



# 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 1911DR43

版本(Rev.) 01

產品名稱 USB Wireless Dongle

申請廠商 Harman International Industries, Incorporated

商標或廠牌 JBL

型式 (號) QUANTUM600TM

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

報告發行日期 108 年 12 月 05 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)

2.4 GHz 射頻電信終端設備技術規範(RTTE01)



### 免責聲明

- 1.本測試報告所敘述之測試結果，僅對顧客所提供之測試樣品，在此測試報告所述及之測試條件下，所實施之量測有效。
- 2.本測試報告未經晶復科技股份有限公司書面同意，不得部分複製本報告內容。
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報告修訂紀錄

| 版本<br>(Rev.) | 發行日期            | 修訂內容                                                                        | 修訂者 |
|--------------|-----------------|-----------------------------------------------------------------------------|-----|
| 00           | 108 年 11 月 21 日 | 初版發行                                                                        | 江玉  |
| 01           | 108 年 12 月 05 日 | 第 5、44 頁更新天線增益值。<br>第 6 頁更新附屬裝置表備註。<br>第 17-28 更新主波電場強度之測試結果。<br>內部照天線標示更新。 | 江玉  |
|              |                 |                                                                             |     |
|              |                 |                                                                             |     |

## 低功率射頻電機測試證明書

發行日期：108年12月05日

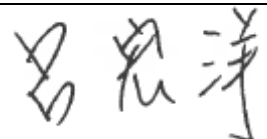
產品名稱：USB Wireless Dongle  
商標：JBL  
型號：QUANTUM600TM  
申請廠商：Harman International Industries, Incorporated  
申請者地址：8500 Balboa Blvd, Northridge, CA 91329, UNITED STATES  
製造廠商：Shenzhen Horn Audio Co., Ltd.  
製造商地址：No.6, 4th Guihua Road, Pingshan New District, Shenzhen City,  
Guangdong Province, P.R. China  
待測物電壓：DC 5 V, 0.5 A  
試驗電壓：110 Vac, 60 Hz  
量測規範：低功率射頻電機技術規範(LP0002) 107年1月10日  
試驗實驗室：晶復科技股份有限公司(桃園市八德區長安街140-1號)  
試驗受理日期：108 年 10 月 29 號  
樣品接受日期：108 年 11 月 07 號  
試驗完成日期：108 年 11 月 14 號

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

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

特此證明！

審核者：



( 呂 宏 洋 )

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## 1. 一般敘述

### 1.1 待測設備一般敘述

本敘述僅針對產品簡單說明之，其他詳細之規格請參考使用說明書。

|             |                        |                                                 |              |              |             |
|-------------|------------------------|-------------------------------------------------|--------------|--------------|-------------|
| 產 品 名 稱     | USB Wireless Dongle    |                                                 |              |              |             |
| 商 標 或 廠 牌   | JBL                    |                                                 |              |              |             |
| 型 號         | QUANTUM600TM           |                                                 |              |              |             |
| 額 定 電 源     | DC 5 V, 0.5 A          |                                                 |              |              |             |
| 頻 率 使 用 範 圍 | 2403.35 – 2479.35 MHz  |                                                 |              |              |             |
| 使 用 頻 道 數   | 39 CH                  |                                                 |              |              |             |
| 調 變 方 式     | $\pi/4$ DQPSK          |                                                 |              |              |             |
| 天 線 資 訊     | Antenna                | 廠 牌                                             | 型 號          | 型 態          | 增 益 值 (dBi) |
|             | ANT-0                  | SOUTH STAR TECHNOLOGY HONG KONG COMPANY LIMITED | F01-6378-R0A | PIFA Antenna | 0.88        |
|             | ANT-1                  | SOUTH STAR TECHNOLOGY HONG KONG COMPANY LIMITED | F01-6378-R0A | PIFA Antenna | 0.73        |
| 主 波 電 場 強 度 | AVG 91.96 dBuV/m @ 3 m |                                                 |              |              |             |

| 頻道表 |         |    |         |    |         |     |         |
|-----|---------|----|---------|----|---------|-----|---------|
| CH  | MHz     | CH | MHz     | CH | MHz     | CH  | MHz     |
| 01  | 2403.35 | 12 | 2425.35 | 23 | 2447.35 | 34  | 2469.35 |
| 02  | 2405.35 | 13 | 2427.35 | 24 | 2449.35 | 35  | 2471.35 |
| 03  | 2407.35 | 14 | 2429.35 | 25 | 2451.35 | 36  | 2473.35 |
| 04  | 2409.35 | 15 | 2431.35 | 26 | 2453.35 | 37  | 2475.35 |
| 05  | 2411.35 | 16 | 2433.35 | 27 | 2455.35 | 38  | 2477.35 |
| 06  | 2413.35 | 17 | 2435.35 | 28 | 2457.35 | 39  | 2479.35 |
| 07  | 2415.35 | 18 | 2437.35 | 29 | 2459.35 | --- | ---     |
| 08  | 2417.35 | 19 | 2439.35 | 30 | 2461.35 | --- | ---     |
| 09  | 2419.35 | 20 | 2441.35 | 31 | 2463.35 | --- | ---     |
| 10  | 2421.35 | 21 | 2443.35 | 32 | 2465.35 | --- | ---     |
| 11  | 2423.35 | 22 | 2445.35 | 33 | 2467.35 | --- | ---     |

輸出/輸入埠說明：

| 輸 出 / 入 埠 |          | 數量 | 介面內容說明                         |
|-----------|----------|----|--------------------------------|
| 1         | USB Port | 1  | 連接至 Notebook/PC/Mac/Playsation |

待測設備外圍說明：

|           |            |
|-----------|------------|
| 電 源 線 類 別 | 無          |
| 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        |
|-------------------------|-----|------------|-----------|
| Gaming Wireless Headset | JBL | QUANTUM600 | 無線功能:FHSS |

## 1.2 其他相關聲明

本測試報告屬(以下選擇一種打■)

|                                     |                                                          |
|-------------------------------------|----------------------------------------------------------|
| <input checked="" type="checkbox"/> | 申請新的型式檢驗認可的測試。                                           |
| <input type="checkbox"/>            | 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).<br>登錄號碼: XXXXXXXX |

## 2. 量測儀器及測試配置說明

### 2.1 量測設備

For Conducted Emission  
Test Period: Nov. 08, 2019  
測試者: 申世傑

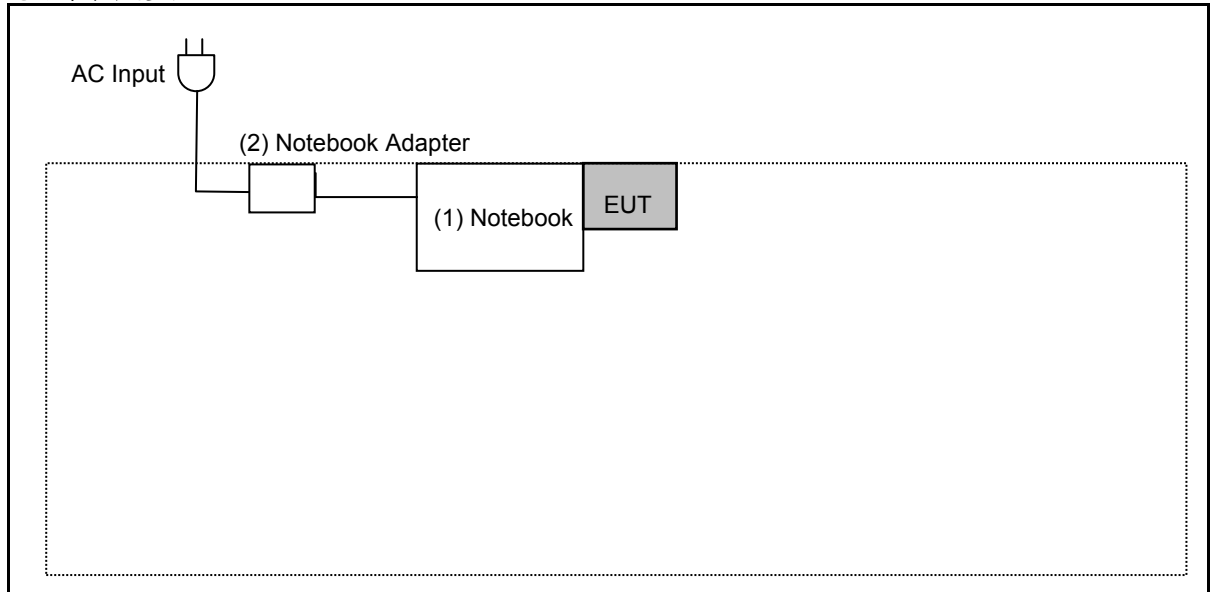
| 名稱                     | 廠牌  | 型號     | 序號     | 本次校驗日期     | 校驗年限   |
|------------------------|-----|--------|--------|------------|--------|
| 測試接收機<br>(9 kHz~3 GHz) | R&S | ESCI   | 100367 | 05/23/2019 | 1 year |
| 線性阻抗模擬網路               | R&S | ENV216 | 101040 | 04/03/2019 | 1 year |
| 線性阻抗模擬網路               | R&S | ENV216 | 101041 | 03/28/2019 | 1 year |

For Radiated Emissions  
Test Period: Nov. 07 ~ Nov. 14, 2019  
測試者: 劉彥聖

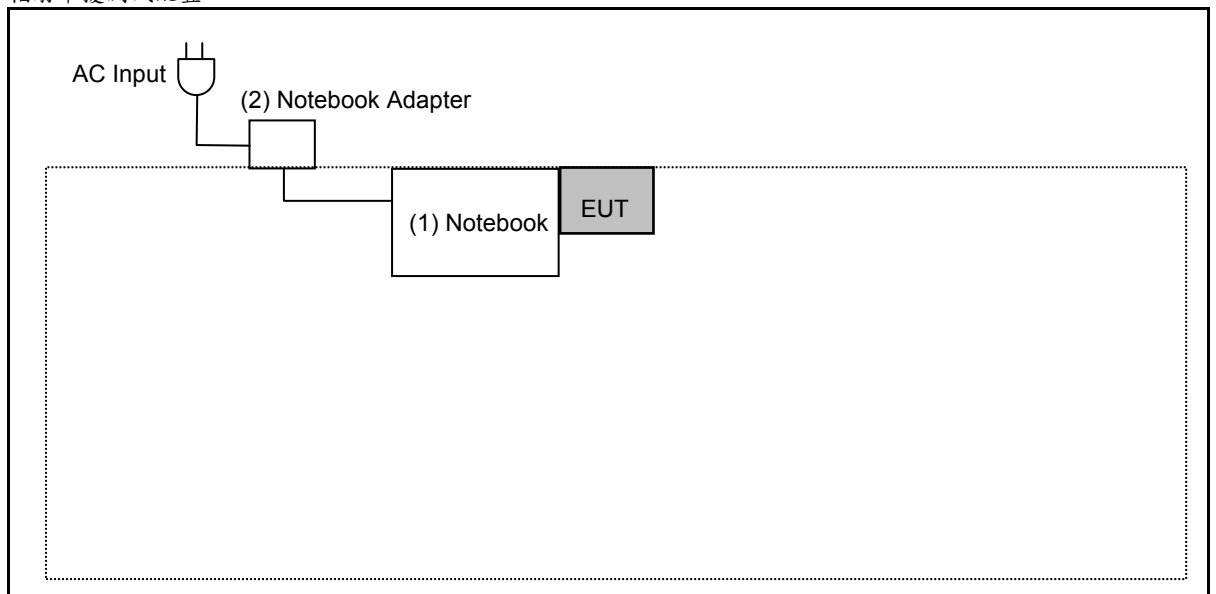
| 名稱                | 廠牌                             | 型號         | 序號         | 本次校驗日期     | 校驗年限   |
|-------------------|--------------------------------|------------|------------|------------|--------|
| Spectrum Analyzer | Agilent                        | E4445A     | MY46181986 | 05/30/2019 | 1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

## 2.2 檢驗系統示意圖

電源傳導干擾測試配置



輻射干擾測試配置



## 2.3 輔助測試之週邊設備描述

下列輔助設備或配件為測試中所使用，以形成一個代表性的受測系統。

| 週邊名稱 |            | 商標   | 型 號            | 序 號     | 電 源 線               | 備註                                                                        |
|------|------------|------|----------------|---------|---------------------|---------------------------------------------------------------------------|
| (1)  | Notebook   | DELL | LATITUDE E5440 | BRTQXY1 | Non-Shielded, 0.8 m | ---                                                                       |
| (2)  | AC Adapter | DELL | HA65NM130      | ---     | 0.8m, 0 core        | INPUT : 100-240 VAC,<br>50 Hz / 60 Hz, 1.7 A<br>OUTPUT : 19.5 VDC, 3.34 A |

## 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

|                            |
|----------------------------|
| Test Mode                  |
| Mode 1: Transmit Mode      |
| Mode 2: Continuous TX Mode |
| Mode 3: Receive Mode       |

Note：經驗證主波電場強度 ANT-0 為 Worst。

| Test Mode | ANT-0 | ANT-1 |
|-----------|-------|-------|
| Mode 2    | V     | V     |

| Test Mode | Antenna Delivery     | Test Channel |
|-----------|----------------------|--------------|
| Mode 2    | 1TX / 1RX(Diversity) | 1, 20, 39    |

## 2.6 量測不確定度

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

| Test Item          | Frequency Range       | Uncertainty (dB) |
|--------------------|-----------------------|------------------|
| Conducted Emission | 150 kHz ~ 30 MHz      | 2.8              |
| Radiated Emission  | 9 kHz ~ 30 MHz        | 1.7              |
|                    | 30 MHz ~ 1000 MHz     | 5.7              |
|                    | 1000 MHz ~ 18000 MHz  | 5.6              |
|                    | 18000 MHz ~ 26500 MHz | 4.9              |
|                    | 26500 MHz ~ 40000 MHz | 4.8              |

Decision Rule

☒ Uncertainty is not included.

☐ Uncertainty is included.

## 2.7 試驗環境

產品測試時之實驗室環境條件如下：

| 項 目                 | 測 試 項 目 | 需 求     | 實 際     |
|---------------------|---------|---------|---------|
| 溫度 Temperature (°C) | LP0002  | 10 - 40 | 23 - 26 |
| 濕度 Humidity (%RH)   |         | 10 - 90 | 55 - 60 |

## 3. 測試項目與結果判定總表

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

| 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 | 合格   |
| 2  | 場強輻射        | 低功率射頻電機技術規範<br>2.8 節、2.7 節、3.10.2.2 節 | 請參閱 4.2 節 | 請參閱 2.1 節 | 合格   |
| 3  | 諧波及指定頻帶外之發射 | 低功率射頻電機技術規範<br>3.10.2.2、3.10.2.4 節    | 請參閱 4.2 節 | 請參閱 2.1 節 | 合格   |
| 4  | 天線規格        | 低功率射頻電機技術規範<br>2.2 節                  | 請參閱 4.3 節 | -----     | 合格   |

## 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  $\Omega$ /50  $\mu$ 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<br>(MHz) | 傳導限制值 (dBuV)       |               |
|--------------------|--------------------|---------------|
|                    | 準峰值 (Quasi – peak) | 平均值 (Average) |
| 0.15 – 0.5         | 66 - 56 (註)        | 56 - 46 (註)   |
| 0.5 – 5            | 56                 | 46            |
| 5 - 30             | 60                 | 50            |

註：隨頻率之對數遞減。

#### 測試方法：

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

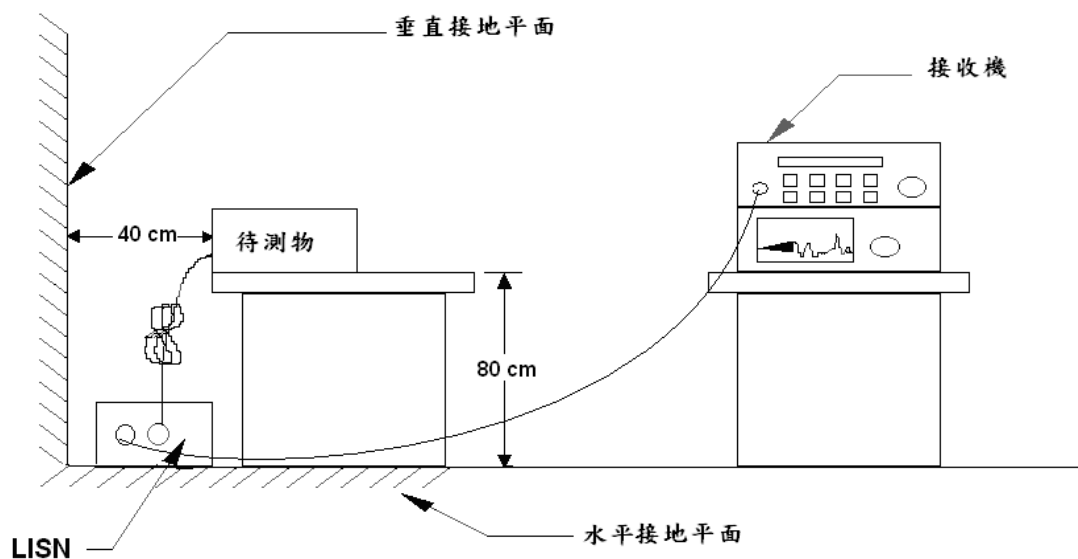
#### 干擾值之計算

電源傳導干擾電壓之計算公式如下

結果值 = 儀器讀值(QP/AV) + 校正因子

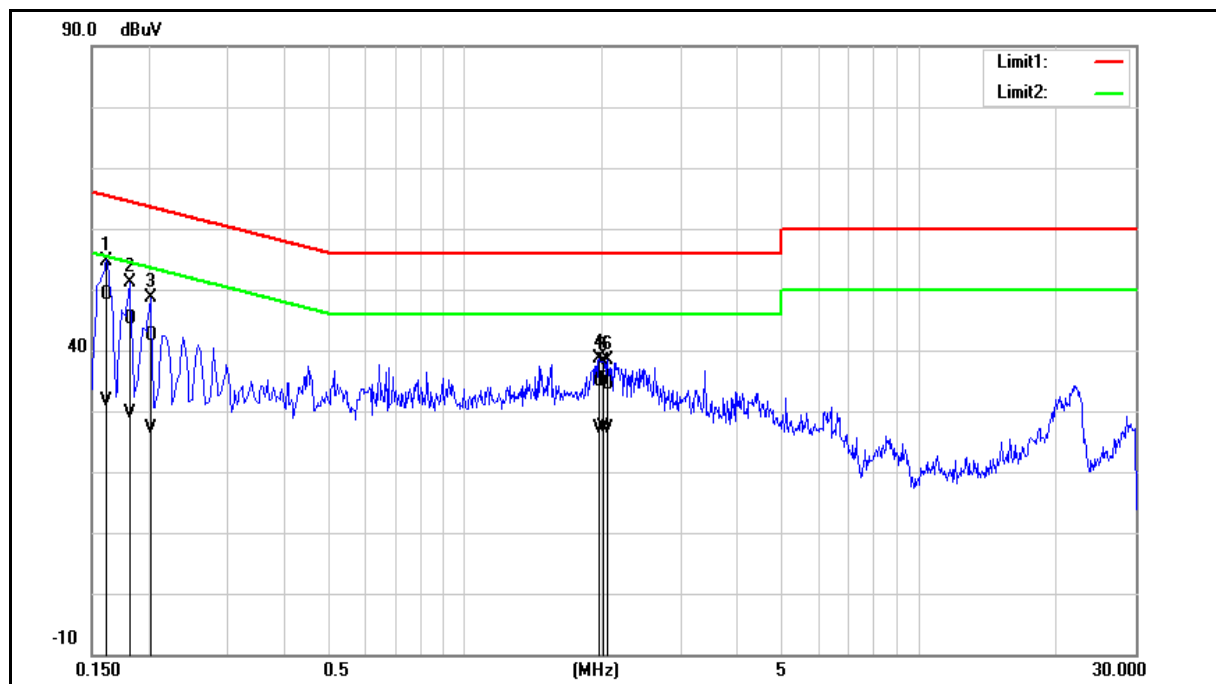
其中校正因子為：饋線損失 + 電源阻抗模擬網路損失

#### 測試架構圖：



## 測試結果:

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

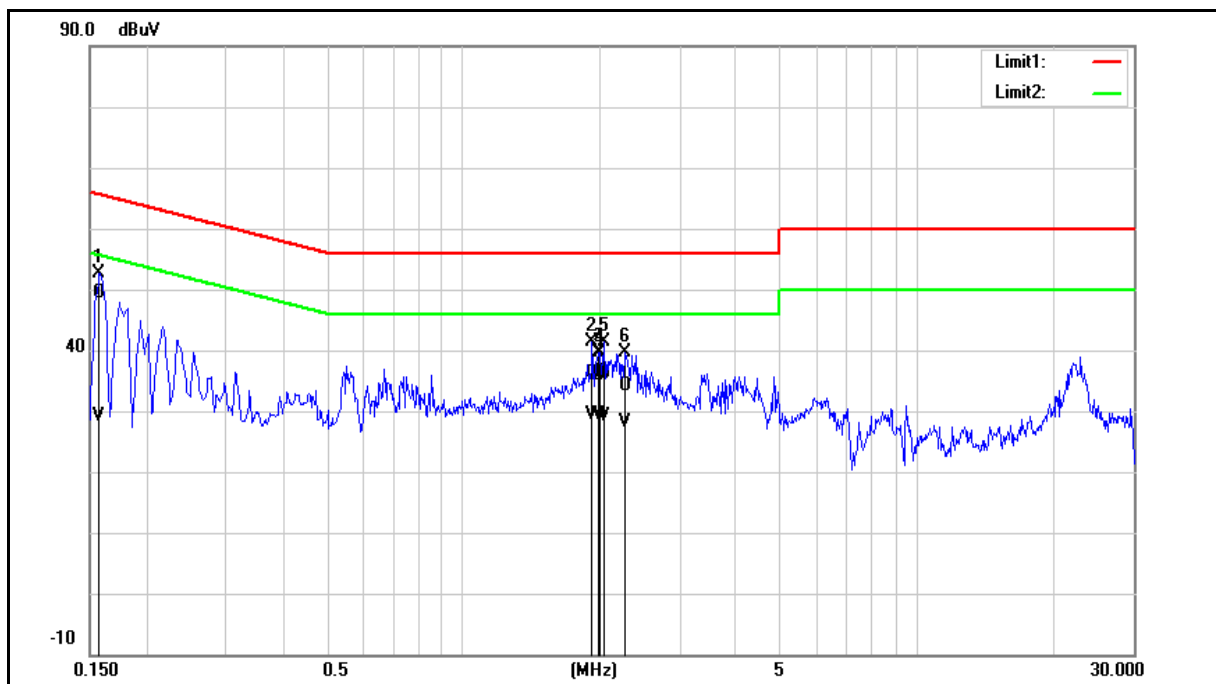


| No. | Frequency (MHz) | QP reading (dBuV) | AVG reading (dBuV) | Correction factor (dB) | QP result (dBuV) | AVG result (dBuV) | QP limit (dBuV) | AVG limit (dBuV) | QP margin (dB) | AVG margin (dB) | Remark |
|-----|-----------------|-------------------|--------------------|------------------------|------------------|-------------------|-----------------|------------------|----------------|-----------------|--------|
| 1   | 0.1620          | 38.84             | 21.31              | 10.38                  | 49.22            | 31.69             | 65.36           | 55.36            | -16.14         | -23.67          | Pass   |
| 2   | 0.1820          | 34.67             | 19.31              | 10.38                  | 45.05            | 29.69             | 64.39           | 54.39            | -19.34         | -24.70          | Pass   |
| 3   | 0.2020          | 32.11             | 16.81              | 10.35                  | 42.46            | 27.16             | 63.53           | 53.53            | -21.07         | -26.37          | Pass   |
| 4   | 1.9700          | 24.94             | 17.18              | 10.02                  | 34.96            | 27.20             | 56.00           | 46.00            | -21.04         | -18.80          | Pass   |
| 5   | 2.0220          | 25.05             | 17.46              | 10.02                  | 35.07            | 27.48             | 56.00           | 46.00            | -20.93         | -18.52          | Pass   |
| 6   | 2.0580          | 24.43             | 17.16              | 10.02                  | 34.45            | 27.18             | 56.00           | 46.00            | -21.55         | -18.82          | Pass   |

註：1. 干擾值(dBuV) = 校正係數(dB) + 讀值(dBuV)。

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

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



| No. | Frequency (MHz) | QP reading (dBuV) | AVG reading (dBuV) | Correction factor (dB) | QP result (dBuV) | AVG result (dBuV) | QP limit (dBuV) | AVG limit (dBuV) | QP margin (dB) | AVG margin (dB) | Remark |
|-----|-----------------|-------------------|--------------------|------------------------|------------------|-------------------|-----------------|------------------|----------------|-----------------|--------|
| 1   | 0.1580          | 39.17             | 18.96              | 10.29                  | 49.46            | 29.25             | 65.57           | 55.57            | -16.11         | -26.32          | Pass   |
| 2   | 1.9260          | 26.03             | 19.22              | 10.07                  | 36.10            | 29.29             | 56.00           | 46.00            | -19.90         | -16.71          | Pass   |
| 3   | 1.9900          | 25.90             | 19.17              | 10.09                  | 35.99            | 29.26             | 56.00           | 46.00            | -20.01         | -16.74          | Pass   |
| 4   | 2.0020          | 26.17             | 19.12              | 10.09                  | 36.26            | 29.21             | 56.00           | 46.00            | -19.74         | -16.79          | Pass   |
| 5   | 2.0500          | 25.97             | 19.04              | 10.09                  | 36.06            | 29.13             | 56.00           | 46.00            | -19.94         | -16.87          | Pass   |
| 6   | 2.2780          | 24.03             | 18.07              | 10.11                  | 34.14            | 28.18             | 56.00           | 46.00            | -21.86         | -17.82          | 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 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 3.10.2.2 節主波發射距 3 公尺處其場強度限值如下表，3.10.2.4 除諧波外，指定頻帶外之發射應比主波低 50 dB 以上或依 2.8 節之發射限制，兩者取其較鬆者，本節之所有發設限制值係以平均值檢測儀量測，且須符合第 5.15.2 節之峰值規定。

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。

| 主波頻率(MHz)   | 主波電場強度(mV/m) | 諧波電場強度( $\mu$ V/m) |
|-------------|--------------|--------------------|
| 2400-2483.5 | 50           | 500                |

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

#### 測試方法：

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

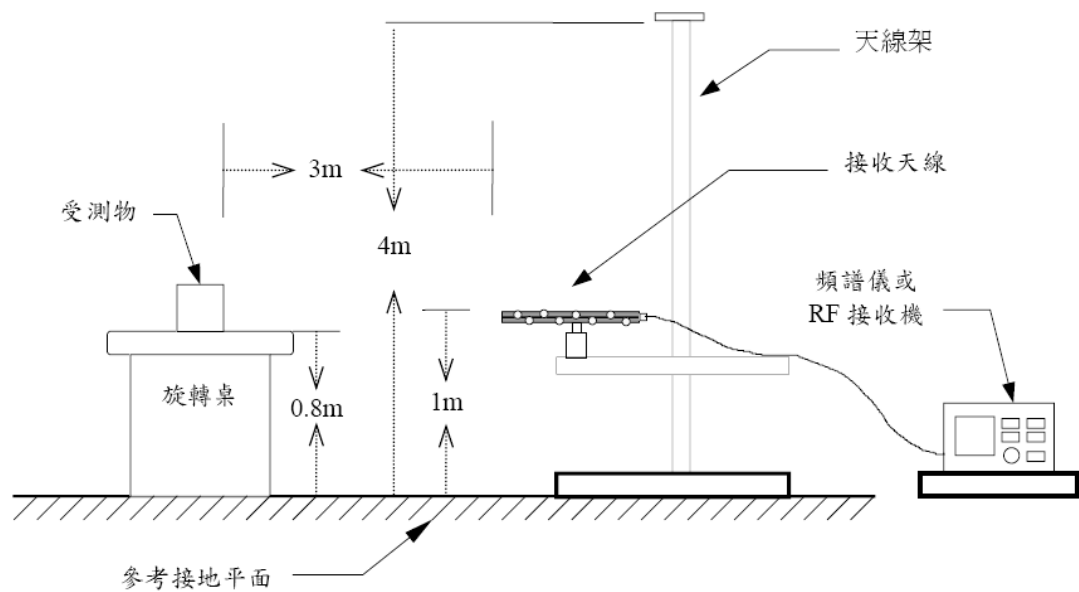
#### 場強度之計算

場強之計算公式為：結果值 = 讀值 + 校正因子

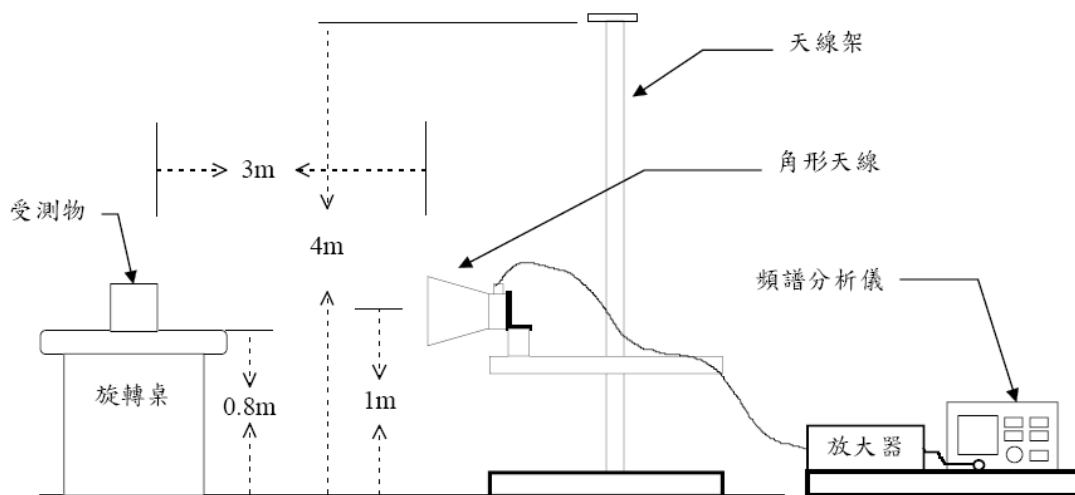
其中校正因子為：天線因子+ 饋線損失 + 濾波器損失（若有使用） - 放大器增益（若有使用）

#### 測試架構圖：

量測頻率低於 1 GHz 以下之測試配置



量測頻率高於 1 GHz 以上之測試配置



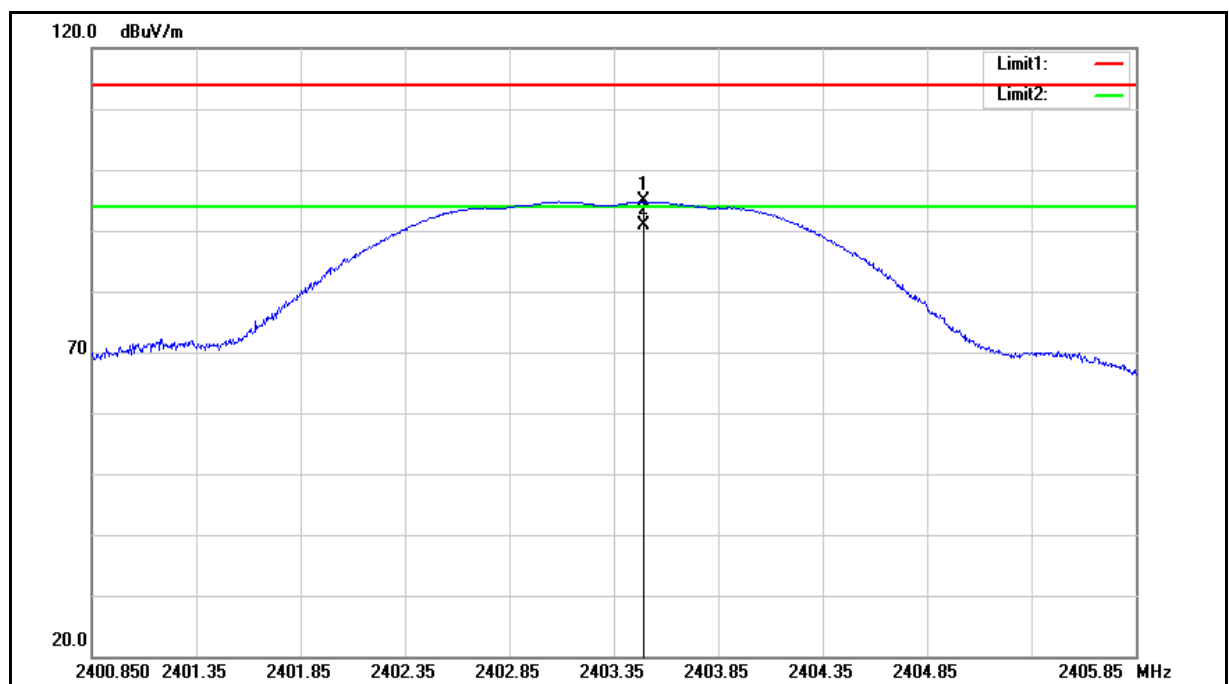
**測試結果:**

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

主波電場強度之測試結果:

ANT-0\_ Antenna Type: PIFA Antenna

|             |             |                      |                  |
|-------------|-------------|----------------------|------------------|
| Standard:   | LP0002      | Test Distance:       | 3 m              |
| Test item:  | Fundamental | Power:               | AC 110 V / 60 Hz |
| Frequency:  | 2403.35 MHz | Temp.(°C)/Hum.(%RH): | 25(°C)/60 %RH    |
| Ant.Polar.: | Horizontal  |                      |                  |



| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|
| 1   | 2403.490        | 105.58         | -10.82               | 94.76           | 114.00         | -19.24      | peak   |
| 1   | 2403.490        | 101.58         | -10.82               | 90.76           | 94.00          | -3.24       | AVG    |

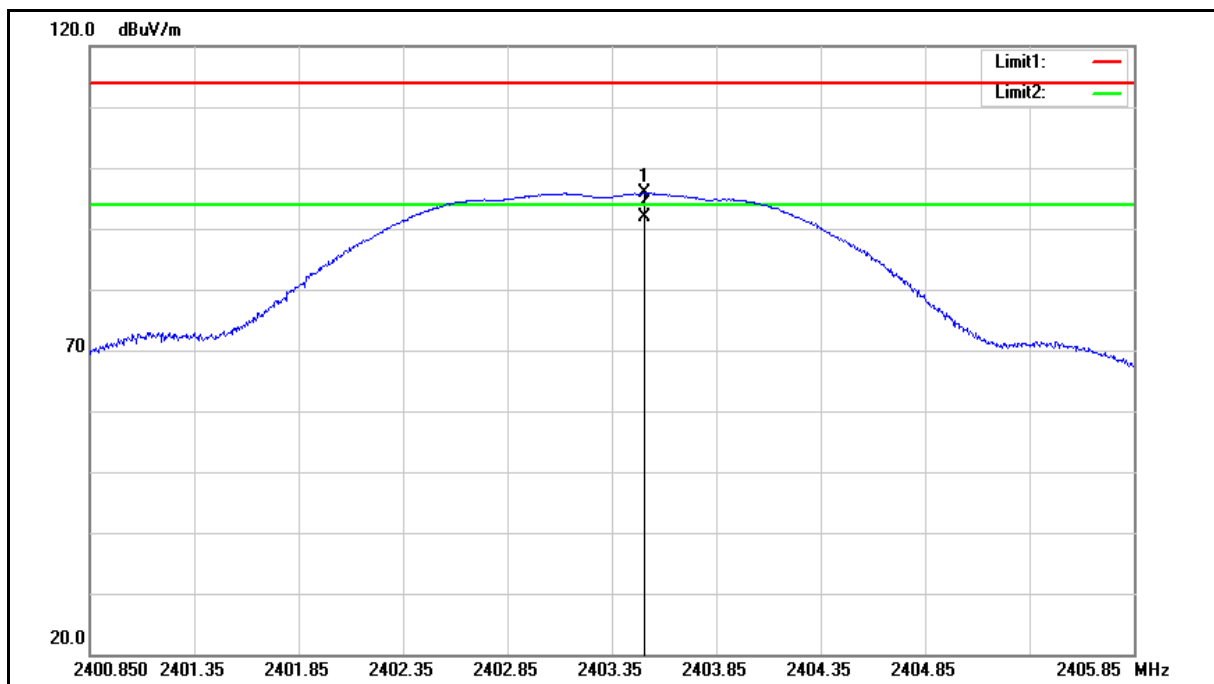
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

Example:  $94.76 = -10.82 + 105.58$

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

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

|             |             |                      |                  |
|-------------|-------------|----------------------|------------------|
| Standard:   | LP0002      | Test Distance:       | 3 m              |
| Test item:  | Fundamental | Power:               | AC 110 V / 60 Hz |
| Frequency:  | 2403.35 MHz | Temp.(°C)/Hum.(%RH): | 25(°C)/60 %RH    |
| Ant.Polar.: | Vertical    |                      |                  |



| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|
| 1   | 2403.505        | 106.60         | -10.82               | 95.78           | 114.00         | -18.22      | peak   |
| 2   | 2403.505        | 102.77         | -10.82               | 91.95           | 94.00          | -2.05       | AVG    |

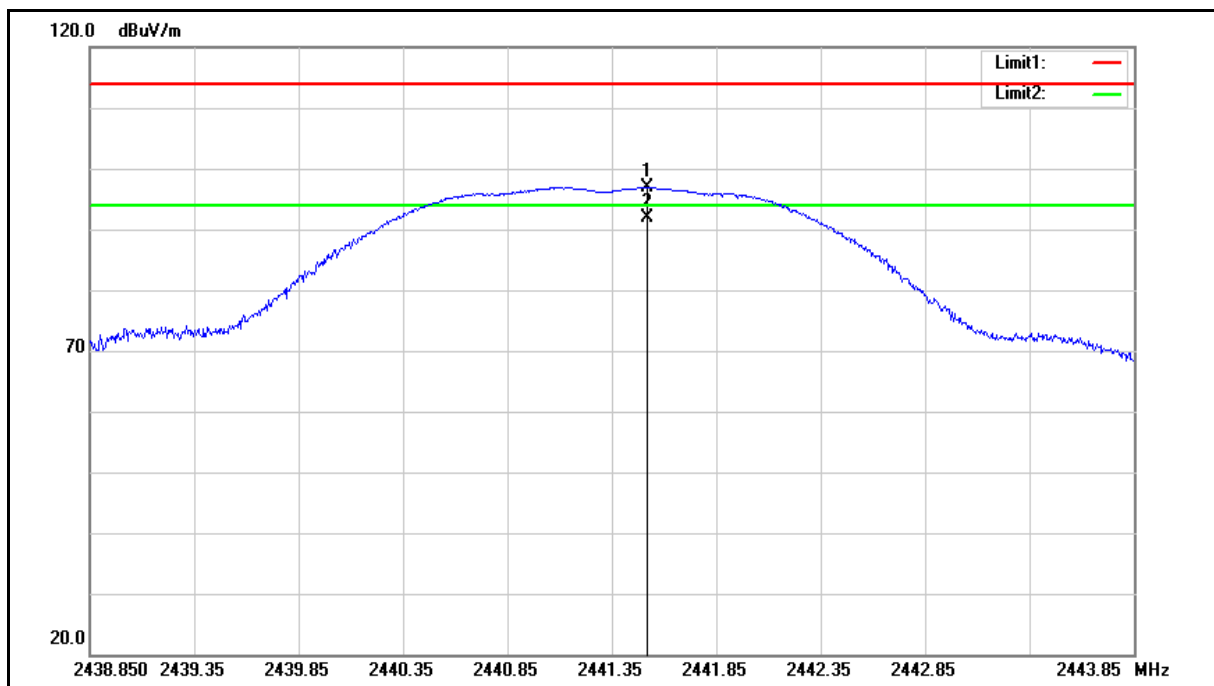
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

Example:  $95.78 = -10.82 + 106.60$

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:  | Fundamental | Power:                | AC 110 V / 60 Hz |
| Frequency:  | 2441.35 MHz | Temp.(°C)/Hum. (%RH): | 25(°C)/60 %RH    |
| Ant.Polar.: | Horizontal  |                       |                  |



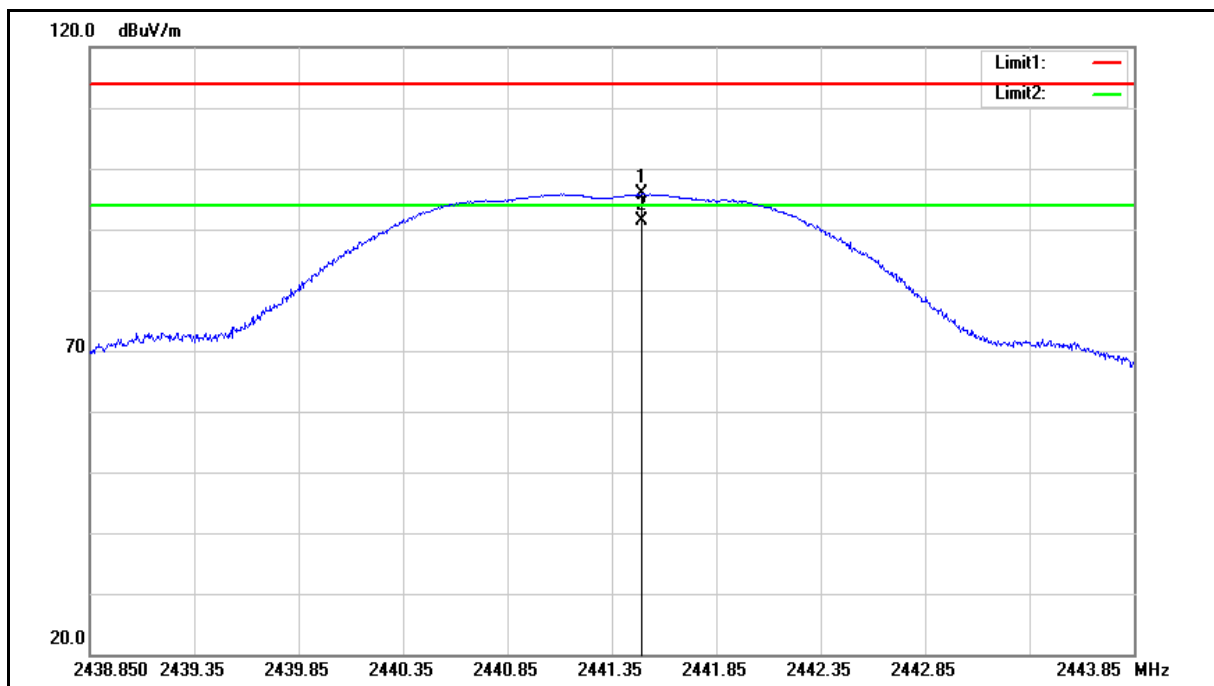
| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>Factor(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------------|--------------------|-------------------|----------------|--------|
| 1   | 2441.520           | 107.58            | -10.74                  | 96.84              | 114.00            | -17.16         | peak   |
| 2   | 2441.520           | 102.70            | -10.74                  | 91.96              | 94.00             | -2.04          | 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:  | Fundamental | Power:                | AC 110 V / 60 Hz |
| Frequency:  | 2441.35 MHz | Temp.(°C)/Hum. (%RH): | 25(°C)/60 %RH    |
| Ant.Polar.: | Vertical    |                       |                  |



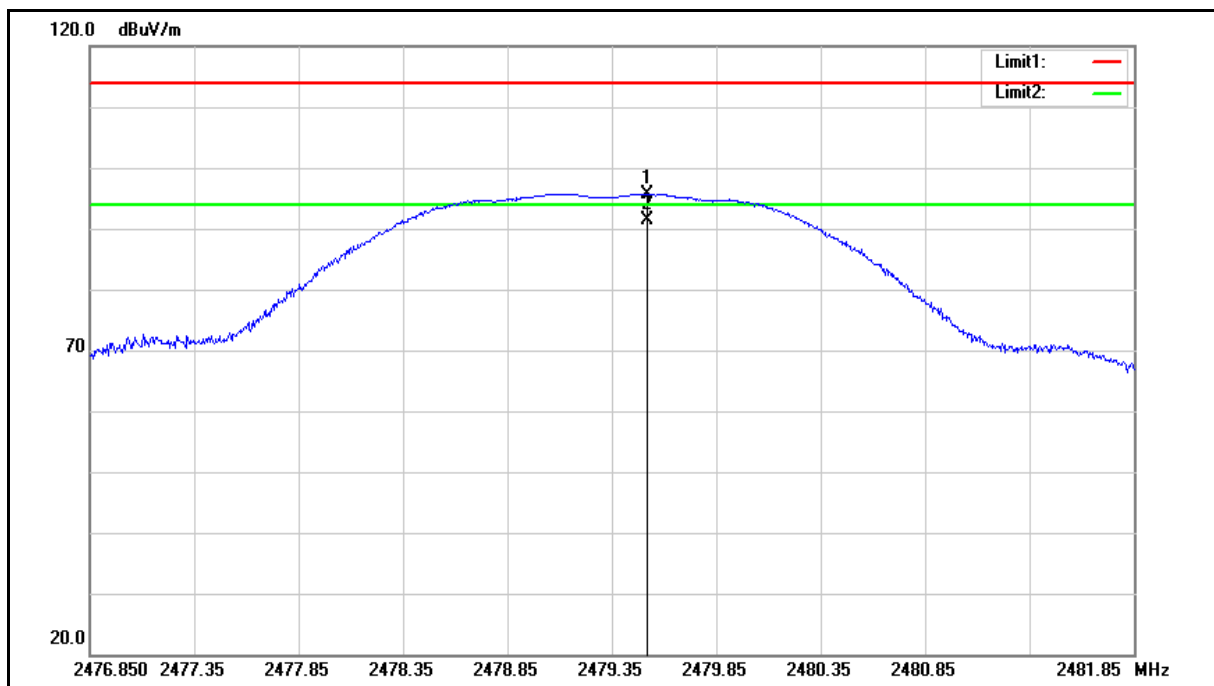
| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|
| 1   | 2441.495        | 106.51         | -10.74               | 95.77           | 114.00         | -18.23      | peak   |
| 2   | 2441.495        | 102.13         | -10.74               | 91.39           | 94.00          | -2.61       | 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:  | Fundamental | Power:                | AC 110 V / 60 Hz |
| Frequency:  | 2479.35 MHz | Temp.(°C)/Hum. (%RH): | 25(°C)/60 %RH    |
| Ant.Polar.: | Horizontal  |                       |                  |



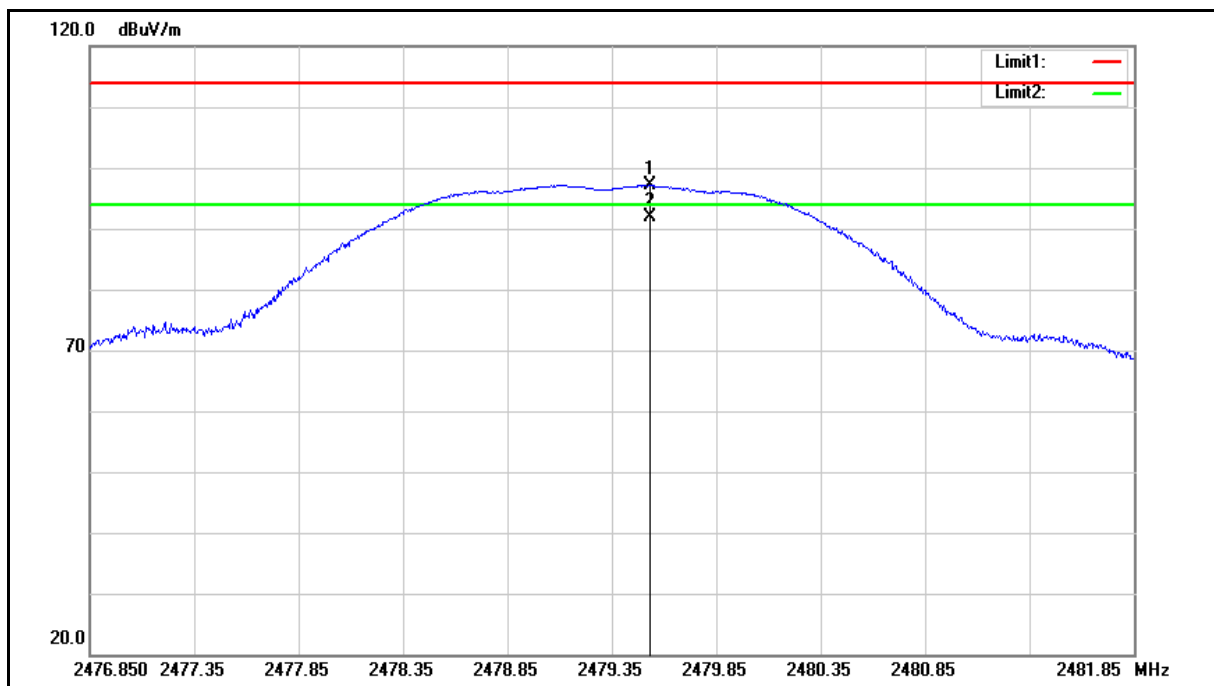
| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|
| 1   | 2479.520        | 106.37         | -10.67               | 95.70           | 114.00         | -18.30      | peak   |
| 1   | 2479.520        | 101.95         | -10.67               | 91.28           | 94.00          | -2.72       | 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:  | Fundamental | Power:                | AC 110 V / 60 Hz |
| Frequency:  | 2479.35 MHz | Temp.(°C)/Hum. (%RH): | 25(°C)/60 %RH    |
| Ant.Polar.: | Vertical    |                       |                  |



| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|
| 1   | 2479.530        | 107.74         | -10.67               | 97.07           | 114.00         | -16.93      | peak   |
| 2   | 2479.530        | 102.52         | -10.67               | 91.85           | 94.00          | -2.15       | peak   |

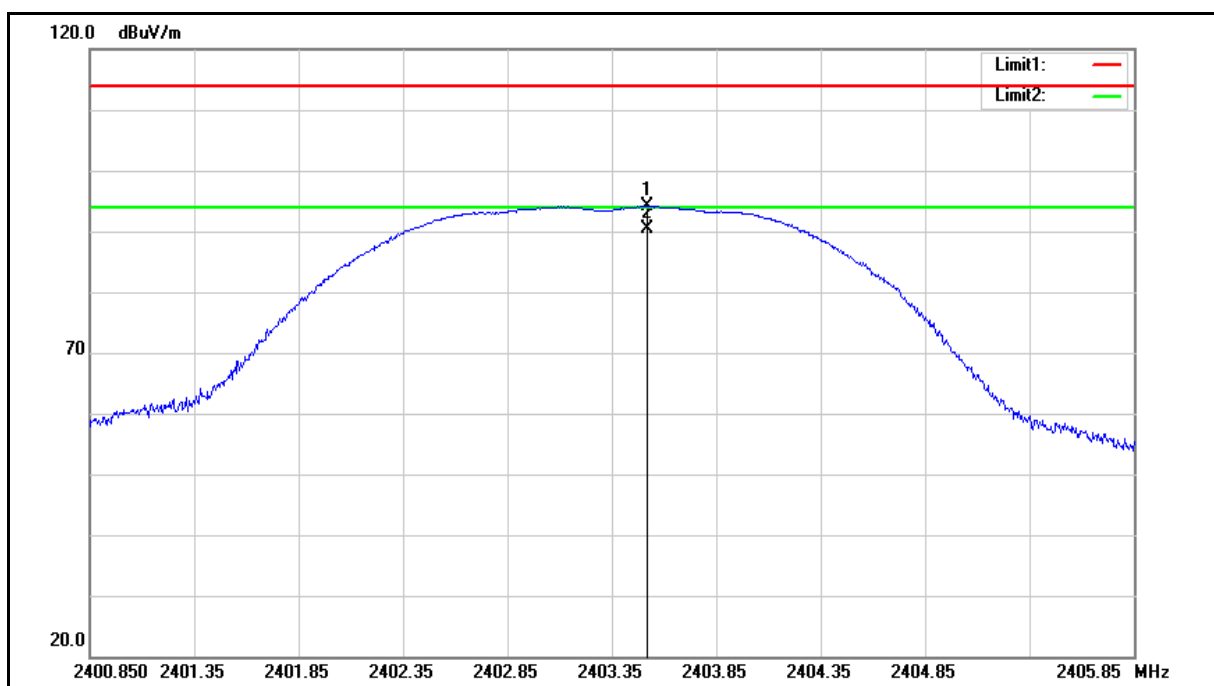
Note:1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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.

## ANT-1\_ Antenna Type: PIFA Antenna

|             |             |                      |               |
|-------------|-------------|----------------------|---------------|
| Standard:   | LP0002      | Test Distance:       | 3 m           |
| Test item:  | Fundamental | Power:               | DC 5 V        |
| Frequency:  | 2403.35 MHz | Temp.(°C)/Hum.(%RH): | 25(°C)/60 %RH |
| Ant.Polar.: | Horizontal  |                      |               |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>Factor(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------------|--------------------|-------------------|----------------|--------|
| 1   | 2403.520           | 104.97            | -10.82                  | 94.15              | 114.00            | -19.85         | peak   |
| 2   | 2403.520           | 101.21            | -10.82                  | 90.39              | 94.00             | -3.61          | AVG    |

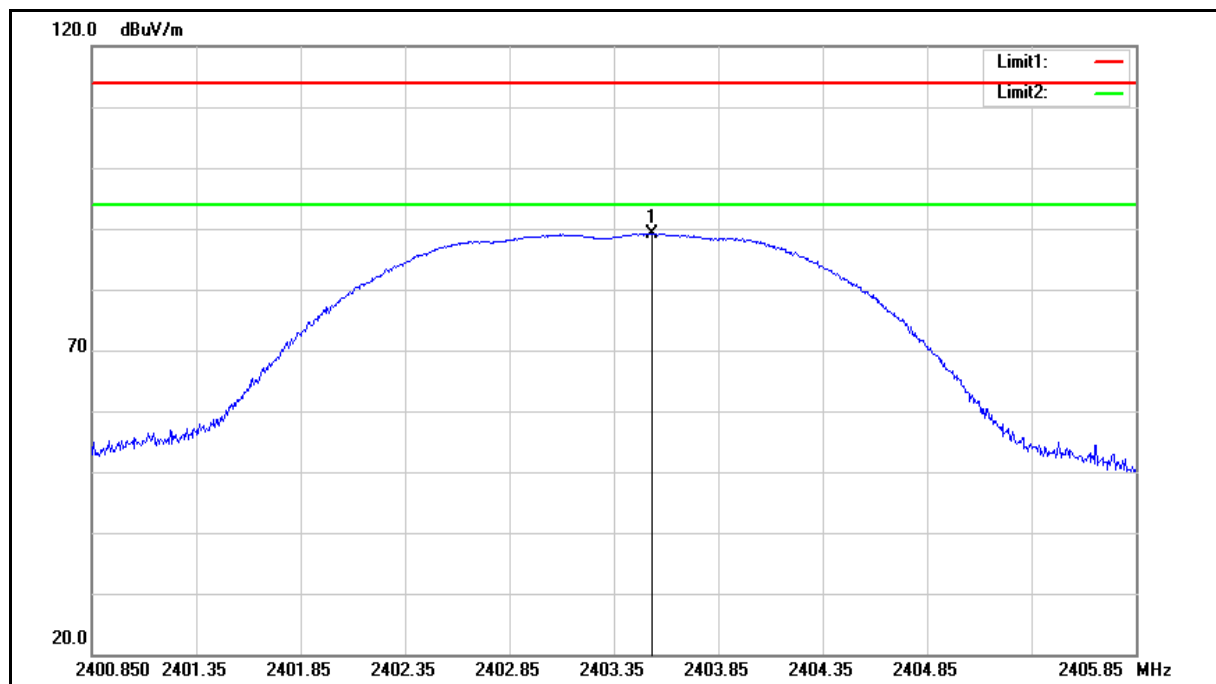
Note: 1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

Example:  $94.15 = -10.82 + 104.97$

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:  | Fundamental | Power:                | DC 5 V        |
| Frequency:  | 2403.35 MHz | Temp.(°C)/Hum. (%RH): | 25(°C)/60 %RH |
| Ant.Polar.: | Vertical    |                       |               |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>Factor(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------------|--------------------|-------------------|----------------|--------|
| 1   | 2403.530           | 100.00            | -10.82                  | 89.18              | 114.00            | -24.82         | peak   |

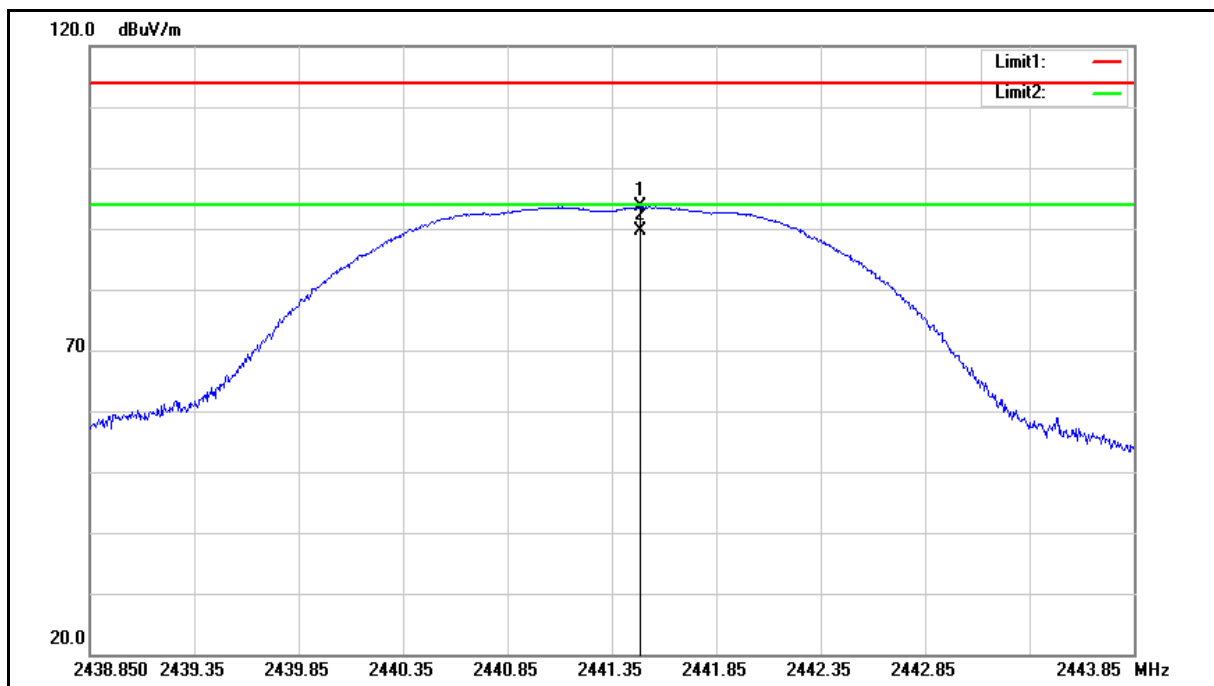
Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

Example:  $89.18 = -10.82 + 100.00$

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:  | Fundamental | Power:                | DC 5 V        |
| Frequency:  | 2441.35 MHz | Temp.(°C)/Hum. (%RH): | 25(°C)/60 %RH |
| Ant.Polar.: | Horizontal  |                       |               |



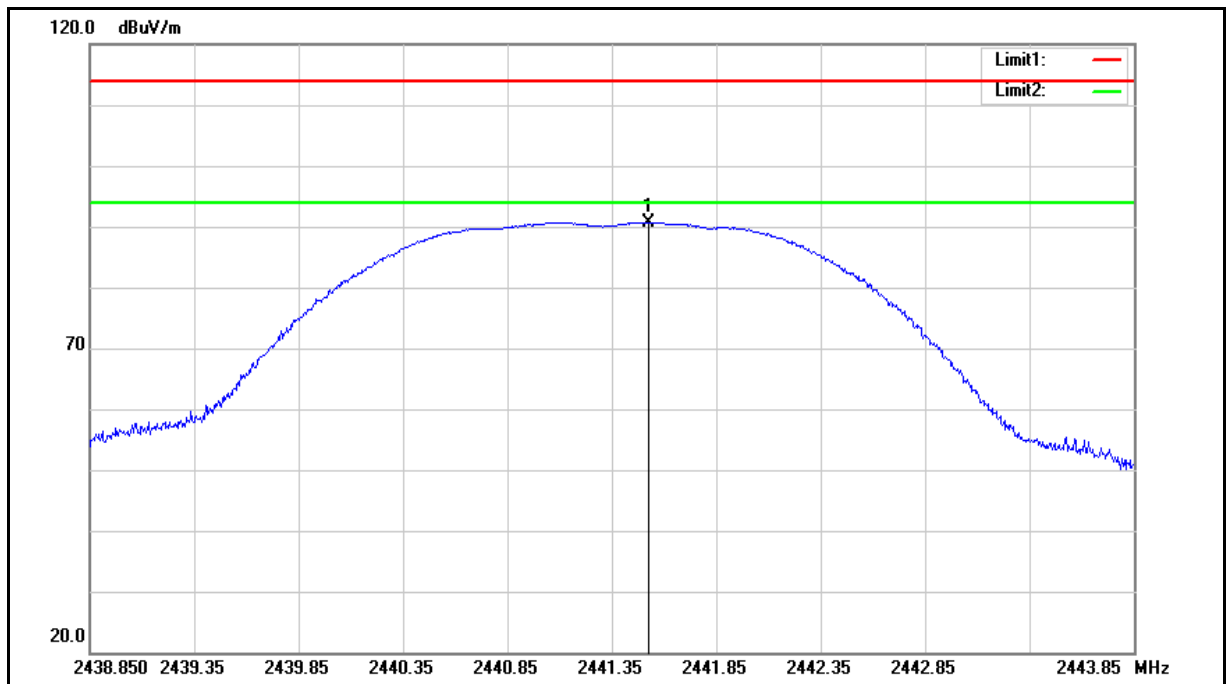
| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|
| 1   | 2441.485        | 104.27         | -10.74               | 93.53           | 114.00         | -20.47      | peak   |
| 2   | 2441.485        | 100.36         | -10.74               | 89.62           | 94.00          | -4.38       | AVG    |

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

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

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

|             |             |                      |               |
|-------------|-------------|----------------------|---------------|
| Standard:   | LP0002      | Test Distance:       | 3 m           |
| Test item:  | Fundamental | Power:               | DC 5 V        |
| Frequency:  | 2441.35 MHz | Temp.(°C)/Hum.(%RH): | 25(°C)/60 %RH |
| Ant.Polar.: | Vertical    |                      |               |



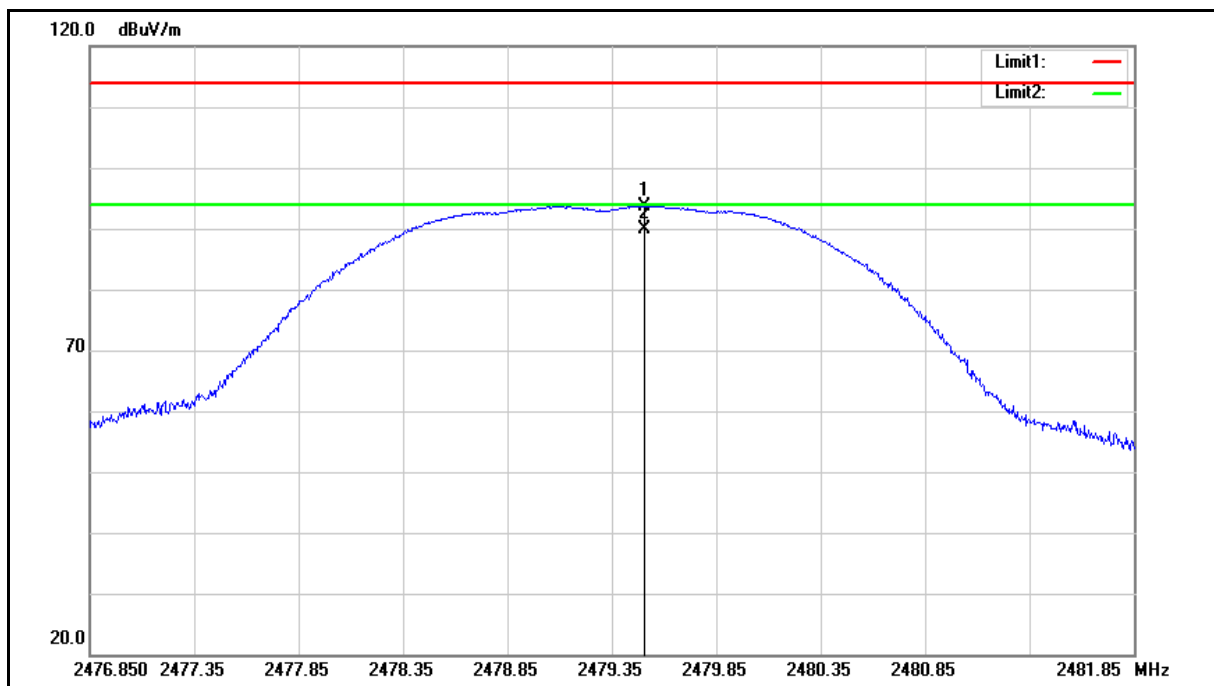
| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>Factor(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------------|--------------------|-------------------|----------------|--------|
| 1   | 2441.525           | 101.46            | -10.74                  | 90.72              | 114.00            | -23.28         | 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:  | Fundamental | Power:                | DC 5 V        |
| Frequency:  | 2479.35 MHz | Temp.(°C)/Hum. (%RH): | 25(°C)/60 %RH |
| Ant.Polar.: | Horizontal  |                       |               |



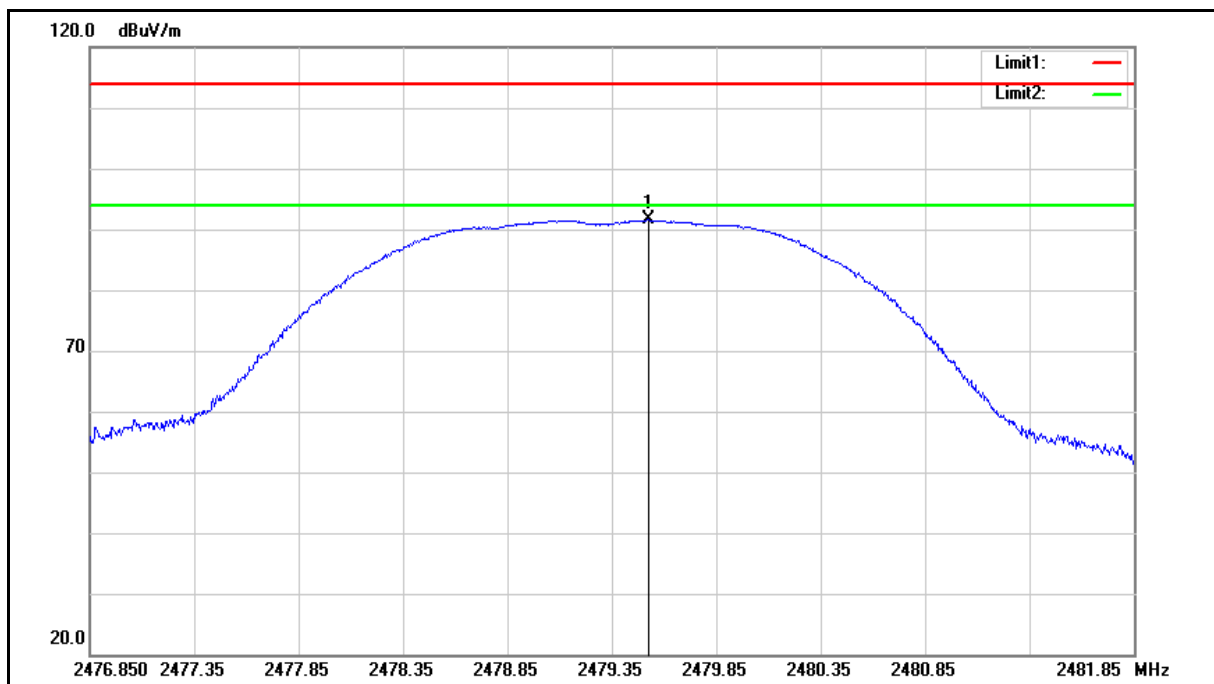
| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|
| 1   | 2479.505        | 104.37         | -10.67               | 93.70           | 114.00         | -20.30      | peak   |
| 2   | 2479.505        | 100.59         | -10.67               | 89.92           | 94.00          | -4.08       | 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:  | Fundamental | Power:                | DC 5 V        |
| Frequency:  | 2479.35 MHz | Temp.(°C)/Hum. (%RH): | 25(°C)/60 %RH |
| Ant.Polar.: | Vertical    |                       |               |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>Factor(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------------|--------------------|-------------------|----------------|--------|
| 1   | 2479.525           | 102.18            | -10.67                  | 91.51              | 114.00            | -22.49         | peak   |

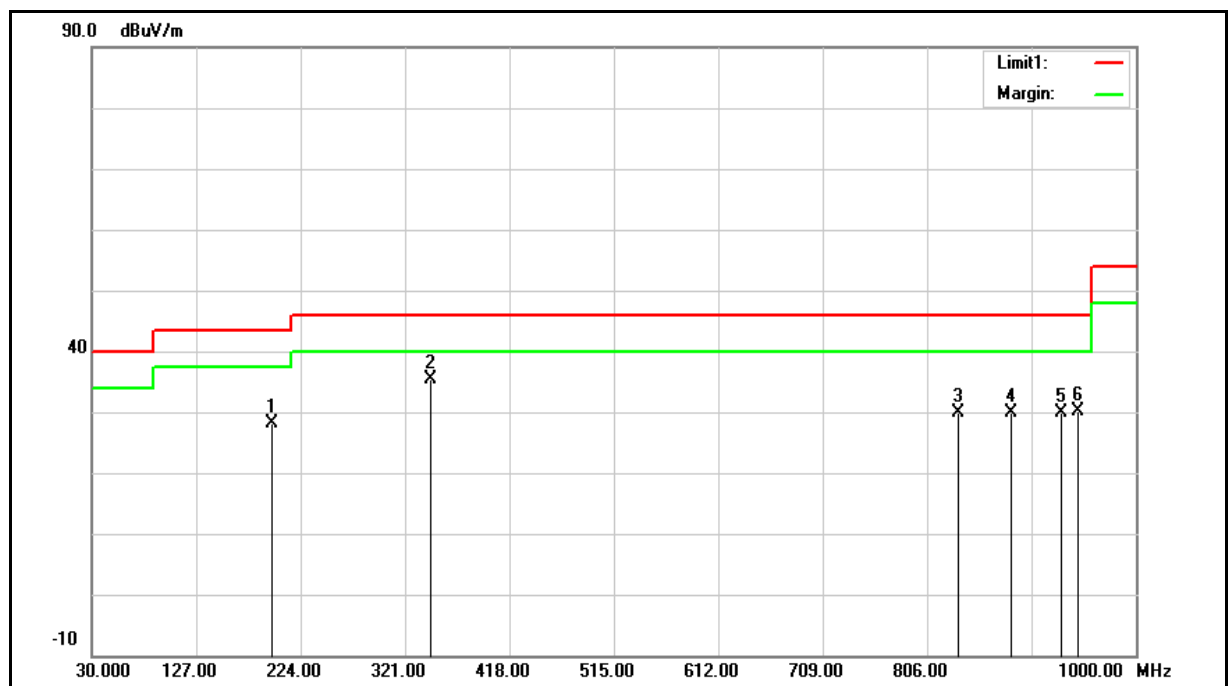
Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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.

## 其它不必要之訊號(1 GHz 以下)測試結果:

|             |             |                      |                  |
|-------------|-------------|----------------------|------------------|
| Standard:   | LP0002      | Test Distance:       | 3 m              |
| Test item:  | Harmonic    | Power:               | AC 110 V / 60 Hz |
| Frequency:  | 2479.35 MHz | Temp.(°C)/Hum.(%RH): | 25(°C)/60 %RH    |
| Test Mode:  | Mode 2      |                      |                  |
| Ant.Polar.: | Horizontal  |                      |                  |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct<br>Factor(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|-------------------------|--------------------|-------------------|----------------|--------|
| 1   | 196.8400           | 42.42             | -14.26                  | 28.16              | 43.50             | -15.34         | QP     |
| 2   | 345.2500           | 44.68             | -9.29                   | 35.39              | 46.00             | -10.61         | QP     |
| 3   | 835.1000           | 29.39             | 0.57                    | 29.96              | 46.00             | -16.04         | QP     |
| 4   | 883.6000           | 28.91             | 0.90                    | 29.81              | 46.00             | -16.19         | QP     |
| 5   | 930.1600           | 28.60             | 1.30                    | 29.90              | 46.00             | -16.10         | QP     |
| 6   | 945.6800           | 28.65             | 1.44                    | 30.09              | 46.00             | -15.91         | QP     |

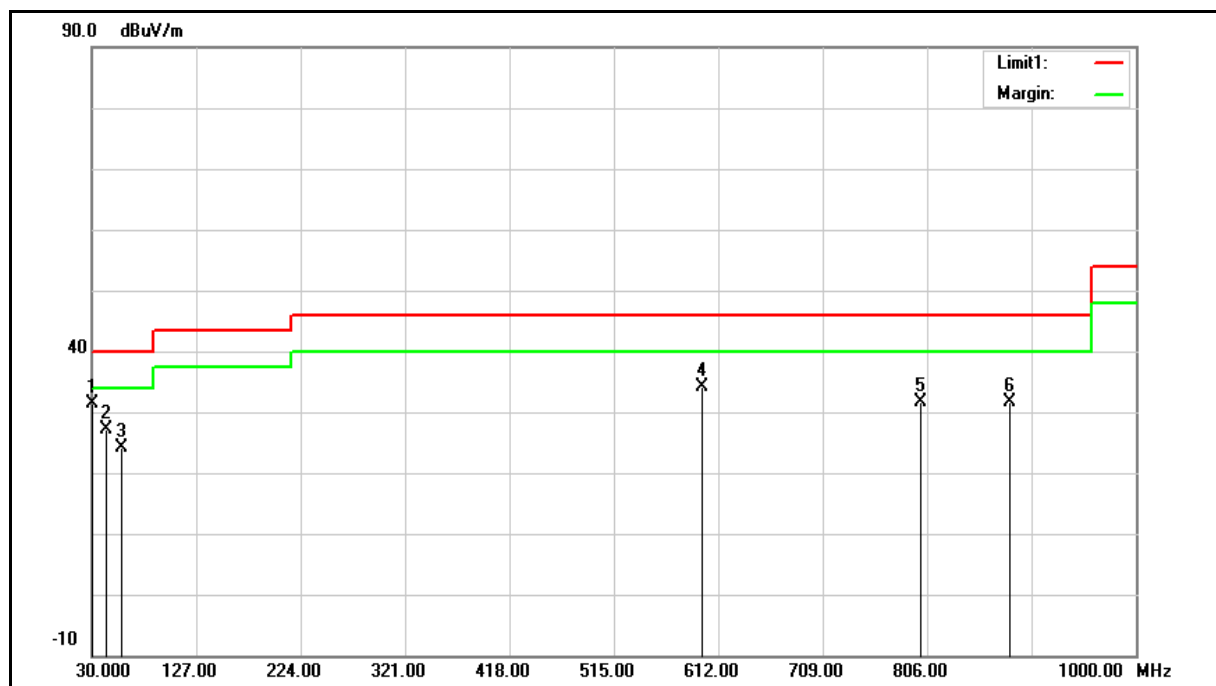
Note: 1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

Example:  $28.16 = -14.26 + 42.42$

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

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

|             |             |                      |                  |
|-------------|-------------|----------------------|------------------|
| Standard:   | LP0002      | Test Distance:       | 3 m              |
| Test item:  | Harmonic    | Power:               | AC 110 V / 60 Hz |
| Frequency:  | 2479.35 MHz | Temp.(°C)/Hum.(%RH): | 25(°C)/60 %RH    |
| Test Mode:  | Mode 2      |                      |                  |
| Ant.Polar.: | Vertical    |                      |                  |



| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|
| 1   | 30.0000         | 44.38          | -13.04               | 31.34           | 40.00          | -8.66       | QP     |
| 2   | 43.5800         | 38.63          | -11.44               | 27.19           | 40.00          | -12.81      | QP     |
| 3   | 58.1300         | 35.41          | -11.31               | 24.10           | 40.00          | -15.90      | QP     |
| 4   | 597.4500        | 37.14          | -2.90                | 34.24           | 46.00          | -11.76      | QP     |
| 5   | 800.1800        | 31.23          | 0.32                 | 31.55           | 46.00          | -14.45      | QP     |
| 6   | 882.6300        | 30.78          | 0.90                 | 31.68           | 46.00          | -14.32      | QP     |

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

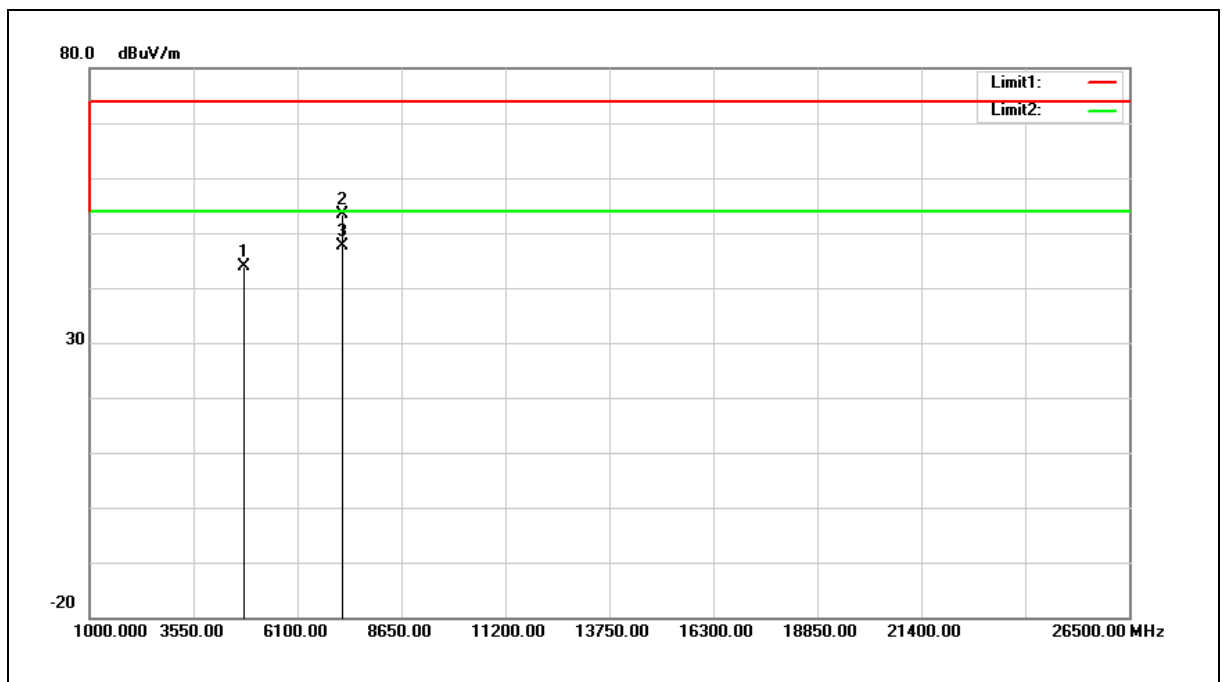
Example:  $31.34 = -13.04 + 44.38$

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.

場強輻射(1 GHz 以上)測試結果:

|             |            |                      |                |
|-------------|------------|----------------------|----------------|
| Standard:   | LP0002     | Test Distance:       | 3 m            |
| Test item:  | Harmonic   | Power:               | AC 110 V/60 Hz |
| Frequency:  | 2403.35MHz | Temp.(°C)/Hum.(%RH): | 25(°C)/60 %RH  |
| Mode:       | Mode 2     |                      |                |
| Ant.Polar.: | Horizontal |                      |                |



| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-----------------------|-----------------|----------------|-------------|--------|
| 1   | 4806.700        | 49.34          | -5.57                 | 43.77           | 74.00          | -30.23      | peak   |
| 2   | 7210.050        | 54.79          | -1.36                 | 53.43           | 74.00          | -20.57      | peak   |
| 3   | 7210.050        | 48.98          | -1.36                 | 47.62           | 54.00          | -6.38       | AVG    |

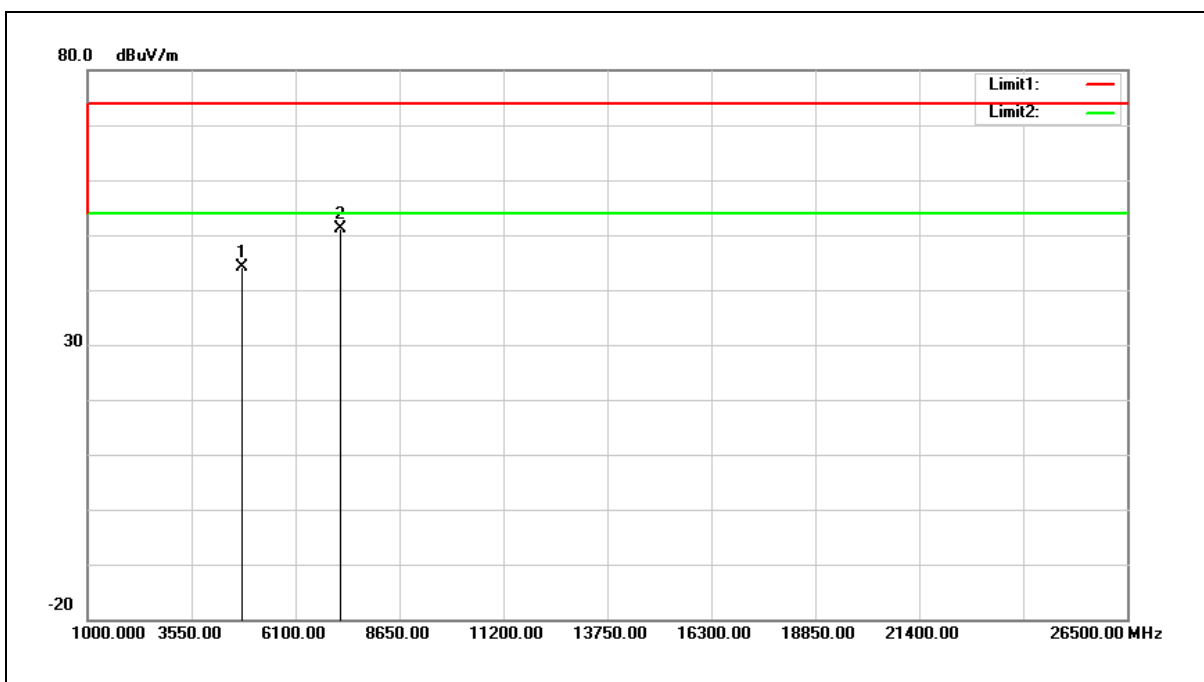
Note: 1. Result (dBuV/m) = Correct Factor (dB/m) + Reading (dBuV).

Example:  $43.77 = -5.57 + 49.34$

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

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

|             |            |                       |                |
|-------------|------------|-----------------------|----------------|
| Standard:   | LP0002     | Test Distance:        | 3 m            |
| Test item:  | Harmonic   | Power:                | AC 110 V/60 Hz |
| Frequency:  | 2403.35MHz | Temp.(°C)/Hum. (%RH): | 25(°C)/60 %RH  |
| Mode:       | Mode 2     |                       |                |
| Ant.Polar.: | Vertical   |                       |                |



| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-----------------------|-----------------|----------------|-------------|--------|
| 1   | 4806.700        | 49.77          | -5.57                 | 44.20           | 74.00          | -29.80      | peak   |
| 2   | 7210.050        | 52.55          | -1.36                 | 51.19           | 74.00          | -22.81      | peak   |

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

Example: 44.20= -5.57+49.77

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

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

|             |            |                      |                |
|-------------|------------|----------------------|----------------|
| Standard:   | LP0002     | Test Distance:       | 3 m            |
| Test item:  | Harmonic   | Power:               | AC 110 V/60 Hz |
| Frequency:  | 2441.35MHz | Temp.(°C)/Hum.(%RH): | 25(°C)/60 %RH  |
| Mode:       | Mode 2     |                      |                |
| Ant.Polar.: | Horizontal |                      |                |



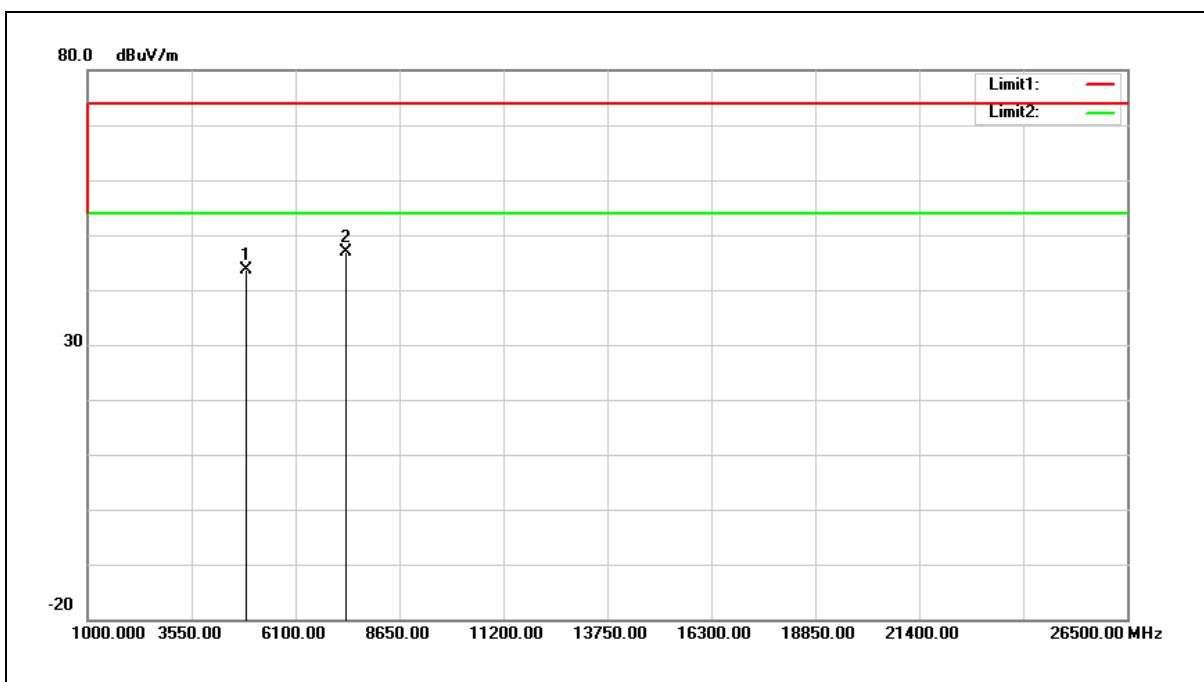
| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct Factor<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|--------------------------|--------------------|-------------------|----------------|--------|
| 1   | 4882.700           | 49.39             | -5.45                    | 43.94              | 74.00             | -30.06         | peak   |
| 2   | 7324.050           | 46.74             | -1.18                    | 45.56              | 74.00             | -28.44         | peak   |

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

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

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

|             |            |                       |                |
|-------------|------------|-----------------------|----------------|
| Standard:   | LP0002     | Test Distance:        | 3 m            |
| Test item:  | Harmonic   | Power:                | AC 110 V/60 Hz |
| Frequency:  | 2441.35MHz | Temp.(°C)/Hum. (%RH): | 25(°C)/60 %RH  |
| Mode:       | Mode 2     |                       |                |
| Ant.Polar.: | Vertical   |                       |                |



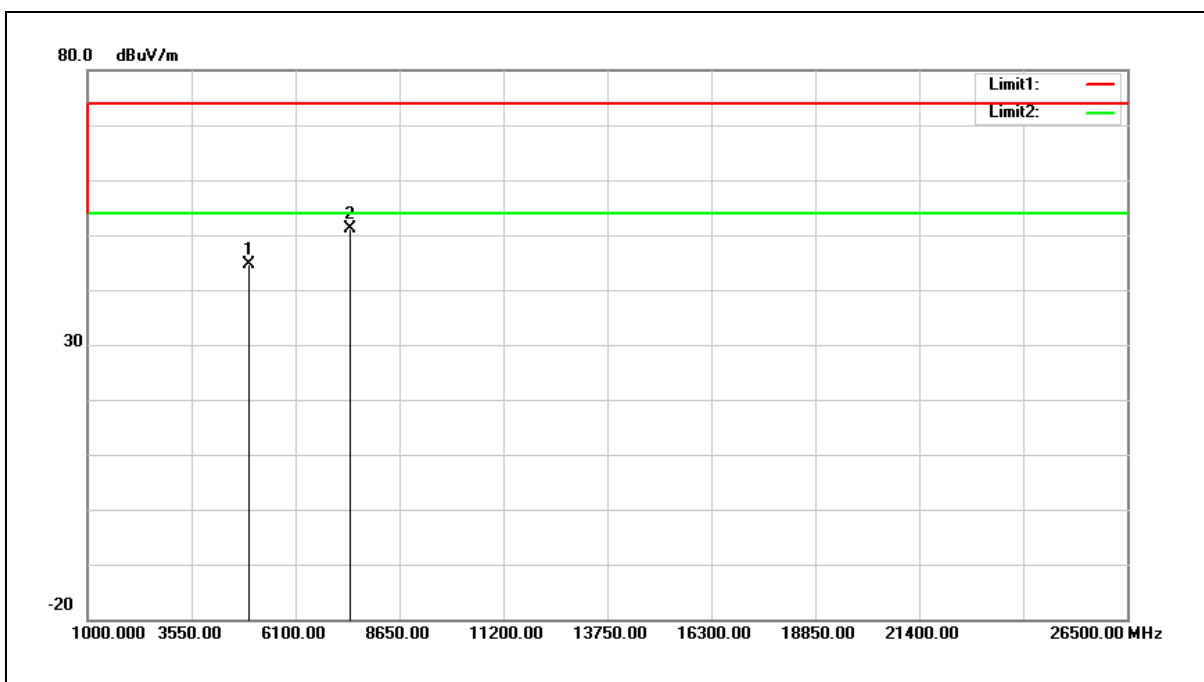
| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|-----------------------|-----------------|----------------|-------------|--------|
| 1   | 4882.700        | 49.11          | -5.45                 | 43.66           | 74.00          | -30.34      | peak   |
| 2   | 7324.050        | 47.97          | -1.18                 | 46.79           | 74.00          | -27.21      | 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:  | Harmonic   | Power:               | AC 110 V/60 Hz |
| Frequency:  | 2479.35MHz | Temp.(°C)/Hum.(%RH): | 25(°C)/60 %RH  |
| Mode:       | Mode 2     |                      |                |
| Ant.Polar.: | Horizontal |                      |                |



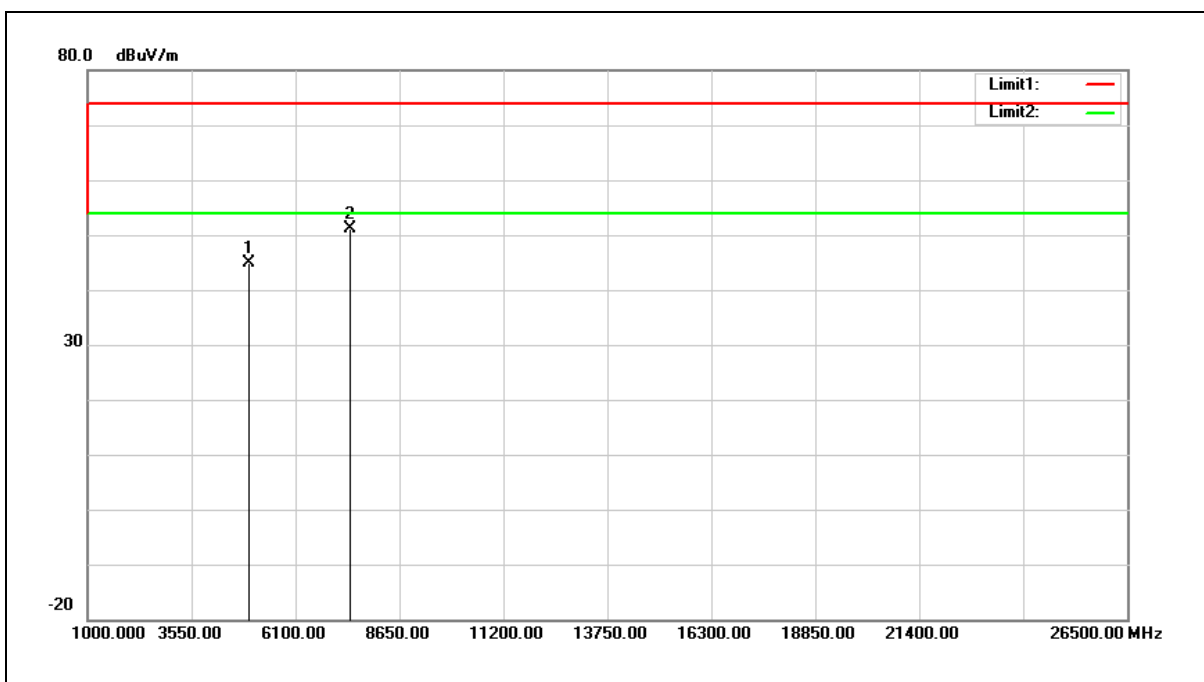
| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct Factor<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|--------------------------|--------------------|-------------------|----------------|--------|
| 1   | 4958.700           | 49.97             | -5.33                    | 44.64              | 74.00             | -29.36         | peak   |
| 2   | 7438.050           | 52.18             | -1.00                    | 51.18              | 74.00             | -22.82         | peak   |

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

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

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

|             |            |                       |                |
|-------------|------------|-----------------------|----------------|
| Standard:   | LP0002     | Test Distance:        | 3 m            |
| Test item:  | Harmonic   | Power:                | AC 110 V/60 Hz |
| Frequency:  | 2479.35MHz | Temp.(°C)/Hum. (%RH): | 25(°C)/60 %RH  |
| Mode:       | Mode 2     |                       |                |
| Ant.Polar.: | Vertical   |                       |                |



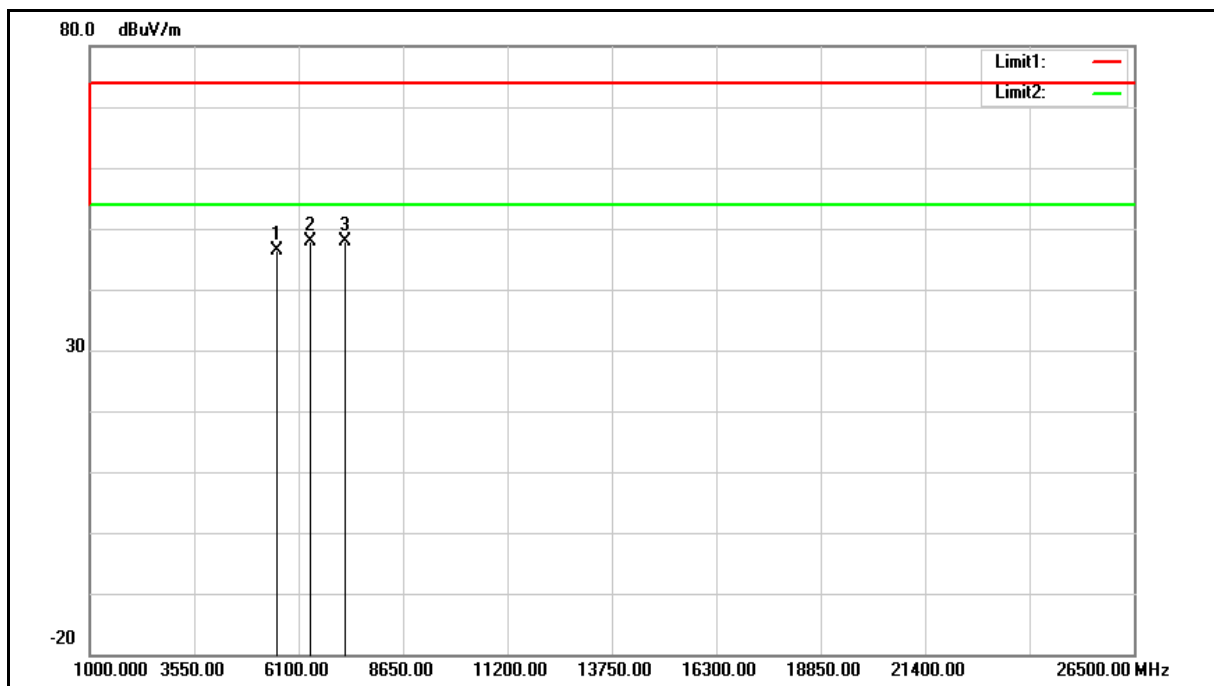
| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct Factor<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|--------------------------|--------------------|-------------------|----------------|--------|
| 1   | 4958.700           | 50.11             | -5.33                    | 44.78              | 74.00             | -29.22         | peak   |
| 2   | 7438.050           | 52.16             | -1.00                    | 51.16              | 74.00             | -22.84         | peak   |

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

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

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

|             |            |                      |                  |
|-------------|------------|----------------------|------------------|
| Standard:   | LP0002     | Test Distance:       | 3 m              |
| Test item:  | Harmonic   | Power:               | AC 110 V / 60 Hz |
| Test Mode:  | Mode 3     | Temp.(°C)/Hum.(%RH): | 25(°C)/60 %RH    |
| Ant.Polar.: | Horizontal |                      |                  |



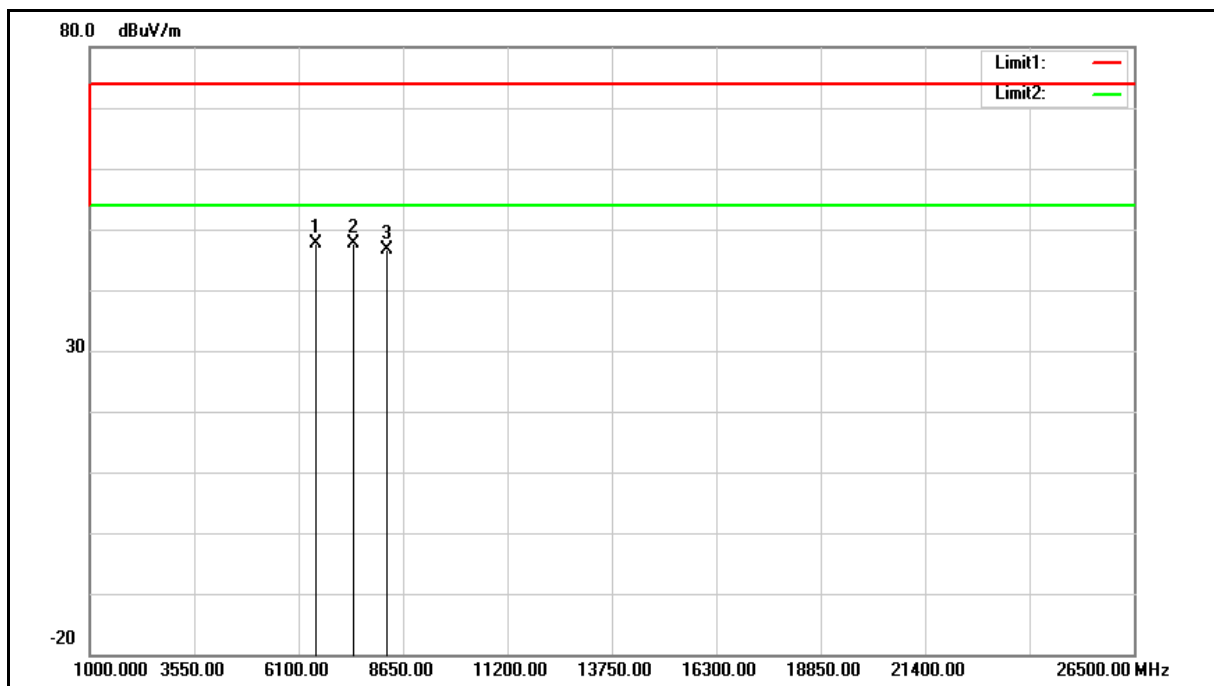
| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|
| 1   | 5564.500        | 50.18          | -3.90                | 46.28           | 74.00          | -27.72      | peak   |
| 2   | 6380.500        | 50.15          | -2.24                | 47.91           | 74.00          | -26.09      | peak   |
| 3   | 7222.000        | 49.19          | -1.34                | 47.85           | 74.00          | -26.15      | 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 | Power:                | AC 110 V / 60 Hz |
| Test Mode:  | Mode 3   | Temp.(°C)/Hum. (%RH): | 25(°C)/60 %RH    |
| Ant.Polar.: | Vertical |                       |                  |



| No. | Frequency (MHz) | Reading (dBuV) | Correct Factor(dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|-----|-----------------|----------------|----------------------|-----------------|----------------|-------------|--------|
| 1   | 6533.500        | 49.81          | -2.11                | 47.70           | 74.00          | -26.30      | peak   |
| 2   | 7426.000        | 48.65          | -1.02                | 47.63           | 74.00          | -26.37      | peak   |
| 3   | 8242.000        | 46.21          | 0.35                 | 46.56           | 74.00          | -27.44      | peak   |

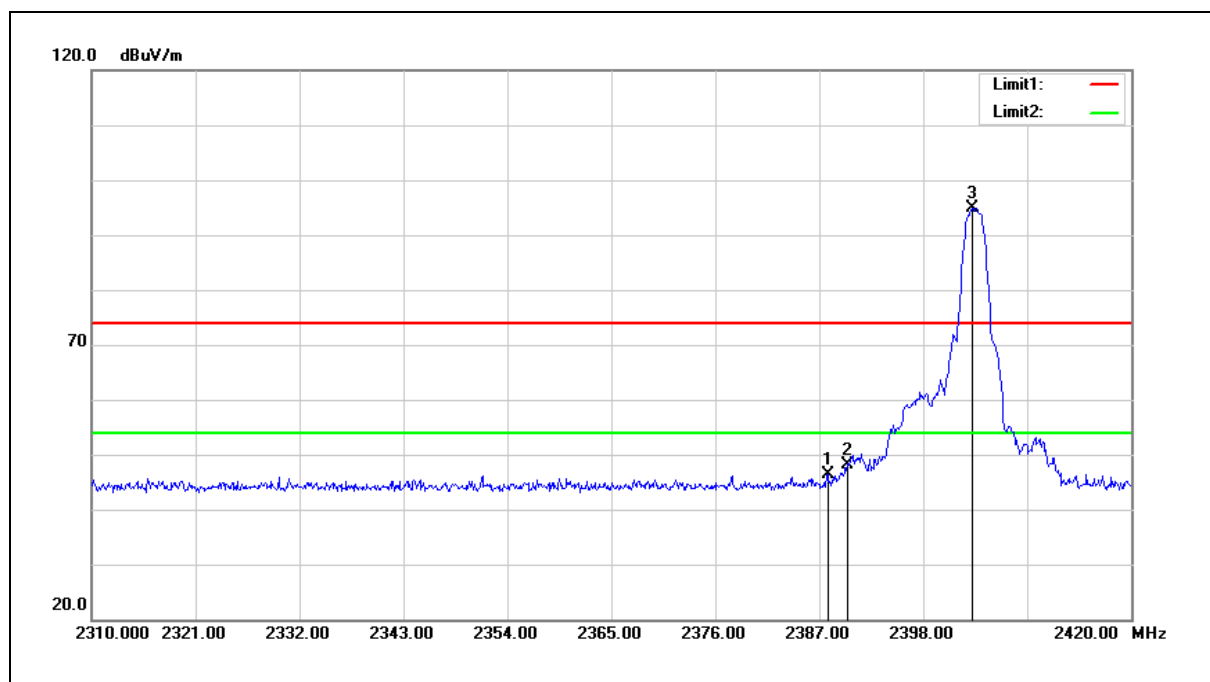
Note: 1.Result (dBuV/m) = Correct Factor (dB/m) + Reading(dBuV).

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

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

## 頻帶邊緣測試結果:

|             |            |                      |                |
|-------------|------------|----------------------|----------------|
| Standard:   | LP0002     | Test Distance:       | 3 m            |
| Test item:  | Band edge  | Power:               | AC 110 V/60 Hz |
| Frequency:  | 2403.35MHz | Temp.(°C)/Hum.(%RH): | 25(°C)/60 %RH  |
| Mode:       | Mode 2     |                      |                |
| Ant.Polar.: | Horizontal |                      |                |



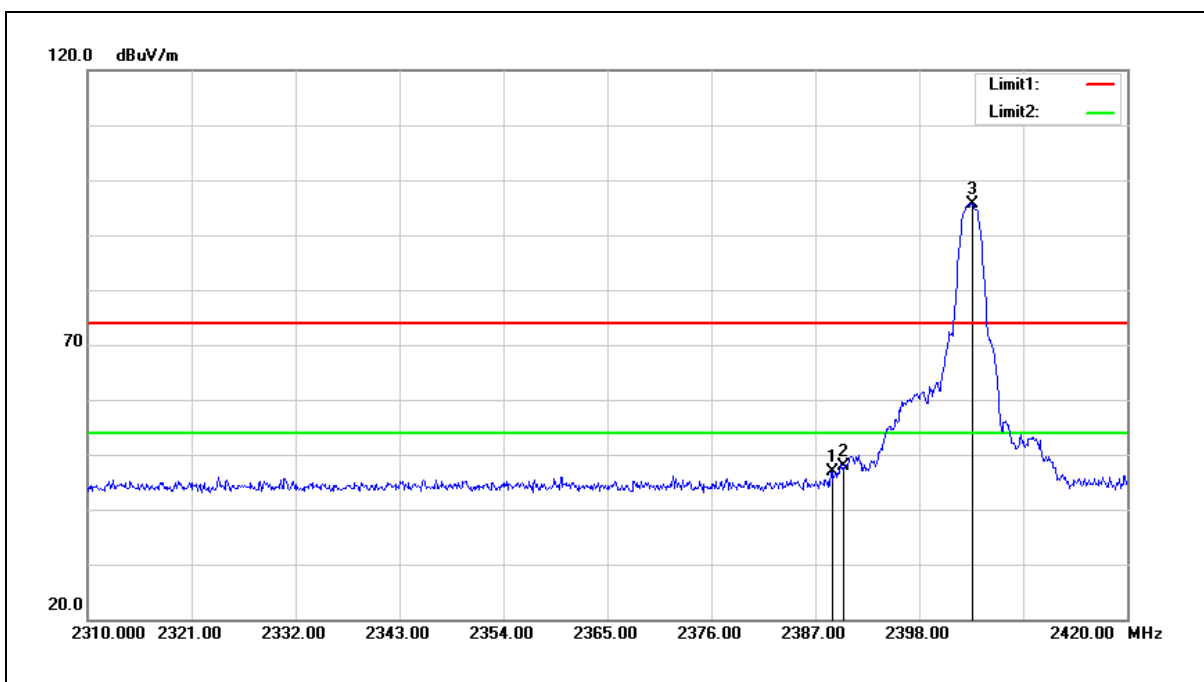
| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct Factor<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|--------------------------|--------------------|-------------------|----------------|--------|
| 1   | 2387.880           | 57.29             | -10.85                   | 46.44              | 74.00             | -27.56         | peak   |
| 2   | 2390.000           | 59.05             | -10.85                   | 48.20              | 74.00             | -25.80         | peak   |
| 3   | 2403.170           | 105.63            | -10.82                   | 94.81              | ---               | ---            | peak   |

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

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

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

|             |            |                      |                |
|-------------|------------|----------------------|----------------|
| Standard:   | LP0002     | Test Distance:       | 3 m            |
| Test item:  | Band edge  | Power:               | AC 110 V/60 Hz |
| Frequency:  | 2403.35MHz | Temp.(°C)/Hum.(%RH): | 25(°C)/60 %RH  |
| Mode:       | Mode 2     |                      |                |
| Ant.Polar.: | Vertical   |                      |                |



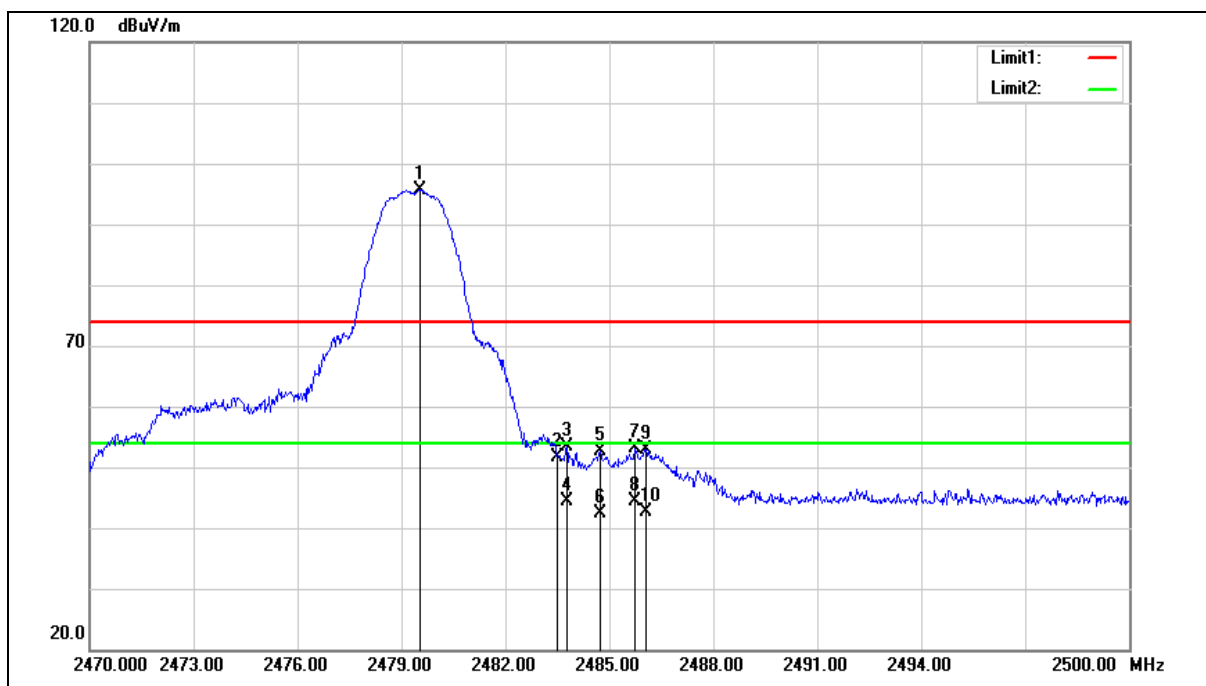
| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct Factor<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|--------------------------|--------------------|-------------------|----------------|--------|
| 1   | 2388.760           | 57.83             | -10.85                   | 46.98              | 74.00             | -27.02         | peak   |
| 2   | 2390.000           | 58.82             | -10.85                   | 47.97              | 74.00             | -26.03         | peak   |
| 3   | 2403.610           | 106.44            | -10.82                   | 95.62              | ---               | ---            | peak   |

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

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

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

|             |            |                      |                |
|-------------|------------|----------------------|----------------|
| Standard:   | LP0002     | Test Distance:       | 3 m            |
| Test item:  | Band edge  | Power:               | AC 110 V/60 Hz |
| Frequency:  | 2479.35MHz | Temp.(°C)/Hum.(%RH): | 25(°C)/60 %RH  |
| Mode:       | Mode 2     |                      |                |
| Ant.Polar.: | Horizontal |                      |                |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct Factor<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|--------------------------|--------------------|-------------------|----------------|--------|
| 1   | 2479.540           | 106.27            | -10.67                   | 95.60              | ---               | ---            | peak   |
| 2   | 2483.500           | 62.29             | -10.65                   | 51.64              | 74.00             | -22.36         | peak   |
| 3   | 2483.770           | 64.14             | -10.65                   | 53.49              | 74.00             | -20.51         | peak   |
| 4   | 2483.770           | 55.14             | -10.65                   | 44.49              | 54.00             | -9.51          | AVG    |
| 5   | 2484.730           | 63.29             | -10.65                   | 52.64              | 74.00             | -21.36         | peak   |
| 6   | 2484.730           | 53.10             | -10.65                   | 42.45              | 54.00             | -11.55         | AVG    |
| 7   | 2485.720           | 63.78             | -10.65                   | 53.13              | 74.00             | -20.87         | peak   |
| 8   | 2485.720           | 54.96             | -10.65                   | 44.31              | 54.00             | -9.69          | AVG    |
| 9   | 2486.050           | 63.49             | -10.65                   | 52.84              | 74.00             | -21.16         | peak   |

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

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

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

|             |            |                      |                |
|-------------|------------|----------------------|----------------|
| Standard:   | LP0002     | Test Distance:       | 3 m            |
| Test item:  | Band edge  | Power:               | AC 110 V/60 Hz |
| Frequency:  | 2479.35MHz | Temp.(°C)/Hum.(%RH): | 25(°C)/60 %RH  |
| Mode:       | Mode 2     |                      |                |
| Ant.Polar.: | Horizontal |                      |                |

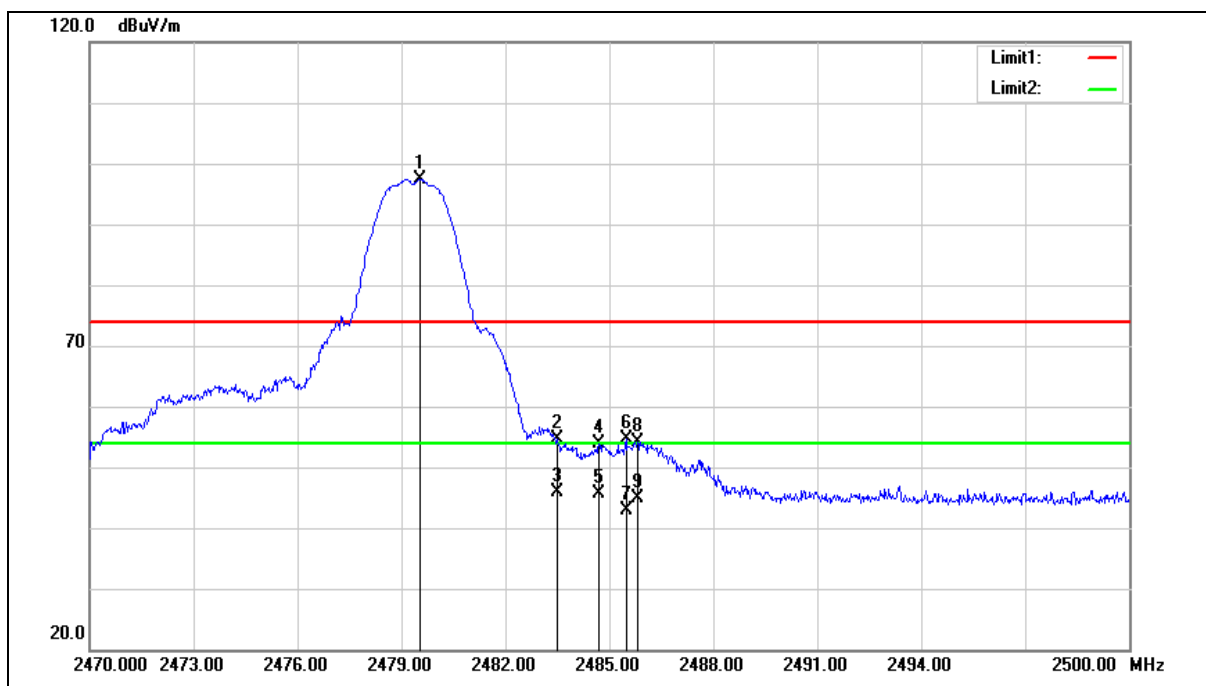
| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct Factor<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|--------------------------|--------------------|-------------------|----------------|--------|
| 10  | 2486.050           | 53.24             | -10.65                   | 42.59              | 54.00             | -11.41         | AVG    |

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

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

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

|             |            |                      |                |
|-------------|------------|----------------------|----------------|
| Standard:   | LP0002     | Test Distance:       | 3 m            |
| Test item:  | Band edge  | Power:               | AC 110 V/60 Hz |
| Frequency:  | 2479.35MHz | Temp.(°C)/Hum.(%RH): | 25(°C)/60 %RH  |
| Mode:       | Mode 2     |                      |                |
| Ant.Polar.: | Vertical   |                      |                |



| No. | Frequency<br>(MHz) | Reading<br>(dBuV) | Correct Factor<br>(dB/m) | Result<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) | Remark |
|-----|--------------------|-------------------|--------------------------|--------------------|-------------------|----------------|--------|
| 1   | 2479.540           | 108.01            | -10.67                   | 97.34              | ---               | ---            | peak   |
| 2   | 2483.500           | 65.24             | -10.65                   | 54.59              | 74.00             | -19.41         | peak   |
| 3   | 2483.500           | 56.43             | -10.65                   | 45.78              | 54.00             | -8.22          | AVG    |
| 4   | 2484.700           | 64.43             | -10.65                   | 53.78              | 74.00             | -20.22         | peak   |
| 5   | 2484.700           | 56.24             | -10.65                   | 45.59              | 54.00             | -8.41          | AVG    |
| 6   | 2485.480           | 65.20             | -10.65                   | 54.55              | 74.00             | -19.45         | peak   |
| 7   | 2485.480           | 53.60             | -10.65                   | 42.95              | 54.00             | -11.05         | AVG    |
| 8   | 2485.810           | 64.79             | -10.65                   | 54.14              | 74.00             | -19.86         | peak   |
| 9   | 2485.810           | 55.48             | -10.65                   | 44.83              | 54.00             | -9.17          | AVG    |

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

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

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

### 4.3 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 2.2 節之要求，低功率射頻電機之發射機或收發信機所使用之天線，除 NCC 低功率射頻電機技術規範(LP0002)中另有規定外，應為全固定、半固定式或以獨特之耦合(unique coupling)方式連接機體。製造者可設計供使用者因損壞而替換之天線，但不得設計或使用原認證以外之天線或可供引接各類電纜之標準天線插座或電氣連接頭，如：BNC、F type、N type、M type、UG type、RCA、SMA、SMB...等及其他各類工業或通訊標準接頭。

**判定結果:**

符合

| Antenna | 廠牌                                                    | 型號           | 型態           | 增益值<br>(dBi) |
|---------|-------------------------------------------------------|--------------|--------------|--------------|
| ANT-0   | SOUTH STAR<br>TECHNOLOGY HONG<br>KONG COMPANY LIMITED | F01-6378-R0A | PIFA Antenna | 0.88         |
| ANT-1   | SOUTH STAR<br>TECHNOLOGY HONG<br>KONG COMPANY LIMITED | F01-6378-R0A | PIFA Antenna | 0.73         |

--- END---