



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# APPROVAL SHEET

**Metal Stamping Antenna**  
**2.4 GHz Working Frequency**  
**P/N: RFMTA310819IMAB701**

Customer : \_\_\_\_\_  
Customer 's Part No. : \_\_\_\_\_  
Approval No. : \_\_\_\_\_  
Issue Date : \_\_\_\_\_

**ELECTRICAL CHARACTERISTICS**

Item	Specification
Working Frequency Range	2.4 ~ 2.5 GHz (Note-1)
Gain(Peak)	5.77 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**

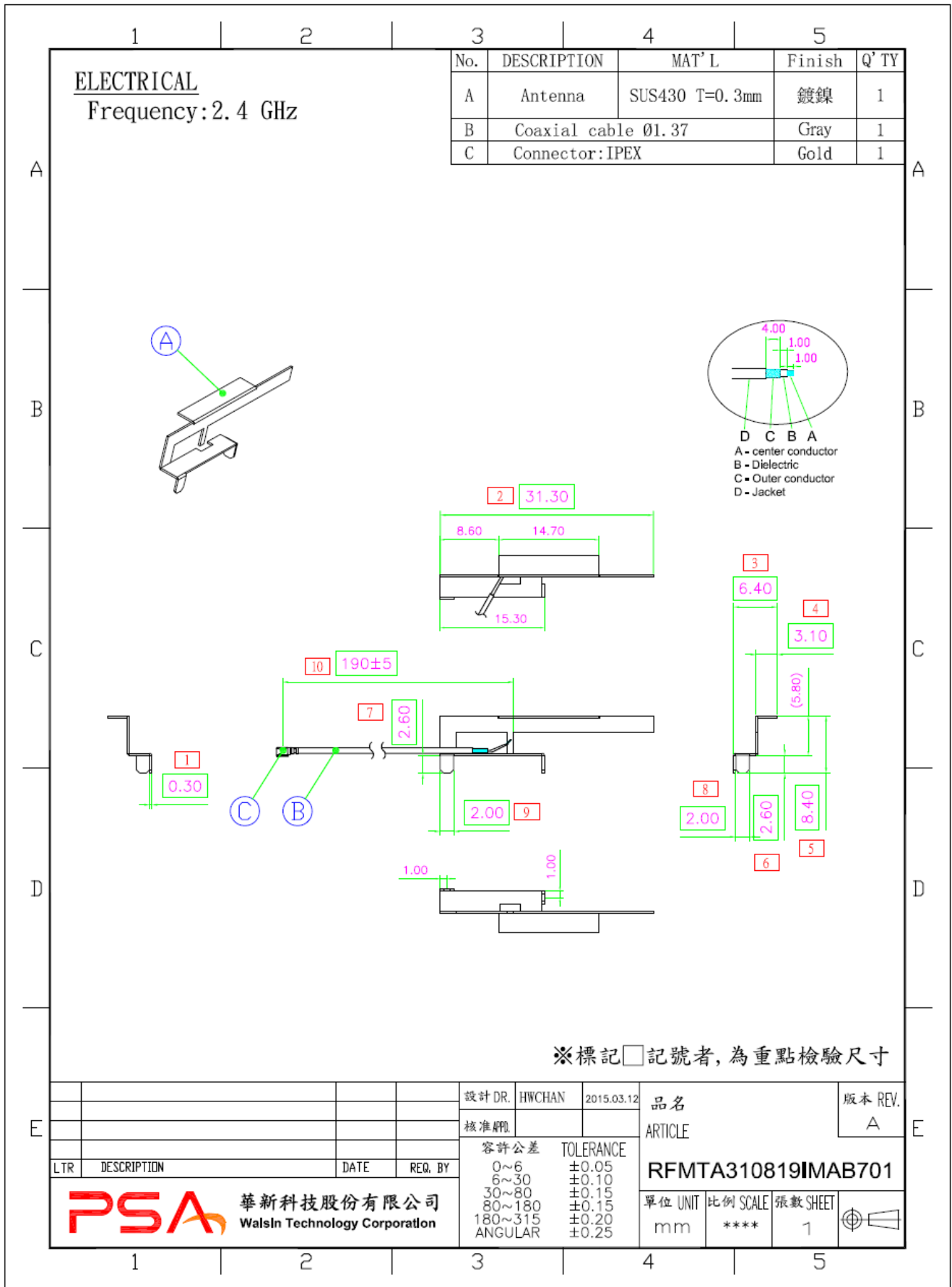
Items	Description
Antenna Material	SUS430 鍍鎳 T=0.3mm
Cable	φ 1.37 Gray
Connector	IPEX

**ORDERING RULE**

RF	MTA	3108	19	I	M	A	B	7	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.: 3108 Length 31.3mm, Width 8.4mm	2 digits for cable length e.g.: 19 Cable Length: 19cm	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: φ0.81 3: φ1.13 6: RG316 7: φ1.37 8: RG178	01~99 series number

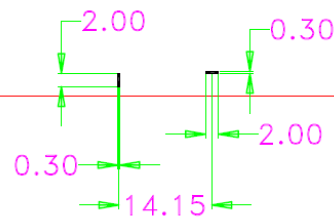
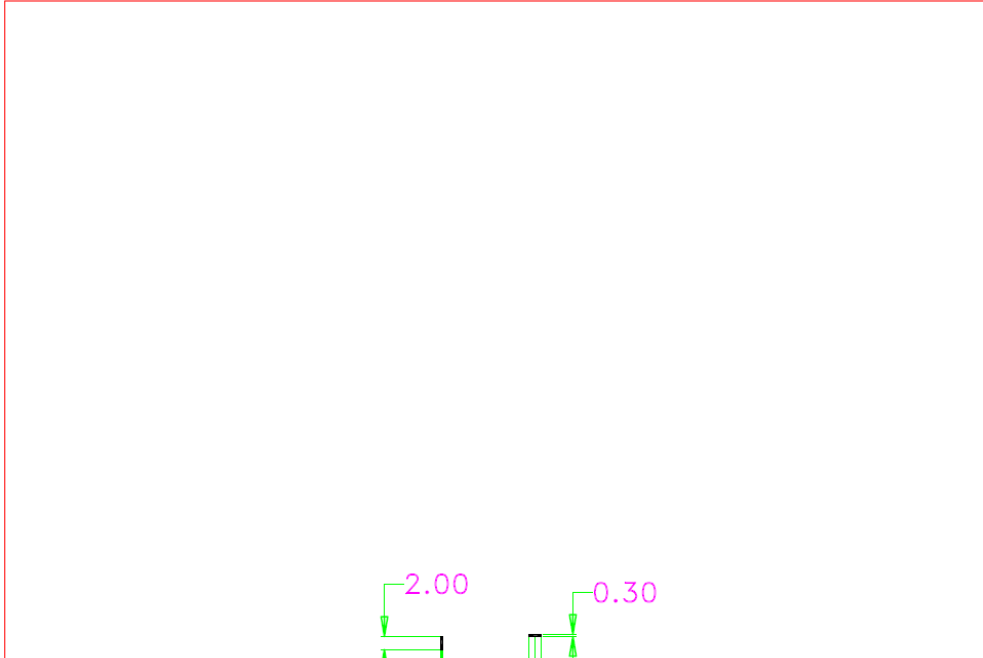
Approval sheet

DIMENSIONS



# Test Report

## ■ PCB Layout

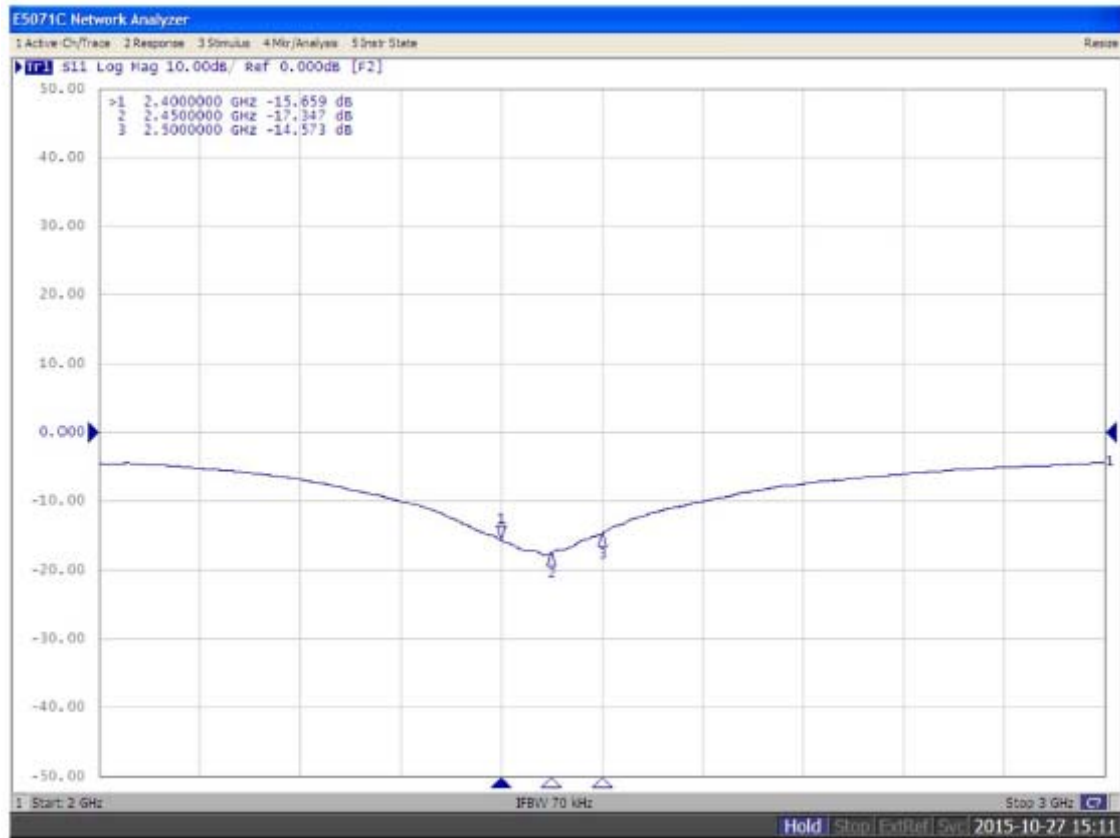


■ GND

天線不需淨空區

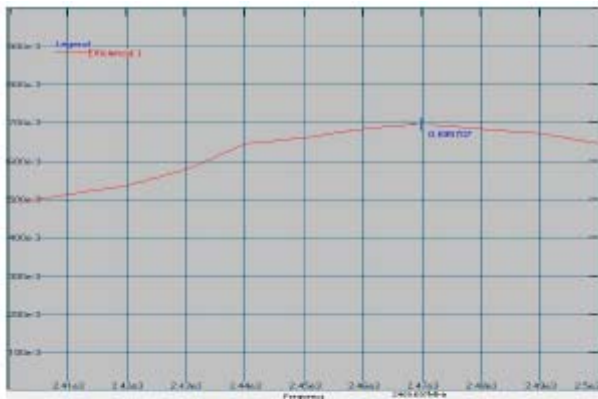
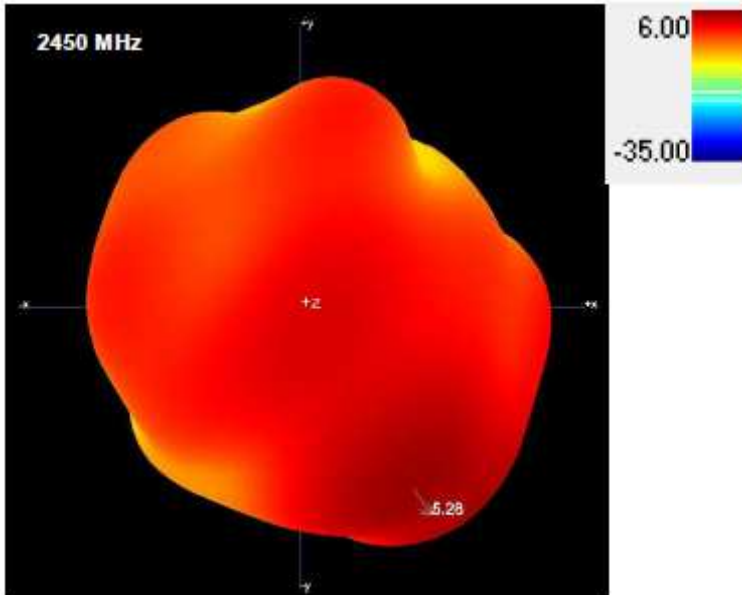
## Electrical Characteristics

### Return Loss

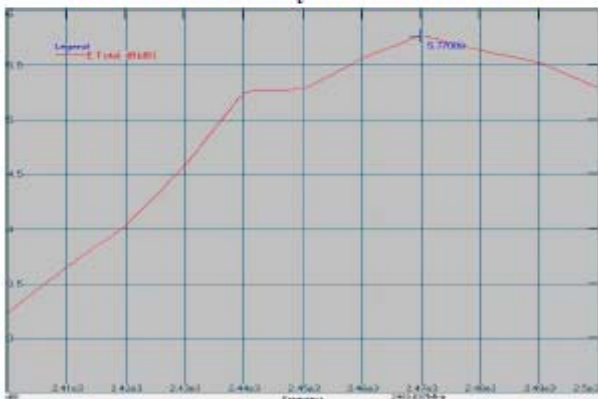


## ■ Antenna Peak Gain

2400~2500 MHz



Maximum Efficiency at 2469 MHz : 69.5 %

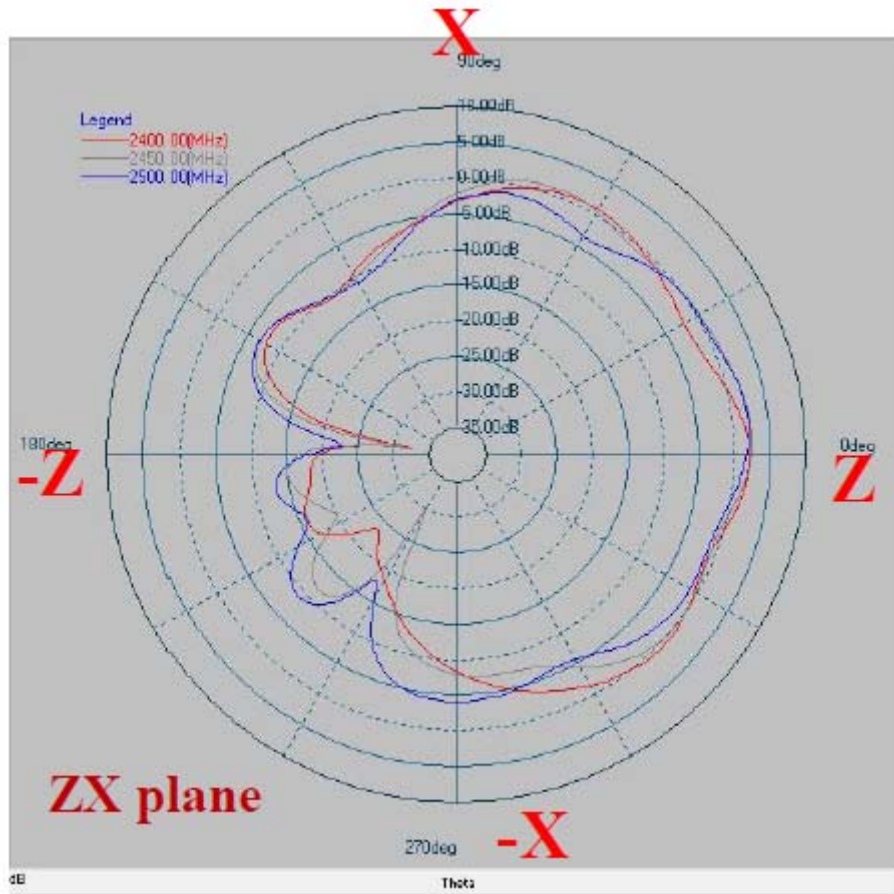


Maximum Peak Gain at 2469 MHz : 5.77 dBi

**RADIATION PATTERN**

2400~2500 MHz

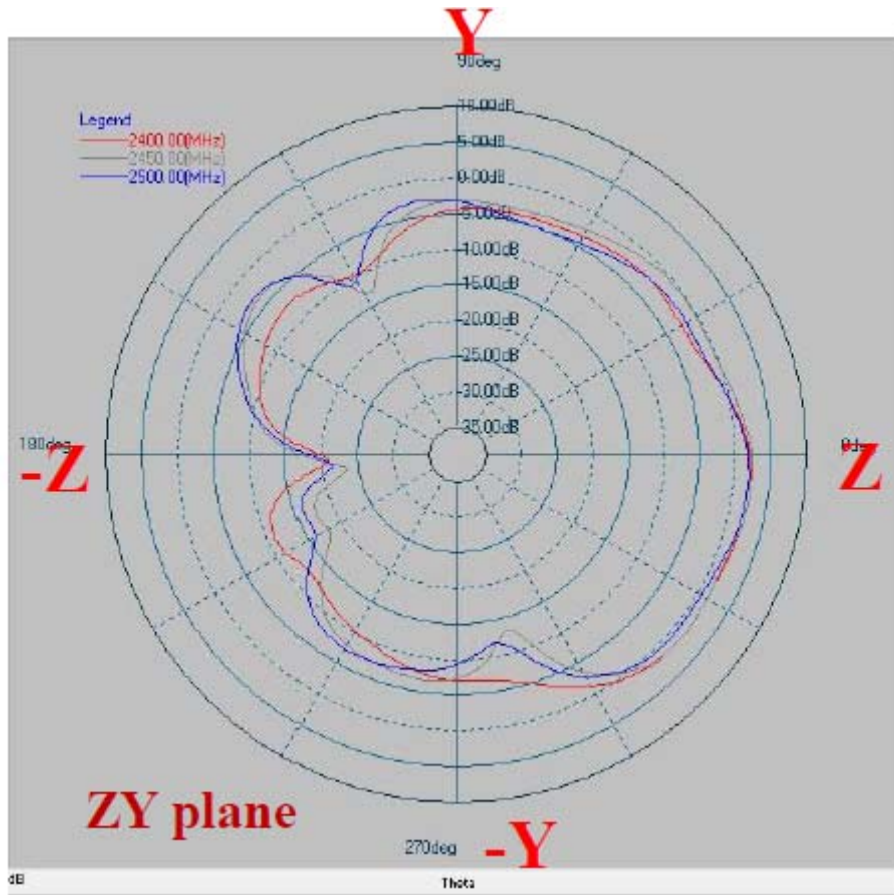
Phi=0.00deg



	ZX plane	
Frequency [MHz]	Max Value [dB]	Average [dB]
2400	2.04 dB	-3.20 dB
2450	2.51 dB	-2.98 dB
2500	2.17 dB	-3.63 dB

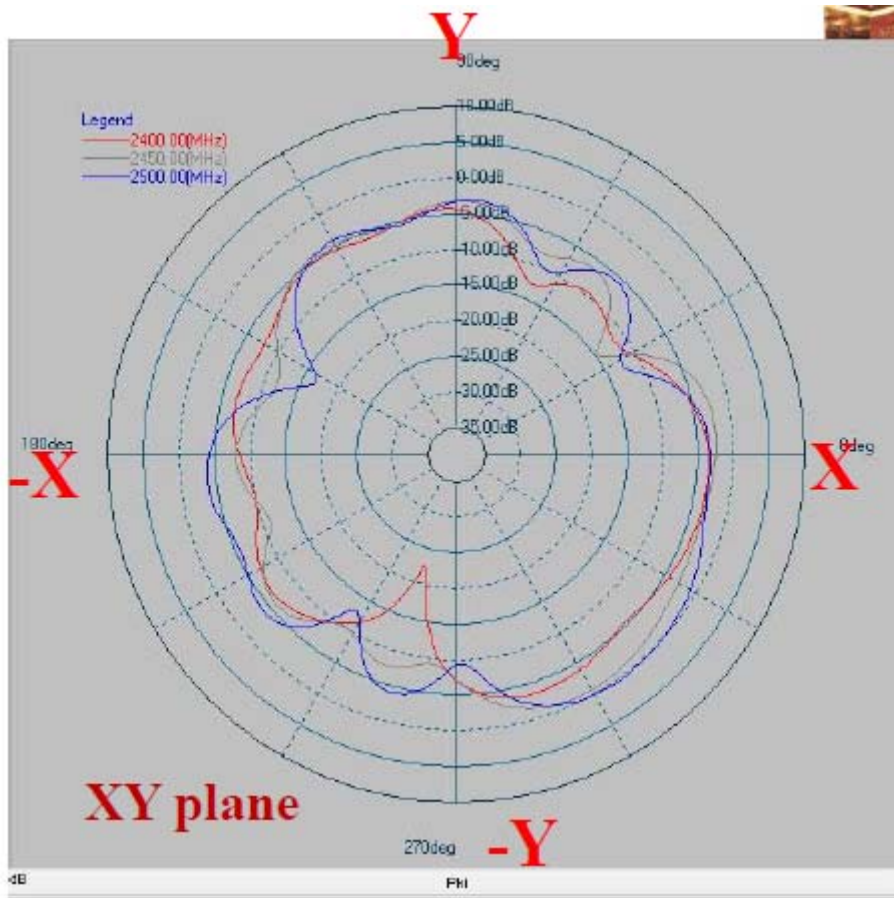


Phi=90.00deg



	ZY plane	
Frequency [MHz]	Max Value [dB]	Average [dB]
2400	2.39 dB	-3.26 dB
2450	2.51 dB	-2.83 dB
2500	2.09 dB	-3.45 dB

Theta=90.00deg



	XY plane	
Frequency [MHz]	Max Value [dB]	Average [dB]
2400	-3.40 dB	-6.56 dB
2450	-0.80 dB	-5.12 dB
2500	0.18 dB	-4.48 dB

# Sample Test Report



## 新品測試記錄表

<input checked="" type="checkbox"/> 原料承認 <input type="checkbox"/> 半成品承認 <input type="checkbox"/> 成品承認		華科料號： RFMTA310819IMAB701		品名：										
供應商： 華科		數量： 10pcs		日期： 2015/3/11										
測試項目	尺寸													
	1	2	3	4	5	6	7	8	9	10				
規格範圍	0.3±0.05	31.3±0.1	6.4±0.1	3.1±0.05	2.6±0.05	2.6±0.05	2±0.05	2.0±0.05	190±5	8.4±0.1				
中心值	0.30	31.30	6.40	3.10	2.60	2.60	2.00	2.00	190.00	8.4				
公差	0.10	0.20	0.20	0.10	0.10	0.10	0.10	0.10	10.00	0.2				
規格上限	0.35	31.40	6.50	3.15	2.65	2.65	2.05	2.05	195.00	8.5				
規格下限	0.25	31.20	6.30	3.05	2.55	2.55	1.95	1.95	185.00	8.3				
測試儀器														
1	0.31	31.31	6.41	3.11	2.61	2.60	2.01	2.00	191.00	8.41				
2	0.30	31.30	6.40	3.11	2.60	2.62	2.00	2.02	191.00	8.40				
3	0.29	31.32	6.40	3.12	2.60	2.60	2.02	2.00	192.00	8.41				
4	0.30	31.31	6.42	3.10	2.60	2.60	2.01	2.01	192.00	8.40				
5	0.30	31.30	6.40	3.10	2.61	2.61	2.01	2.01	191.00	8.42				
6	0.30	31.30	6.41	3.11	2.60	2.60	2.00	2.00	192.00	8.41				
7	0.30	31.30	6.40	3.10	2.62	2.60	2.01	2.00	192.00	8.40				
8	0.30	31.32	6.41	3.12	2.60	2.62	2.00	2.01	192.00	8.41				
9	0.30	31.30	6.42	3.10	2.61	2.61	2.00	2.00	191.00	8.41				
10	0.30	31.30	6.40	3.10	2.60	2.60	2.01	2.01	192.00	8.40				
Max	0.31	31.32	6.42	3.12	2.62	2.62	2.02	2.02	192.00	8.42				
Min	0.29	31.30	6.40	3.10	2.60	2.60	2.00	2.00	191.00	8.40				
AVG	0.30	31.31	6.41	3.11	2.61	2.61	2.01	2.01	191.60	8.41				
STD	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.52	0.01				
Ca	(0.00)	0.06	0.07	0.14	0.10	0.12	0.14	0.12	0.32	0.07				
Cp	3.54	3.95	4.00	2.02	2.36	1.98	2.47	2.38	3.23	4.94				
Cpk	3.54	3.72	3.71	1.74	2.12	1.74	2.12	2.10	2.19	4.59				
判定	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK				
材料名稱	料號		廠商	備註										
天線	RFMTA310819IMAB701		華科											
備註：														

**RELIABILITY TEST**

 <b>華新科技股份有限公司</b> Walsin Technology Corporation <b>實驗報告</b>		編號	日期	頁次							
			2015/3/11	1/1							
		核準	審核	作成							
		何耀輝	何耀輝	潘丹鳳							
實驗名稱:	驗證IPEX於1.37線材的拉力能否達到1.5Kg以上										
實驗目的:	驗證IPEX於1.37線材的拉力是否OK										
實驗設備:	拉力測試機										
實驗人員:	潘丹鳳										
實驗日期:	2015/3/11										
實驗步驟:	1.取10PCS IPEX於1.37線材的樣品進行IPEX於線材拉力測試,步驟如下:										
	 <p>組裝IPEX后產品</p>										
	 <p>測試結果</p>										
	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	6	7	8	9	10	判定
測試值	1.75	1.8	1.73	1.75	1.68	1.75	1.68	1.7	1.8	1.75	OK
	MAX: 1.8		MIN: 1.68			$\bar{X}$ : 1.739					
實驗結論:	取10PCS產品進行拉力測試,其拉力值均在規格範圍內,判定為OK。										


 蘇州華科電子有限公司

## Antenna 可靠度測試報告

料號：	RFMTA310819IMAB701		申請日期：	2015/3/10	
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		<div style="text-align: center;">  <p>實驗前</p>  <p>實驗后</p>  </div>	
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

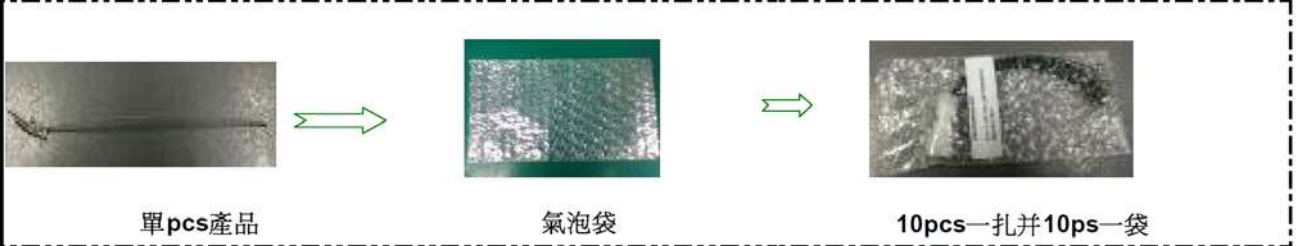
測試:施建和

**PACKAGE**

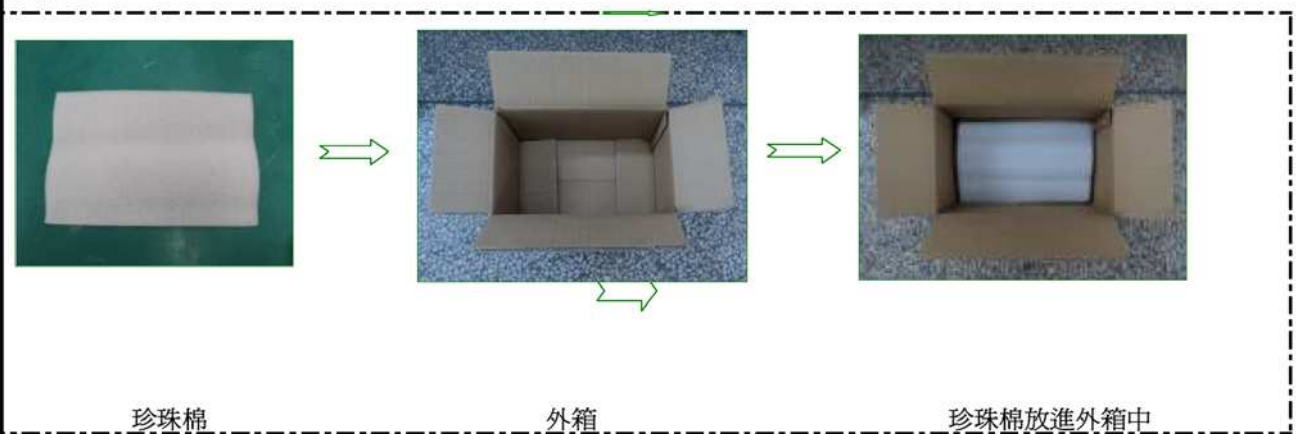
華新科技股份有限公司		
RFMTA310819IMAB701包規	頁次： 1 之 1	
	規章編號：	版次：A版
制修訂日期： 2015/3/12		

五.產品包裝圖示：

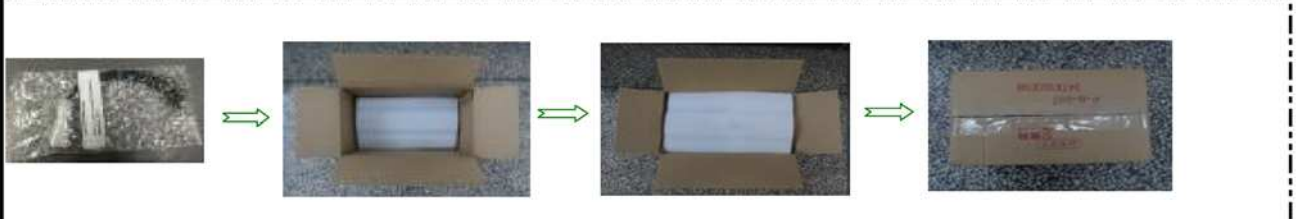
圖示一



圖示二



圖示三



六.產品包裝說明：

- 1.將每10PCS產品使用珍珠棉將線端包紮，然後裝入氣泡袋中并封口(如圖示一)
- 2.將珍珠棉放進外箱中(如圖示二)
- 3.將裝好的成品(如圖三)放入外箱中，上下各放1片珍珠棉，每箱放600pcs

4.產品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



- (NO 1.): Spec desc.
- (NO 2.): 料號 批號 數量(QN & 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

標籤注釋權屬華科電子有限公司

核准：	何耀輝	審核：	何耀輝	制定：	潘丹鳳
-----	-----	-----	-----	-----	-----