

低功率射頻器材試驗報告

產品名稱 HUAWEI FreeBuds 4 NEW

申請廠商 訊嵐技術有限公司

廠 牌 HUAWEI

型式 (號) T0008

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 10 月 29 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 : 低功率射頻器材技術規範(LP0002)(頻率範圍:9 kHz to 40 GHz)



免 責 聲 明

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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 10 月 29 日	初版發行	王裕霜

低功率射頻器材測試證明書

產品名稱 : HUAWEI FreeBuds 4 NEW

廠牌 : HUAWEI

型號 : T0008

申請廠商 : 訊歲技術有限公司

申請者地址 : 臺北市內湖區洲子街55、57號3樓

製造廠商 : Huawei Device Co., Ltd.

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

待測物電壓 : DC 5 V, 400 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 09 月 28 日

試驗日期 : 110 年 09 月 29 日 ~ 110 年 10 月 03 日

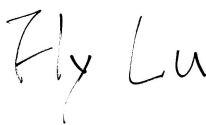
報告中所描述之測試結果與待測設備之架構組合，均根據實際量測情況作詳實的記錄。

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)

目 錄

名 稱	頁 次
低功率射頻器材測試證明書	3
1. 一般敘述	5
1.1 待測設備一般敘述	5
1.2 其他相關聲明	6
2. 量測儀器及測試配置說明	7
2.1 量測設備	7
2.2 檢驗系統示意圖	10
2.3 輔助測試之週邊設備描述	11
2.4 測試軟體版本	13
2.5 測試模式	13
2.6 量測不確定度	15
2.7 試驗環境	15
3. 測試項目與結果判定總表	16
4. 測試項目表列	18
4.1 電源線傳導干擾之量測	18
4.2 場強輻射之量測	19
4.3 輸出峰值功率之量測	22
4.4 非必要頻帶之量測	22
4.5 頻率範圍之要求	23
4.6 發射頻寬之要求	23
4.7 頻道數之要求	24
4.8 跳頻系統之載波頻率頻道間隔之量測	24
4.9 跳頻系統之任一頻率佔用之平均時間之量測	24
4.10 功率密度之要求	25
4.11 天線規格之要求	25
5. Test Results	26
Annex A. Conducted Emission	26
Annex B. Radiated Emission Measurement	28
Annex C. Conducted Test Results	74
6. EUT Photos	100

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	HUAWEI FreeBuds 4 NEW		
廠 牌	HUAWEI		
型 號	T0008		
額 定 電 源	DC 5 V, 400 mA		
待 測 物 電 源 類 別	Power Adapter / Battery / Notebook		
調 變 方 式	GFSK, $\pi/4$ -DQPSK, 8DPSK		
頻 率 使 用 範 圍	2402 MHz – 2480 MHz		
天 線 廠 牌	Huaqin		
天 線 型 號	0302021015		
天 線 型 態	Monopole Antenna & Parasitic Antenna		
天 線 增 益 值	-1.21 dBi		
RF 最大輸出功率	BR, GFSK:	10.72 dBm/	0.01180 W
	EDR, $\pi/4$ -DQPSK:	10.72 dBm/	0.01180 W
	EDR, 8DPSK:	10.81 dBm/	0.01205 W
	LE, GFSK:	5.18 dBm/	0.00330 W
註：此產品為右耳耳機。			

輸出/輸入埠說明：

輸 出 / 入 埠		數 量	介面內容說明
1	DC Power Port	1	連接至充電盒

附屬裝置表:

	裝置名稱	廠牌	型號	備註
(A)	內建固定式電池	HUAWEI	HB05260ECW	DC 3.82 V, 30 mAh 製造商(1):東莞新能德科技有限公司 製造商(2):深圳市比亞迪鋰電池有限公司 製造商(3):天津力神電池股份有限公司
(B)	HUAWEI FreeBuds 4 NEW (充電盒)	HUAWEI	T0008L	Input : DC 5 V, 1.6 A Output : DC 5 V, 400 mA*2
(C)	USB Cable(1)	HUAWEI	CUDU01B-HC457-EH	STD-A to Type-C 線長: 0.23 m 製造商:富譽電子科技(淮安)有限公司
(D)	USB Cable(2)	HUAWEI	AU2-CHO016HF	STD-A to Type-C 線長: 0.23 m 製造商:聯基實業(江西)有限公司
(E)	USB Cable(3)	HUAWEI	WA0084	STD-A to Type-C 線長: 0.23 m 製造商:廣西博祿德電子有限公司
(F)	USB Cable(4)	HUAWEI	L99UC158-CS-H	STD-A to Type-C 線長: 0.23 m 製造商:博碩科技(江西)有限公司
(G)	USB Cable(5)	HUAWEI	2120-00029-0	STD-A to Type-C 線長:0.23 m 製造商:江西錦寶科技有限公司
(H)	HUAWEI FreeBuds 4 NEW (左耳耳機)	HUAWEI	T0008	無線功能:Bluetooth

1.2 其他相關聲明

本測試報告屬(以下選擇一種打■)

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

2. 量測儀器及測試配置說明

2.1 量測設備

For Conducted

Test Period: Sep. 30 ~ Oct. 01, 2021

Testing Engineer: Andy Lu

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 Conducted Emission
Test Period: Oct. 03, 2021
Testing Engineer: 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	10/27/2021	1 year
☐	Test Receiver	R&S	ESCI	101000	11/26/2021	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

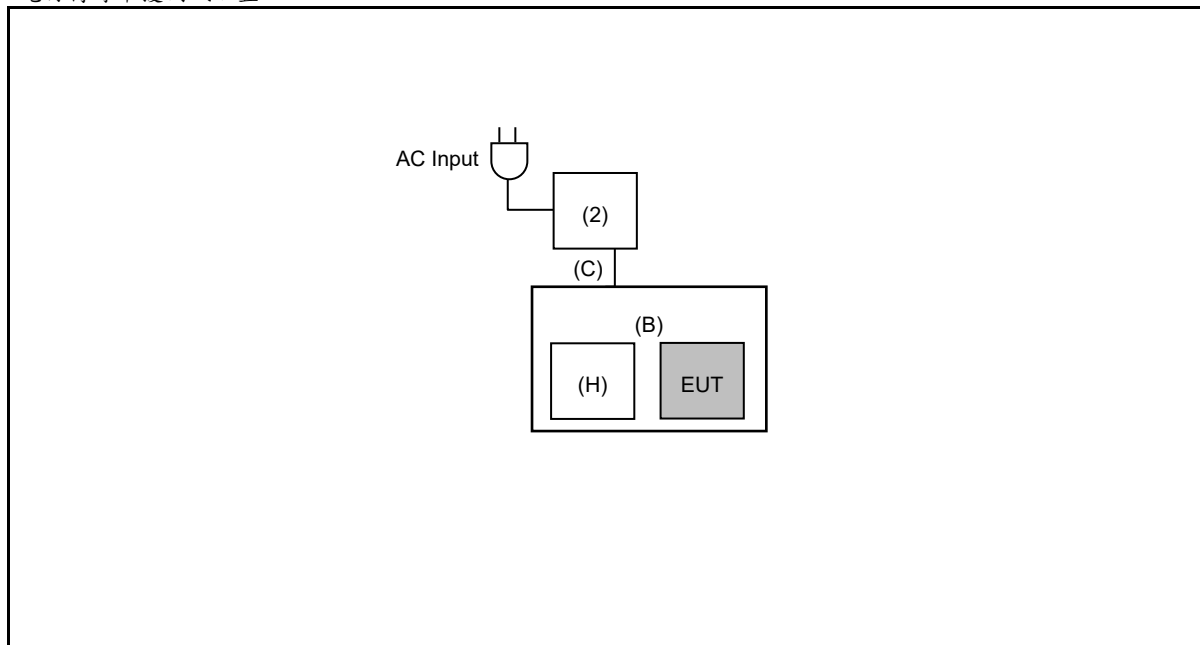
For Radiated Emissions
Test Period: Sep. 29 ~ 30, 2021
Testing Engineer: Pink Li

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
☒	Spectrum Analyzer (2 Hz~50 GHz)	Keysight	N9030B	MY57143537	04/19/2021	1 year
☒	Pre Amplifier (100 kHz~1.3 GHz)	Agilent	8447D	2944A11119	01/15/2021	1 year
☐	Pre Amplifier (100 kHz~1.3 GHz)	Agilent	8447D	2944A10961	07/06/2021	1 year
☐	Broadband Amplifier (100 kHz~1 GHz)	Titan	T0910E00014330A 1F	001	07/23/2021	1 year
☐	Pre Amplifier (1~26.5 GHz)	Agilent	8449B	3008A02237	10/21/2020	1 year
☒	Broadband Amplifier (1~26.5 GHz)	Titan	T0912E01263025A 1F	002	07/26/2021	1 year
☐	Pre Amplifier (26.5~40 GHz)	EMCI	EMC2654045	980028	08/19/2021	1 year
☒	Broadband Antenna	Schwarzbeck	VULB9168	01146	07/19/2021	1 year
☒	Horn Antenna (1~18 GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	02207	07/09/2021	1 year
☒	Horn Antenna (18~40 GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9170	9170-320	08/24/2021	1 year

Radiation test sites		Semi Anechoic Room				
Use	Equipment	Manufacturer	Model Number	Serial Number	Cal. Date	Cal. Period
☐	Broadband Antenna	Schwarzbeck	VULB9168	416	11/11/2020	1 year
☐	Horn Antenna (1~18 GHz)	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	9120D-550	08/24/2021	1 year
☐	Horn Antenna (18~40 GHz)	ETS	3116	00086467	12/03/2020	1 year
☐	Loop Antenna	COM-POWER CORPORATION	AL-130	121014	04/07/2021	1 year
☐	RF Cable	EMCI	EMC104-N-N-6000	TE01-1	02/19/2021	1 year
☐	Microwave Cable	EMCI	EMC104-SM-SM-1 3000	170814	10/29/2020	1 year
☐	Microwave Cable	EMCI	EMC102-KM-KM-1 4000	151001	02/19/2021	1 year
☒	Coaxial Cable	Titan	T0710AT327A10A 100	J11005	08/06/2021	1 year
☒	Coaxial Cable	Titan	T0710AT327A10A 900	J11004	08/06/2021	1 year
☒	Coaxial Cable	Titan	CFD400NL-LW	001	08/06/2021	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

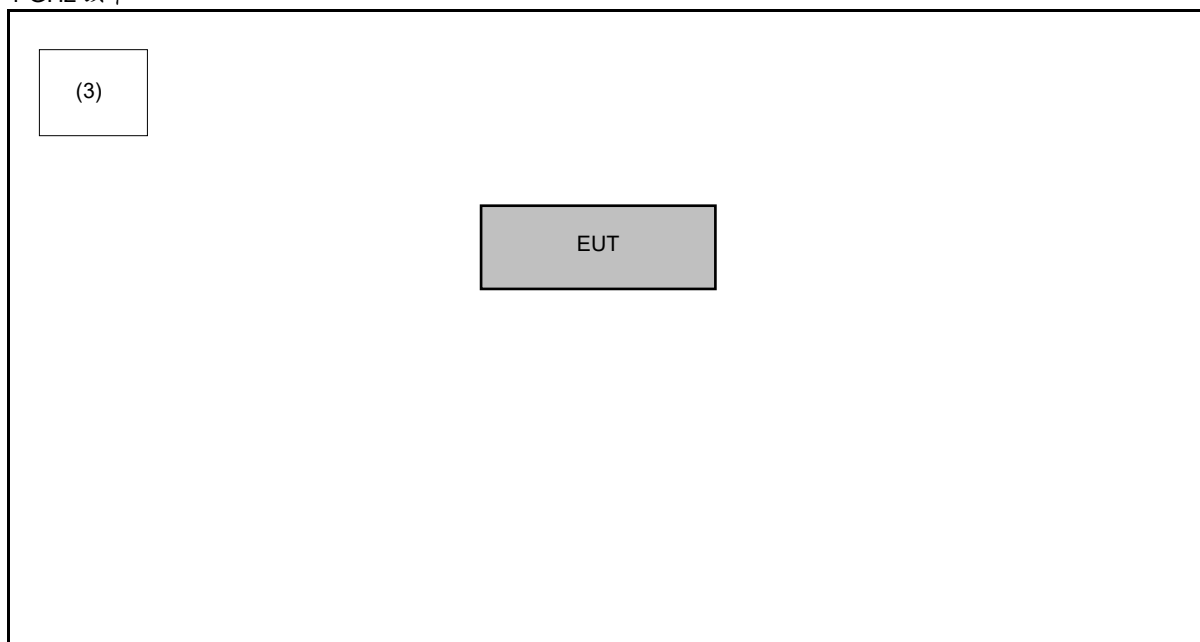
2.2 檢驗系統示意圖

電源傳導干擾測試配置

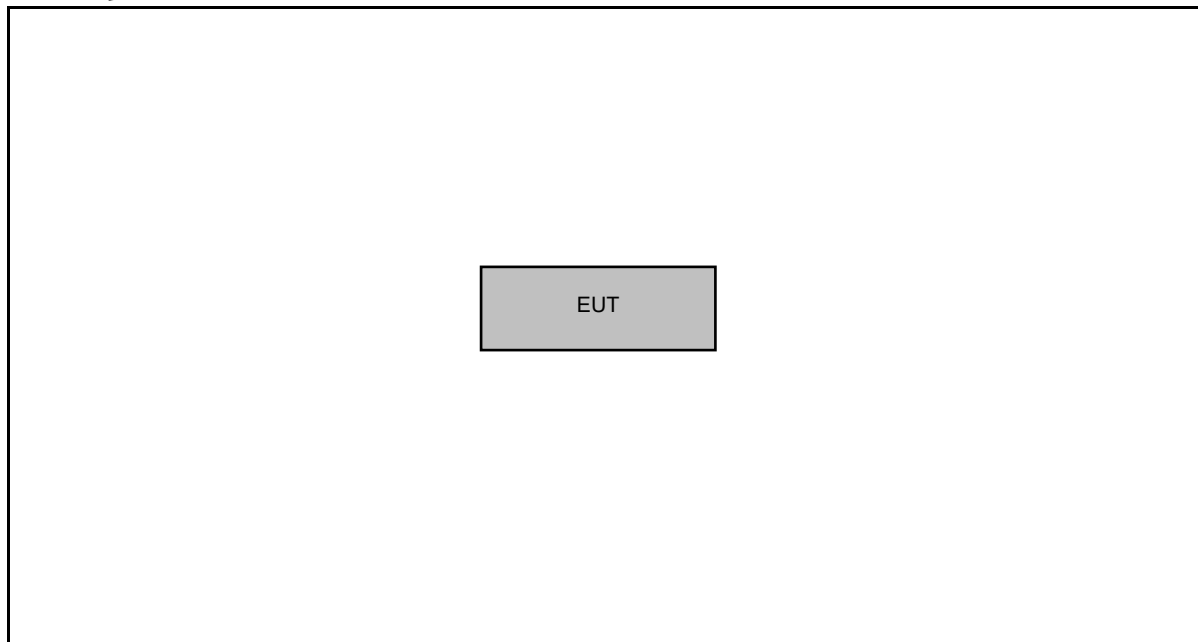


輻射干擾測試配置

1 GHz 以下



1 GHz 以上



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	Acer	N19C1	---	---	(實驗室提供)
(2)	AC Adapter	HUAWEI	HW-050450U 00	---	---	INPUT : AC 100 V - 240 V, 50 Hz/60 Hz, 0.75 A OUTPUT : DC 5 V, 2 A OR 4.5 V, 5 A OR 5 V, 4.5 A (實驗室提供)
(3)	手持式行動 電話機	HUAWEI	ELS-NX9	---	---	NCC ID : CCAK204G0170T4 (申請者提供)
(4)	USB Cable	長丞電子有限 公司	CH340G 下載 線	---	---	STD-A to Type-C 線長: 0.95 m (申請者提供)

測試組合：

EUT Configure Mode	CE	RE<1G	RE $\geq$ 1G	備註
內建固定式電池	V	V	V	製造商(3)
HUAWEI FreeBuds 4 NEW (充電盒)	V	---	V	
USB Cable(1)	V	X	X	
USB Cable(2)		X	X	
USB Cable(3)		X	X	
USB Cable(4)		X	X	
USB Cable(5)		X	X	
HUAWEI FreeBuds 4 NEW (左耳耳機)	V	X	X	
Notebook	X	X	V	測試週邊(1) Test Mode使用
AC Adapter	V	X	X	測試週邊(2)
手持式行動電話機	X	V	X	測試週邊(3)
USB Cable	X	X	V	測試週邊(4) Test Mode使用

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

2.4 測試軟體版本

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

2.5 測試模式

使用定頻模式量測

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

Final-Test Mode
Mode 1: Standby Mode
Mode 2: Transmit Mode
Mode 3: BR, GFSK Continuous TX Mode
Mode 5: EDR, 8DPSK Continuous TX Mode
Mode 6: LE, GFSK Continuous TX Mode
Mode 7: Receiver Mode

Test Mode	Frequency (MHz)	Packet Type	RF Power setting in Test Software	Test Software Version
Mode 3	2402	DH1	Default	CBT
		DH3	Default	
		DH5	Default	
	2441	DH1	Default	
		DH3	Default	
		DH5	Default	
	2480	DH1	Default	
		DH3	Default	
		DH5	Default	
Mode 4	2402	2DH1	Default	
		2DH3	Default	
		2DH5	Default	
	2441	2DH1	Default	
		2DH3	Default	
		2DH5	Default	
	2480	2DH1	Default	
		2DH3	Default	
		2DH5	Default	
Mode 5	2402	3DH1	Default	
		3DH3	Default	
		3DH5	Default	
	2441	3DH1	Default	
		3DH3	Default	
		3DH5	Default	
	2480	3DH1	Default	
		3DH3	Default	
		3DH5	Default	

Test Mode	Frequency (MHz)	RF Power setting in Test Software	Test Software Version
Mode 6	2402	Default	HiAudioStudioTool V2.1.1.0
	2440	Default	
	2480	Default	

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
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	

2.7 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 低功率射頻器材技術規範(LP0002)之檢驗法。

BR/EDR 測試項目

項次	測試項目	適用規範	測試結果	量測設備	結果判定
1	電源線傳導干擾	低功率射頻器材技術規範 3.3節	Annex A.	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	Annex B.	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	Annex B.	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	Annex B.	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)(B)節	Annex C.	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	Annex C.	請參閱2.1節	符合
7	頻率範圍	低功率射頻器材技術規範 4.10.1.1節	Annex C.	請參閱2.1節	符合
8	發射頻寬	低功率射頻器材技術規範 4.10.1.6(1)(A)節	Annex C.	請參閱2.1節	符合
9	頻道數	低功率射頻器材技術規範 4.10.1.6(1)(A)(a)節	Annex C.	請參閱2.1節	符合
10	跳頻系統之載波頻率頻道間隔	低功率射頻器材技術規範 4.10.1.6(1)(A)節	Annex C.	請參閱2.1節	符合
11	跳頻系統之任一頻率佔用之 平均時間	低功率射頻器材技術規範 4.10.1.6(1)(A)(a)節	Annex C.	請參閱2.1節	符合
12	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4.11節	-----	符合

* 此項目為在 RF 功能作動下進行

LE 測試項目

項次	測試項目	適用規範	測試結果	量測設備	結果判定
1	電源線傳導干擾	低功率射頻器材技術規範 3.3節	Annex A.	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	Annex B.	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	Annex B.	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	Annex B.	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	Annex C.	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節	Annex C.	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	Annex C.	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	Annex C.	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4.11節	-----	符合

* 此項目為在 RF 功能作動下進行

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 μ H 之電源線阻抗模擬網路 (LISN)。頻率重疊處，以較低限值為準。

Frequency (MHz)	傳導限制值 (dBuV)	
	準峰值 (Quasi – peak)	平均值 (Average)
0.15 – 0.5	66 - 56 (註)	56 - 46 (註)
0.5 – 5	56	46
5 - 30	60	50

註：隨頻率之對數遞減。

測試方法：

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

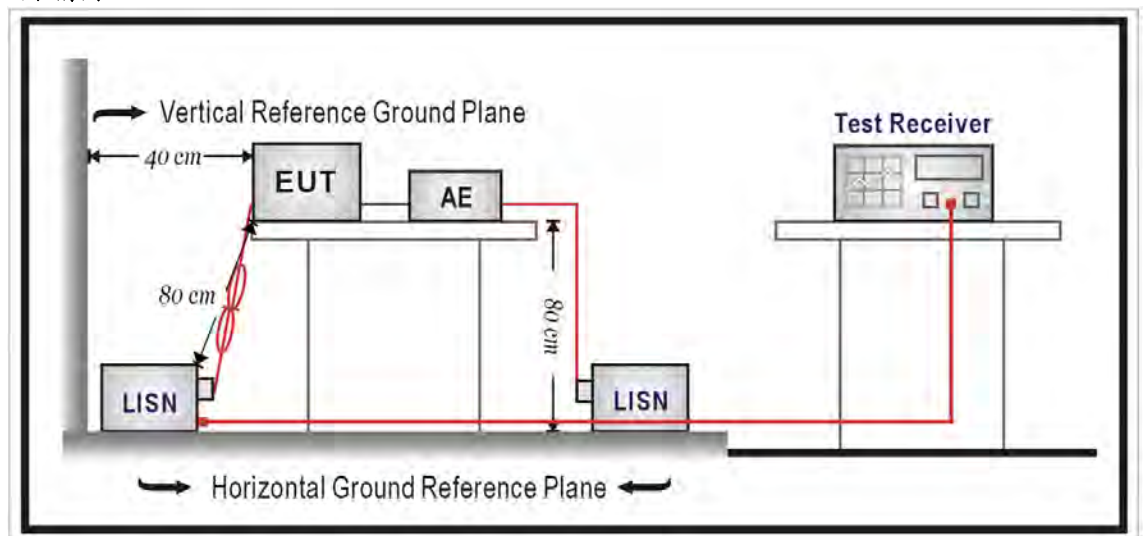
干擾值之計算

電源傳導干擾電壓之計算公式如下

結果值 = 儀器讀值(QP/AV) + 校正因子

其中校正因子為：饋線損失 + 電源阻抗模擬網路損失

測試架構圖：



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(μ V/m)	測距(m)
0.009 - 0.490(含)	2,400/頻率(千赫)	300
0.490 (不含) – 1.705 (含)	24,000/頻率(千赫)	30
1.705(不含) – 30 (不含)	30	30
30 (含) – 88 (含)	100	3
88 (不含)- 216 (含)	150	3
216 (不含)- 960 (含)	200	3
960 (不含)以上	500	3

測試方法：

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

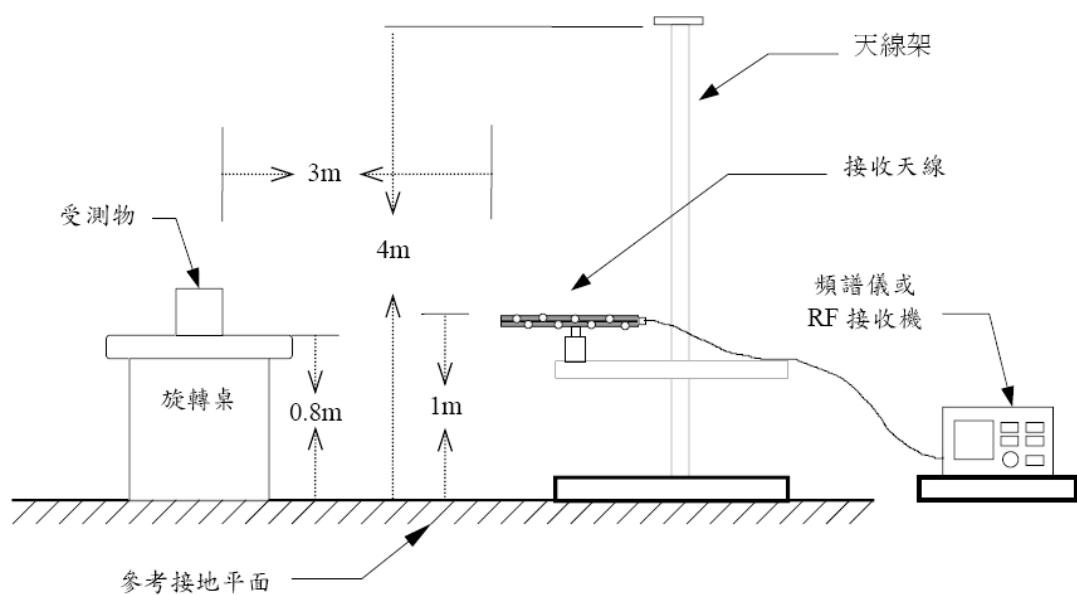
場強度之計算

場強之計算公式為：結果值 = 讀值 + 校正因子

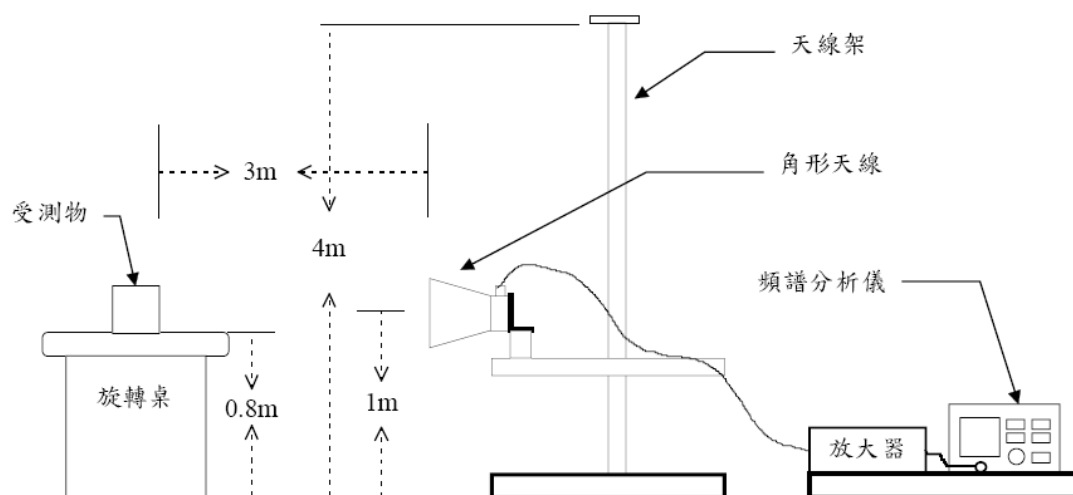
其中校正因子為：天線因子+ 饋線損失 + 濾波器損失（若有使用） - 放大器增益（若有使用）

測試架構圖：

量測頻率低於 1 GHz 以下之測試配置



量測頻率高於 1 GHz 以上之測試配置



4.3 輸出峰值功率之量測

合格標準：

BR/EDR

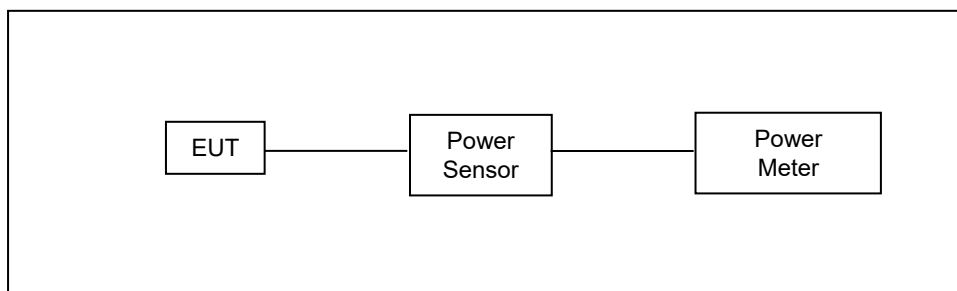
依據 NCC 低功率射頻器材技術規範(LP0002)之 4.10.1.2(1)(B)節之要求，所有操作於 2400-2483.5 兆赫且輸出功率應小於或等於 0.125 W。

LE

依據 NCC 低功率射頻器材技術規範(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：

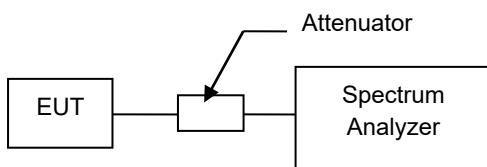


4.4 非必要頻帶之量測

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。

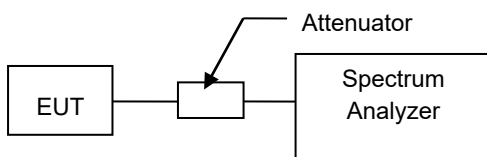
附註 2: 測試結果頻帶外之輻射雜訊皆小於主頻 TX 20 dB。

4.5 頻率範圍之要求

合格標準：

依據 NCC 低功率射頻器材技術規範(LP0002)之 4.10.1.1 節之要求，允許使用的頻率範圍為 2400 至 2483.5 MHz。

測試架構圖：



4.6 發射頻寬之要求

合格標準：

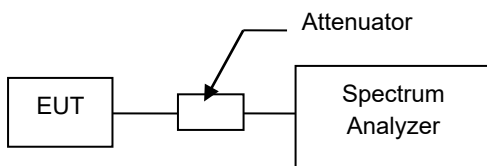
BR/EDR

對跳頻系統(Frequency Hopping System)而言，依據 NCC 低功率射頻器材技術規範 4.10.1.6(1)(A)節之要求，跳頻系統之載波頻率頻道間隔應至少 25 千赫(kHz)或跳頻頻道 20 dB 頻寬之三分之二，兩者取較寬者。系統之跳頻頻道應依虛擬亂數排列，在各頻率之跳頻頻道上跳躍。每一發射機必須均等的使用每一頻率。系統接收機應具有與發射機跳躍頻道頻寬相匹配之輸入頻寬，且應隨所發射的信號同步偏移接收頻率。

LE

依據 NCC 低功率射頻器材技術規範 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：

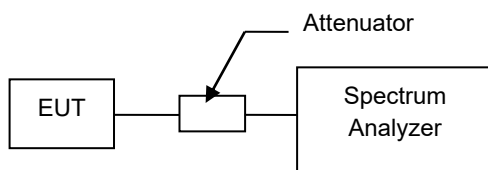


4.7 頻道數之要求

合格標準:

對跳頻系統(Frequency Hopping System)而言，依據 NCC 低功率射頻器材技術規範(LP0002)之 4.10.1.6(1)(A)(a)節之要求，至少使用 15 個無重疊之頻道(複合系統時，關閉數位調變作業狀態檢驗)。

測試架構圖：

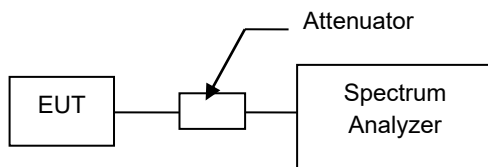


4.8 跳頻系統之載波頻率頻道間隔之量測

合格標準:

依據 NCC 低功率射頻器材技術規範(LP0002) 之 4.10.1.6(1)(A)節要求，應至少 25 kHz 或跳頻頻道之 20 dB 頻寬之三分之二，兩者取較寬者。

測試架構圖：

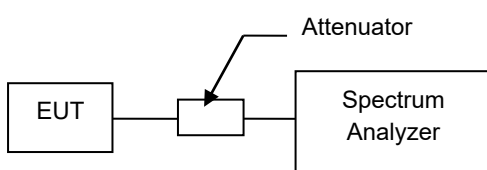


4.9 跳頻系統之任一頻率佔用之平均時間之量測

合格標準:

依據 NCC 低功率射頻器材技術規範(LP0002)之 4.10.1.6(1)(A)(a)節之要求，若使用 15 個無重疊之頻道，在 0.4 秒乘以跳頻頻道數之週期內，任一頻道佔用之平均時間不得超過 0.4 秒(複合系統時，關閉跳頻作業狀態檢驗)。

測試架構圖：

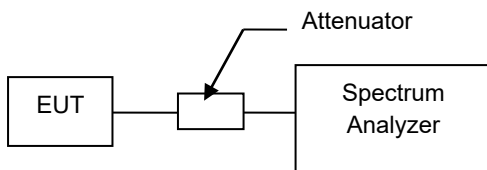


4.10 功率密度之要求

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：



4.11 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。

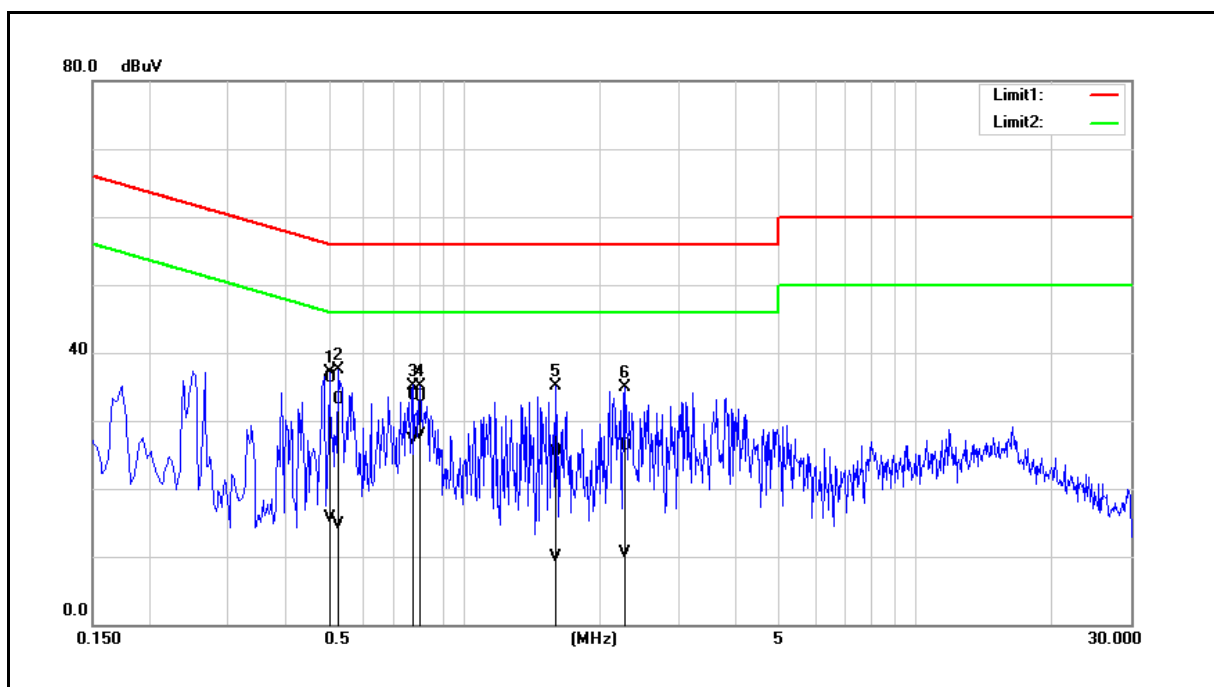
依據 NCC 低功率射頻器材技術規範(LP0002)之 4.10.1.4 節之要求，天線之規格不受第 3.2 節規定之限制

判定結果： 符合。

5. Test Results

Annex A. Conducted Emission

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

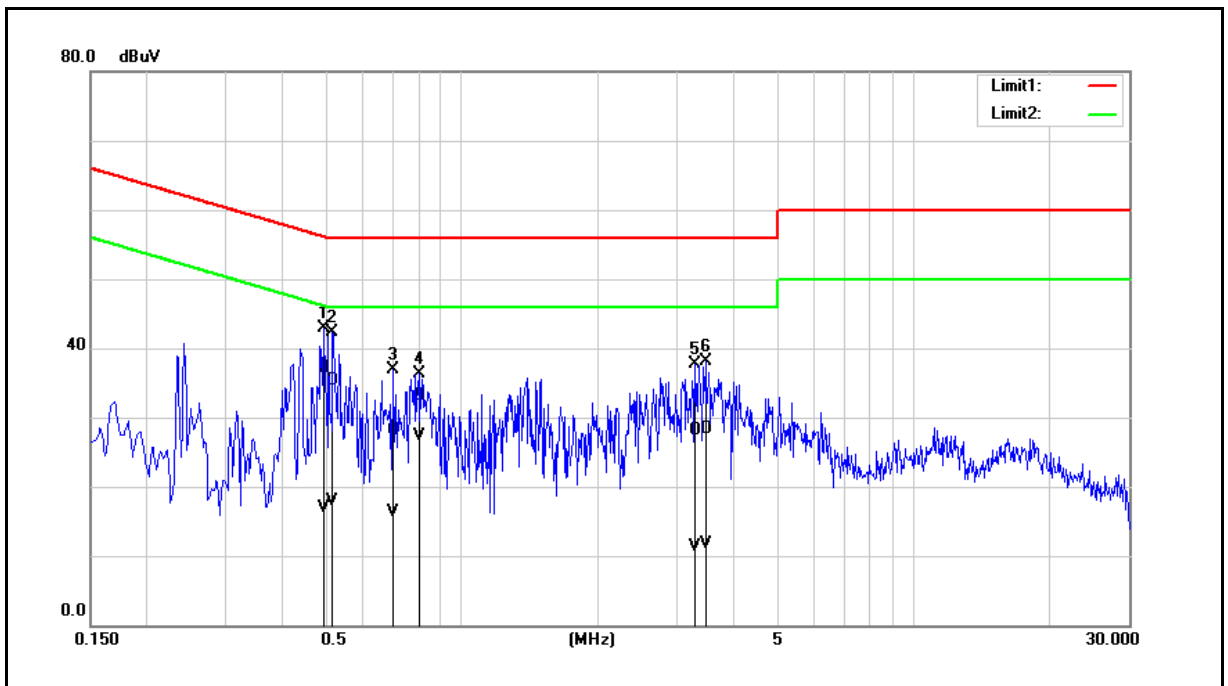


No.	Frequency (MHz)	QP reading (dBuV)	AVG reading (dBuV)	Correction factor (dB)	QP result (dBuV)	AVG result (dBuV)	QP limit (dBuV)	AVG limit (dBuV)	QP margin (dB)	AVG margin (dB)	Remark
1	0.5020	26.63	5.87	9.74	36.37	15.61	56.00	46.00	-19.63	-30.39	Pass
2	0.5260	23.27	4.92	9.74	33.01	14.66	56.00	46.00	-22.99	-31.34	Pass
3	0.7700	23.86	17.34	9.75	33.61	27.09	56.00	46.00	-22.39	-18.91	Pass
4	0.7980	23.67	18.14	9.75	33.42	27.89	56.00	46.00	-22.58	-18.11	Pass
5	1.5940	15.68	0.13	9.79	25.47	9.92	56.00	46.00	-30.53	-36.08	Pass
6	2.2700	16.60	0.71	9.80	26.40	10.51	56.00	46.00	-29.60	-35.49	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	0.4940	27.41	7.12	9.73	37.14	16.85	56.10	46.10	-18.96	-29.25	Pass
2	0.5180	25.57	8.13	9.73	35.30	17.86	56.00	46.00	-20.70	-28.14	Pass
3	0.7020	18.44	6.63	9.75	28.19	16.38	56.00	46.00	-27.81	-29.62	Pass
4	0.8020	23.29	17.57	9.75	33.04	27.32	56.00	46.00	-22.96	-18.68	Pass
5	3.2860	18.27	1.40	9.83	28.10	11.23	56.00	46.00	-27.90	-34.77	Pass
6	3.4540	18.50	1.81	9.83	28.33	11.64	56.00	46.00	-27.67	-34.36	Pass

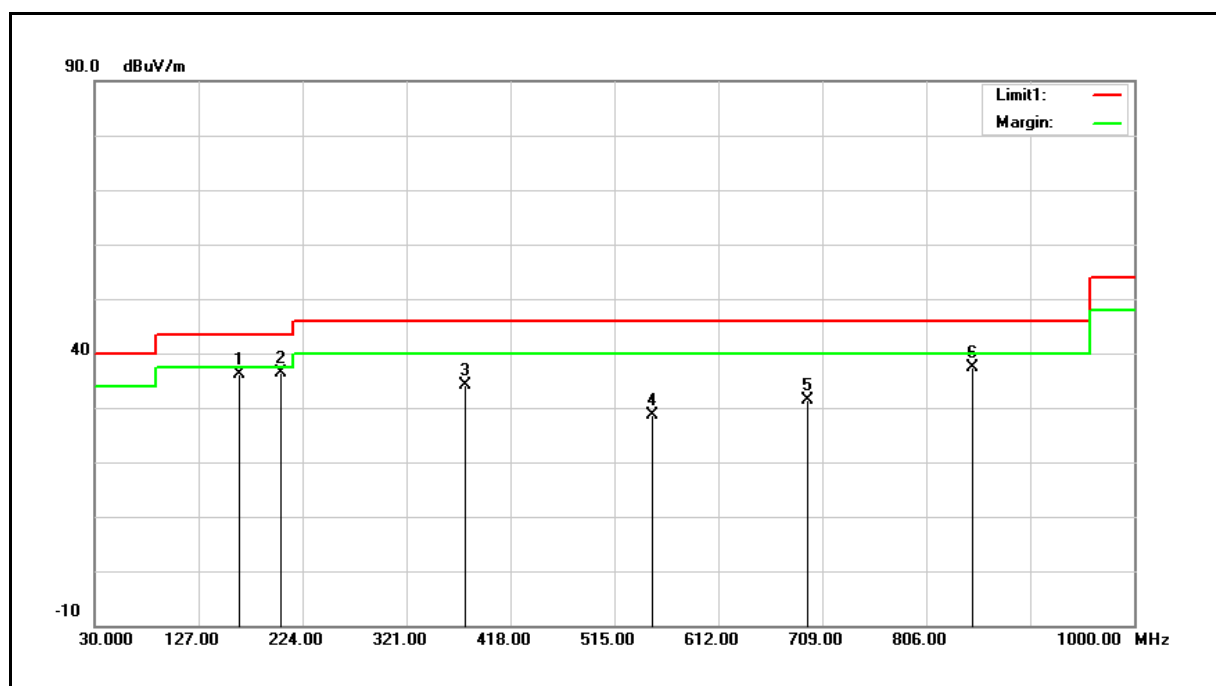
註：1. 干擾值(dBuV) = 校正係數(dB) + 讀值(dBuV)。

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)。

Annex B. 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 2		
Ant.Polar.:	Horizontal		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	164.8300	42.59	-6.57	36.02	43.50	-7.48	QP
2	203.6300	45.60	-9.15	36.45	43.50	-7.05	QP
3	376.2900	38.10	-3.94	34.16	46.00	-11.84	QP
4	549.9200	29.51	-0.87	28.64	46.00	-17.36	QP
5	695.4200	29.26	2.14	31.40	46.00	-14.60	QP
6	849.6500	32.78	4.57	37.35	46.00	-8.65	QP

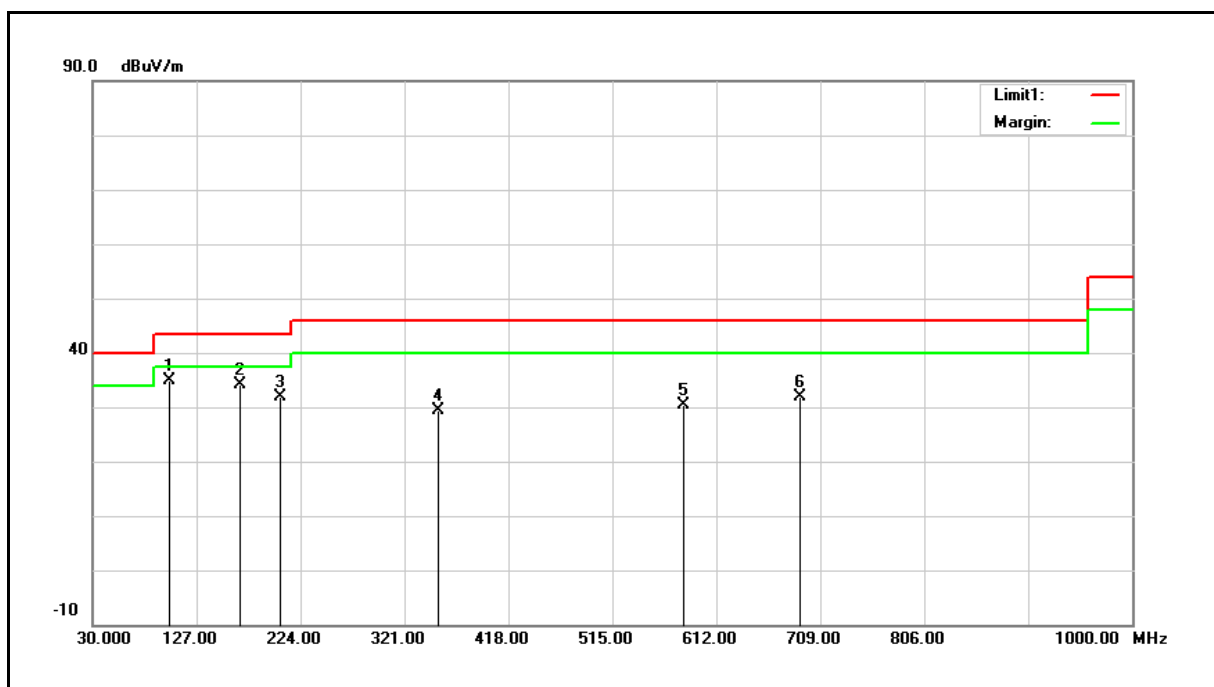
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

Example: 36.02 = -6.57 + 42.59.

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 2		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	101.7800	46.46	-11.54	34.92	43.50	-8.58	QP
2	167.7400	40.76	-6.67	34.09	43.50	-9.41	QP
3	204.6000	41.06	-9.15	31.91	43.50	-11.59	QP
4	352.0400	33.87	-4.61	29.26	46.00	-16.74	QP
5	580.9600	30.48	0.01	30.49	46.00	-15.51	QP
6	689.6000	29.94	2.00	31.94	46.00	-14.06	QP

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

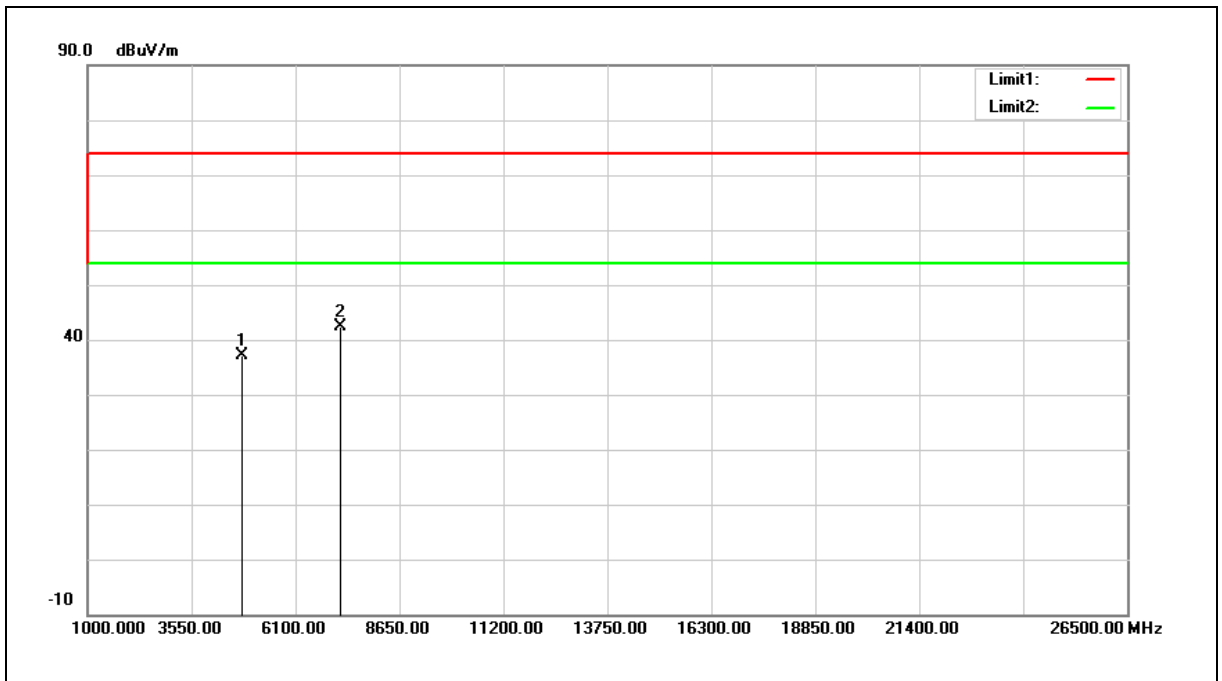
Example: $34.92 = -11.54 + 46.46$.

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 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	38.19	-1.04	37.15	74.00	-36.85	peak
2	7206.000	36.27	6.04	42.31	74.00	-31.69	peak

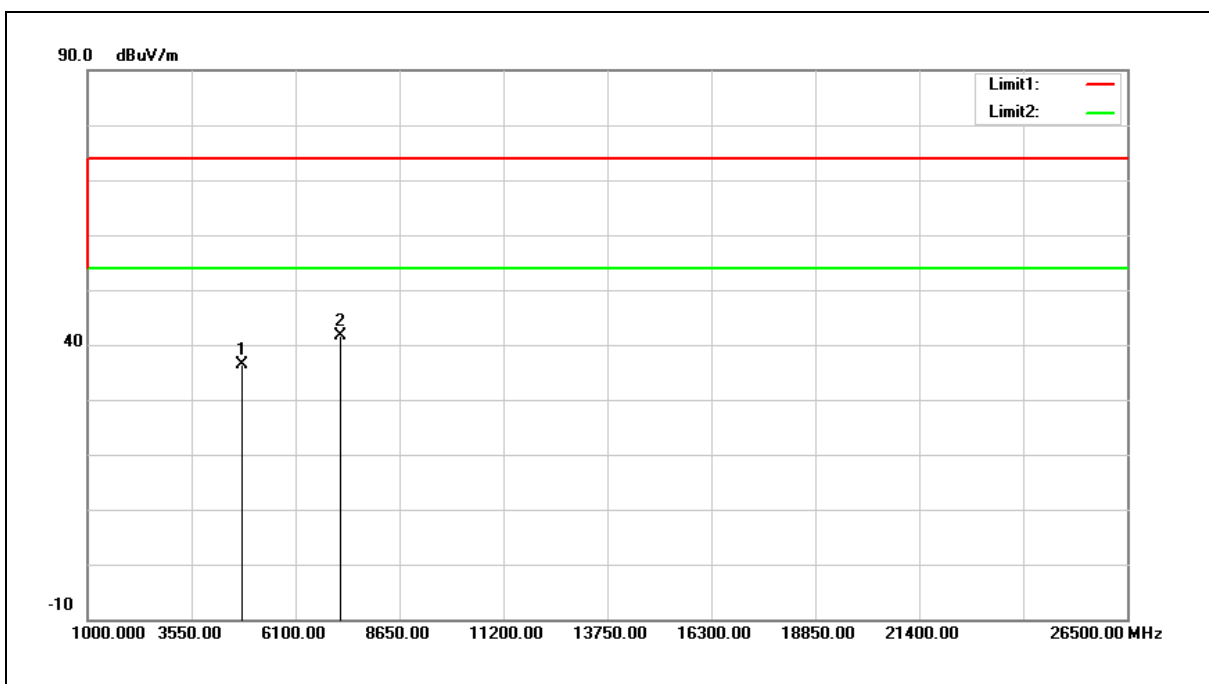
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

Example: 37.15 = -1.04+38.19

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

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

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	37.48	-1.04	36.44	74.00	-37.56	peak
2	7206.000	35.51	6.04	41.55	74.00	-32.45	peak

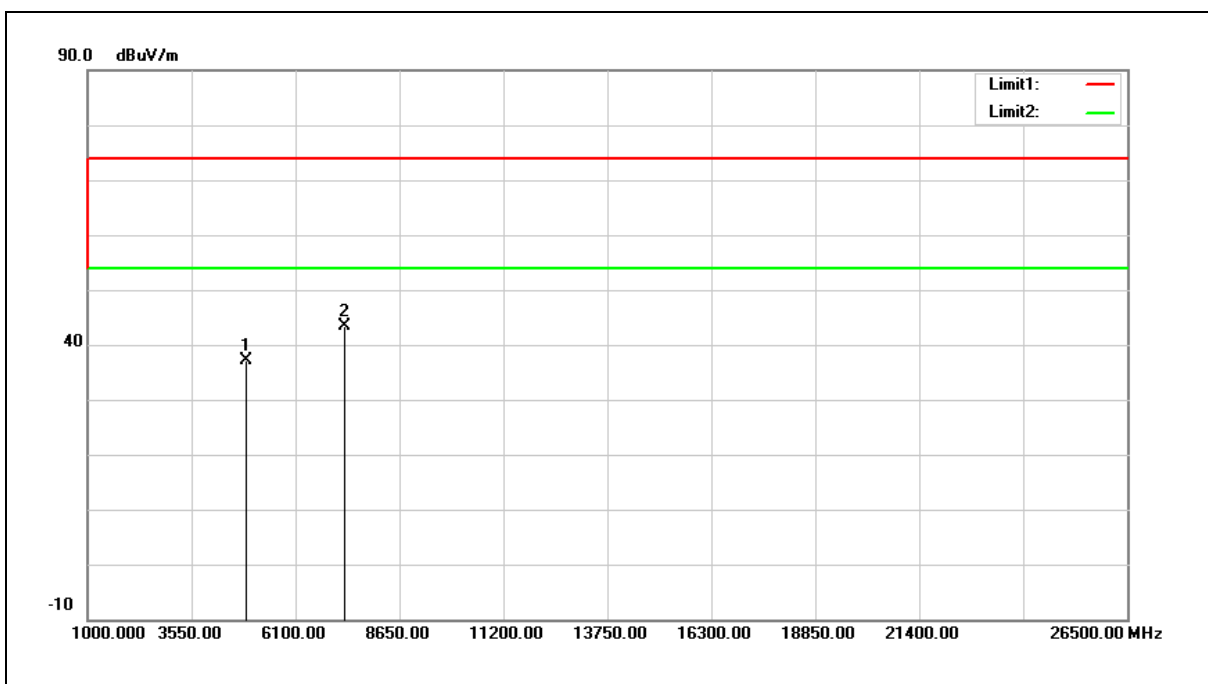
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

Example: $36.44 = -1.04 + 37.48$

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

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

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



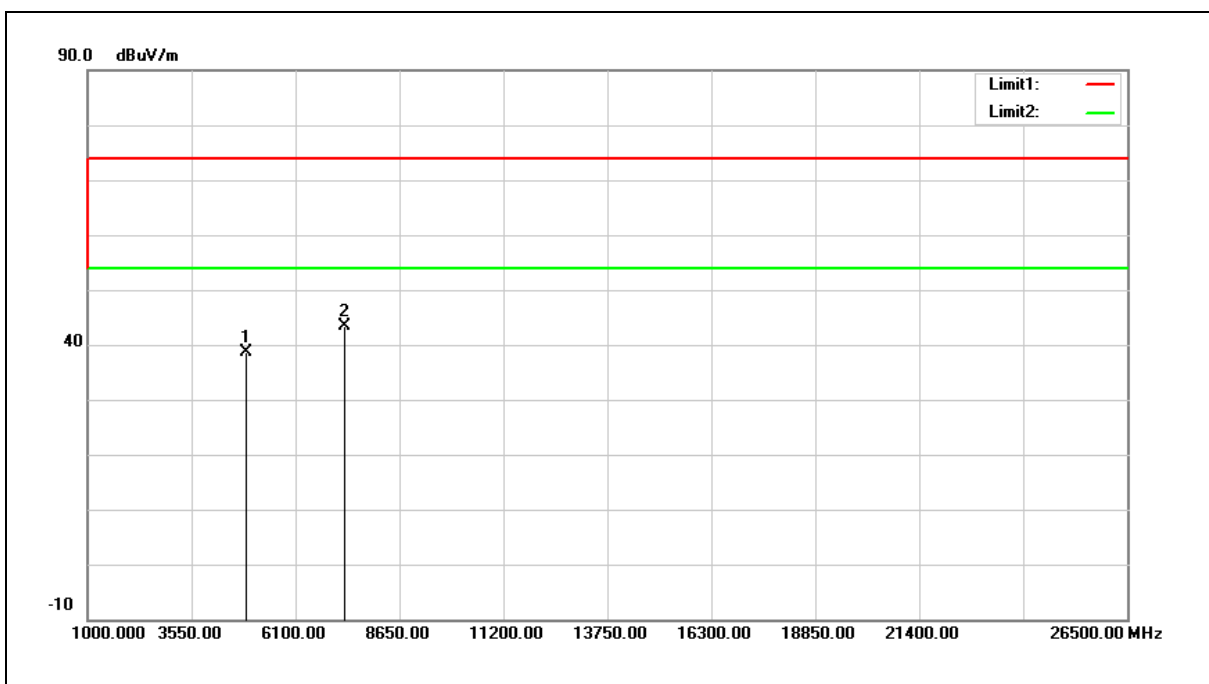
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4882.000	37.95	-0.77	37.18	74.00	-36.82	peak
2	7323.000	36.76	6.50	43.26	74.00	-30.74	peak

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

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

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

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



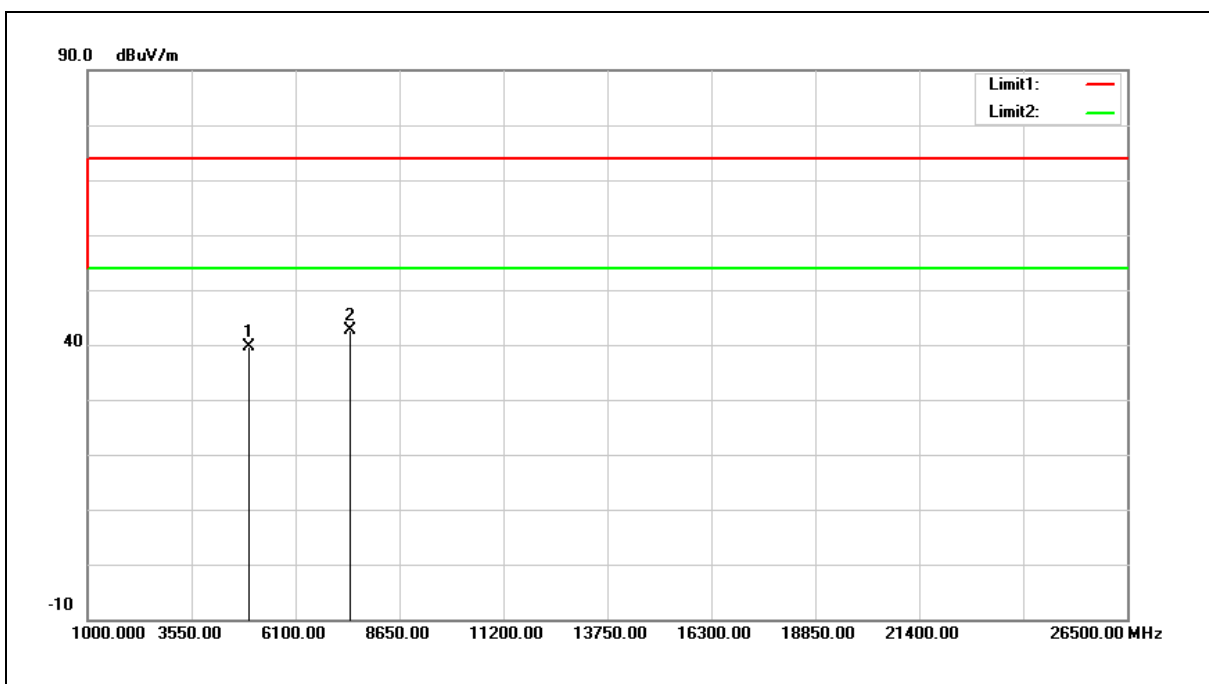
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4882.000	39.36	-0.77	38.59	74.00	-35.41	peak
2	7323.000	36.84	6.50	43.34	74.00	-30.66	peak

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		



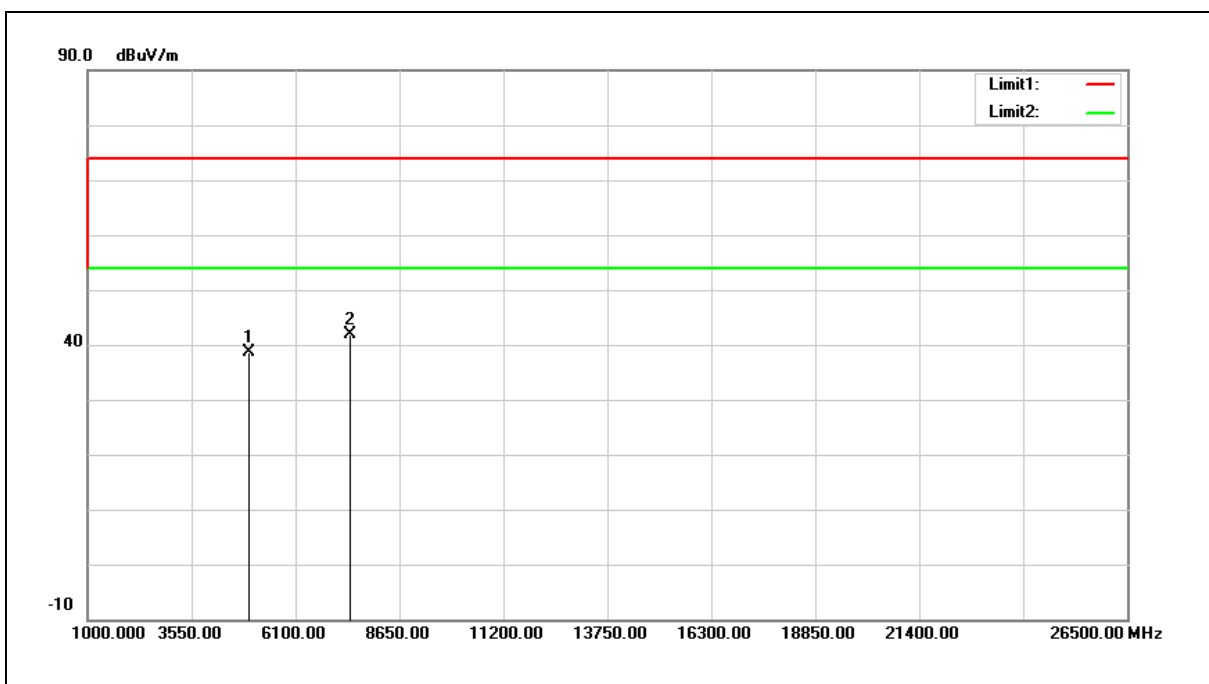
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	40.15	-0.50	39.65	74.00	-34.35	peak
2	7440.000	35.65	6.95	42.60	74.00	-31.40	peak

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

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

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

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



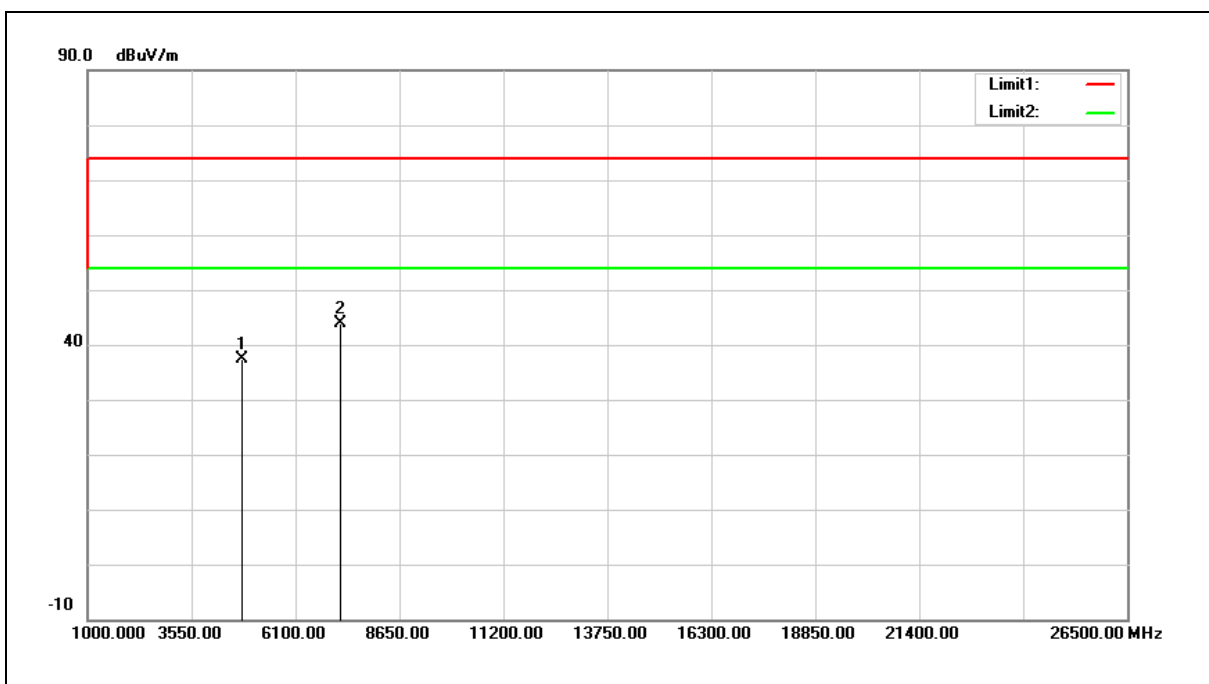
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	39.17	-0.50	38.67	74.00	-35.33	peak
2	7440.000	35.04	6.95	41.99	74.00	-32.01	peak

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:	2402 MHz		
Mode:	Mode 5		
Ant.Polar.:	Horizontal		



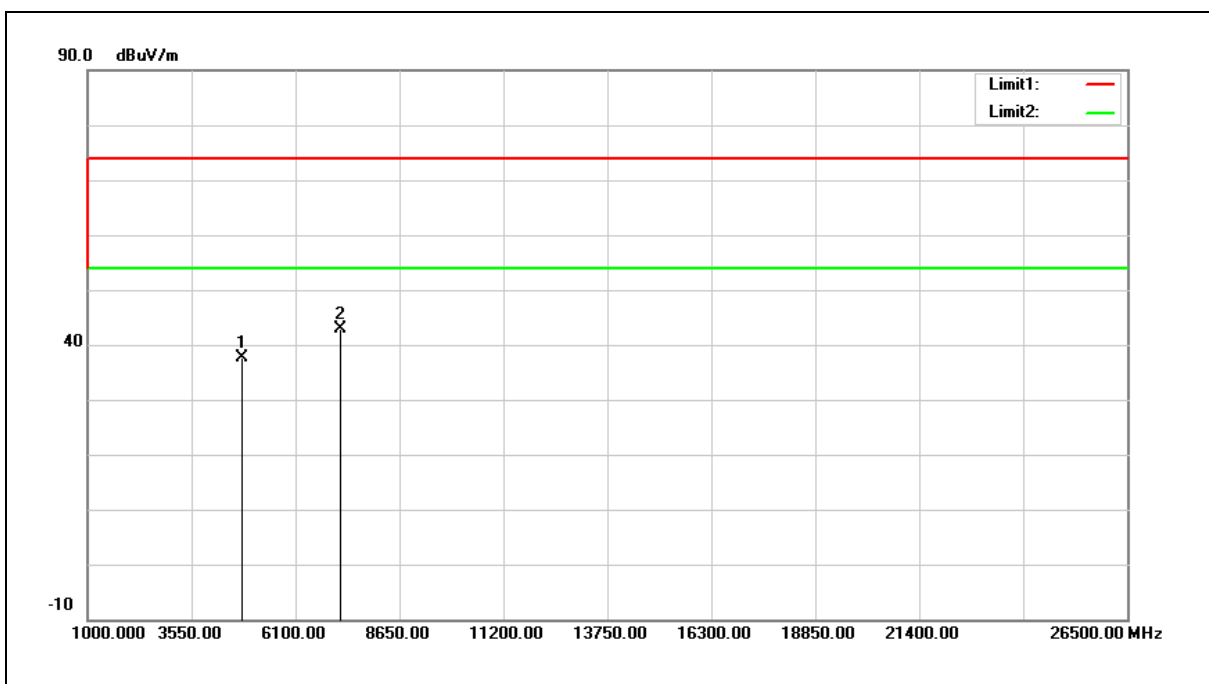
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.000	38.49	-1.04	37.45	74.00	-36.55	peak
2	7206.000	37.84	6.04	43.88	74.00	-30.12	peak

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:	2402 MHz		
Mode:	Mode 5		
Ant.Polar.:	Vertical		



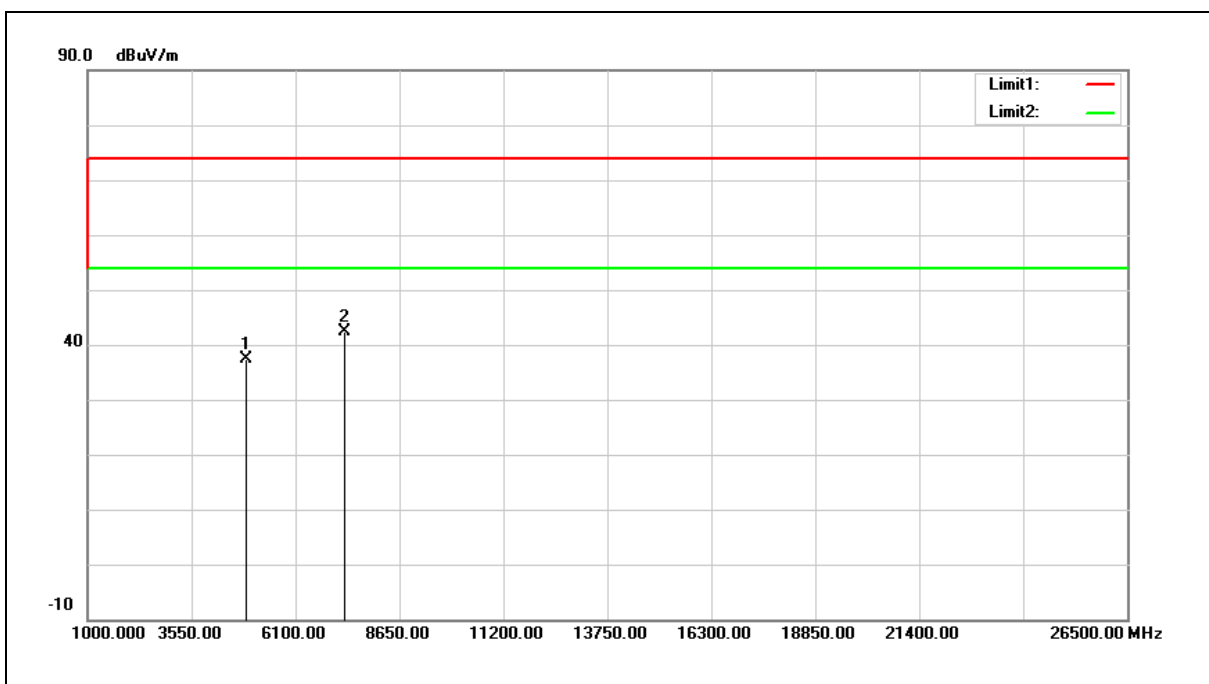
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.000	38.59	-1.04	37.55	74.00	-36.45	peak
2	7206.000	36.72	6.04	42.76	74.00	-31.24	peak

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:	2441 MHz		
Mode:	Mode 5		
Ant.Polar.:	Horizontal		



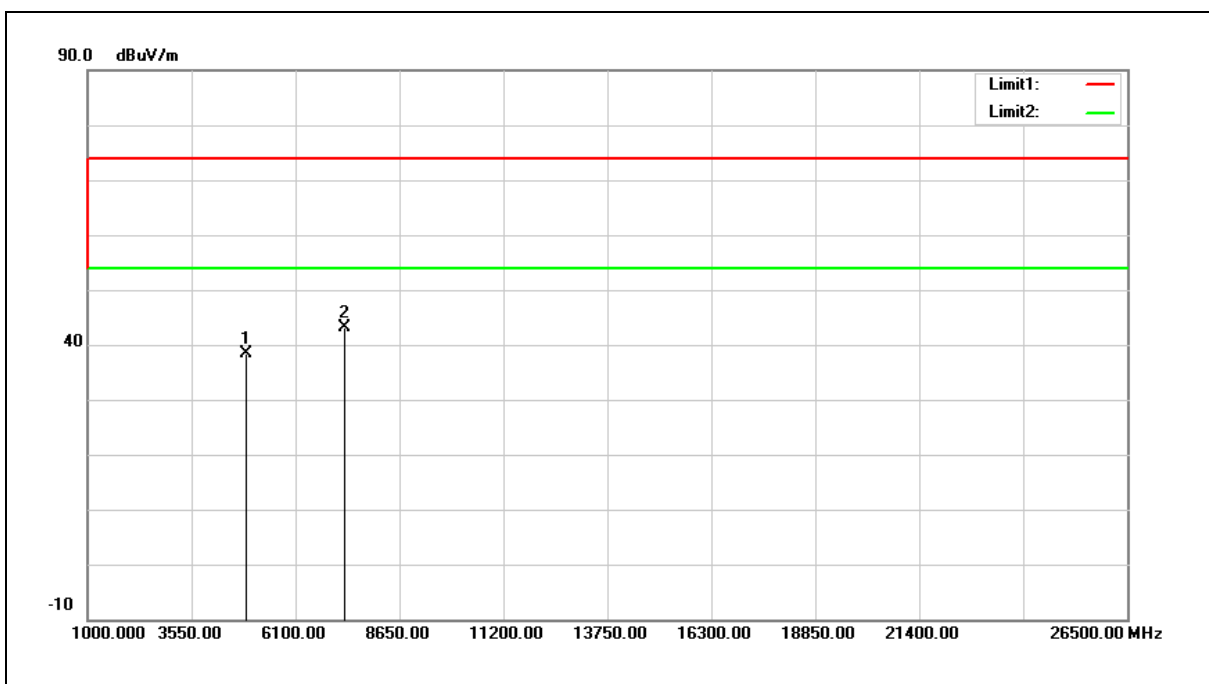
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4882.000	38.10	-0.77	37.33	74.00	-36.67	peak
2	7323.000	35.86	6.50	42.36	74.00	-31.64	peak

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

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

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

Standard:	LP0002	Test Distance:	3 m
Test item:	Harmonic		
Frequency:	2441 MHz		
Mode:	Mode 5		
Ant.Polar.:	Vertical		



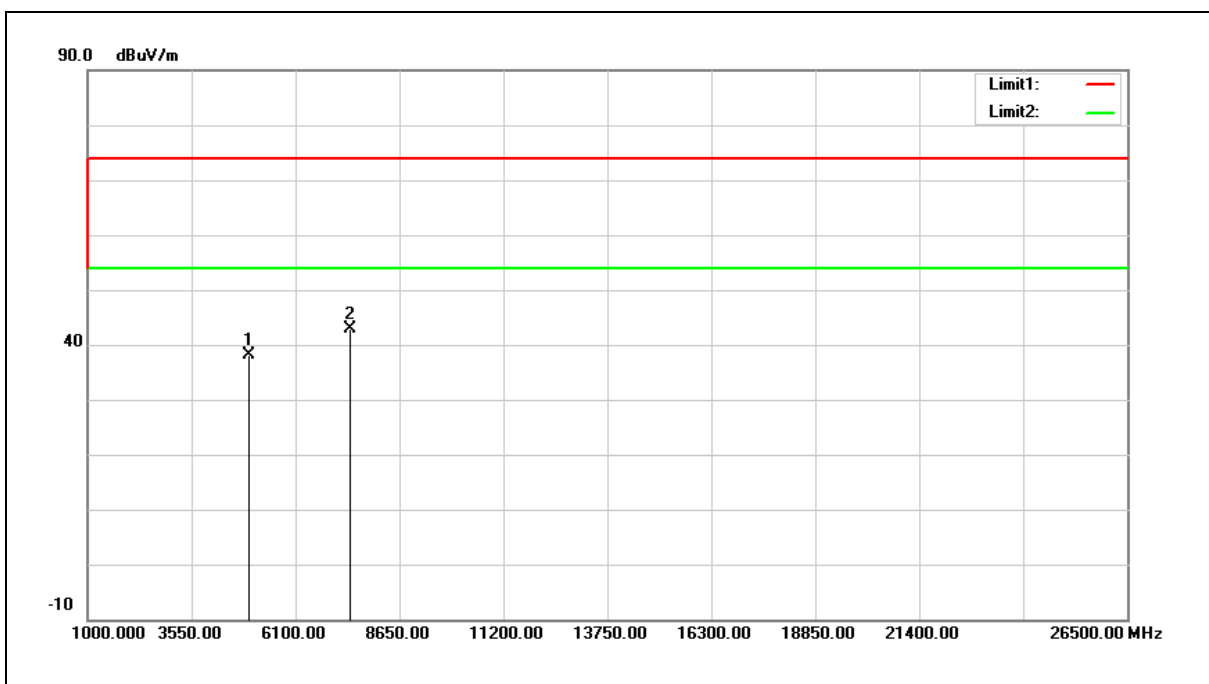
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4882.000	39.21	-0.77	38.44	74.00	-35.56	peak
2	7323.000	36.73	6.50	43.23	74.00	-30.77	peak

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

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

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

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



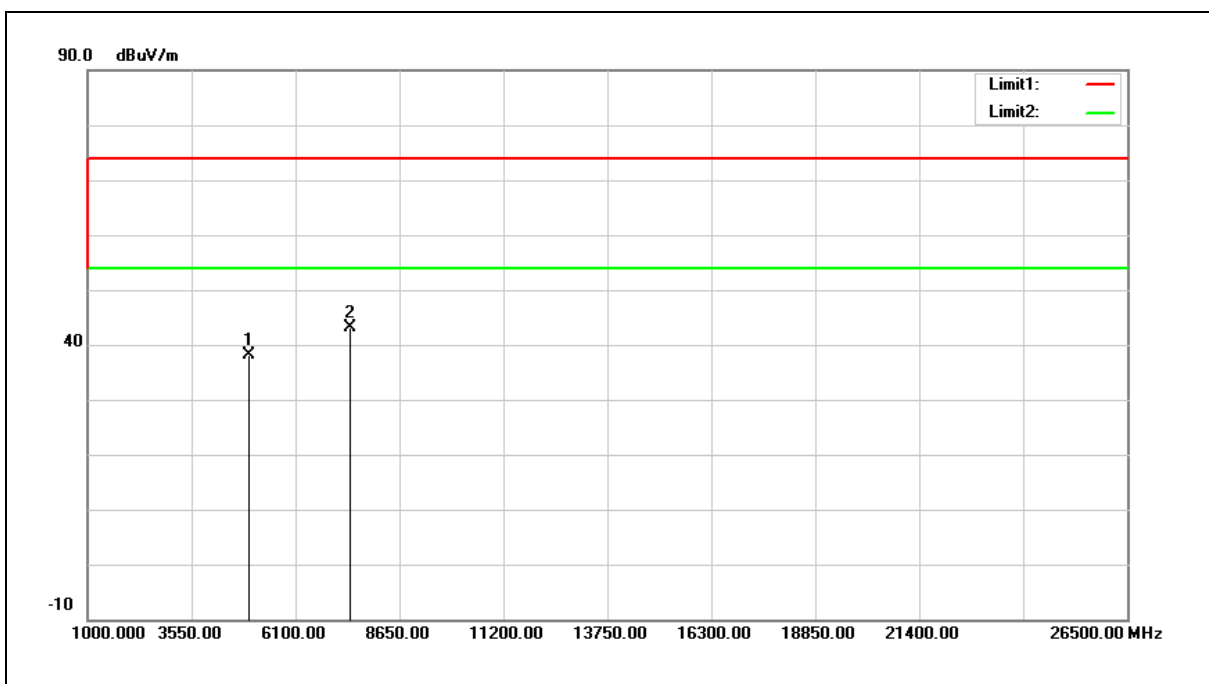
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	38.53	-0.50	38.03	74.00	-35.97	peak
2	7440.000	35.97	6.95	42.92	74.00	-31.08	peak

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:	2480 MHz		
Mode:	Mode 5		
Ant.Polar.:	Vertical		



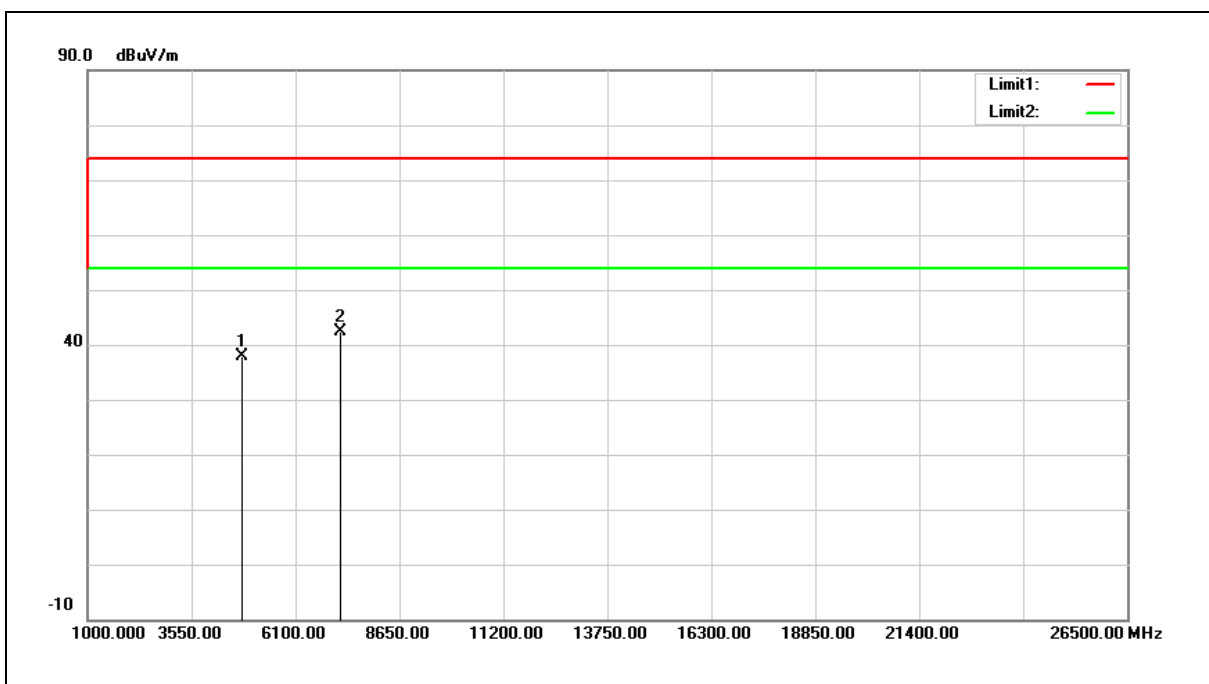
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	38.64	-0.50	38.14	74.00	-35.86	peak
2	7440.000	36.17	6.95	43.12	74.00	-30.88	peak

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

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

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

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



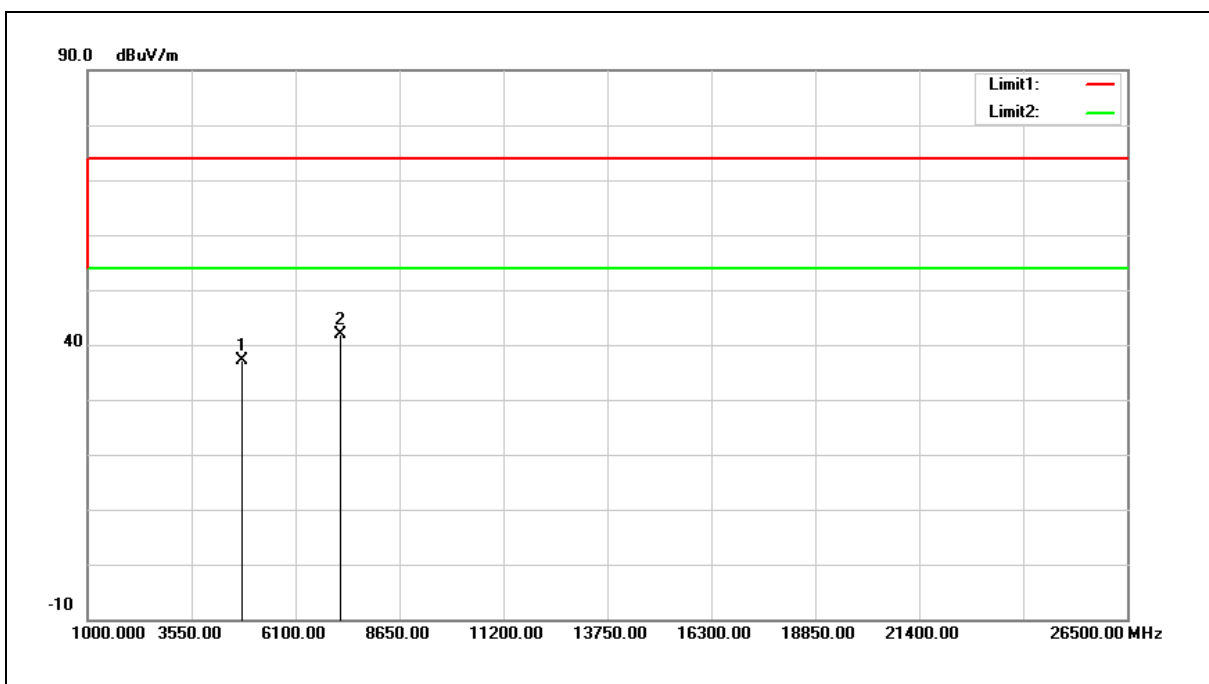
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.000	38.83	-1.04	37.79	74.00	-36.21	peak
2	7206.000	36.45	6.04	42.49	74.00	-31.51	peak

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:	2402 MHz		
Mode:	Mode 6		
Ant.Polar.:	Vertical		



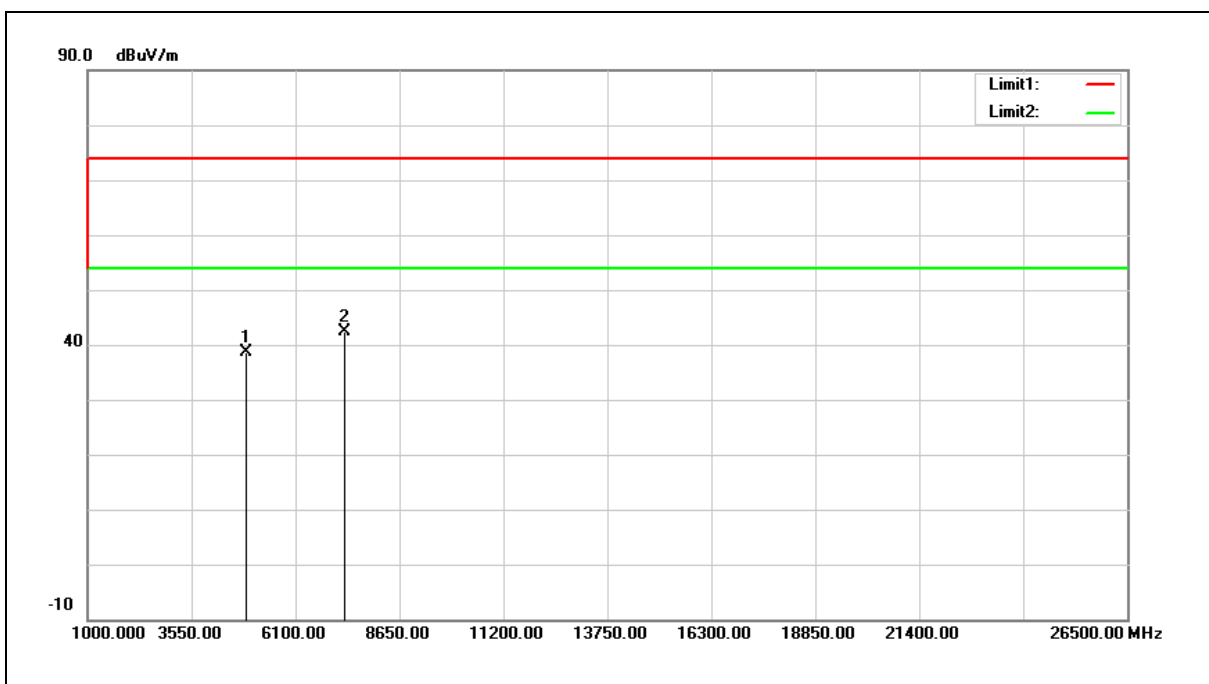
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4804.000	38.08	-1.04	37.04	74.00	-36.96	peak
2	7206.000	35.81	6.04	41.85	74.00	-32.15	peak

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:	Harmonic		
Frequency:	2440 MHz		
Mode:	Mode 6		
Ant.Polar.:	Horizontal		



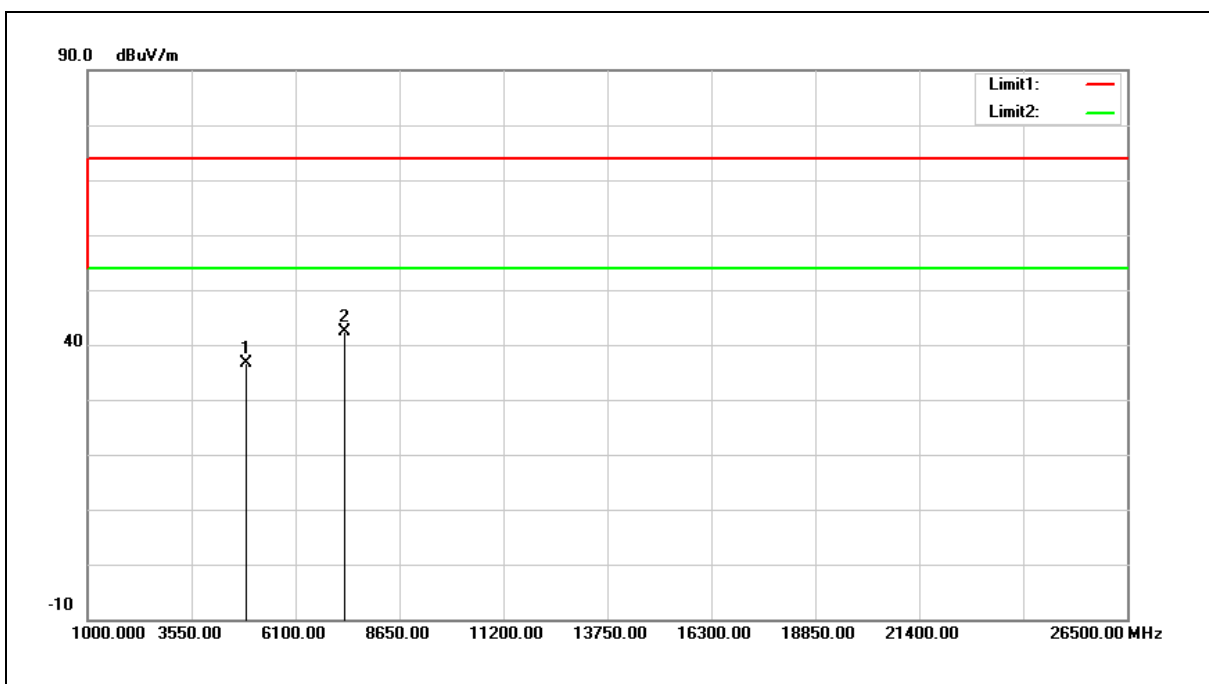
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4880.000	39.43	-0.78	38.65	74.00	-35.35	peak
2	7320.000	35.98	6.49	42.47	74.00	-31.53	peak

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 6		
Ant.Polar.:	Vertical		



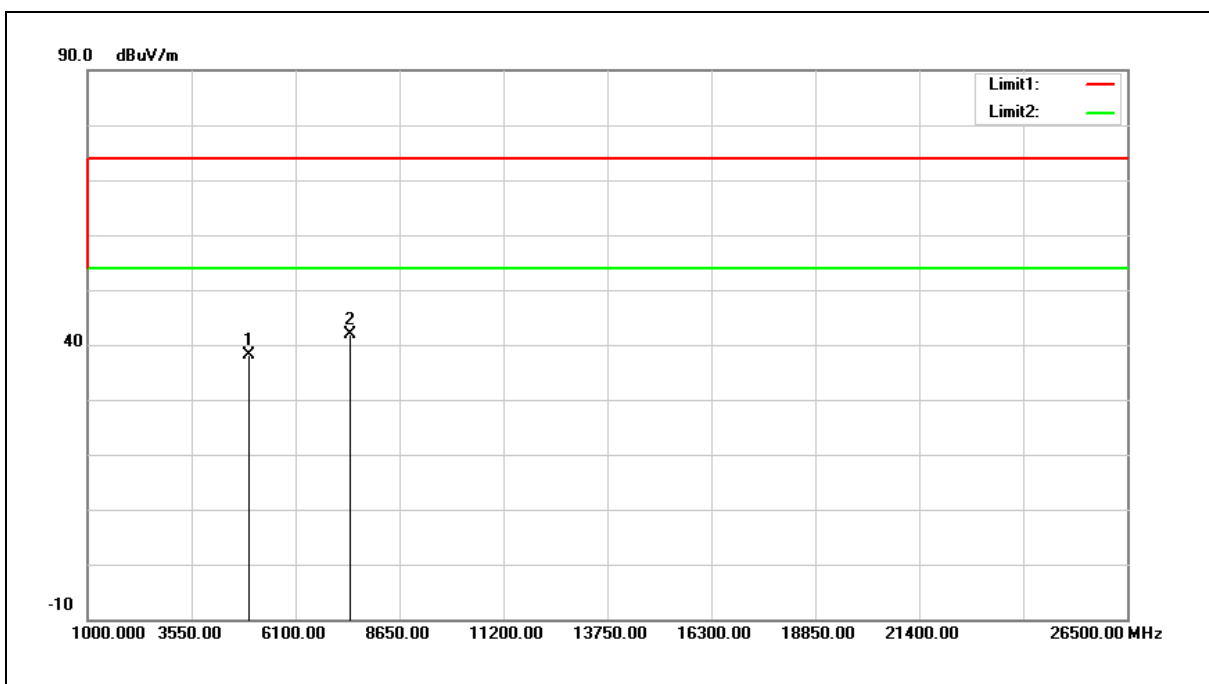
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4880.000	37.39	-0.78	36.61	74.00	-37.39	peak
2	7320.000	35.96	6.49	42.45	74.00	-31.55	peak

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:	Harmonic		
Frequency:	2480 MHz		
Mode:	Mode 6		
Ant.Polar.:	Horizontal		



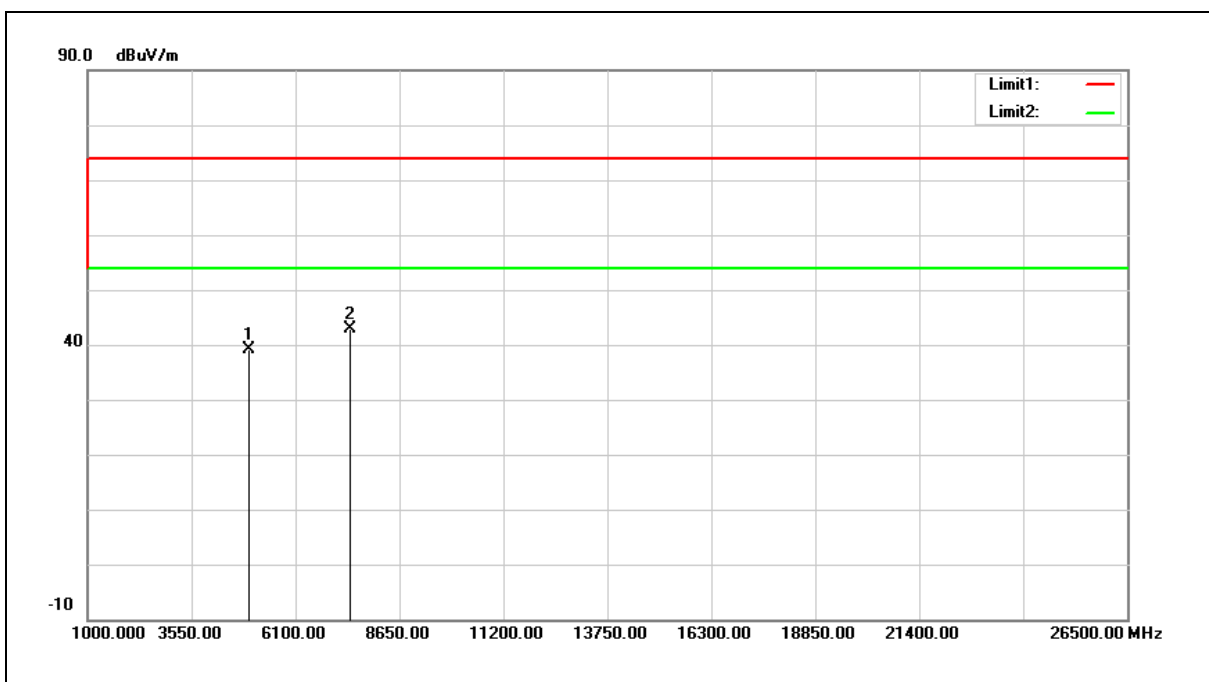
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	38.74	-0.50	38.24	74.00	-35.76	peak
2	7440.000	34.92	6.95	41.87	74.00	-32.13	peak

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

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

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

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



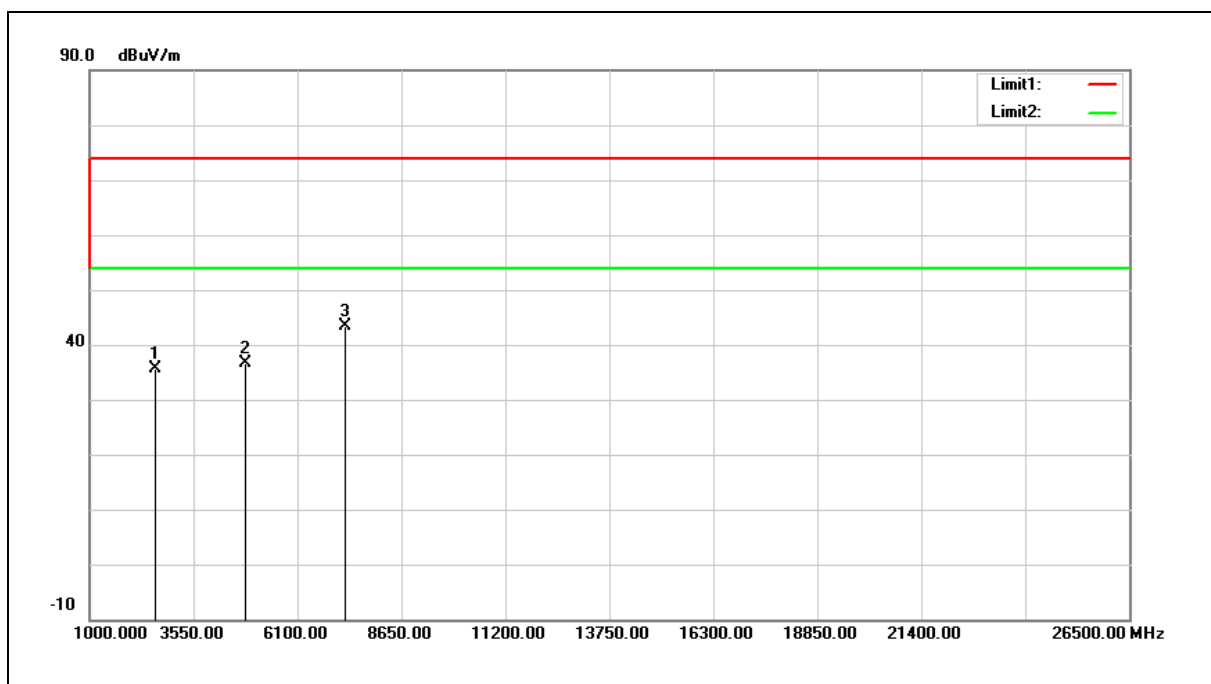
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	4960.000	39.59	-0.50	39.09	74.00	-34.91	peak
2	7440.000	35.97	6.95	42.92	74.00	-31.08	peak

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		
Mode:	Mode 7		
Ant.Polar.:	Horizontal		
Description:			



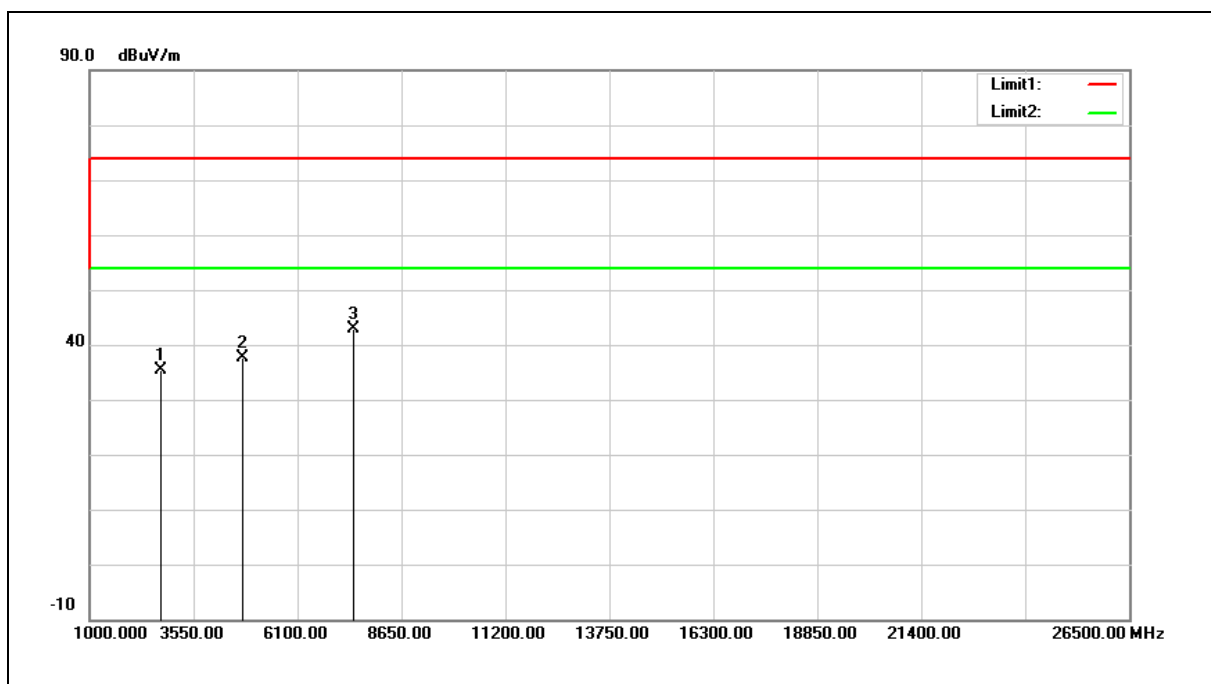
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2598.000	42.10	-6.56	35.54	74.00	-38.46	peak
2	4825.000	37.65	-0.97	36.68	74.00	-37.32	peak
3	7273.000	37.06	6.30	43.36	74.00	-30.64	peak

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 7		
Ant.Polar.:	Vertical		
Description:			



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2717.000	41.68	-6.21	35.47	74.00	-38.53	peak
2	4757.000	38.86	-1.21	37.65	74.00	-36.35	peak
3	7477.000	35.87	7.11	42.98	74.00	-31.02	peak

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

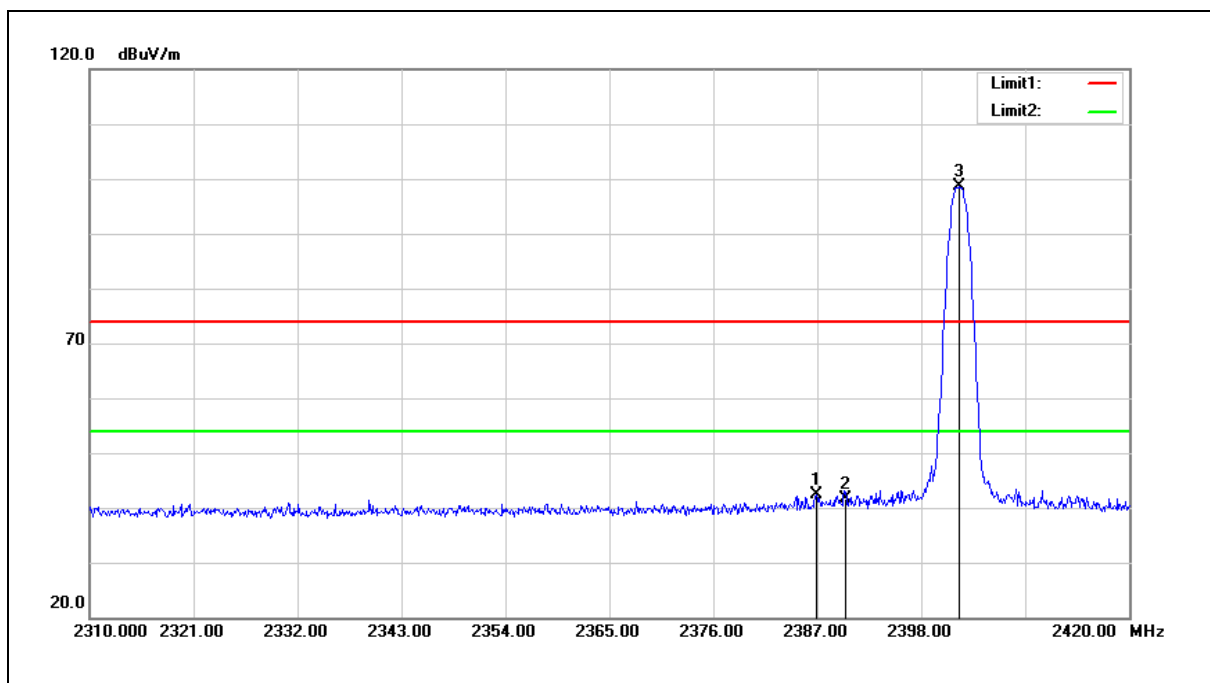
2.Correction factor (dB/m) = Antenna Factor (dB/m) + Cable loss (dB) – Pre-Amplifier gain (dB).

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

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Peak

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



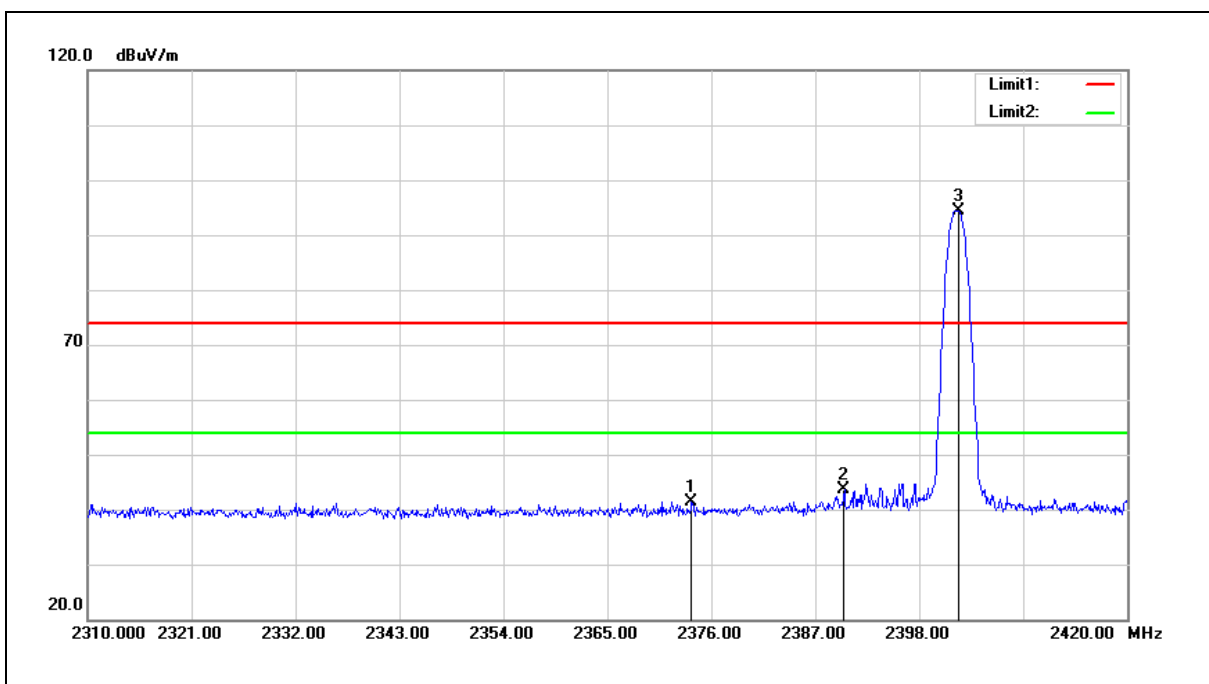
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.890	49.60	-7.33	42.27	74.00	-31.73	peak
2	2390.000	48.86	-7.30	41.56	74.00	-32.44	peak
3	2401.960	105.76	-7.25	98.51	--	--	peak

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



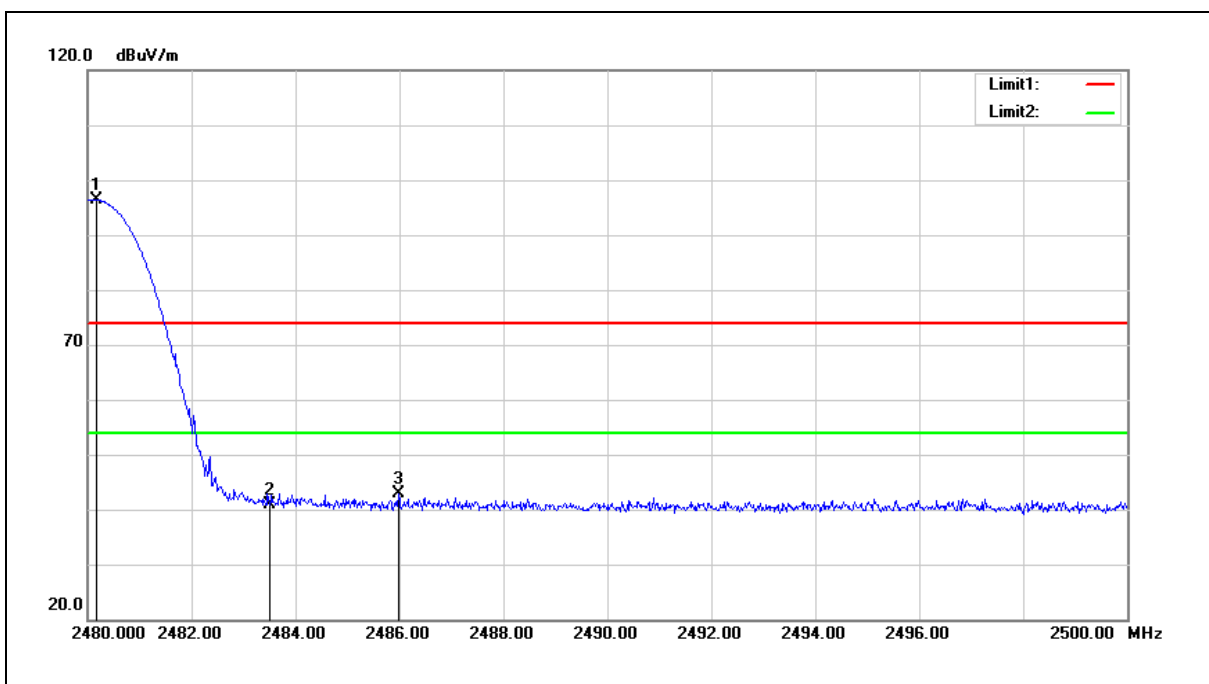
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2373.910	48.82	-7.37	41.45	74.00	-32.55	peak
2	2390.000	50.92	-7.30	43.62	74.00	-30.38	peak
3	2402.180	101.58	-7.25	94.33	--	--	peak

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

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

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

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



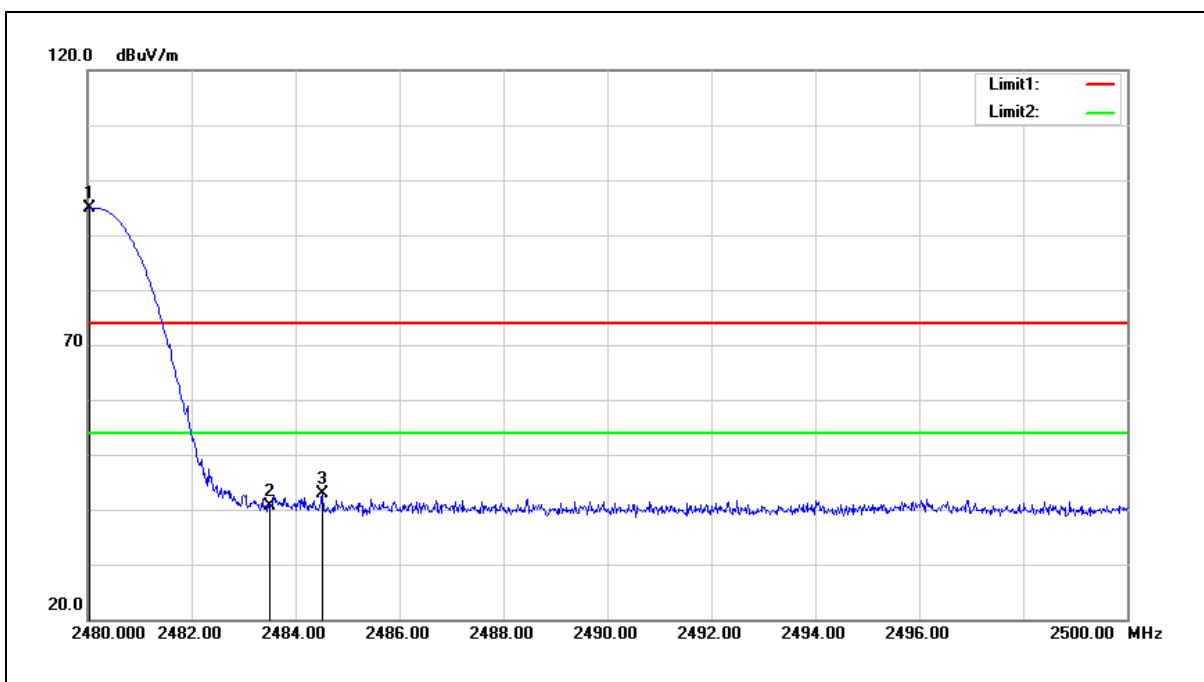
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.160	103.34	-6.95	96.39	--	--	peak
2	2483.500	47.86	-6.94	40.92	74.00	-33.08	peak
3	2485.980	49.71	-6.92	42.79	74.00	-31.21	peak

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

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

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

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



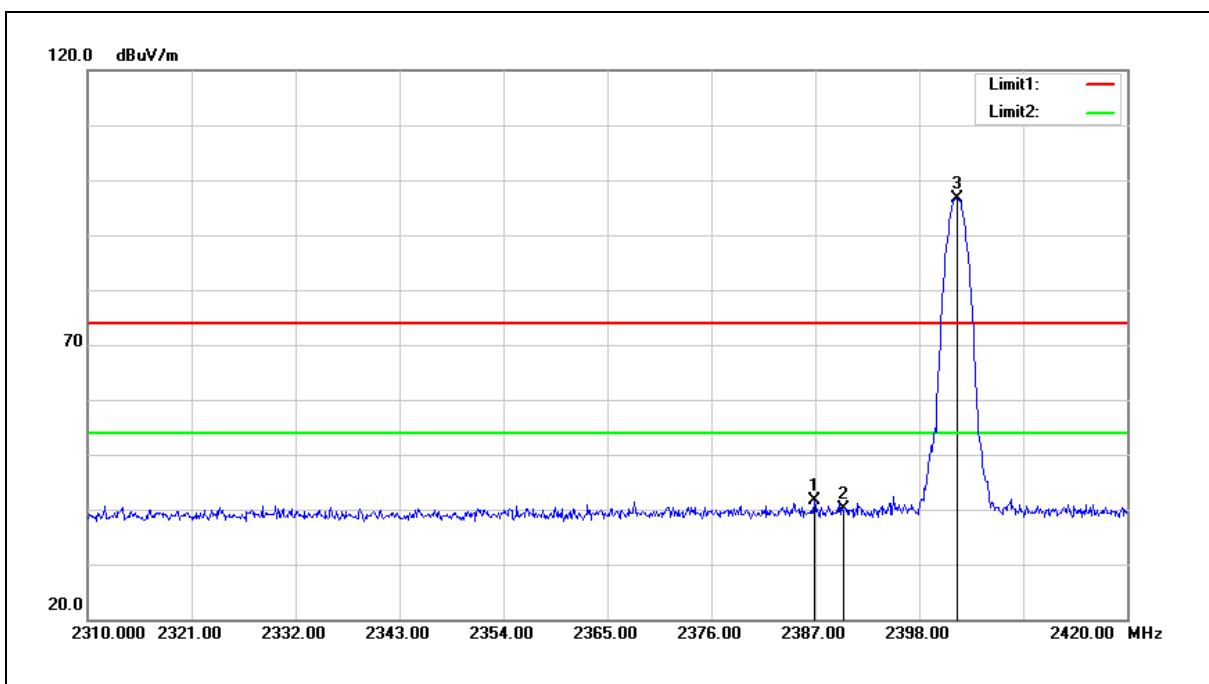
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.040	101.92	-6.95	94.97	--	--	peak
2	2483.500	47.51	-6.94	40.57	74.00	-33.43	peak
3	2484.520	49.83	-6.92	42.91	74.00	-31.09	peak

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:	Band edge		
Frequency:	2402 MHz		
Mode:	Mode 5		
Ant.Polar.:	Horizontal		



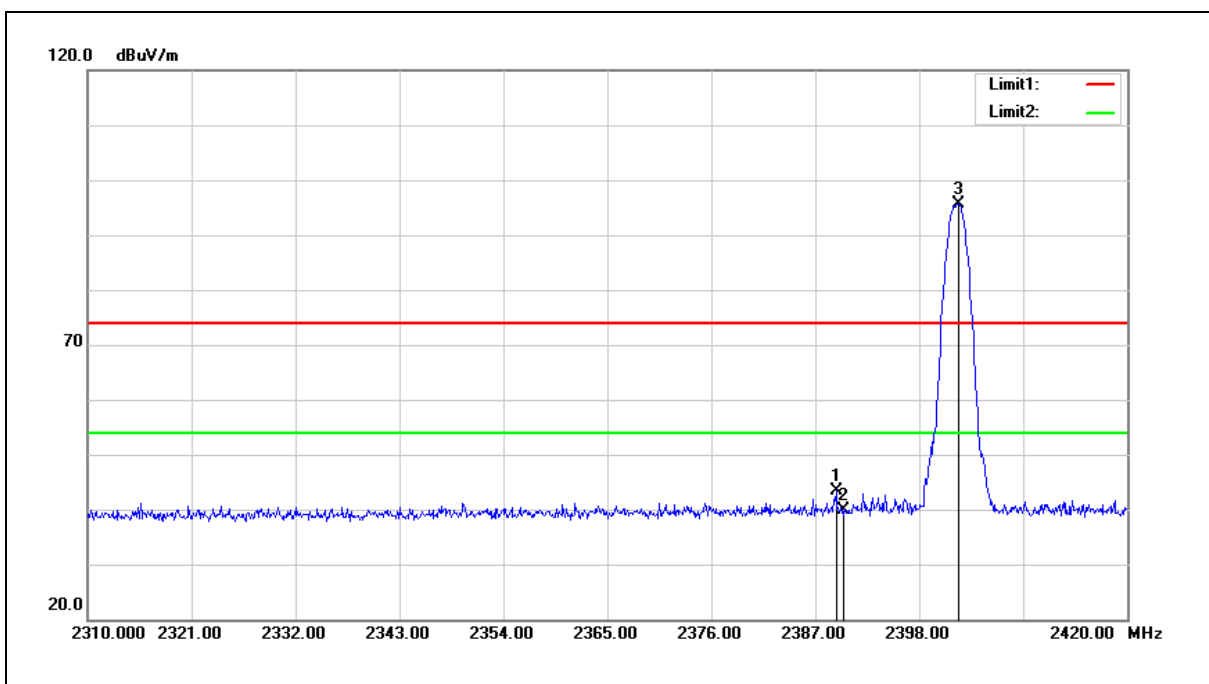
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.890	48.90	-7.33	41.57	74.00	-32.43	peak
2	2390.000	47.41	-7.30	40.11	74.00	-33.89	peak
3	2401.960	103.80	-7.25	96.55	--	--	peak

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:	2402 MHz		
Mode:	Mode 5		
Ant.Polar.:	Vertical		



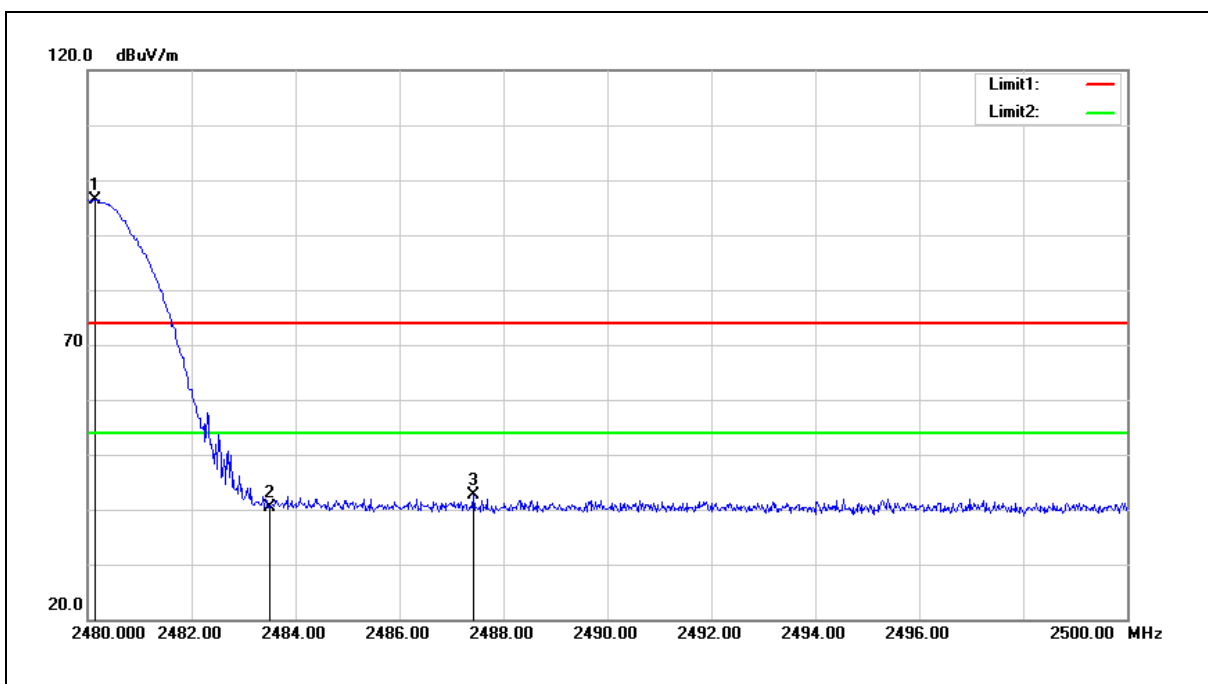
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2389.200	50.77	-7.30	43.47	74.00	-30.53	peak
2	2390.000	47.25	-7.30	39.95	74.00	-34.05	peak
3	2402.180	102.94	-7.25	95.69	--	--	peak

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

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

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

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



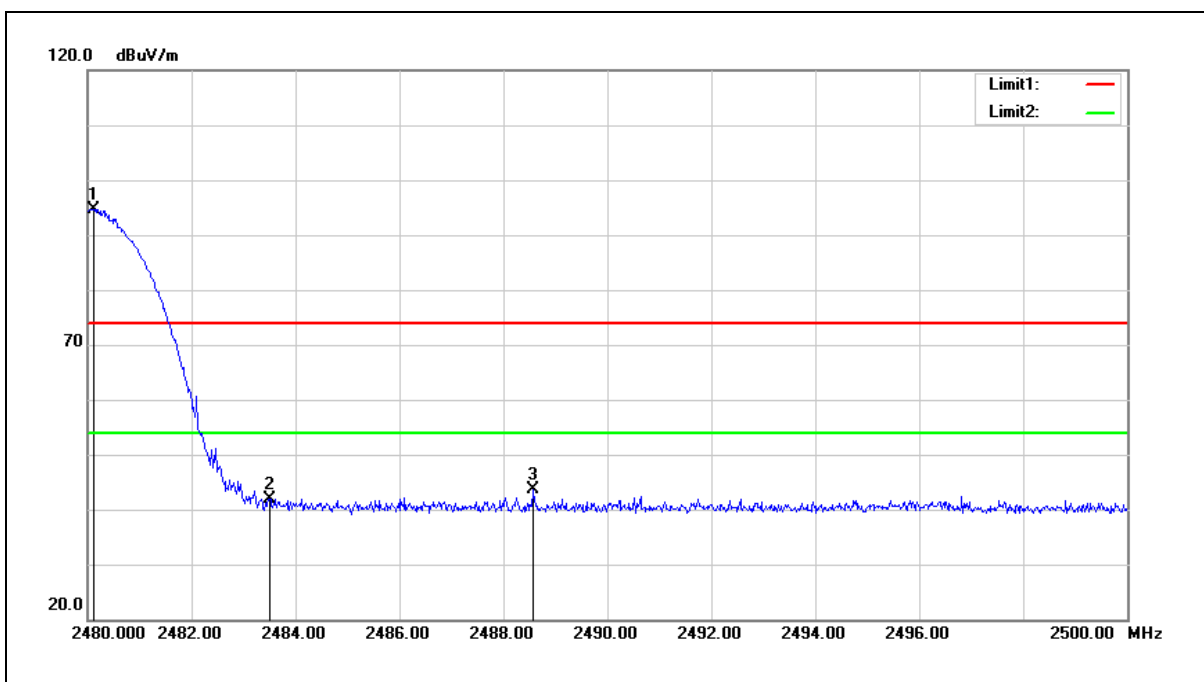
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.140	103.37	-6.95	96.42	--	--	peak
2	2483.500	47.21	-6.94	40.27	74.00	-33.73	peak
3	2487.420	49.43	-6.92	42.51	74.00	-31.49	peak

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

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

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

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



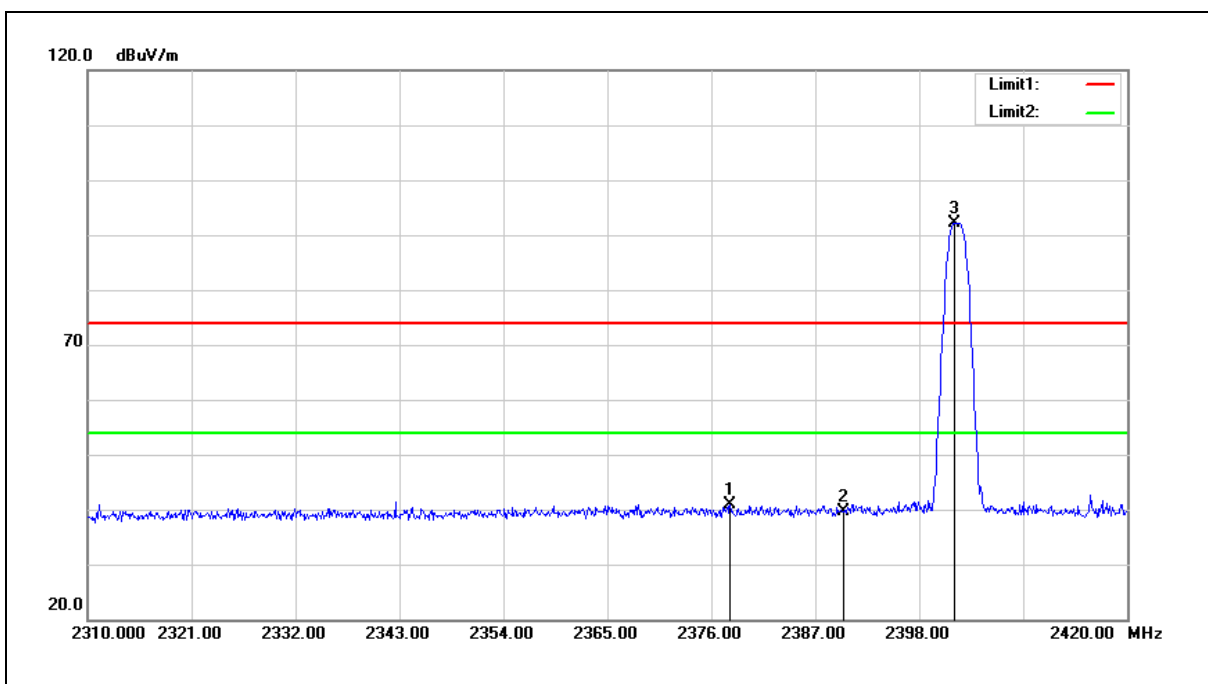
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.120	101.66	-6.95	94.71	--	--	peak
2	2483.500	48.78	-6.94	41.84	74.00	-32.16	peak
3	2488.580	50.66	-6.91	43.75	74.00	-30.25	peak

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

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

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

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



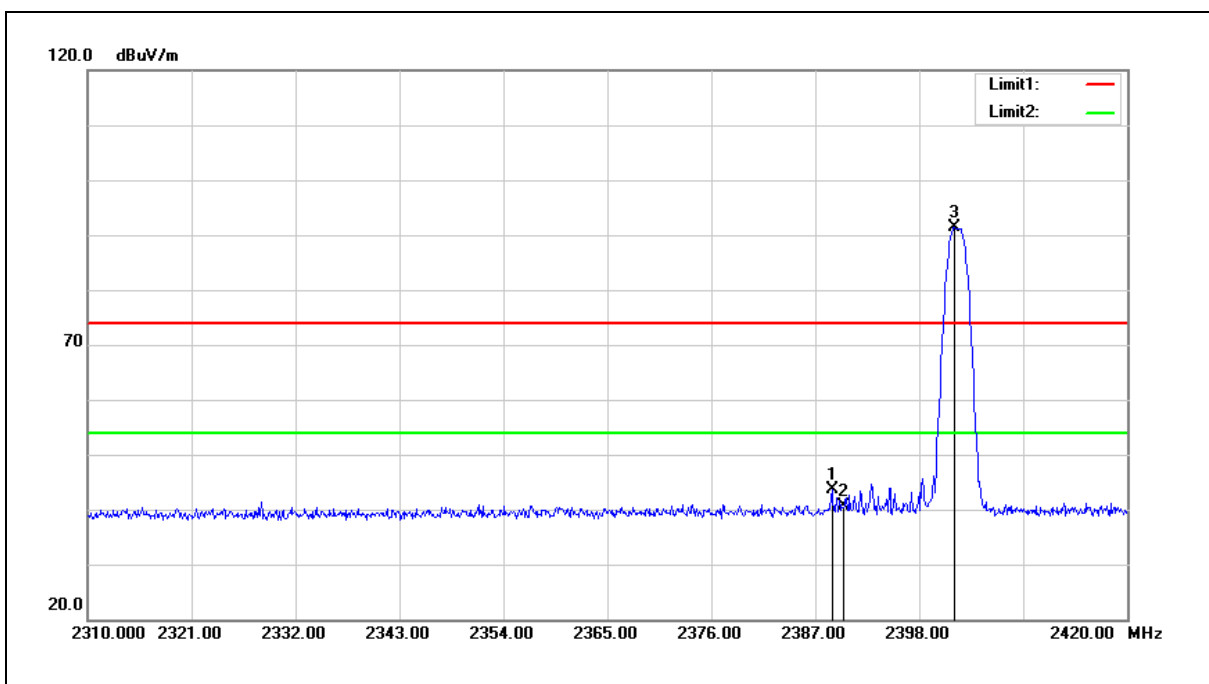
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2377.980	48.12	-7.35	40.77	74.00	-33.23	peak
2	2390.000	46.85	-7.30	39.55	74.00	-34.45	peak
3	2401.740	99.44	-7.26	92.18	--	--	peak

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

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

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

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



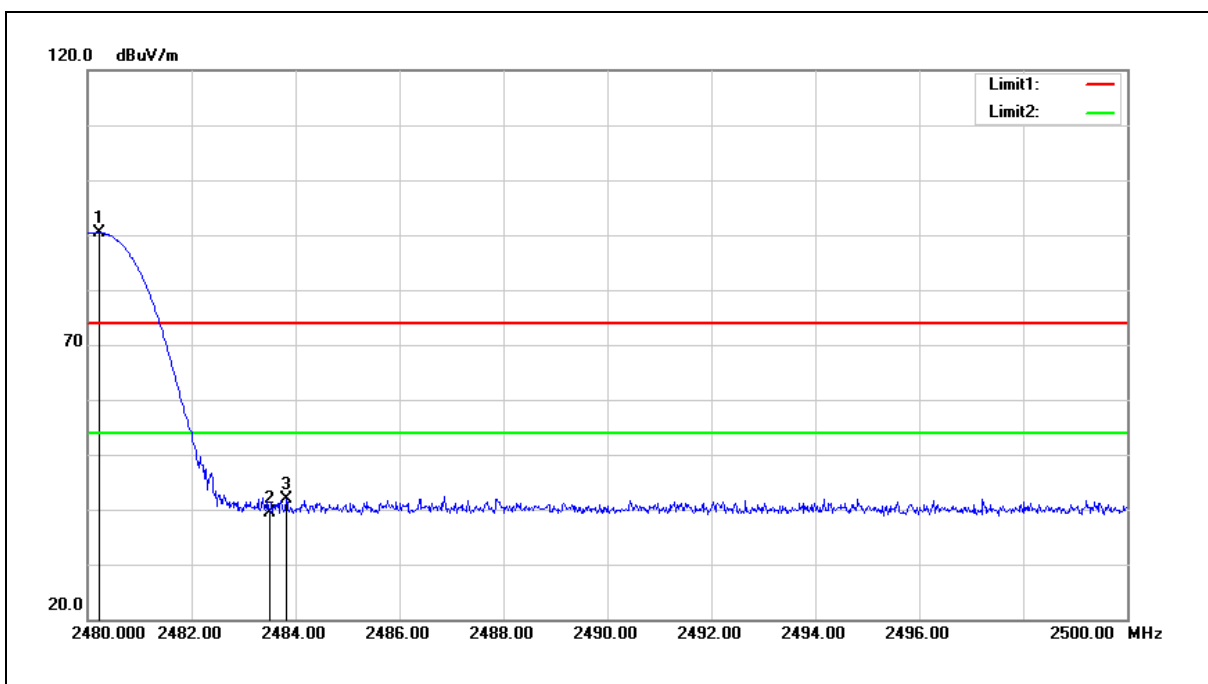
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2388.760	50.93	-7.31	43.62	74.00	-30.38	peak
2	2390.000	47.86	-7.30	40.56	74.00	-33.44	peak
3	2401.740	98.56	-7.26	91.30	--	--	peak

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

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

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

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



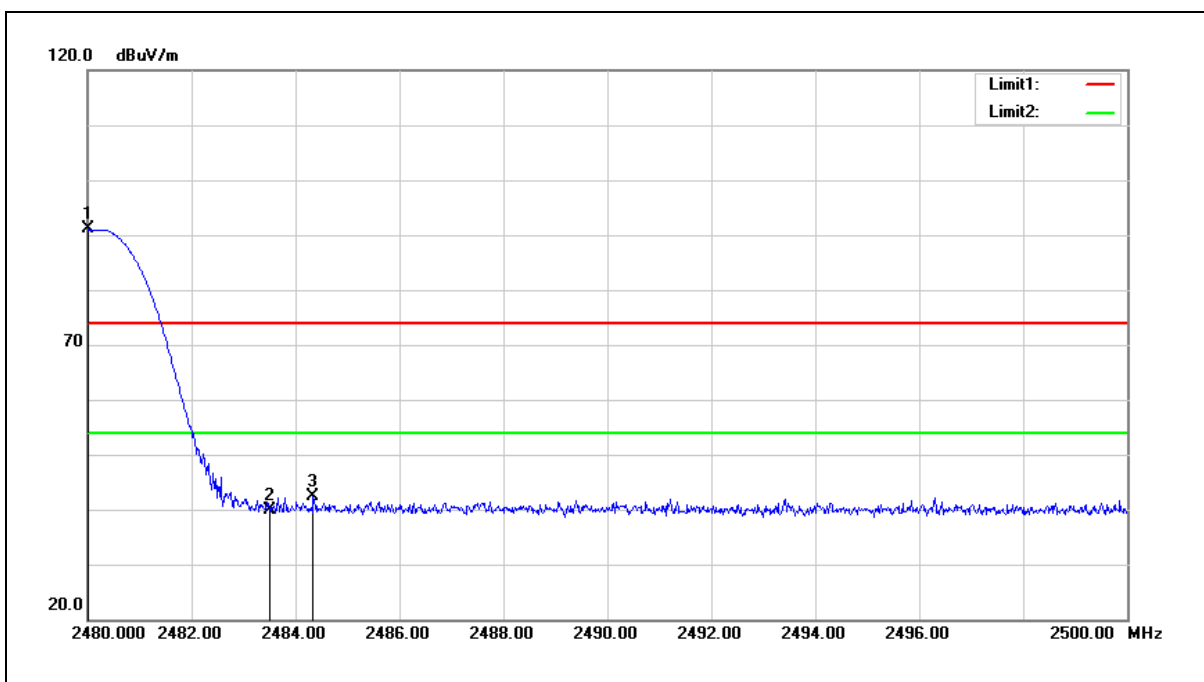
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.220	97.28	-6.95	90.33	--	--	peak
2	2483.500	46.31	-6.94	39.37	74.00	-34.63	peak
3	2483.820	48.92	-6.94	41.98	74.00	-32.02	peak

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:	2480 MHz		
Mode:	Mode 6		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2480.020	97.96	-6.95	91.01	--	--	peak
2	2483.500	46.81	-6.94	39.87	74.00	-34.13	peak
3	2484.340	49.40	-6.92	42.48	74.00	-31.52	peak

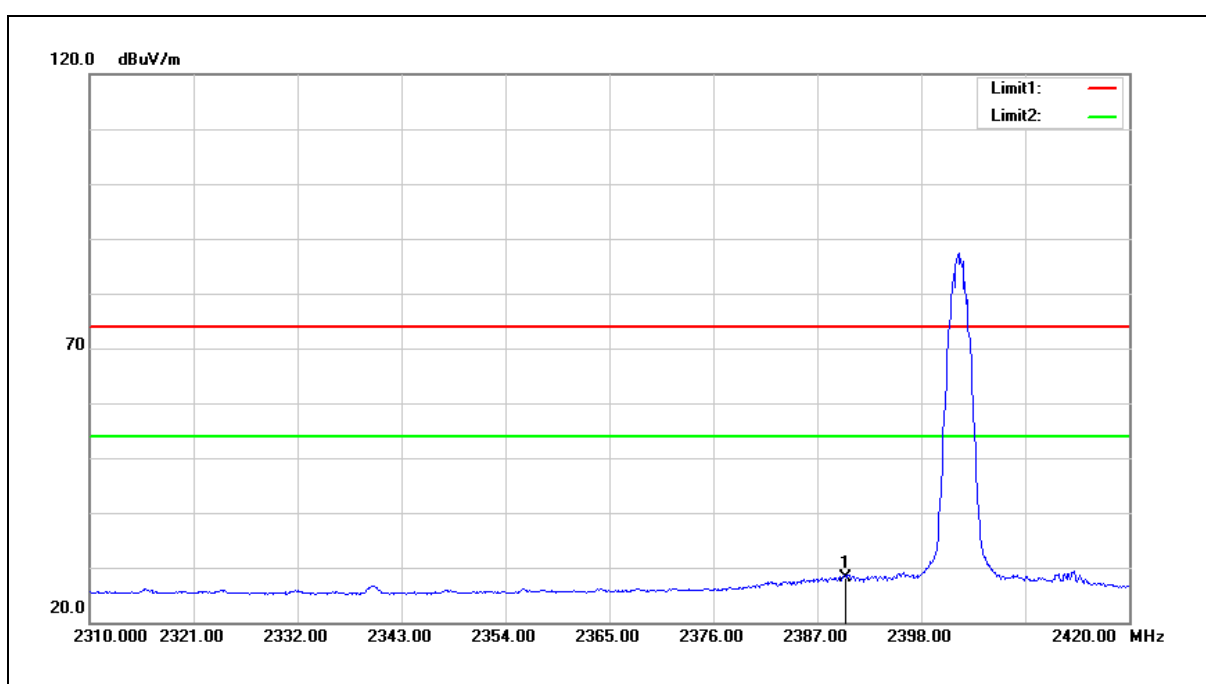
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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.

AVG

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



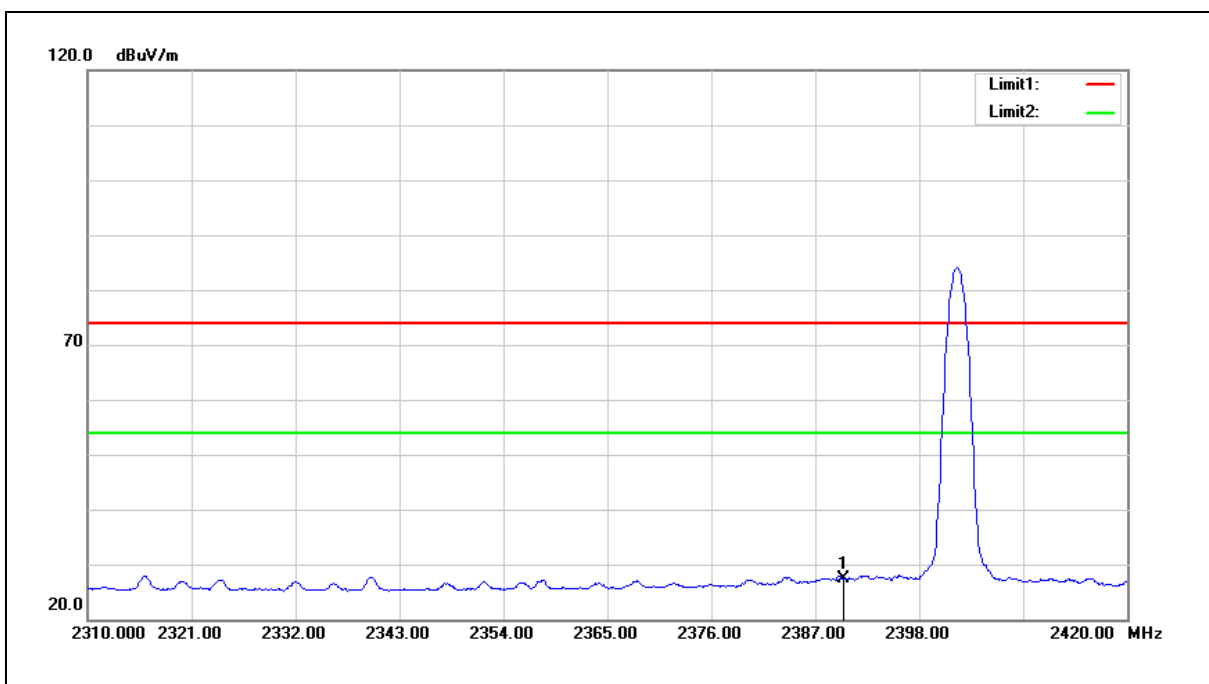
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	35.51	-7.30	28.21	54.00	-25.79	AVG

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		



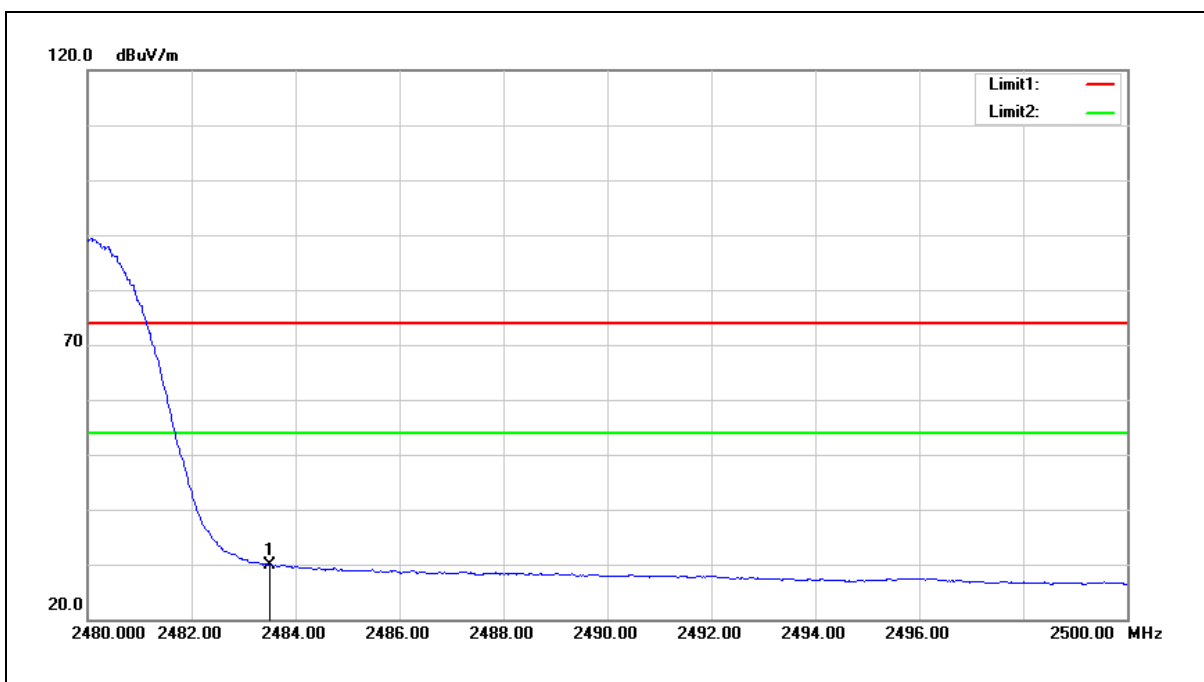
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	34.74	-7.30	27.44	54.00	-26.56	AVG

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		



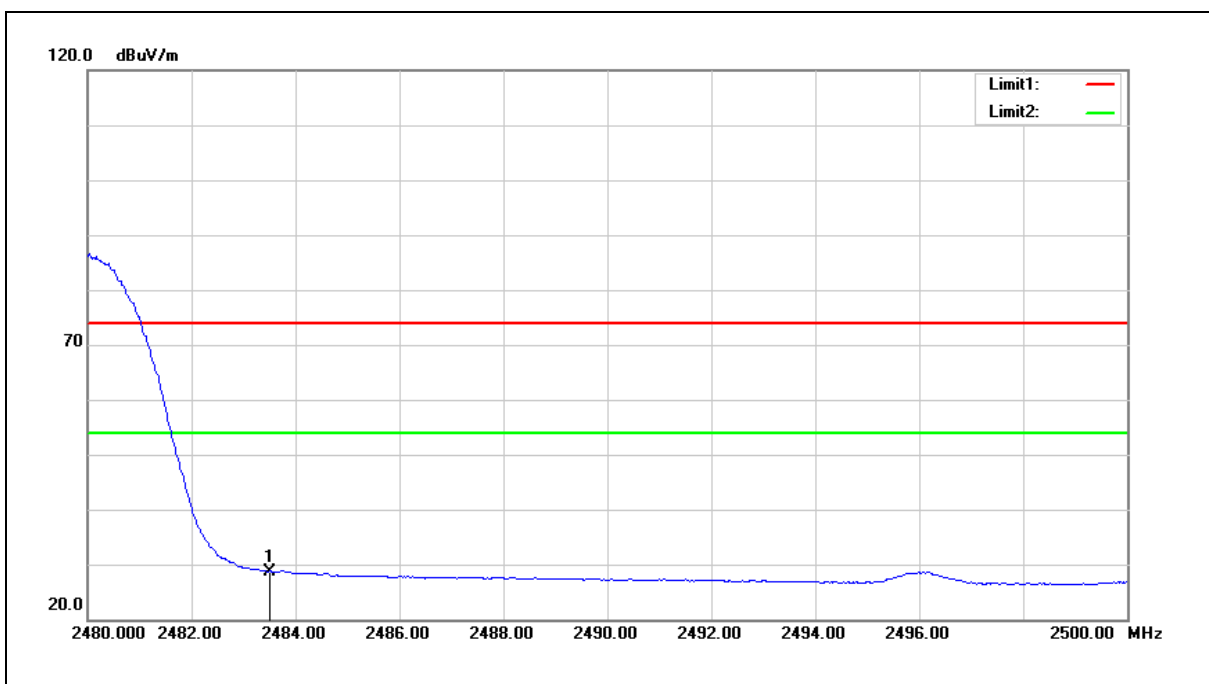
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	36.74	-6.94	29.80	54.00	-24.20	AVG

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		



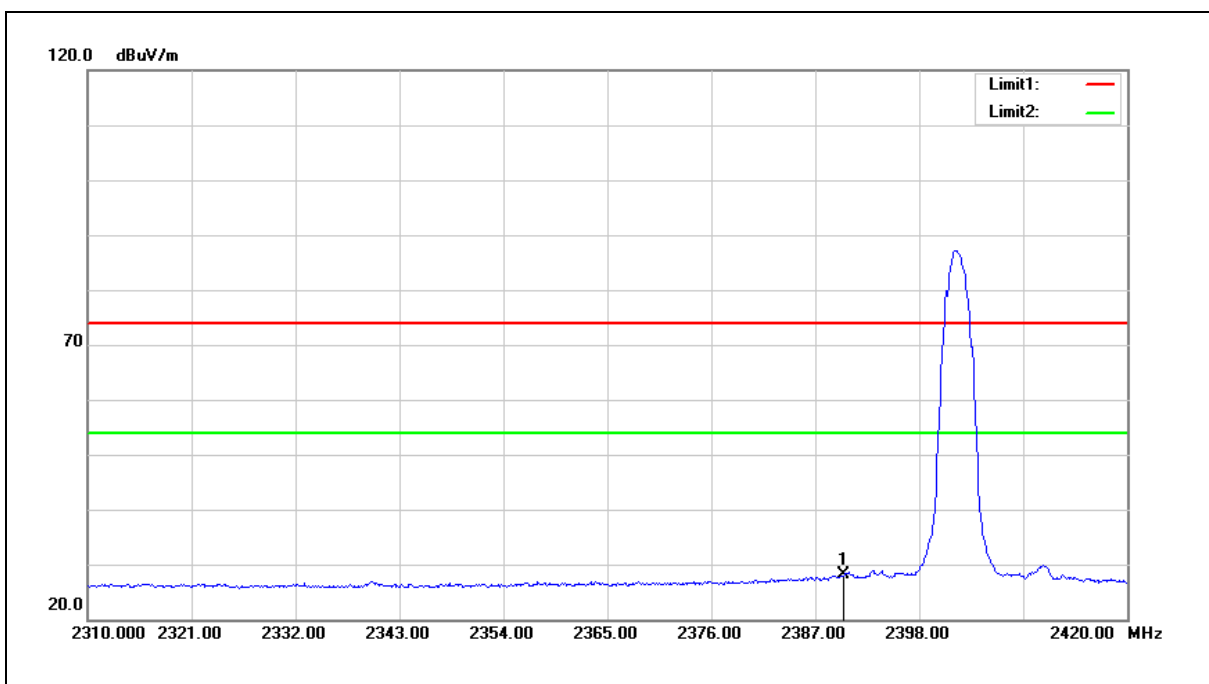
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	35.69	-6.94	28.75	54.00	-25.25	AVG

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

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

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

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



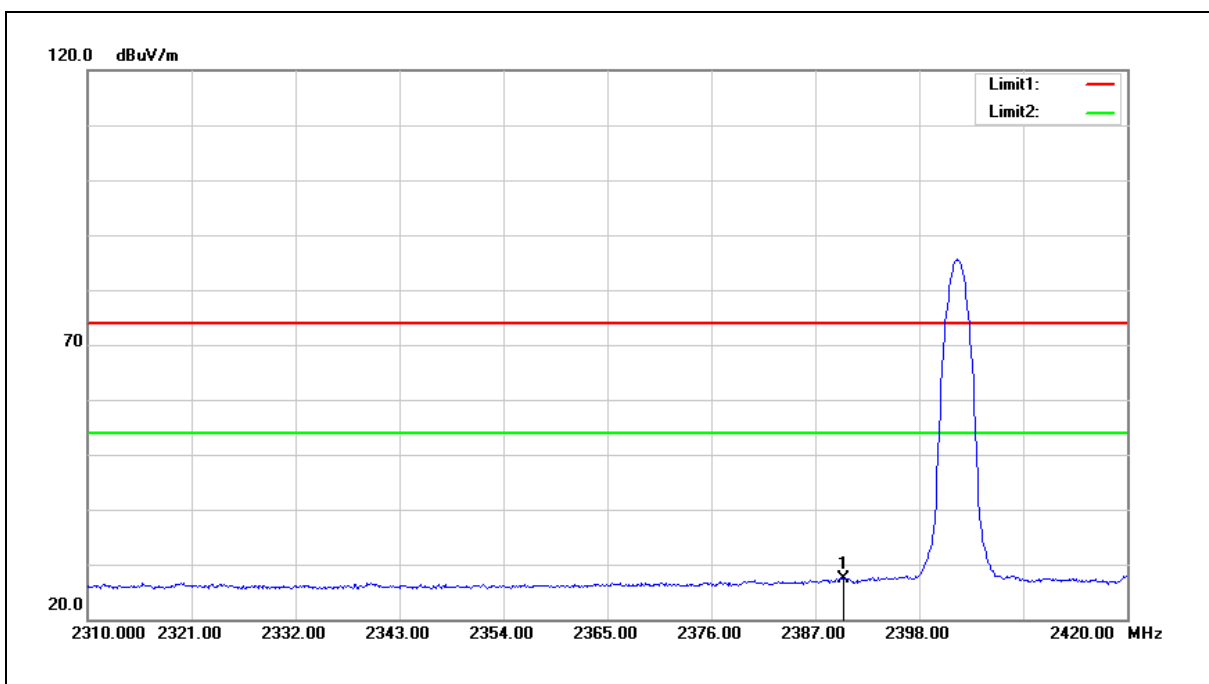
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	35.50	-7.30	28.20	54.00	-25.80	AVG

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 5		
Ant.Polar.:	Vertical		



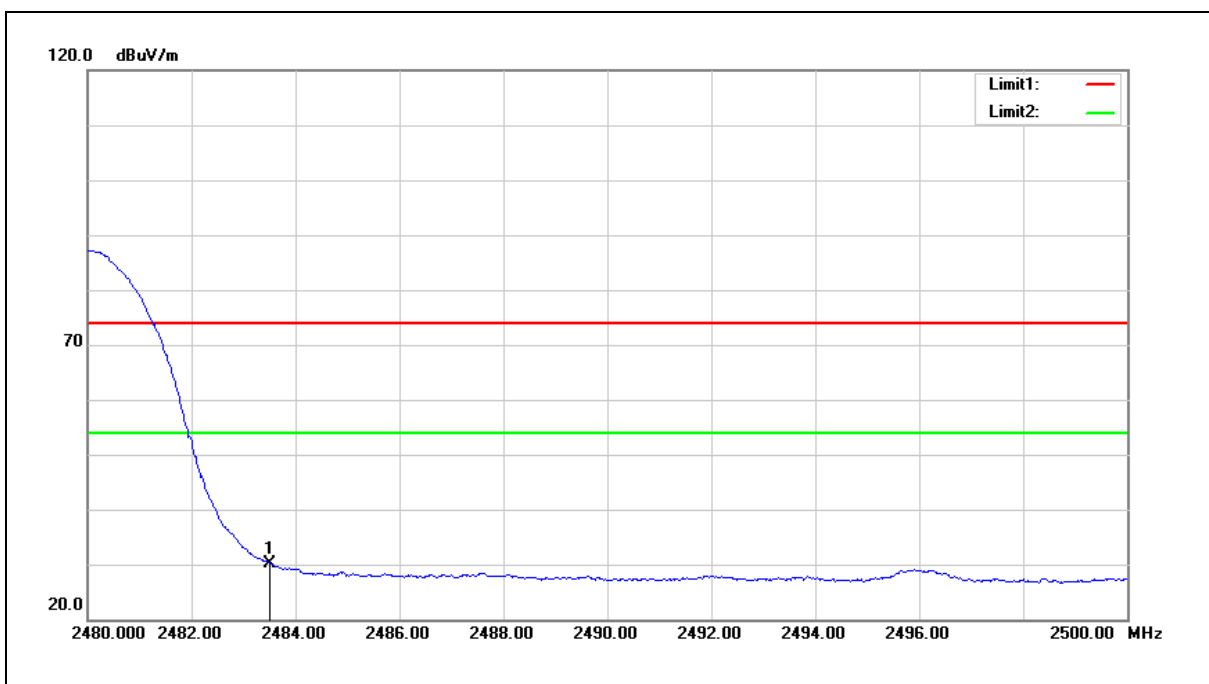
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	34.67	-7.30	27.37	54.00	-26.63	AVG

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:	2480 MHz		
Mode:	Mode 5		
Ant.Polar.:	Horizontal		



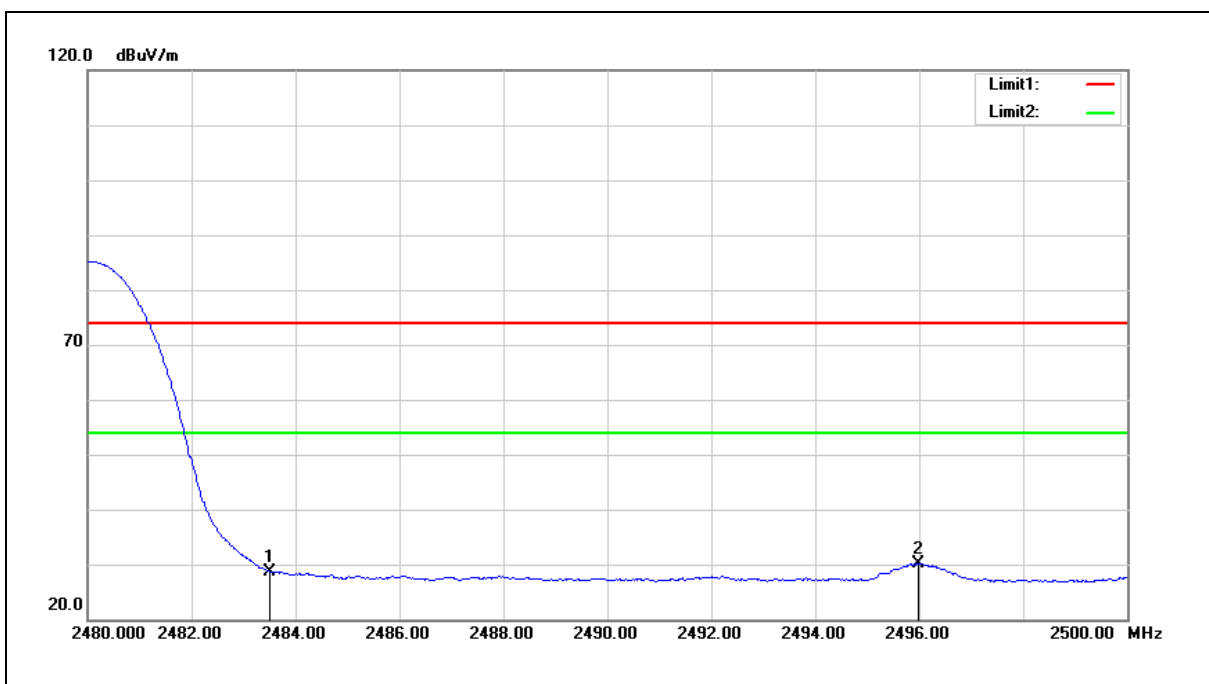
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	37.17	-6.94	30.23	54.00	-23.77	AVG

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 5		
Ant.Polar.:	Vertical		



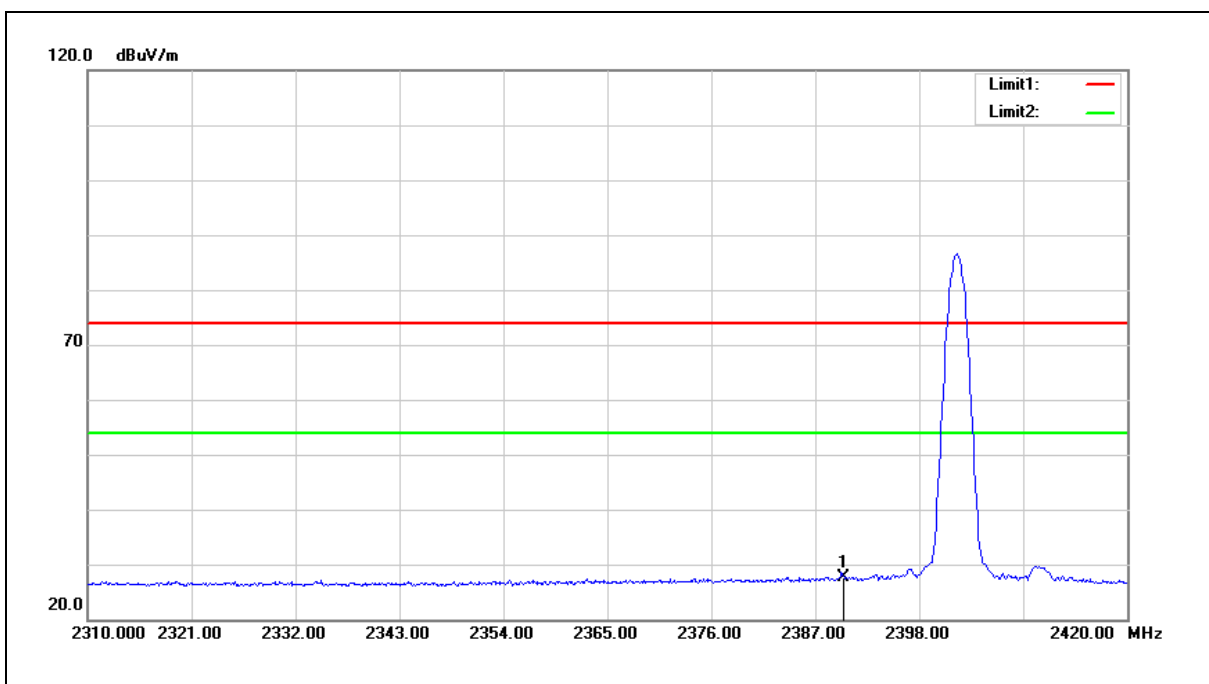
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	35.61	-6.94	28.67	54.00	-25.33	AVG
2	2495.980	37.00	-6.88	30.12	54.00	-23.88	AVG

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 6		
Ant.Polar.:	Horizontal		



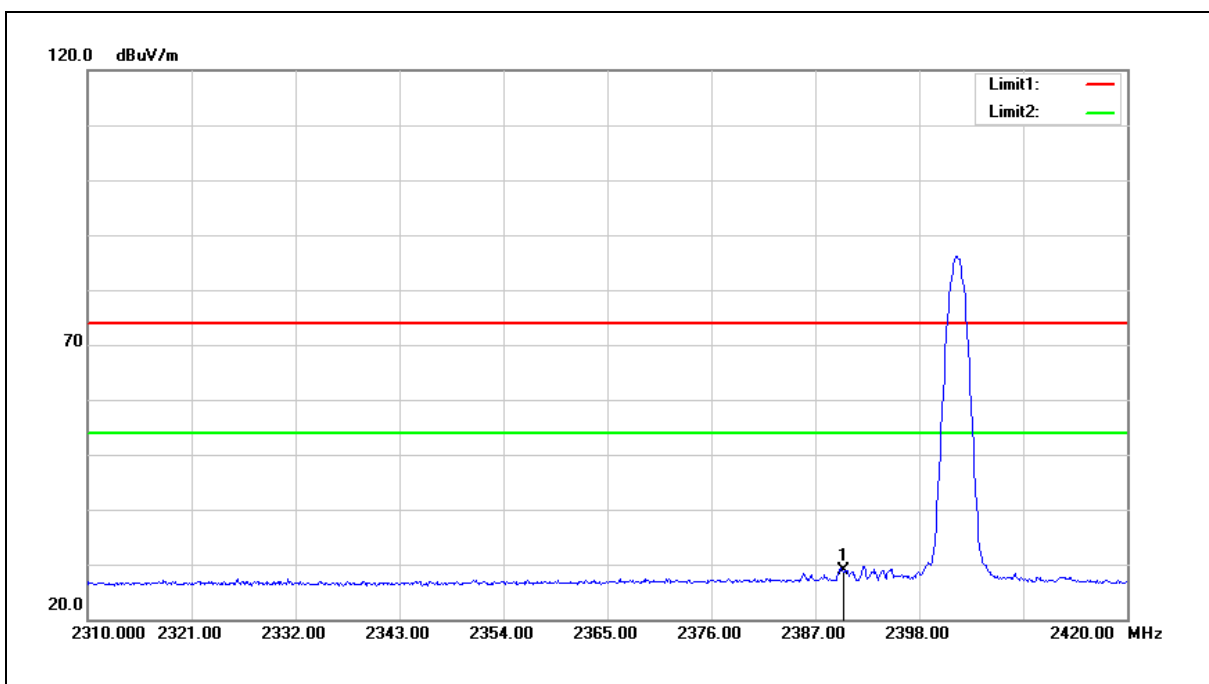
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	34.93	-7.30	27.63	54.00	-26.37	AVG

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.

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



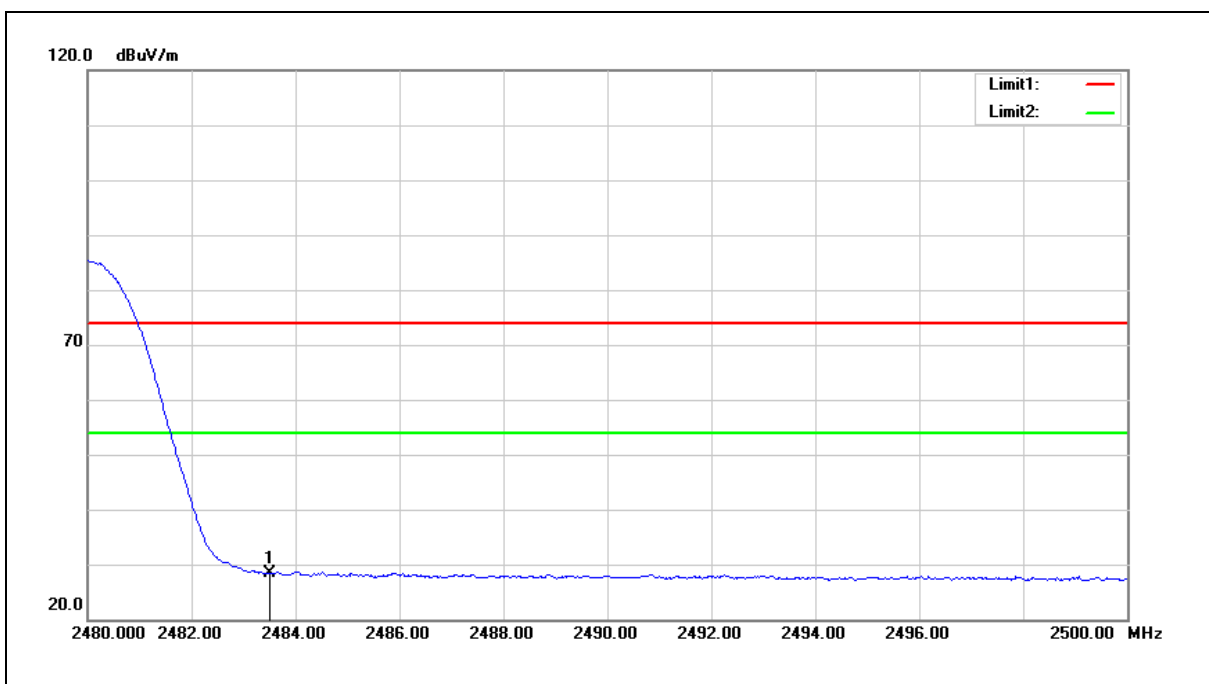
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	36.11	-7.30	28.81	54.00	-25.19	AVG

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 6		
Ant.Polar.:	Horizontal		



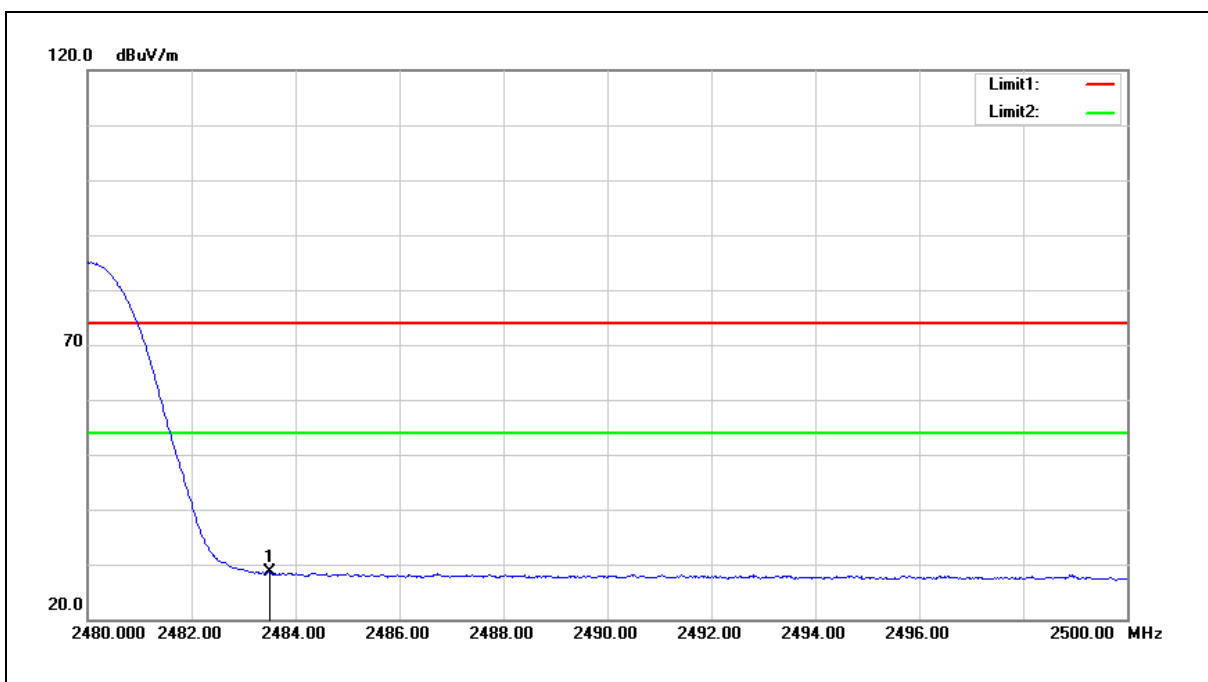
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	35.39	-6.94	28.45	54.00	-25.55	AVG

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 6		
Ant.Polar.:	Vertical		



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	35.45	-6.94	28.51	54.00	-25.49	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.

Annex C. Conducted Test Results

輸出峰值功率之量測

操作模式 : Mode 3: BR, GFSK Continuous TX Mode						
頻道		輸出功率(Average)		輸出功率(Peak)		限制值
		dBm	W	dBm	W	W
低頻道	DH1	9.85	0.00966	9.95	0.00989	≤0.125
	DH3	9.91	0.00979	10.00	0.01000	≤0.125
	DH5	9.95	0.00989	10.07	0.01016	≤0.125
中頻道	DH1	10.55	0.01135	10.59	0.01146	≤0.125
	DH3	10.60	0.01148	10.65	0.01161	≤0.125
	DH5	10.67	0.01167	10.72	0.01180	≤0.125
高頻道	DH1	10.35	0.01084	10.48	0.01117	≤0.125
	DH3	10.41	0.01099	10.55	0.01135	≤0.125
	DH5	10.46	0.01112	10.62	0.01153	≤0.125

操作模式 : Mode 4: EDR, $\pi/4$ -DQPSK Continuous TX Mode						
頻道		輸出功率(Average)		輸出功率(Peak)		限制值
		dBm	W	dBm	W	W
低頻道	2DH1	8.70	0.00741	9.85	0.00966	≤0.125
	2DH3	8.75	0.00750	9.92	0.00982	≤0.125
	2DH5	8.82	0.00762	10.00	0.01000	≤0.125
中頻道	2DH1	9.32	0.00855	10.58	0.01143	≤0.125
	2DH3	9.40	0.00871	10.65	0.01161	≤0.125
	2DH5	9.48	0.00887	10.72	0.01180	≤0.125
高頻道	2DH1	9.15	0.00822	10.30	0.01072	≤0.125
	2DH3	9.22	0.00836	10.42	0.01102	≤0.125
	2DH5	9.30	0.00851	10.48	0.01117	≤0.125

操作模式 : Mode 5: EDR, 8DPSK Continuous TX Mode						
頻道		輸出功率(Average)		輸出功率(Peak)		限制值
		dBm	W	dBm	W	W
低頻道	3DH1	8.75	0.00750	9.95	0.00989	≤0.125
	3DH3	8.82	0.00762	10.01	0.01002	≤0.125
	3DH5	8.89	0.00774	10.06	0.01014	≤0.125
中頻道	3DH1	9.40	0.00871	10.70	0.01175	≤0.125
	3DH3	9.45	0.00881	10.76	0.01191	≤0.125
	3DH5	9.53	0.00897	10.81	0.01205	≤0.125
高頻道	3DH1	9.22	0.00836	10.46	0.01112	≤0.125
	3DH3	9.30	0.00851	10.52	0.01127	≤0.125
	3DH5	9.36	0.00863	10.59	0.01146	≤0.125

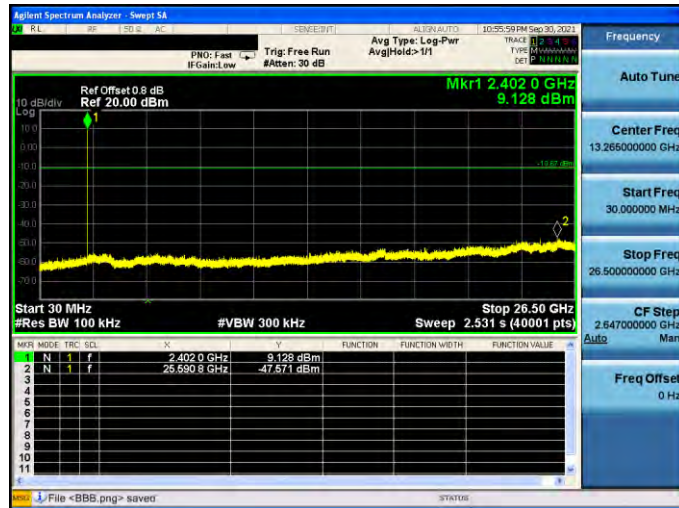
操作模式 : Mode 6: LE, GFSK Continuous TX Mode					
頻道	輸出功率(Average)		輸出功率(Peak)		限制值
	dBm	W	dBm	W	W
低頻道	4.79	0.00301	4.95	0.00313	≤ 1
中頻道	4.81	0.00303	5.00	0.00316	≤ 1
高頻道	5.01	0.00317	5.18	0.00330	≤ 1

非必要頻帶之量測

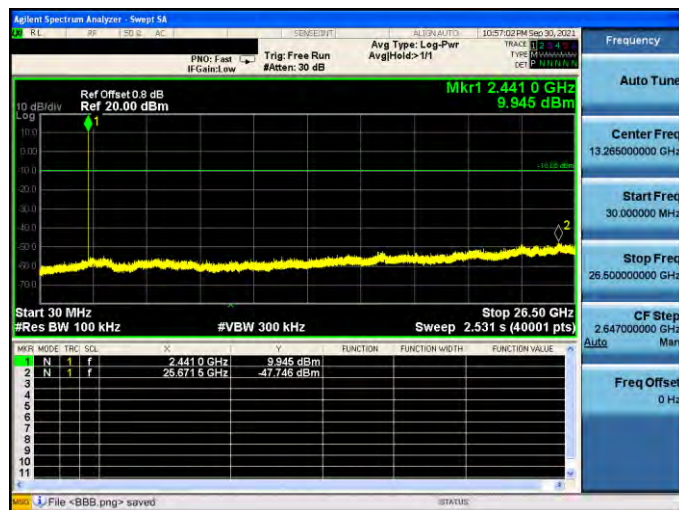
Out of Band Conducted Spurious Emission

Mode 3: BR, GFSK Continuous TX Mode

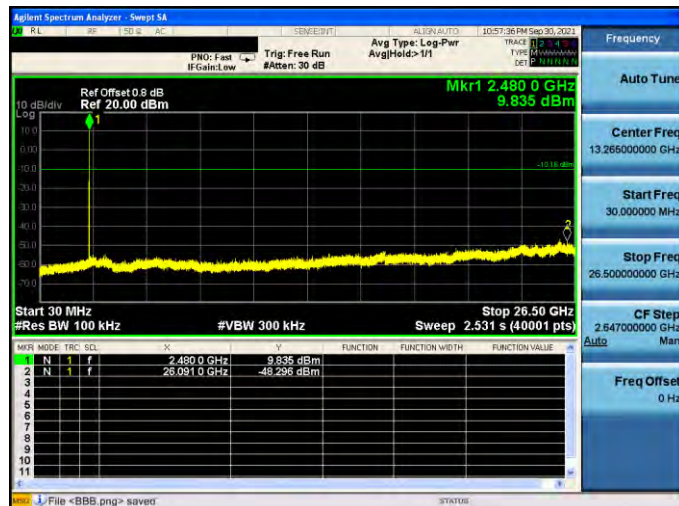
低頻道



中頻道

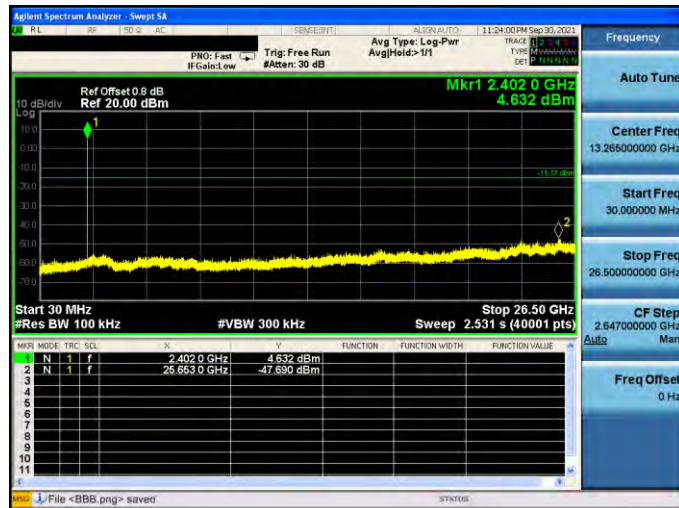


高頻道

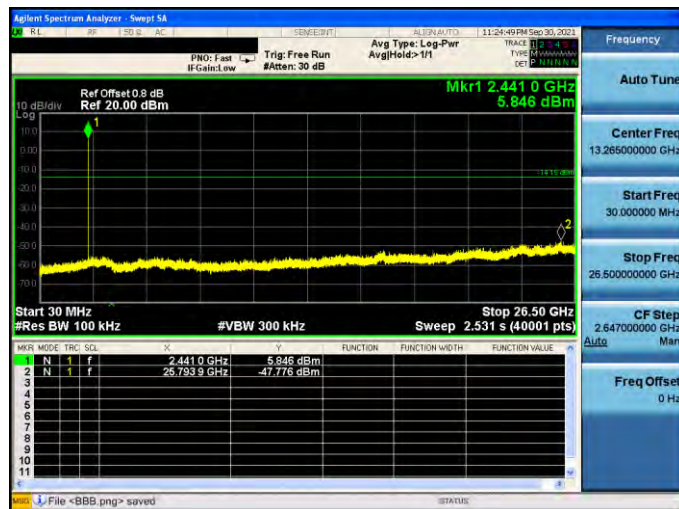


Mode 5: EDR, 8DPSK Continuous TX Mode

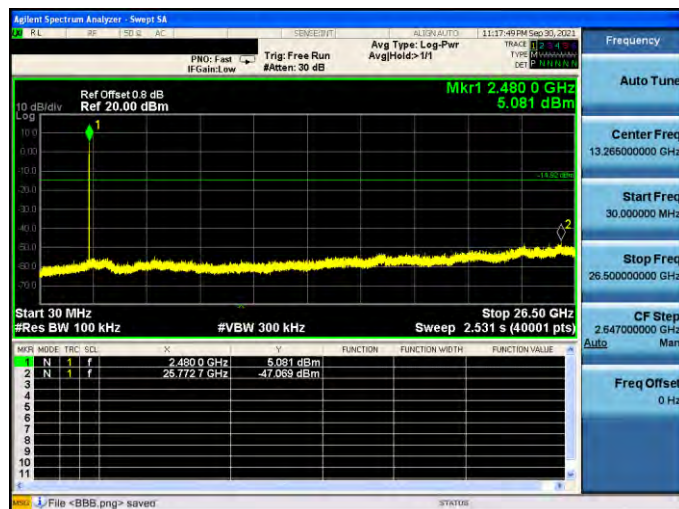
低頻道



中頻道

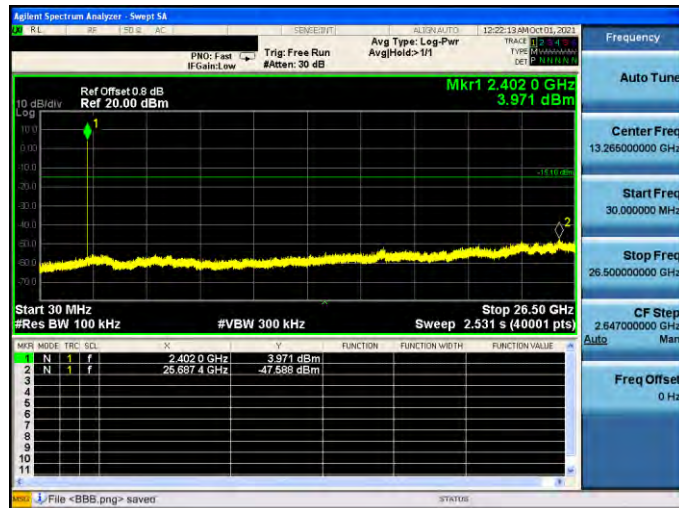


高頻道

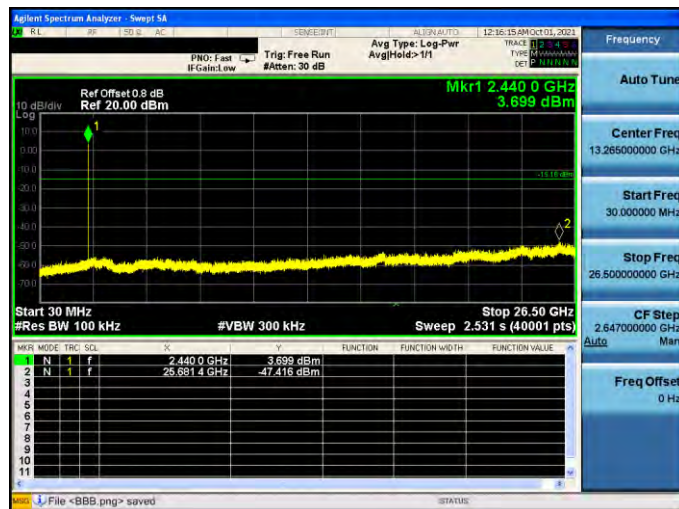


Mode 6: LE, GFSK Continuous TX Mode

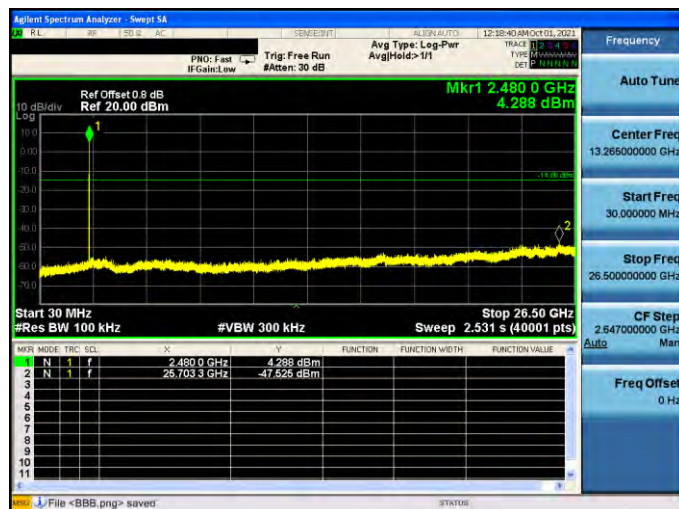
低頻道



中頻道



高頻道



Reference level

Mode 6: LE, GFSK Continuous TX Mode

低頻道



中頻道



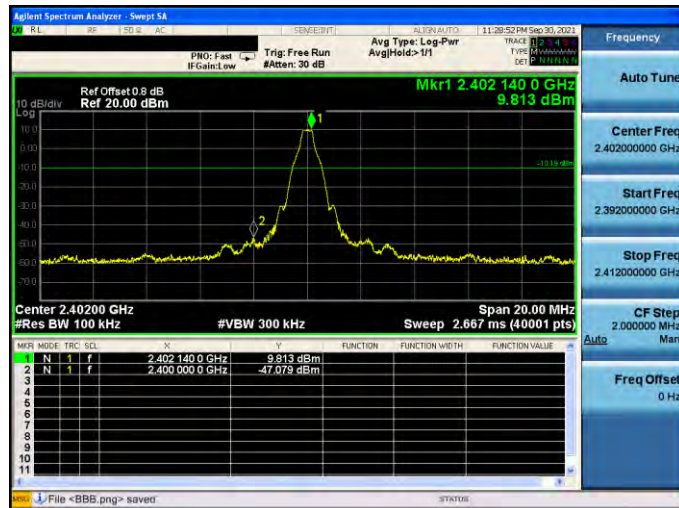
高頻道



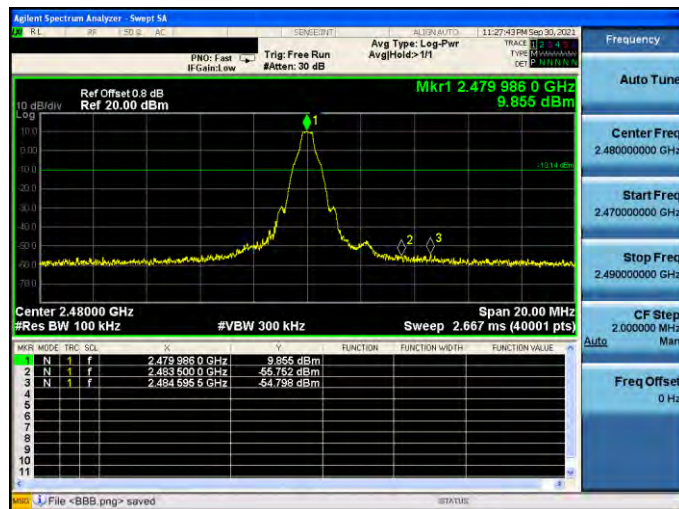
Conducted Band Edge

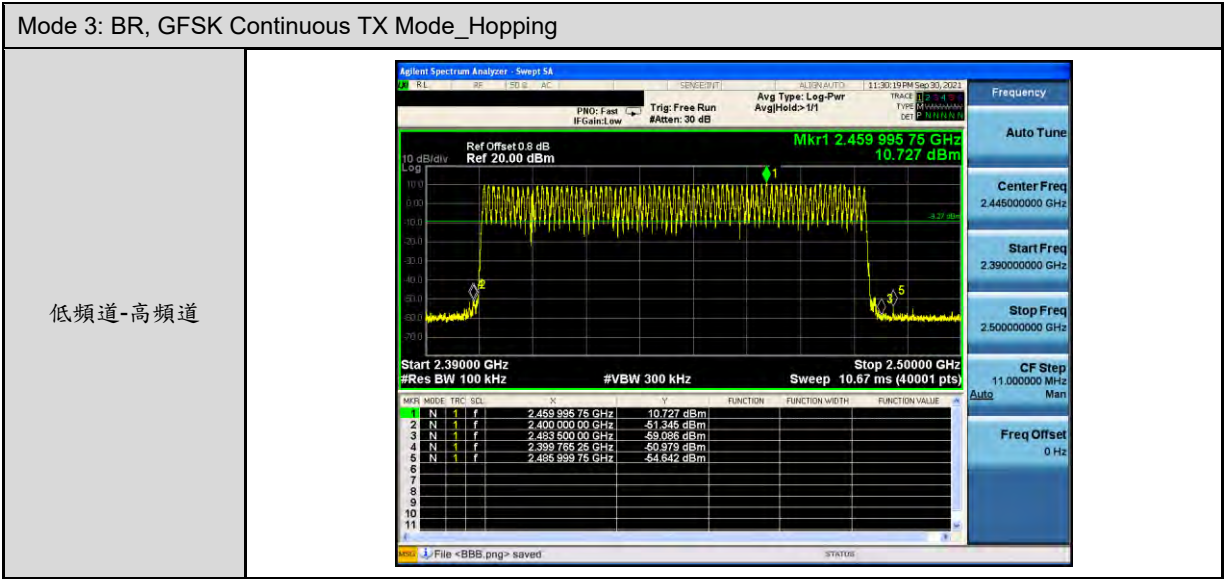
Mode 3: BR, GFSK Continuous TX Mode_Un-hopping

低頻道



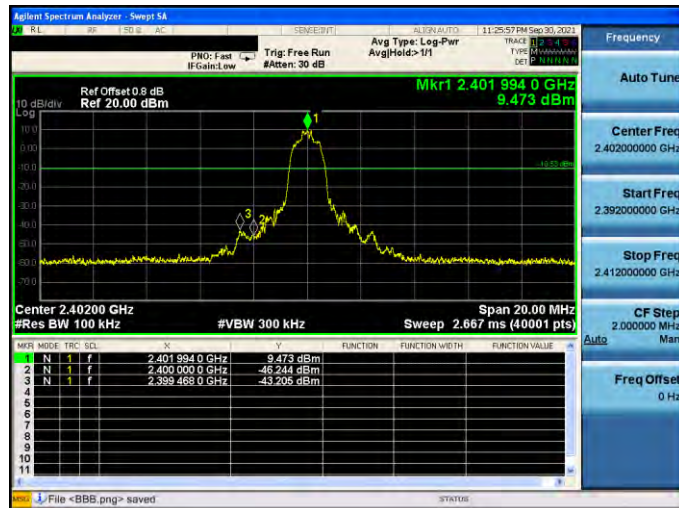
高頻道



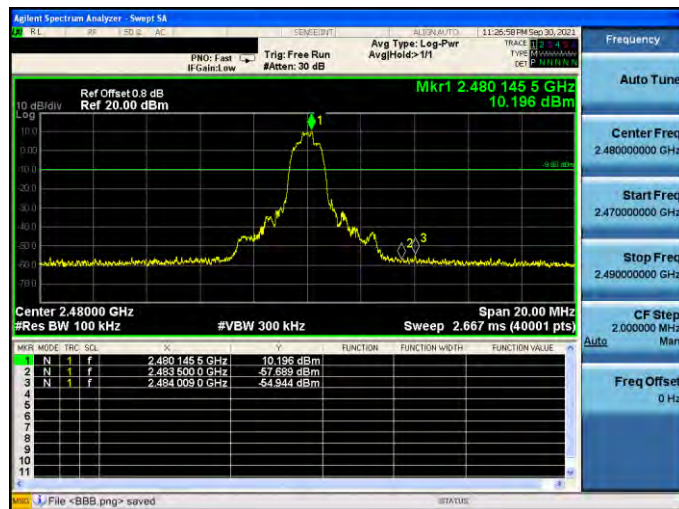


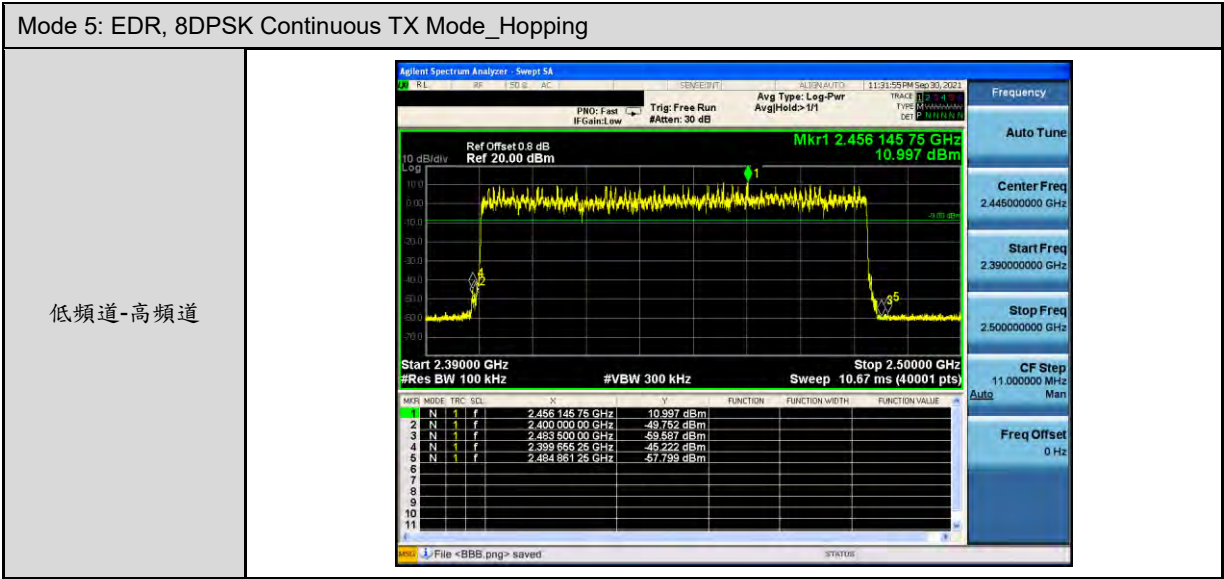
Mode 5: EDR, 8DPSK Continuous TX Mode_Un-hopping

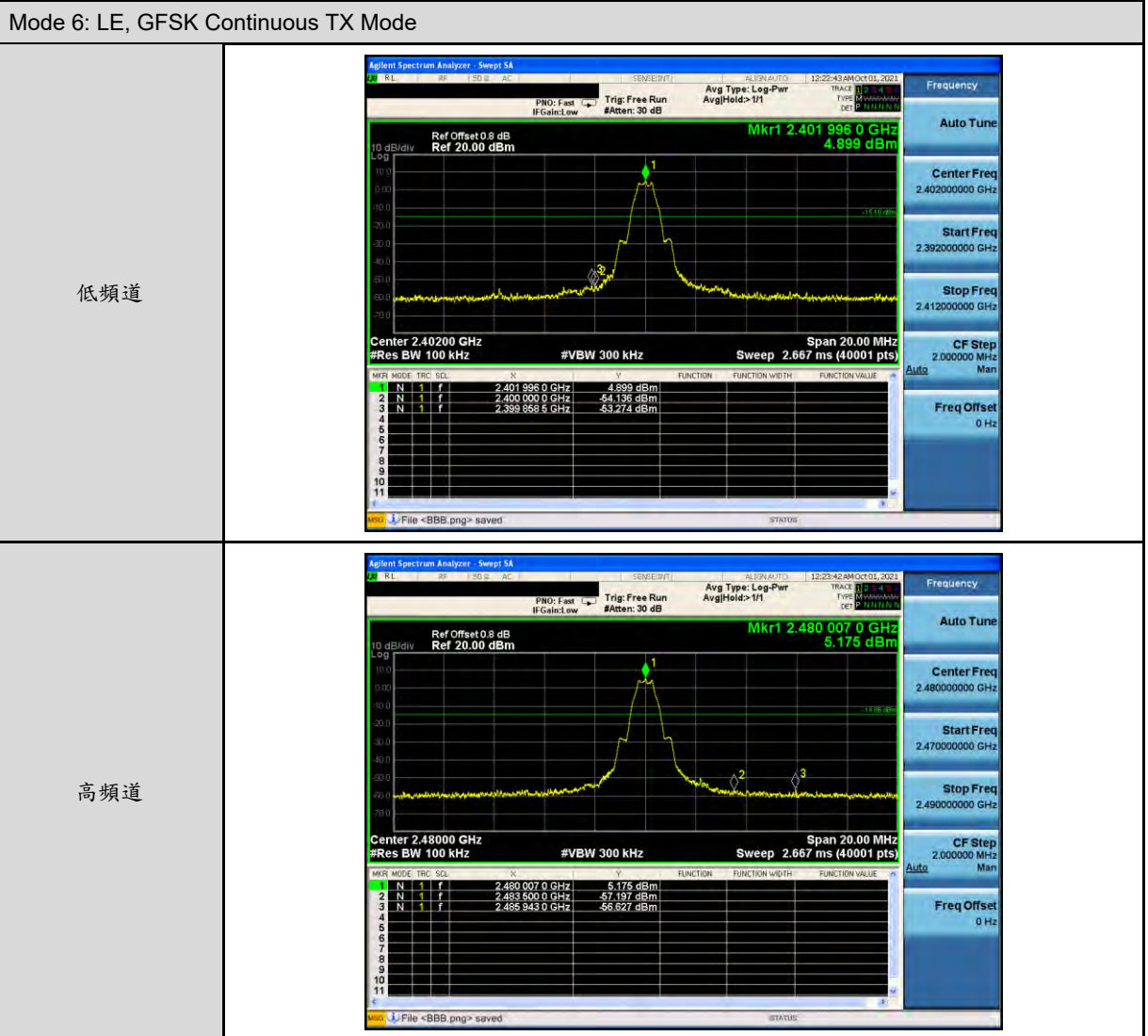
低頻道



高頻道







頻率範圍及頻道數之要求

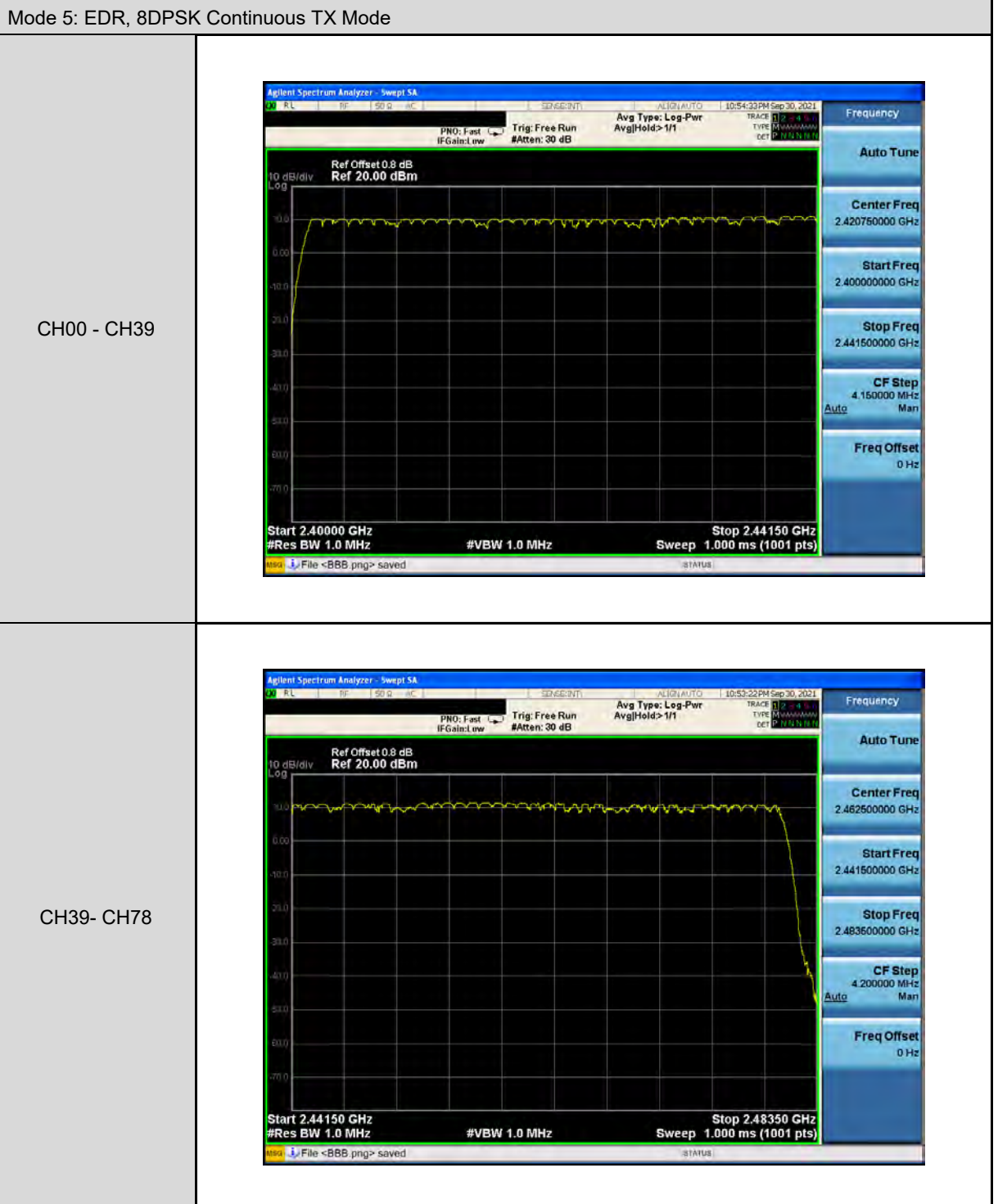
Mode 3: BR, GFSK Continuous TX Mode

CH00 - CH39



CH39- CH78





發射頻寬之要求

操作模式 : Mode 3: BR, GFSK Continuous TX Mode Mode 5: EDR, 8DPSK Continuous TX Mode				
操作模式	頻道	發射頻寬(20 dB)		
		量測值 (MHz)	2/3 量測值 (MHz)	限制值 (MHz)
Mode 3	低頻道	0.956	0.637	-----
	中頻道	0.955	0.636	-----
	高頻道	0.957	0.638	-----
Mode 5	低頻道	1.266	0.844	-----
	中頻道	1.263	0.842	-----
	高頻道	1.268	0.845	-----
註: 發射頻寬(20 dB) 之 2/3 量測值 = 量測值 x 2 / 3				

操作模式 : Mode 6: LE, GFSK Continuous TX Mode			
操作模式	頻道	發射頻寬(6 dB)	
		量測值 (kHz)	限制值 (kHz)
Mode 6	低頻道	668.900	≥ 500
	中頻道	665.800	≥ 500
	高頻道	657.100	≥ 500

Mode 3: BR, GFSK Continuous TX Mode

低頻道



中頻道



高頻道



Mode 5: EDR, 8DPSK Continuous TX Mode

低頻道



中頻道



高頻道



Mode 6: LE, GFSK Continuous TX Mode

低頻道



中頻道



高頻道



跳頻系統之載波頻率頻道間隔之量測

操作模式 : Mode 3: BR, GFSK Continuous TX Mode Mode 5: EDR, 8DPSK Continuous TX Mode			
操作模式	頻道	鄰頻道載波間隔	
		量測值 (MHz)	限制值 (MHz)
Mode 3	低頻道	1.000	≥ 0.637
	中頻道	1.000	≥ 0.636
	高頻道	1.000	≥ 0.638
Mode 5	低頻道	1.000	≥ 0.844
	中頻道	1.000	≥ 0.842
	高頻道	1.000	≥ 0.845

Mode 3: BR, GFSK Continuous TX Mode

低頻道



中頻道



高頻道



Mode 5: EDR, 8DPSK Continuous TX Mode

低頻道



中頻道



高頻道

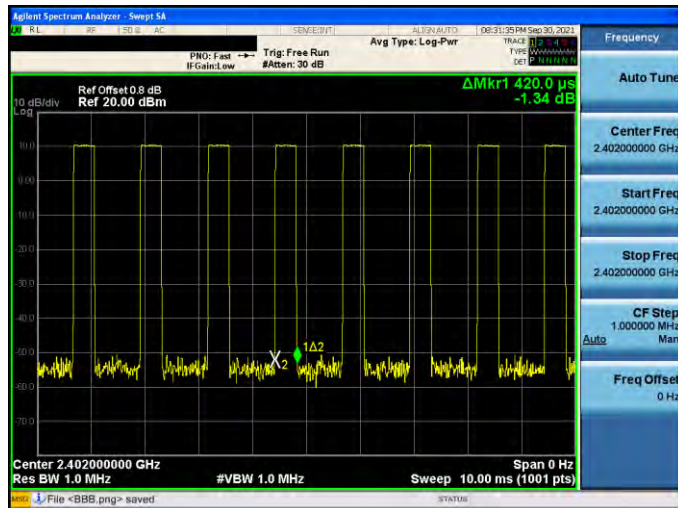


跳頻系統之任一頻率佔用之平均時間之量測

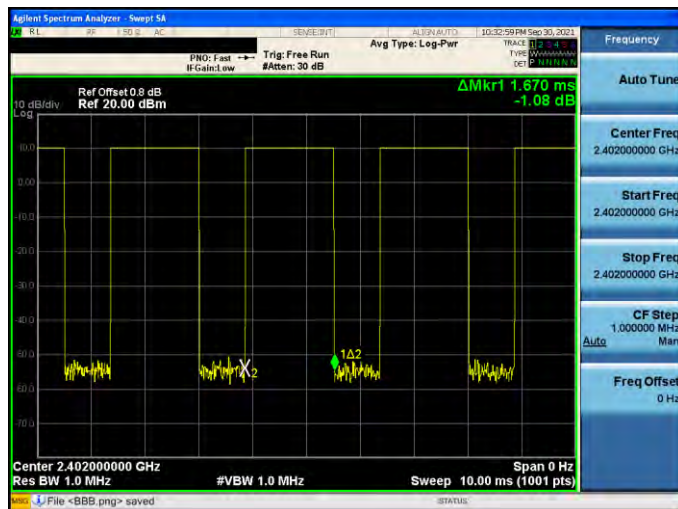
Mode 3: BR, GFSK Continuous TX Mode	
DH1 模式	
需量測之週期(秒)	$79\text{CH} * 0.4 = 31.6$ (秒)
待測物每秒跳頻之總次數	1600(藍牙通訊協定標準)
頻道每秒佔用之次數	$800/79\text{CH} = 10.13$ (次/秒)
頻道每次佔用之時間(1)	0.420 ms (秒)
週期內頻道佔用之總次數(2)	$31.6 * 10.13 = 320.108$ (次)
週期內佔用的平均時間(1) * (2)	134.445 ms (秒)
LIMIT(msec)	≤ 400
DH3 模式	
需量測之週期(秒)	$79\text{CH}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

Mode 3: BR, GFSK Continuous TX Mode

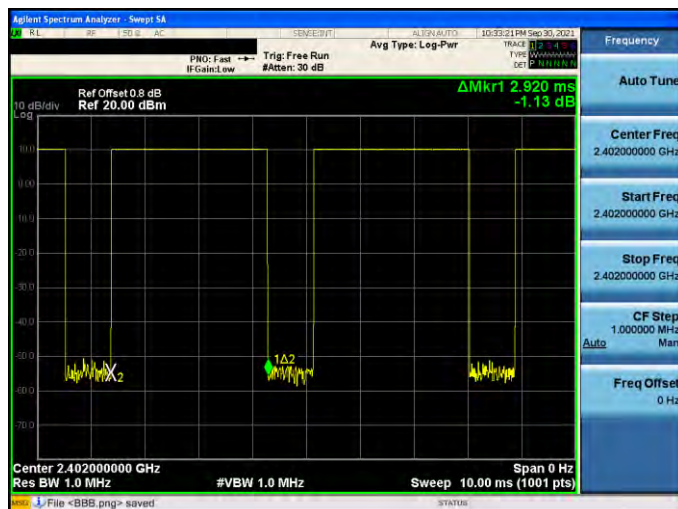
DH1



DH3



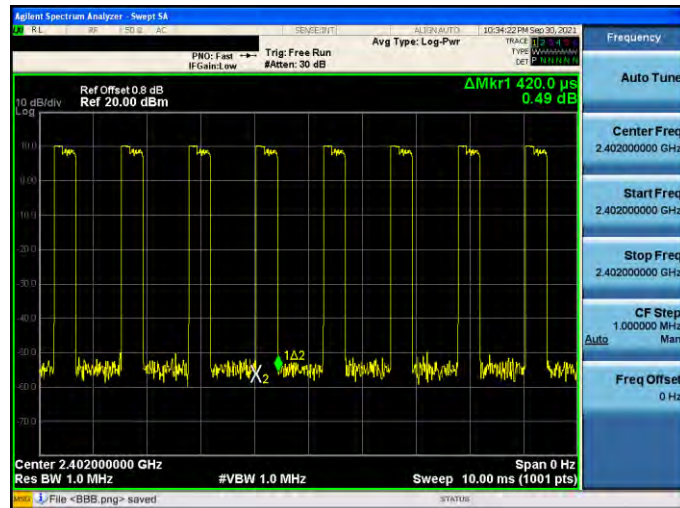
DH5



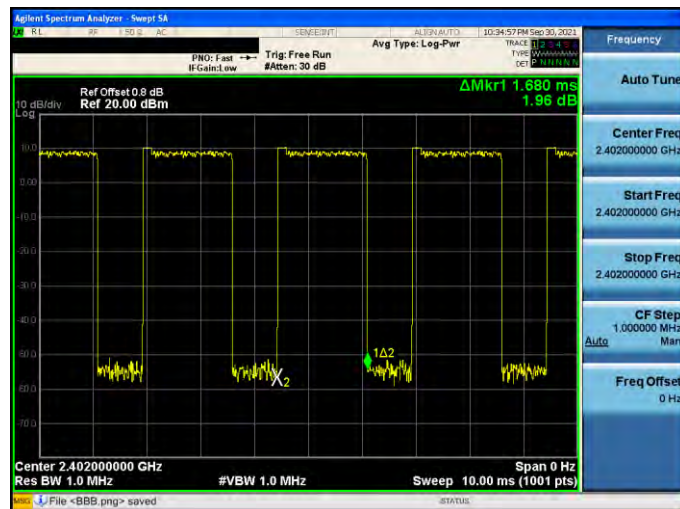
Mode 5: EDR, 8DPSK Continuous TX Mode	
3DH1 模式	
需量測之週期(秒)	$79\text{CH} * 0.4 = 31.6$ (秒)
待測物每秒跳頻之總次數	1600(藍牙通訊協定標準)
頻道每秒佔用之次數	$800/79\text{CH} = 10.13$ (次/秒)
頻道每次佔用之時間(1)	0.420 ms (秒)
週期內頻道佔用之總次數(2)	$31.6 * 10.13 = 320.108$ (次)
週期內佔用的平均時間(1) * (2)	134.445 ms (秒)
LIMIT(msec)	≤ 400
3DH3 模式	
需量測之週期(秒)	$79\text{CH} * 0.4 = 31.6$ (秒)
待測物每秒跳頻之總次數	1600(藍牙通訊協定標準)
頻道每秒佔用之次數	$400/79\text{CH} = 5.06$ (次/秒)
頻道每次佔用之時間(1)	1.680 ms (秒)
週期內頻道佔用之總次數(2)	$31.6 * 5.06 = 159.896$ (次)
週期內佔用的平均時間(1) * (2)	268.625 ms (秒)
LIMIT(msec)	≤ 400
3DH5 模式	
需量測之週期(秒)	$79\text{CH} * 0.4 = 31.6$ (秒)
待測物每秒跳頻之總次數	1600(藍牙通訊協定標準)
頻道每秒佔用之次數	$266.7/79\text{CH} = 3.38$ (次/秒)
頻道每次佔用之時間(1)	2.920 ms (秒)
週期內頻道佔用之總次數(2)	$31.6 * 3.38 = 106.808$ (次)
週期內佔用的平均時間(1) * (2)	311.879 ms (秒)
LIMIT(msec)	≤ 400

Mode 5: EDR, 8DPSK Continuous TX Mode

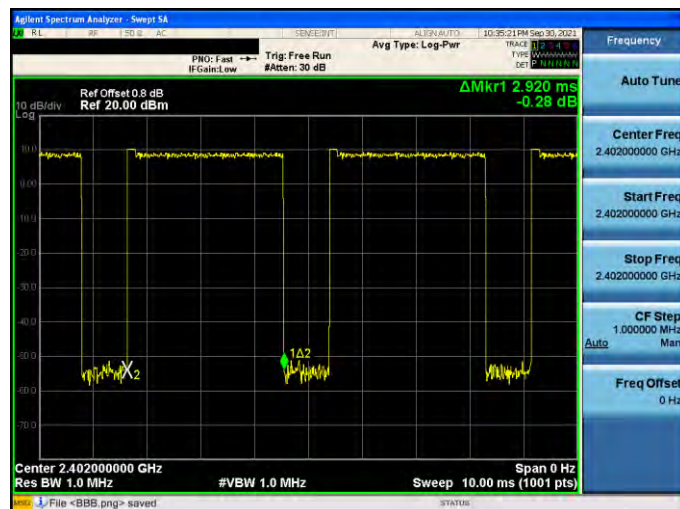
3DH1



3DH3



3DH5



功率密度之要求

操作模式 : Mode 6: LE, GFSK Continuous TX Mode			
操作模式	頻道	量測值 (dBm/3 kHz)	限制值 (dBm/3 kHz)
Mode 6	低頻道	-6.895	≤ 8
	中頻道	-6.905	≤ 8
	高頻道	-6.563	≤ 8

Mode 6: LE, GFSK Continuous TX Mode

低頻道



中頻道



高頻道



6. EUT Photos

請參照 文件編號: 21-1392_EUT External Photos 和 21-1392_EUT Internal Photos 。

---END---