

APPROVAL SHEET

Metal Stamping Antenna
2.4 GHz Working Frequency
P/N: RFMTA280715IMAB301

Customer : _____
Customer 's Part No. : _____
Approval No. : _____
Issue Date : _____

ELECTRICAL CHARACTERISTICS

| Item | Specification |
|-------------------------|--------------------|
| Working Frequency Range | 2.4 GHz (Note-1) |
| Gain(Peak) | 2.4 GHz : 2.82 dBi |
| Return Loss | -10dB(Max) |
| VSWR | 2 max. |
| Polarization | Linear Vertical |
| Radiation Pattern | Directional |
| Impedance | 50Ω |

*Note 1. Central Frequency should be defined after customers' application approval.

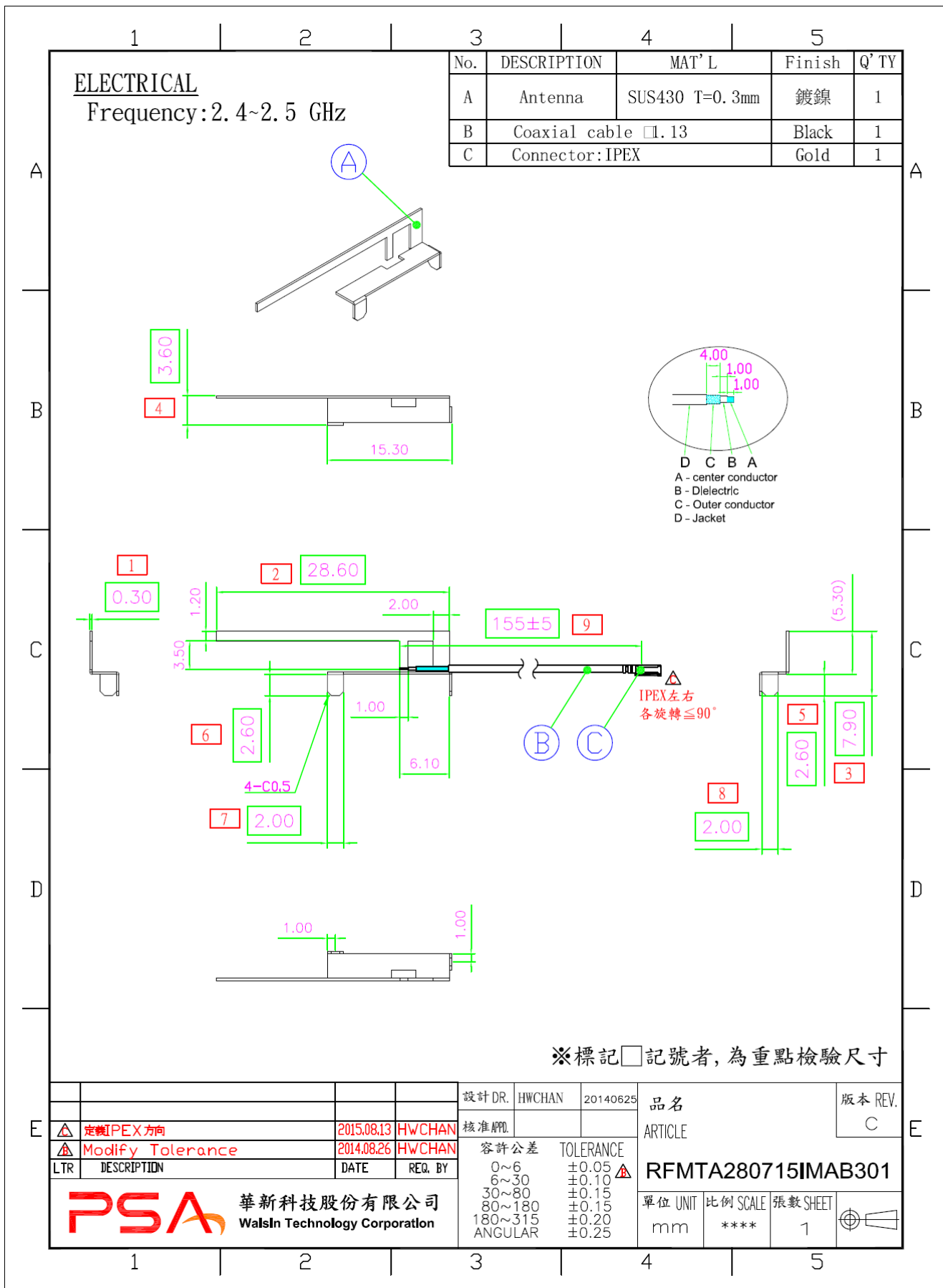
MATERIAL TABLE

| Items | Description |
|------------------|-------------------|
| Antenna Material | SUS430 鍍鎳 T=0.3mm |
| Coaxial Cable | Ø1.13(Black) |
| Connector | IPEX |

ORDERING RULE

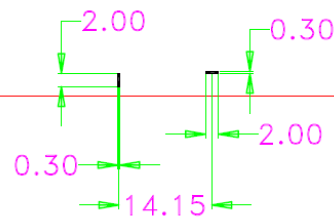
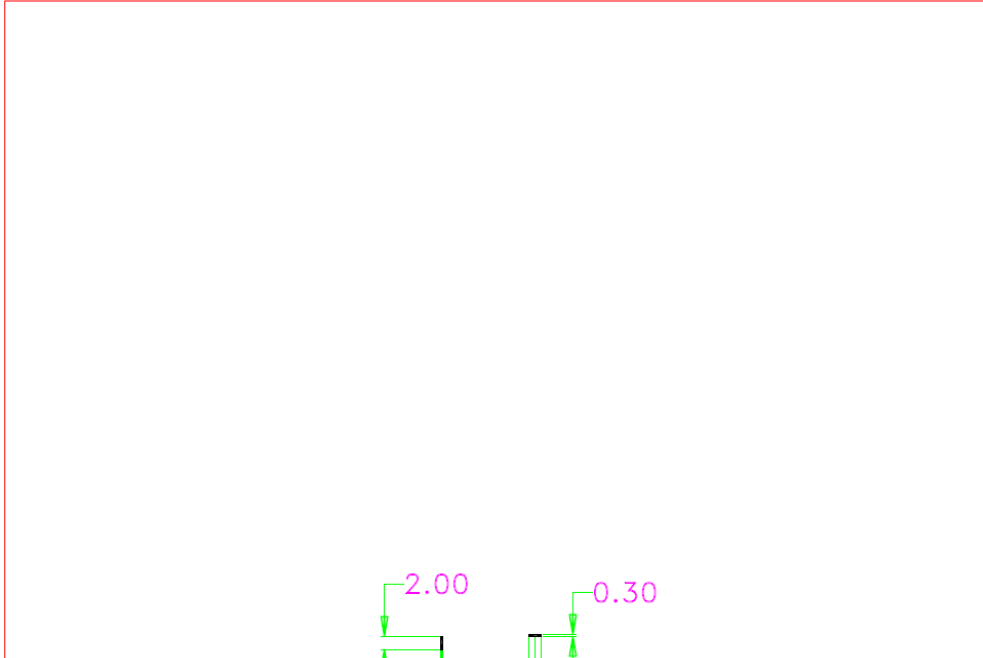
| RF | MTA | 2807 | 15 | I | M | A | B | 3 | 01 |
|------------------|--------------------------|---|---|--|--|---|--|---|------------------------|
| Type Code | Product Code | Metal Dimension (Unit: mm) | Cable Length (unit: cm) | Connector Brand | Type of Connector | Application | Project status | Wire Diameter | Project |
| Walsin RF Device | MTA: Metal Antenna | Per 2 digits of length, width e.g.: 2611 Length 26.55mm, Width 11.30mm | 2 digits for cable length e.g.: 00 None Cable | A: N C:MCX D:IPEX III E: IPEX IV F: IPEX A13 H: Hirose I: IPEX M: MMCX S: SMA T: TNC U:MURATA N: None | A: Reverse Female B: Reverse Male F: Female M: Male N: None | 0: 0GHz 3: 3GHz 5: 5 GHz 6: 6GHz A: 2.4GHz ISM band B: GSM 900/1800 dual band G: GPS band L: 2.4/5.2/5.8 GHz tri-band N: NFC T:LTE band W: WCDMA band | B: MP T:During Test X: Pile Run | 0:None 1:∅0.81 3:∅1.13 6:RG316 7:∅1.37 8:RG178 | 01~99 series number |

DIMENSIONS



Test Report

■ PCB Layout

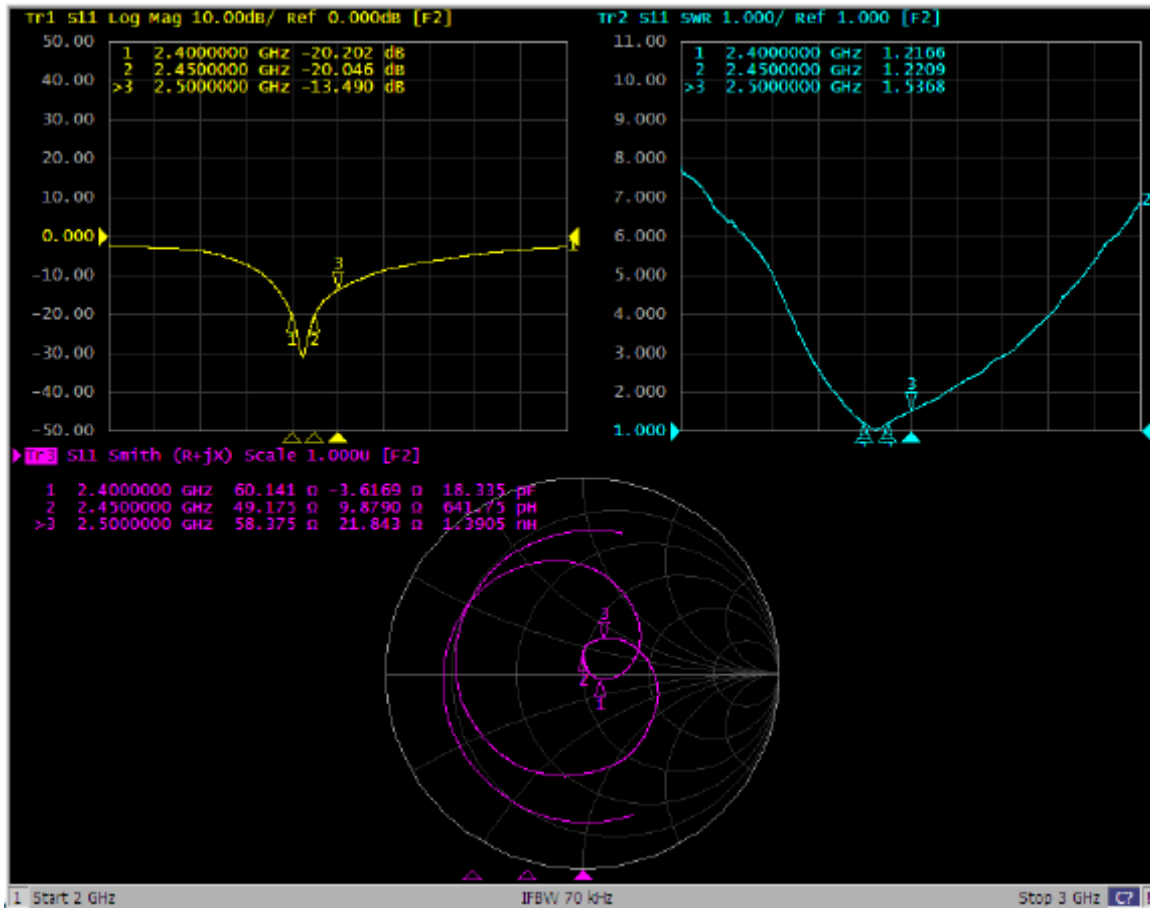


■ GND

天線不需淨空區

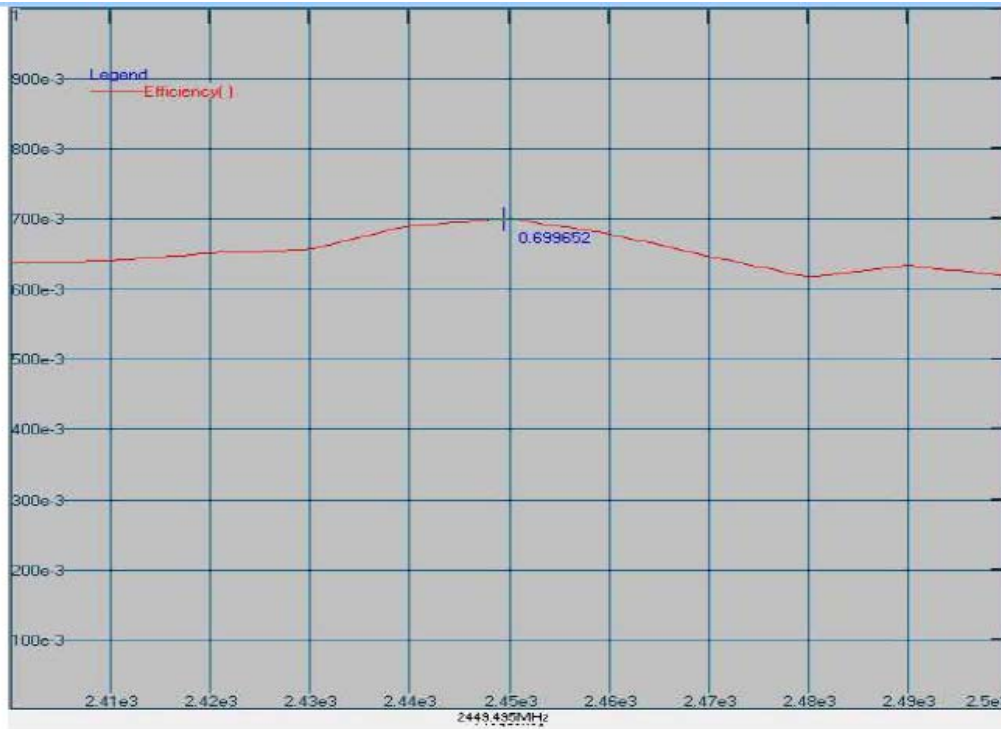
Electrical Characteristics

Return Loss & VSWR & Smith Chart

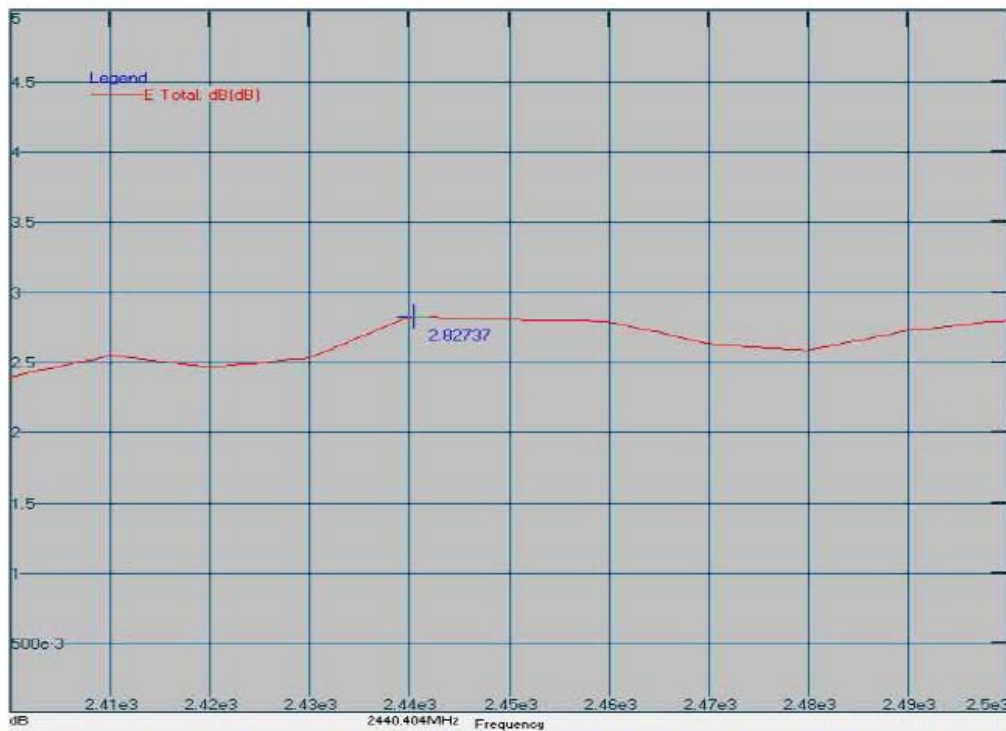


Antenna Peak Gain

2400~2500 MHz



Max: 69.9 % Min: 62.5 % Ave:66.2%

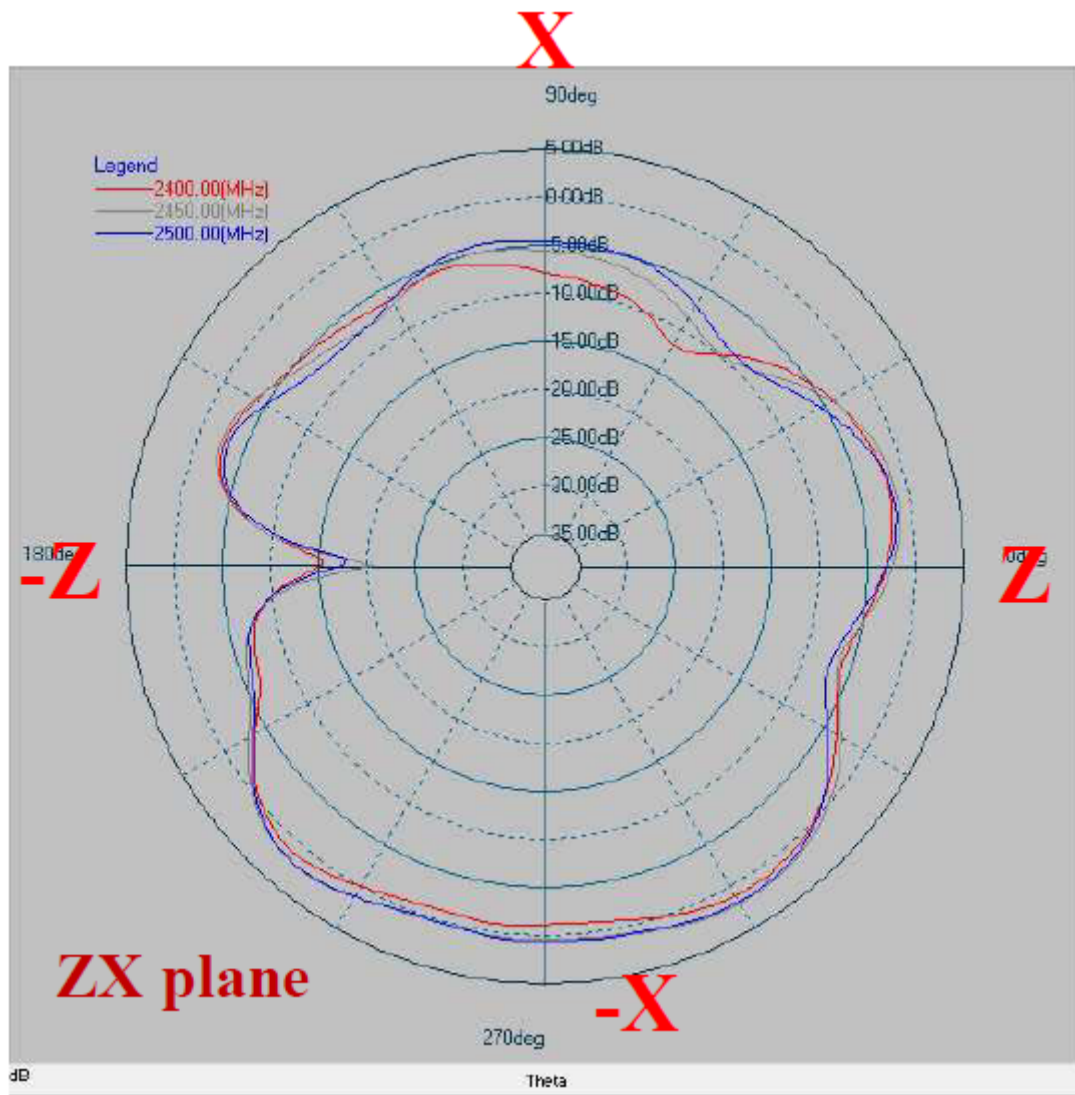


Max Peak Gain : 2.82 dBi Min Peak Gain : 2.46 dBi

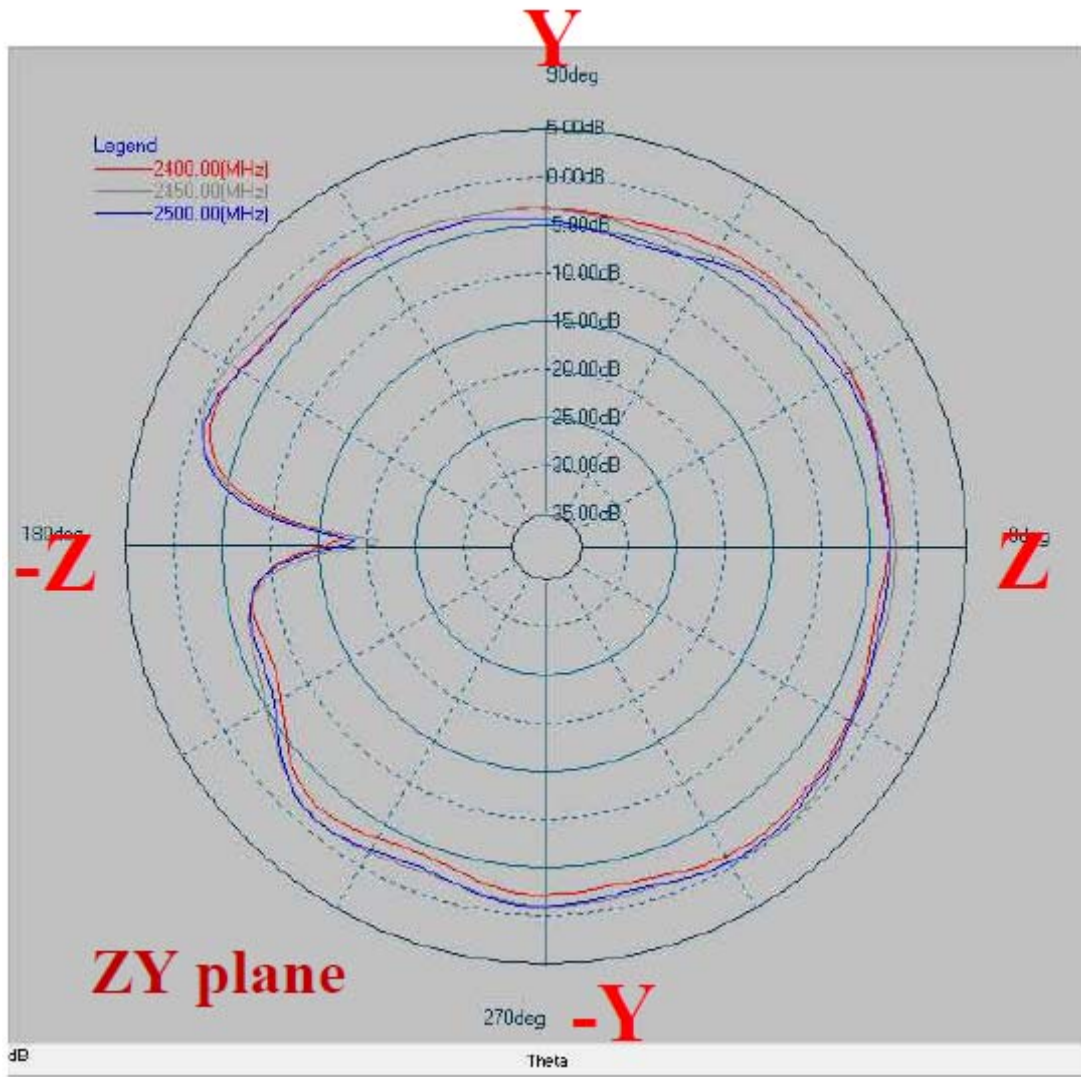
RADIATION PATTERN

2400~2500 MHz

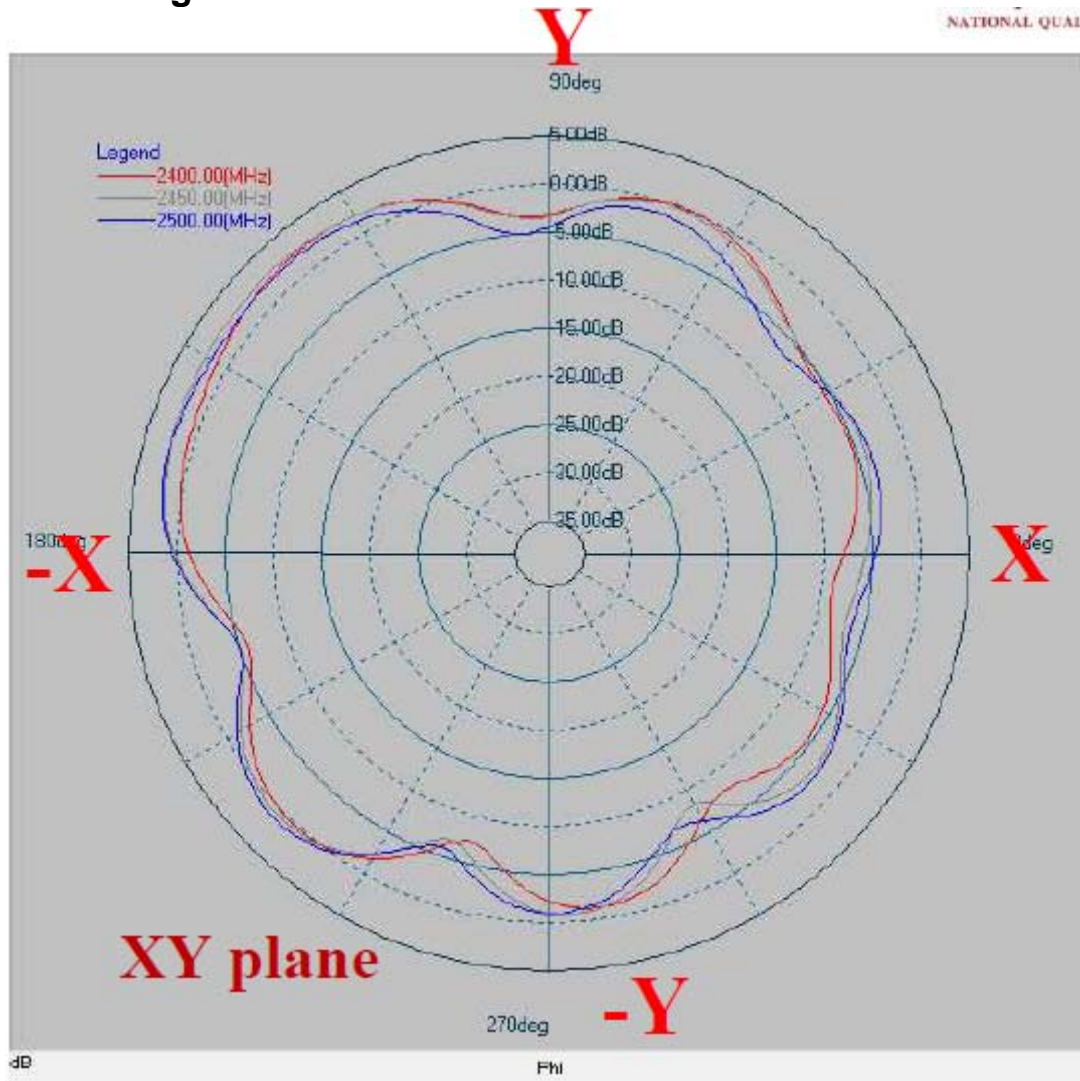
Phi=0.00deg



Phi=90.00deg




Theta=90.00deg



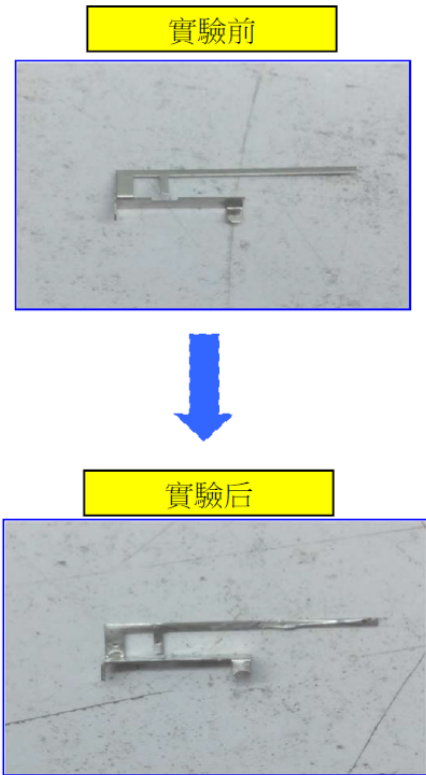
| Frequency [MHz] | ZX plane | | ZY plane | | XY plane | |
|-----------------|----------------|--------------|----------------|--------------|----------------|--------------|
| | Max Value [dB] | Average [dB] | Max Value [dB] | Average [dB] | Max Value [dB] | Average [dB] |
| 2400 | 1.11 dB | -3.08 dB | -1.14 dB | -3.09 dB | 2.27 dB | -1.95 dB |
| 2450 | 1.98 dB | -2.24 dB | -0.15 dB | -2.49 dB | 2.57 dB | -1.34 dB |
| 2500 | 1.92 dB | -2.44 dB | -0.50 dB | -2.94 dB | 2.26 dB | -1.60 dB |

RELIABILITY TEST

| | | | | | | | | | | | |
|--|---|-----|---|-------------|-------|--|--|--|--|--|----|
|  華新科技股份有限公司 Walsin Technology Corporation | | 編號 | 日期 | 頁次 | | | | | | | |
| | | | 2014/7/22 | 1/1 | | | | | | | |
| RFMTA280715IMAB301實驗報告 | | 核準 | 審核 | 作成 | | | | | | | |
| | | 何耀輝 | 張濤 | 徐小红 | | | | | | | |
| 實驗名稱: | 拉力測試 | | | | | | | | | | |
| 實驗目的: | 驗證IPEX鉚壓后其拉力是否OK | | | | | | | | | | |
| 實驗設備: | 拉力測試機 | | | | | | | | | | |
| 實驗人員: | 徐小红 | | | | | | | | | | |
| 實驗日期: | 2014/7/22 | | | | | | | | | | |
| 實驗步驟: | 1.取5PCS鉚壓好IPEX的樣品進行拉力測試，步驟如下： | | | | | | | | | | |
| |  組裝IPEX后產品 | |  | | | | | | | | |
| |  測試結果 | |  | | | | | | | | |
| | 2. 拉力測試數據如下： | | | | | | | | | | |
| | 拉力測試規格： $\geq 1.5\text{Kg}$ | | | | | | | | | | |
| NO | 1 | 2 | 3 | 4 | 5 | | | | | | 判定 |
| 測試值 | 1.7 | 1.4 | 1.34 | 1.5 | 1.64 | | | | | | OK |
| MAX : | 1.7 | MIN | 1.34 | \bar{X} : | 1.516 | | | | | | |
| 實驗結論: | 取5PCS產品進行拉力測試，其拉力值均在規格範圍內，判定為OK。 | | | | | | | | | | |



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Antenna 可靠度測試報告

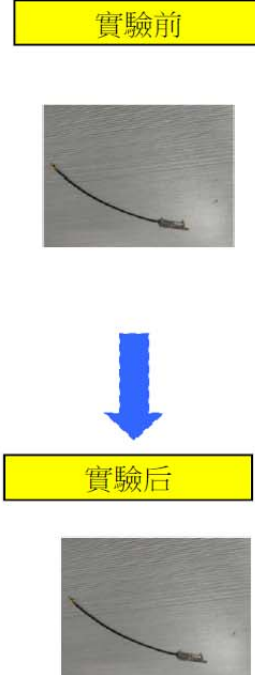
| | | | |
|------|--------------------|-----------|---|
| 料號： | RFMTA280715IMAB301 | 申請日期： | 2014/8/1 |
| 批號： | NA | 實驗數量： | 5 PCS |
| 測試項目 | 沾錫性實驗 | | |
| 測試設備 | 錫爐 | | |
| 測試條件 | 錫爐溫度：260°C±10°C | 時間：10S±2S | 實驗前、實驗后 圖片對比 <div style="text-align: center;">  </div> |
| NO. | 實驗結果 | | |
| 1 | OK | | |
| 2 | OK | | |
| 3 | OK | | |
| 4 | OK | | |
| 5 | OK | | |
| 6 | / | | |
| 7 | / | | |
| 8 | / | | |
| 9 | / | | |
| 10 | / | | |
| 判定 | OK | | |
| 備注： | | | |

審核:李百京

測試:施建和


 蘇州華科電子有限公司



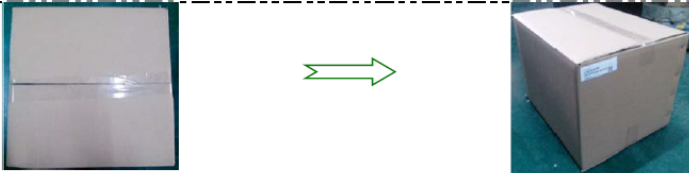

Antenna 可靠度測試報告

| | | | | | |
|------|------------------------|---------------------|--|-----------|--|
| 料號： | RFMTA280715IMAB301 | | 申請日期： | 2014/7/22 | |
| 批號： | NA | | 實驗數量： | 5 PCS | |
| 測試項目 | 中性鹽霧試驗 | | 實驗前、實驗后 圖片對比 | | |
| 測試設備 | 鹽霧試驗箱 | | | | |
| 測試條件 | 鹽水濃度：5% 實驗箱溫度：35±1℃ | 實驗時間：24H 噴霧方式：連續 |  | | |
| 測試對比 | 實驗前 | 實驗后 | | | |
| NO. | | | | | |
| 1 | 無氧化 | 無氧化 | | | |
| 2 | 無氧化 | 無氧化 | | | |
| 3 | 無氧化 | 無氧化 | | | |
| 4 | 無氧化 | 無氧化 | | | |
| 5 | 無氧化 | 無氧化 | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |
| 判定 | OK | | | | |
| 備注： | | | | | |

審核:李百京

測試:施建和

PACKAGE

| 華新科技股份有限公司 | | | | | | | | | | | | | | | | | | |
|--|--|--|--------|------|------|------|----------|----|------|--|--|--|--|--|--|--|--|--|
| RFMTA280715IMAB301 製品工程表 | | 頁次：4 之 3 | | | | | | | | | | | | | | | | |
| | | 規章編號： | 版次：A版 | | | | | | | | | | | | | | | |
| | | 制修訂日期：2014/08/6 | | | | | | | | | | | | | | | | |
| 產品包裝圖示： | | | | | | | | | | | | | | | | | | |
| 圖一 |  | | | | | | | | | | | | | | | | | |
| | 單PCS產品 | 產品用气泡袋裝，一捆25pcs,一袋裝2捆 | | | | | | | | | | | | | | | | |
| 圖二 |  | | | | | | | | | | | | | | | | | |
| | 珍珠棉 | 外箱 | 珍珠棉放入外 | | | | | | | | | | | | | | | |
| 圖三 |  | | | | | | | | | | | | | | | | | |
| | 封箱 | 貼成品標籤 | | | | | | | | | | | | | | | | |
| 產品包裝規範： | | | | | | | | | | | | | | | | | | |
| 1.將每25pcs產品使用珍珠棉將IPEX端用珍珠棉加白色橡皮筋包裝,然後裝入气泡袋內，每袋裝2扎。 | | | | | | | | | | | | | | | | | | |
| 2.將珍珠棉放入外箱中（如圖示二） | | | | | | | | | | | | | | | | | | |
| 3.將裝好的成品放入箱中，每箱2000pcs產品，上下各放一片珍珠棉，包裝好的外箱左上方需貼標籤。 | | | | | | | | | | | | | | | | | | |
| 標籤需貼到最小包裝。 | | | | | | | | | | | | | | | | | | |
| 製標圖示：實物標籤內容僅作參考 具體內容以出貨料號為準 | | | | | | | | | | | | | | | | | | |
|  | | <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;">變更時間</th> <th style="width: 15%;">變更版別</th> <th style="width: 70%;">變更內容</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2014/8/6</td> <td style="text-align: center;">A版</td> <td style="text-align: center;">新版發行</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> | | 變更時間 | 變更版別 | 變更內容 | 2014/8/6 | A版 | 新版發行 | | | | | | | | | |
| 變更時間 | 變更版別 | | | 變更內容 | | | | | | | | | | | | | | |
| 2014/8/6 | A版 | | | 新版發行 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| (NO 1.): Spec desc. (NO 2.): 料號 批號 數量(PN & LOT & QTY) (NO 3.): 盤點條碼(Inventory check barcode) (NO 4.): 列印時間-總張數(print system time-total piece this print) (NO 5.): 表示 BULK LOT (NO 6.)表示該張標籤流水序號 | | | | | | | | | | | | | | | | | | |
| 核准： | 何耀輝 | 審核： | | | | | | | | | | | | | | | | |
| | | 制定： | 徐小红 | | | | | | | | | | | | | | | |