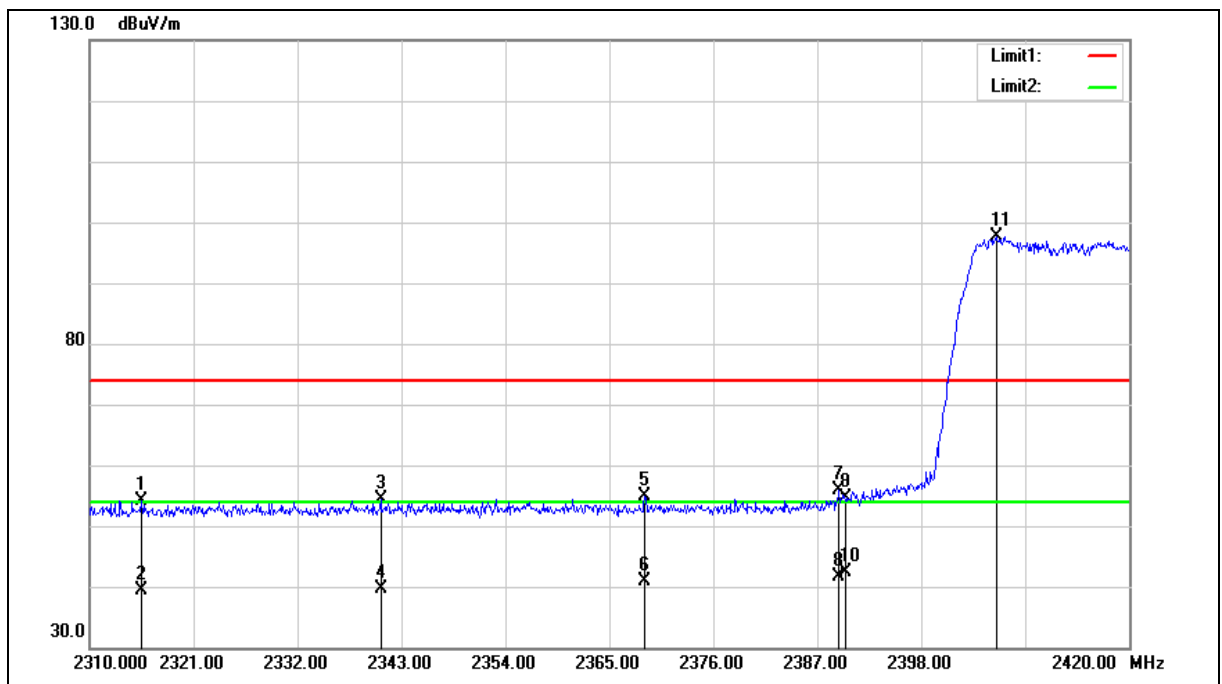
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2316.930	57.36	-3.55	53.81	74.00	-20.19	peak
2	2316.930	42.56	-3.55	39.01	54.00	-14.99	AVG
3	2357.190	57.98	-3.41	54.57	74.00	-19.43	peak
4	2357.190	43.80	-3.41	40.39	54.00	-13.61	AVG
5	2382.710	57.86	-3.31	54.55	74.00	-19.45	peak
6	2382.710	44.36	-3.31	41.05	54.00	-12.95	AVG
7	2390.000	55.71	-3.28	52.43	74.00	-21.57	peak
8	2390.000	44.86	-3.28	41.58	54.00	-12.42	AVG
9	2405.370	96.82	-3.22	93.60	--	--	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:	2412 MHz		
Mode:	Mode 4		
Ant.Polar.:	Vertical		



Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2412 MHz		
Mode:	Mode 4		
Ant.Polar.:	Vertical		

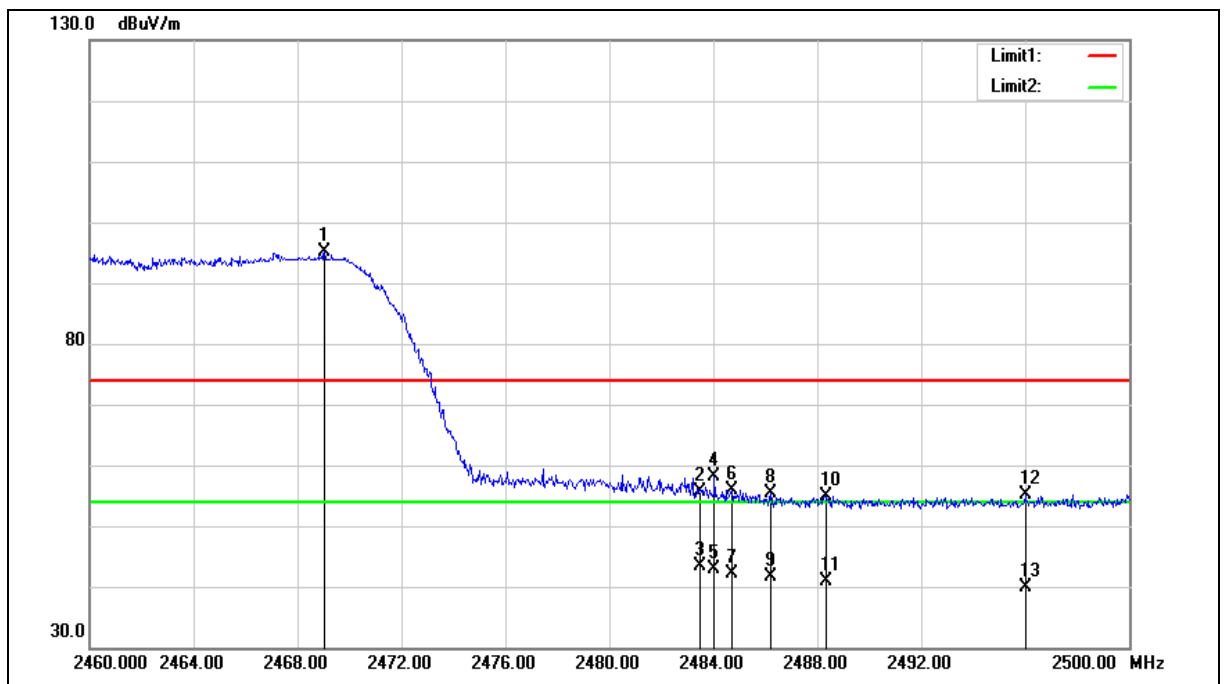
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2315.500	57.58	-3.55	54.03	74.00	-19.97	peak
2	2315.500	42.81	-3.55	39.26	54.00	-14.74	AVG
3	2340.800	57.90	-3.46	54.44	74.00	-19.56	peak
4	2340.800	43.13	-3.46	39.67	54.00	-14.33	AVG
5	2368.740	58.27	-3.36	54.91	74.00	-19.09	peak
6	2368.740	44.21	-3.36	40.85	54.00	-13.15	AVG
7	2389.310	59.17	-3.28	55.89	74.00	-18.11	peak
8	2389.310	44.79	-3.28	41.51	54.00	-12.49	AVG
9	2390.000	57.85	-3.28	54.57	74.00	-19.43	peak
10	2390.000	45.67	-3.28	42.39	54.00	-11.61	AVG
11	2405.920	100.81	-3.22	97.59	--	--	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:	2462 MHz		
Mode:	Mode 4		
Ant.Polar.:	Horizontal		



Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2462 MHz		
Mode:	Mode 4		
Ant.Polar.:	Horizontal		

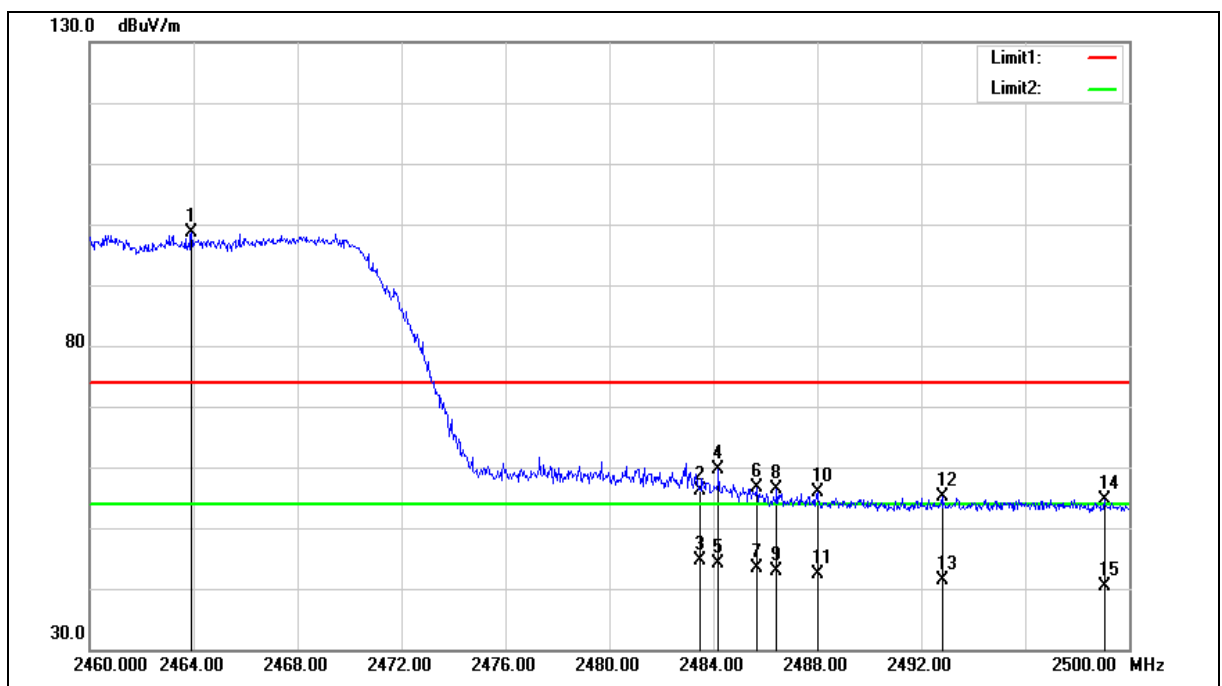
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2469.040	98.12	-2.98	95.14	--	--	peak
2	2483.500	58.67	-2.93	55.74	74.00	-18.26	peak
3	2483.500	46.31	-2.93	43.38	54.00	-10.62	AVG
4	2484.040	61.04	-2.93	58.11	74.00	-15.89	peak
5	2484.040	45.89	-2.93	42.96	54.00	-11.04	AVG
6	2484.720	58.92	-2.93	55.99	74.00	-18.01	peak
7	2484.720	45.18	-2.93	42.25	54.00	-11.75	AVG
8	2486.200	58.25	-2.92	55.33	74.00	-18.67	peak
9	2486.200	44.66	-2.92	41.74	54.00	-12.26	AVG
10	2488.320	57.91	-2.92	54.99	74.00	-19.01	peak
11	2488.320	43.75	-2.92	40.83	54.00	-13.17	AVG
12	2496.000	57.97	-2.88	55.09	74.00	-18.91	peak
13	2496.000	42.85	-2.88	39.97	54.00	-14.03	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:	2462 MHz		
Mode:	Mode 4		
Ant.Polar.:	Vertical		



Standard:	LP0002	Test Distance:	3 m
Test item:	Band edge		
Frequency:	2462 MHz		
Mode:	Mode 4		
Ant.Polar.:	Vertical		

No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2463.920	101.53	-3.01	98.52	--	--	peak
2	2483.500	58.98	-2.93	56.05	74.00	-17.95	peak
3	2483.500	47.55	-2.93	44.62	54.00	-9.38	AVG
4	2484.200	62.63	-2.93	59.70	74.00	-14.30	peak
5	2484.200	47.06	-2.93	44.13	54.00	-9.87	AVG
6	2485.680	59.52	-2.92	56.60	74.00	-17.40	peak
7	2485.680	46.41	-2.92	43.49	54.00	-10.51	AVG
8	2486.440	59.20	-2.92	56.28	74.00	-17.72	peak
9	2486.440	45.77	-2.92	42.85	54.00	-11.15	AVG
10	2488.000	58.69	-2.92	55.77	74.00	-18.23	peak
11	2488.000	45.23	-2.92	42.31	54.00	-11.69	AVG
12	2492.800	57.91	-2.90	55.01	74.00	-18.99	peak
13	2492.800	44.36	-2.90	41.46	54.00	-12.54	AVG
14	2499.040	57.46	-2.87	54.59	74.00	-19.41	peak
15	2499.040	43.24	-2.87	40.37	54.00	-13.63	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).

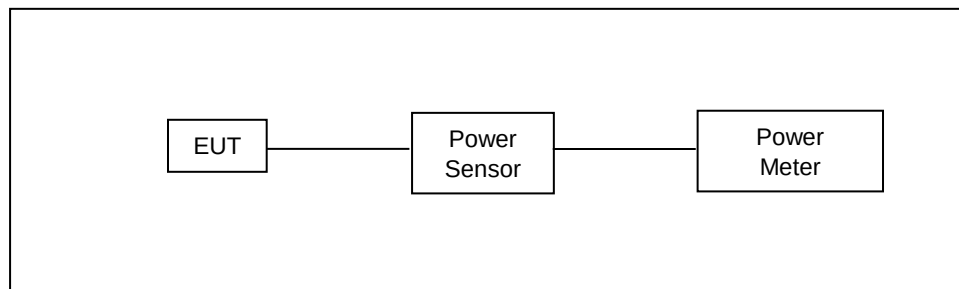
3.When the peak results are less than average limit, so not need to evaluate the average.

4.2.2 峰值傳導輸出功率之量測

合格標準:

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

測試架構圖：



測試結果:

Test Mode	Frequency (MHz)	RF Power setting in Test Software	Test Software Version
Mode 2	2412	Default	CMD
	2437	Default	
	2462	Default	
Mode 3	2412	Default	
	2437	Default	
	2462	Default	
Mode 4	2412	Default	
	2437	Default	
	2462	Default	

操作模式：Mode 2 / Mode 3 / Mode 4							
操作模式	Data Rate (Mbps)	頻道 CH	輸出功率(Average)		輸出功率(Peak)		Limit (dBm)
			dBm	W	dBm	W	
Mode 2	1	01	6.66	0.005	10.01	0.010	≤ 30.00
		06	6.31	0.004	9.68	0.009	≤ 30.00
		11	6.87	0.005	10.22	0.011	≤ 30.00
Mode 3	6	01	6.35	0.004	14.85	0.031	≤ 30.00
		06	6.43	0.004	15.01	0.032	≤ 30.00
		11	7.15	0.005	15.18	0.033	≤ 30.00
Mode 4	6.5	01	6.36	0.004	15.10	0.032	≤ 30.00
		06	6.47	0.004	15.12	0.033	≤ 30.00
		11	7.05	0.005	15.13	0.033	≤ 30.00

4.2.3 天線規格之要求

合格標準:

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

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

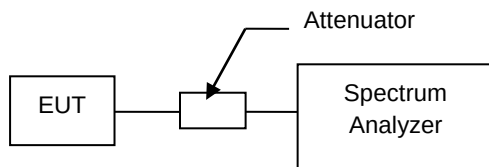
判定結果: 符合。

4.2.4 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 / Mode 3 / Mode 4
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: IEEE 802.11b Continuous TX Mode

CH01

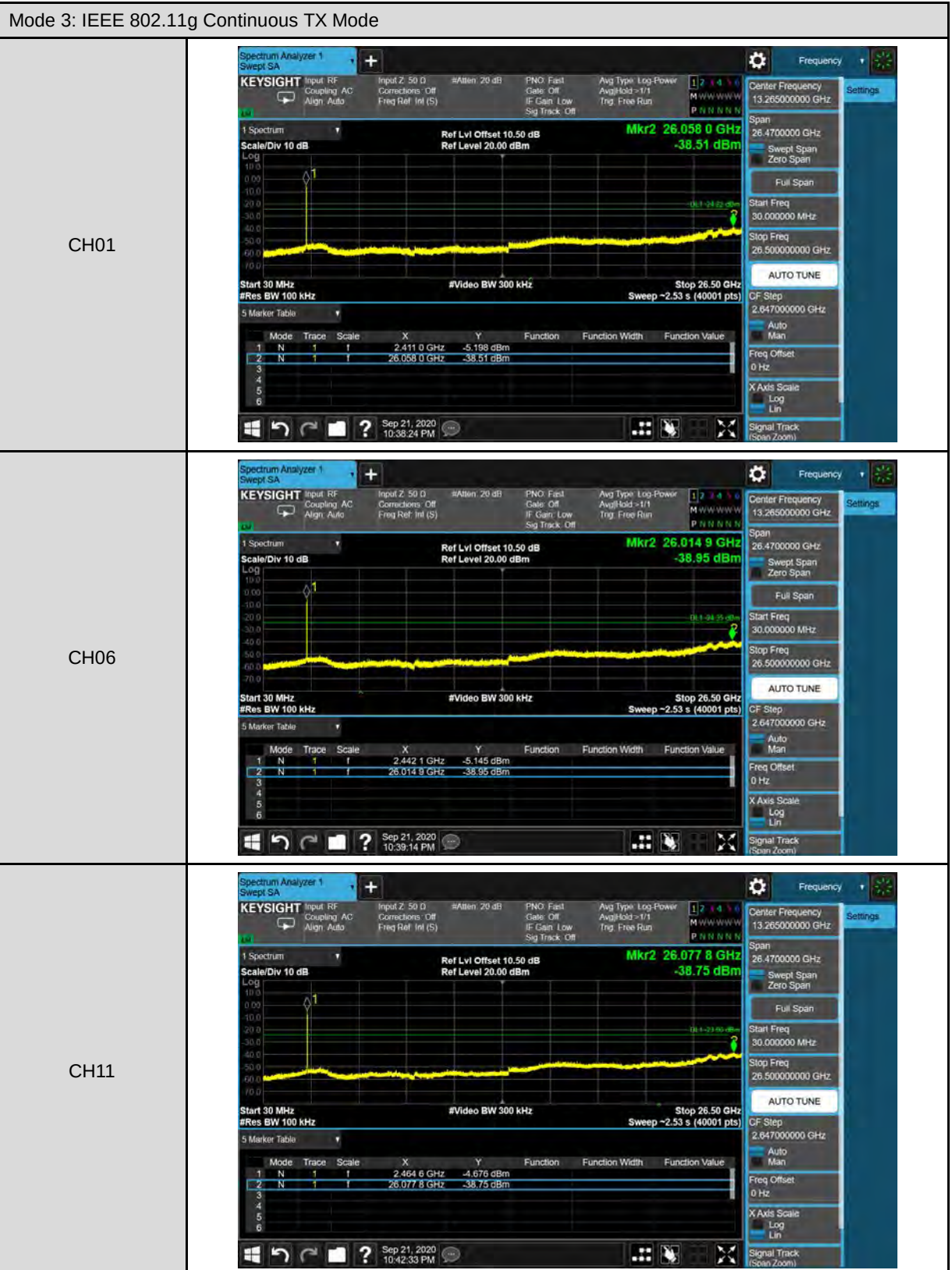


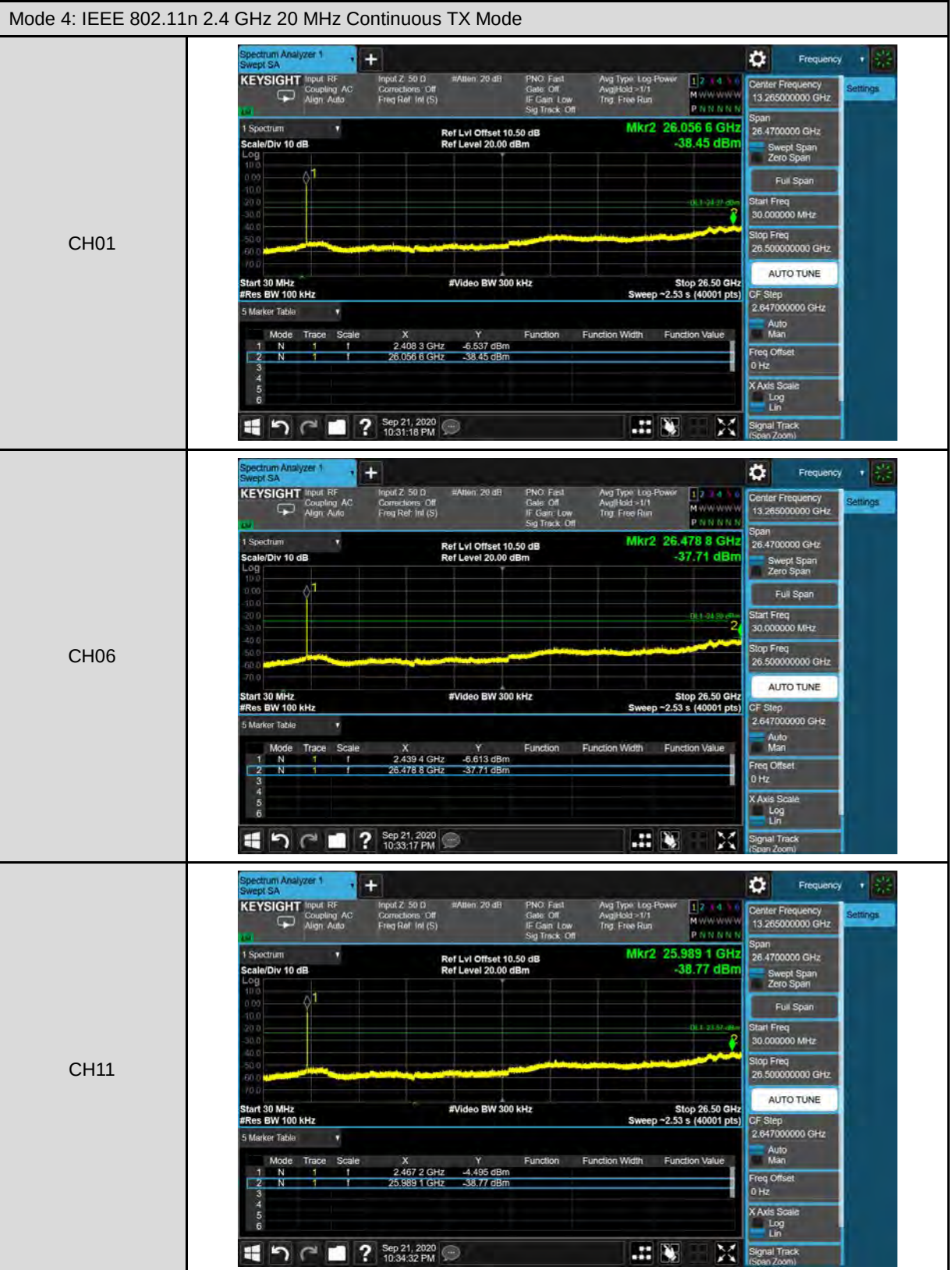
CH06



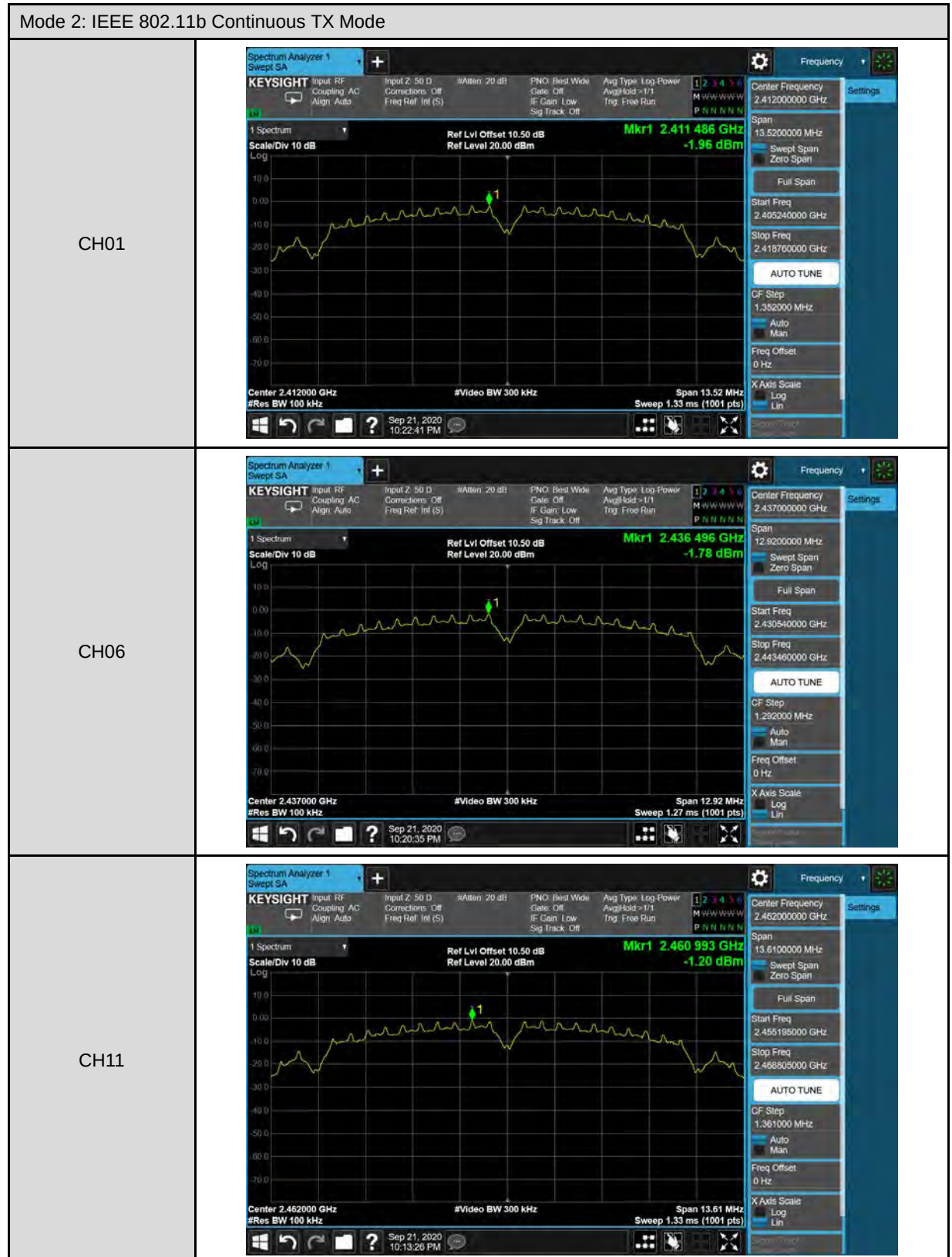
CH11







Reference level



Mode 3: IEEE 802.11g Continuous TX Mode

CH01



CH06



CH11



Mode 4: IEEE 802.11n 2.4 GHz 20 MHz Continuous TX Mode

CH01



CH06



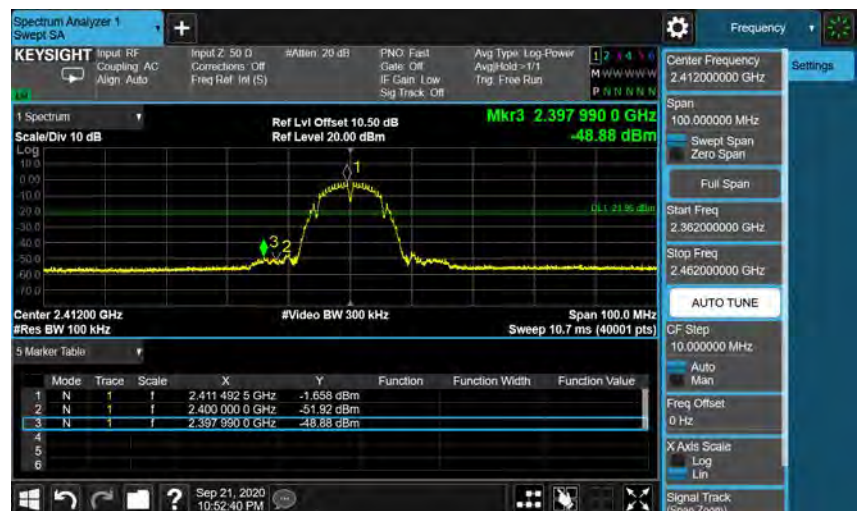
CH11



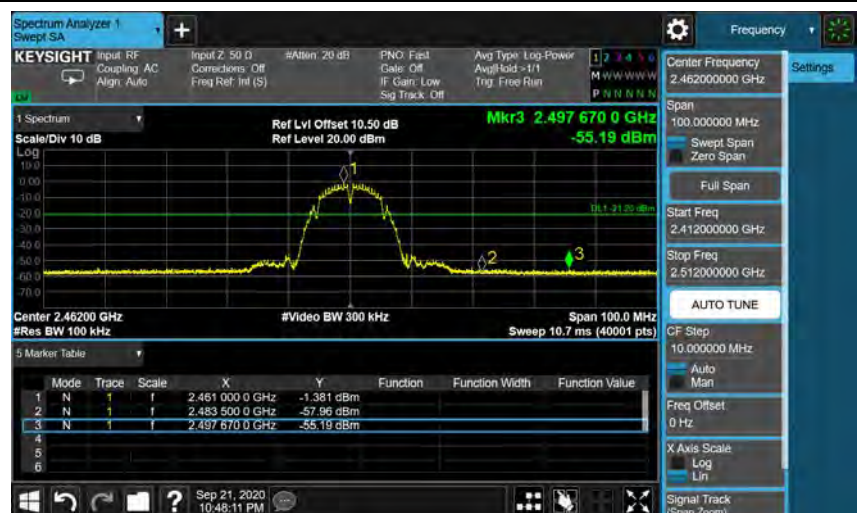
Conducted Band Edge

Mode 2: IEEE 802.11b Continuous TX Mode

CH01



CH11





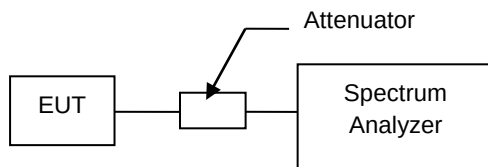


4.2.5 6 dB頻寬之要求

合格標準:

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：

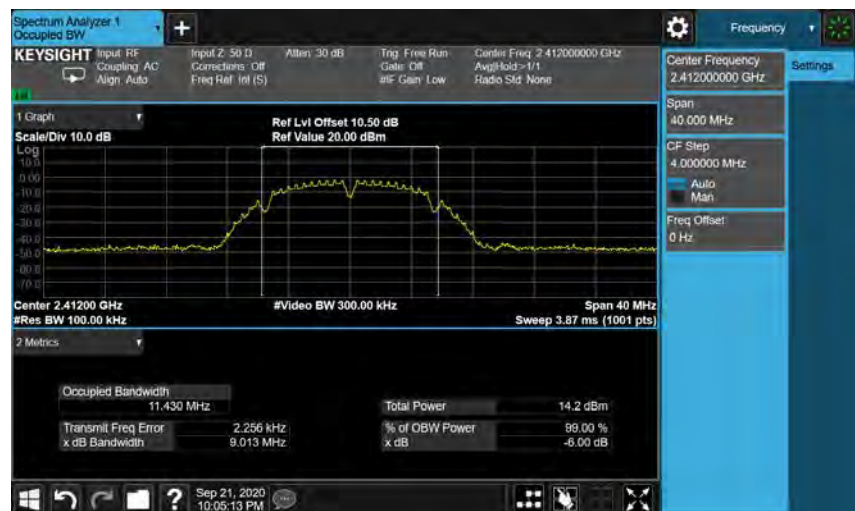


測試結果:

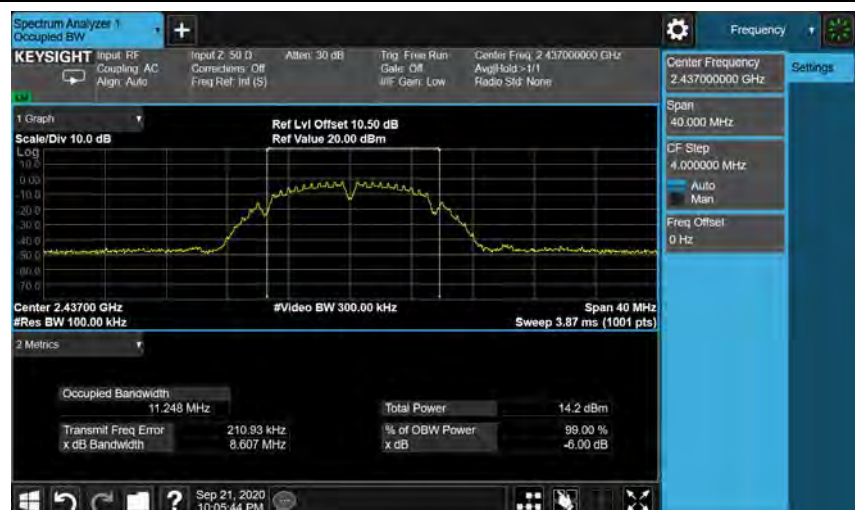
操作模式：Mode 2 / Mode 3 / Mode 4			
操作模式	頻道	量測值 (kHz)	限制值 (kHz)
Mode 2	CH01	9013	≥ 500
	CH06	8607	≥ 500
	CH11	9068	≥ 500
Mode 3	CH01	16420	≥ 500
	CH06	16420	≥ 500
	CH11	16430	≥ 500
Mode 4	CH01	17670	≥ 500
	CH06	17640	≥ 500
	CH11	17640	≥ 500
測試掃描圖請參考下頁。			

Mode 2: IEEE 802.11b Continuous TX Mode

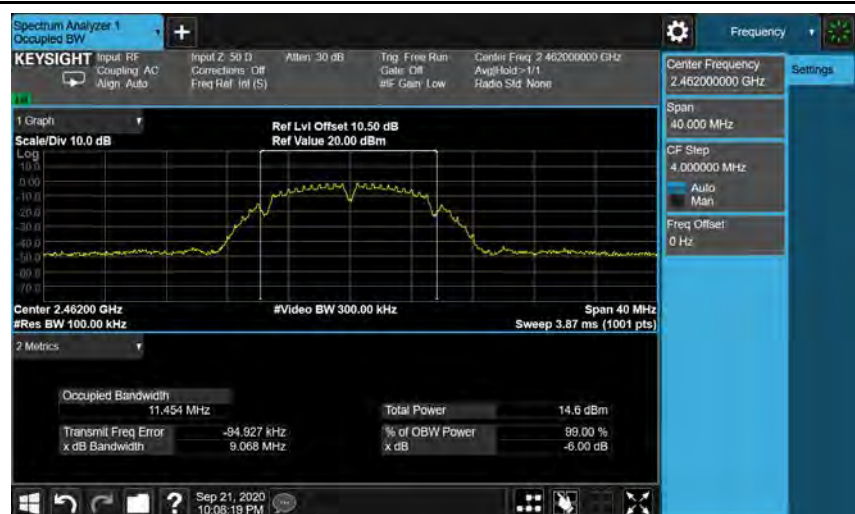
CH01



CH06



CH11

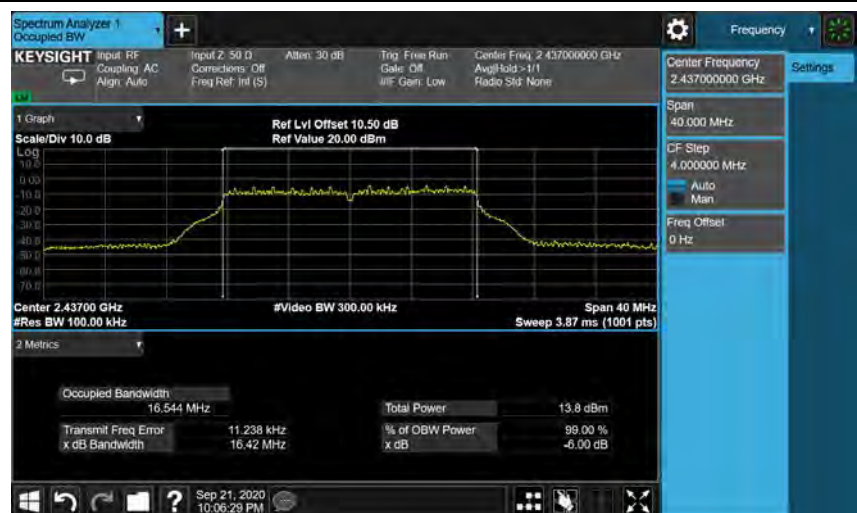


Mode 3: IEEE 802.11g Continuous TX Mode

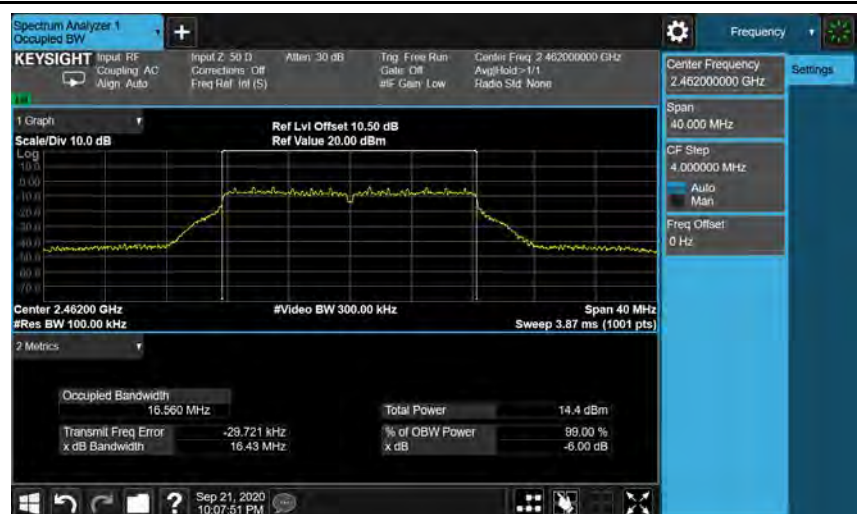
CH01



CH06



CH11



Mode 4: IEEE 802.11n 2.4 GHz 20 MHz Continuous TX Mode

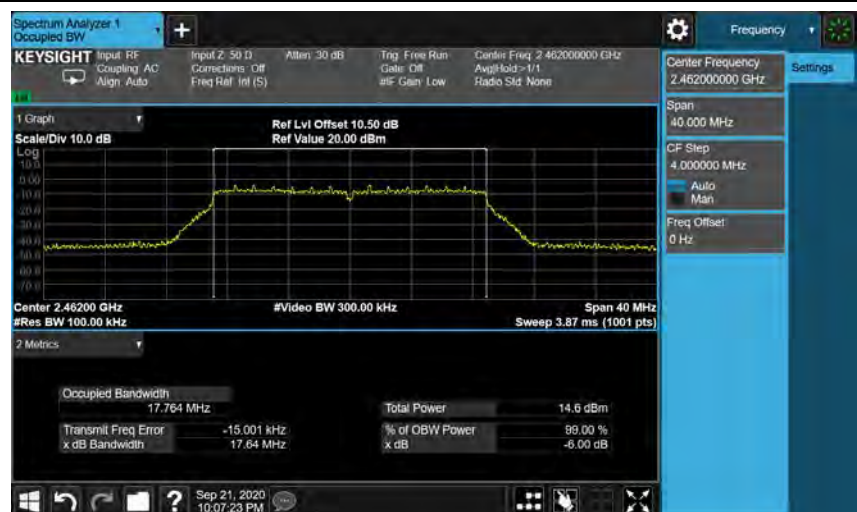
CH01



CH06



CH11



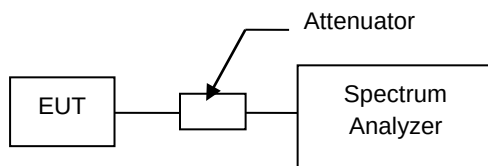
4.2.6 峰值發射功率頻譜密度之要求

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 3kHz 頻寬內,由發射機傳導至天線之峰值發射功率頻譜密度在任意期間內,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 2 / Mode 3 / Mode 4			
操作模式	頻道	量測值 (dBm)	限制值 (dBm)
Mode 2	CH01	-15.430	≤ 8
	CH06	-15.220	≤ 8
	CH11	-15.230	≤ 8
Mode 3	CH01	-18.060	≤ 8
	CH06	-17.680	≤ 8
	CH11	-16.540	≤ 8
Mode 4	CH01	-18.270	≤ 8
	CH06	-17.380	≤ 8
	CH11	-18.540	≤ 8

Mode 2: IEEE 802.11b Continuous TX Mode

CH01

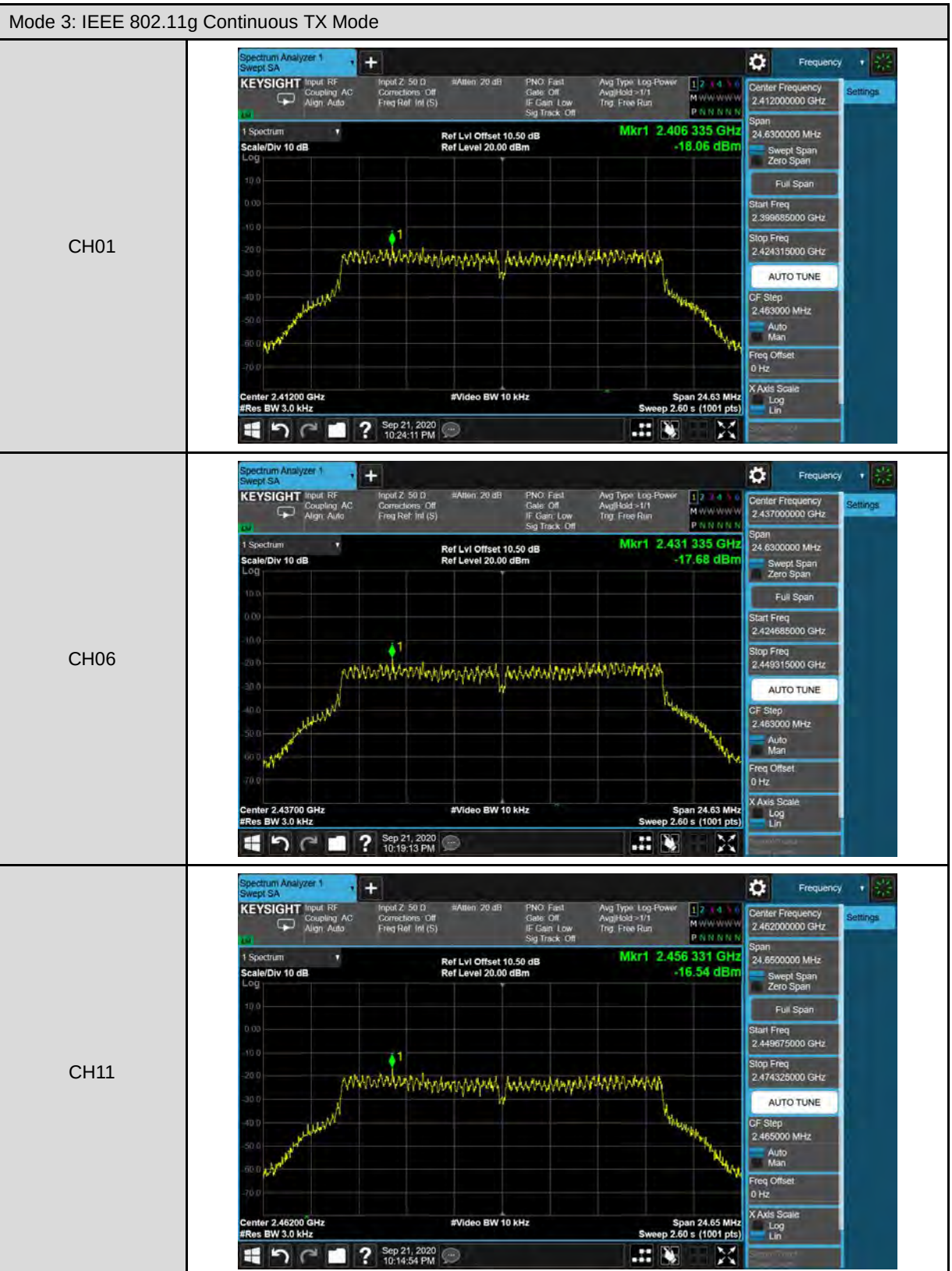


CH06



CH11







4.2.7 電波暴露量之評估

合格標準:

若受測物於正常操作模式下，其發射機距離人體 20 公分以上者，可測試最大暴露允許值(Maximum Permissible Exposure, MPE)以證明其符合電波暴露量之要求。限制值如下：

5.20.2.1 職業性/可控制之暴露

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

註 1：標記*表平面波等效功率密度。

註 2：f 表測試頻率，單位：MHz。

5.20.2.2 一般人/不可控制之暴露

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

註 1：標記*表平面波等效功率密度。

註 2：f 表測試頻率，單位：MHz。

判定結果:

Band	Frequency (MHz)	Limit (mW/cm ²)	Distance [R] (cm)	Power [P] (dBm)	ANT Gain (dBi)	Numeric Gain [G] (dBi)	Duty Cycle	With Duty cycle [P] x [G] (mW)	Power Density [S] (mW/cm ²)
WLAN 2.4 GHz	2412-2462	1	20	7.15	-6.36	0.23	1	1.193	0.0002
BT	2402-2480	1	20	9.21	-6.36	0.23	1	1.917	0.0004

Simultaneous MPE = WLAN 2.4 GHz MPE + BT MPE

$$= 0.0002 + 0.0004 = 0.0006$$

--- END---