

# APPROVAL SHEET

**Metal Stamping Antenna**  
**2.4/5.x GHz Dual Band Working Frequency**  
**P/N: RFMTA250800NNLB001**

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

Version	Date	Description	Author
V01	2015 Jun.	New Release	HWCHAN
V02	2015 Sep.	變更鐵件尺寸	PIPI

## Antenna Specification

### ELECTRICAL CHARACTERISTICS

Item	Specification
Working Frequency Range	2.4 ~ 2.5 / 5.15 ~5.85 GHz
Return Loss	-10dB(Max)
Peak Gain	2.64 dBi(@2.4 ~ 2.5 GHz) 4.48 dBi(@5.15 ~5.85 GHz)
VSWR	2 max.
Polarization	Linear Vertical
Radiation Pattern	Directional
Impedance	50Ω

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

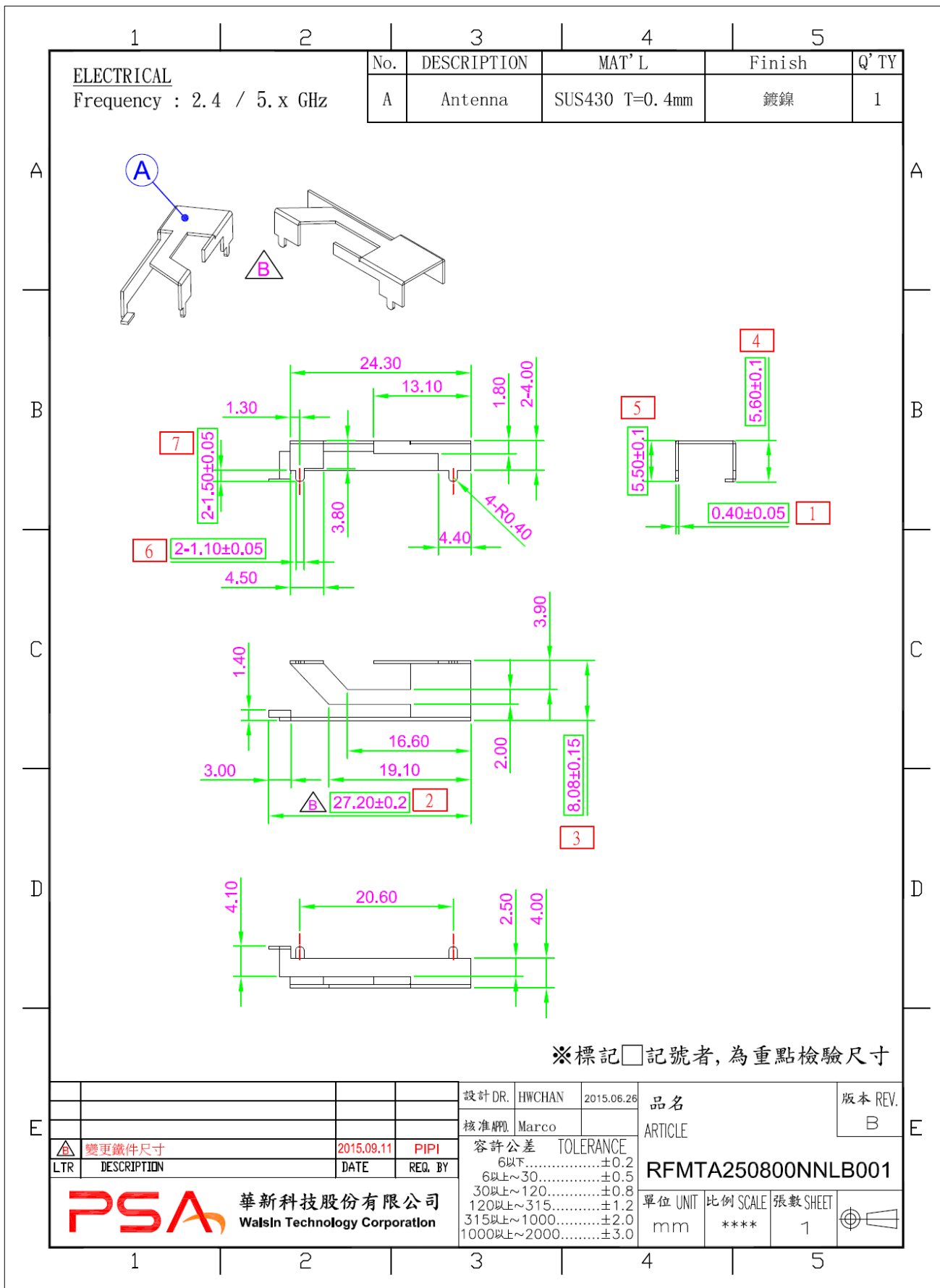
### MATERIAL TABLE

Items	Description
Antenna Material	SUS430 T=0.4 mm(鍍鎳)

### ORDERING RULE

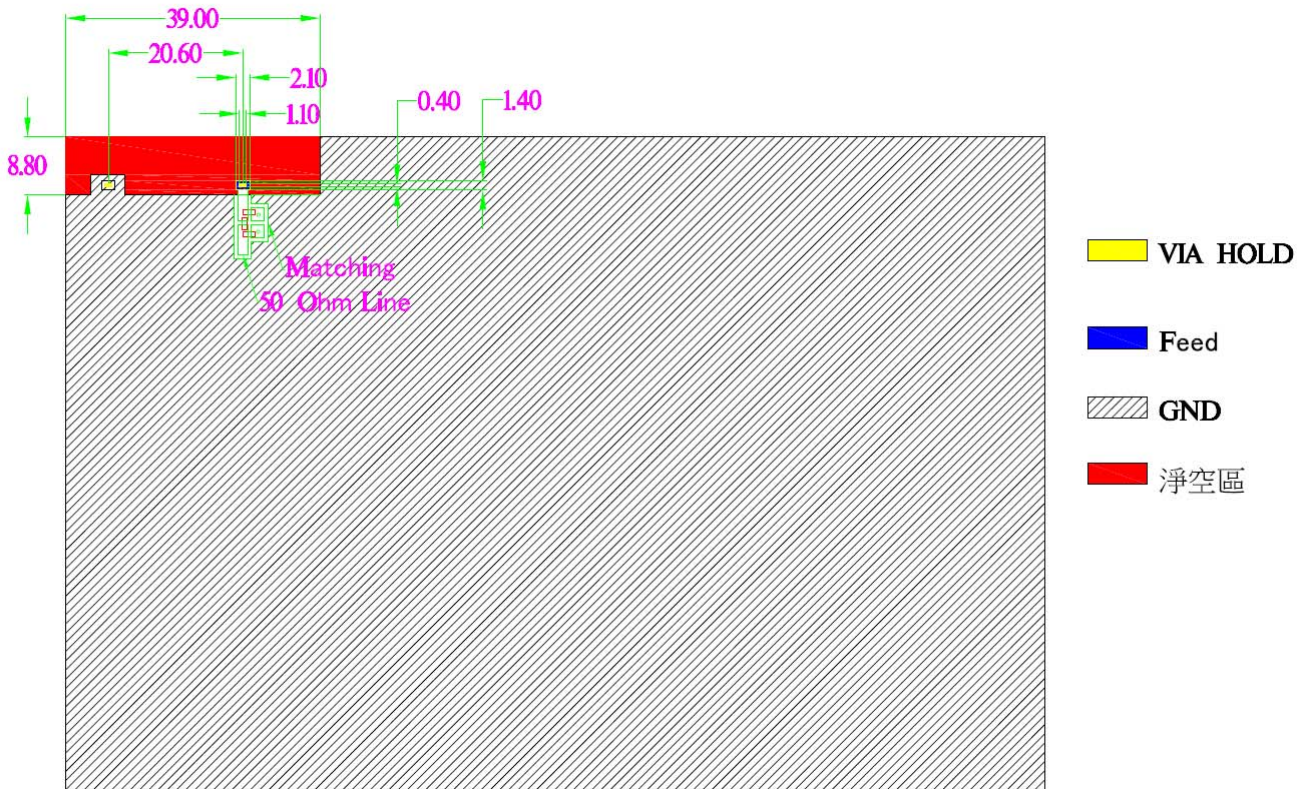
RF	MTA	2508	00	N	N	L	B	0	01
Type Code	Product Code	Metal Dimension (Unit: mm)	Cable Length (unit: cm)	Connector Brand	Type of Connector	Application	Project status	Wire Diameter	Project
Walsin RF Device	MTA: Metal Antenna	Per 2 digits of length, width e.g.: 2508 Length 25.70mm, Width8.08mm	2 digits for cable length e.g.: 00 None Length	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

**DIMENSIONS**



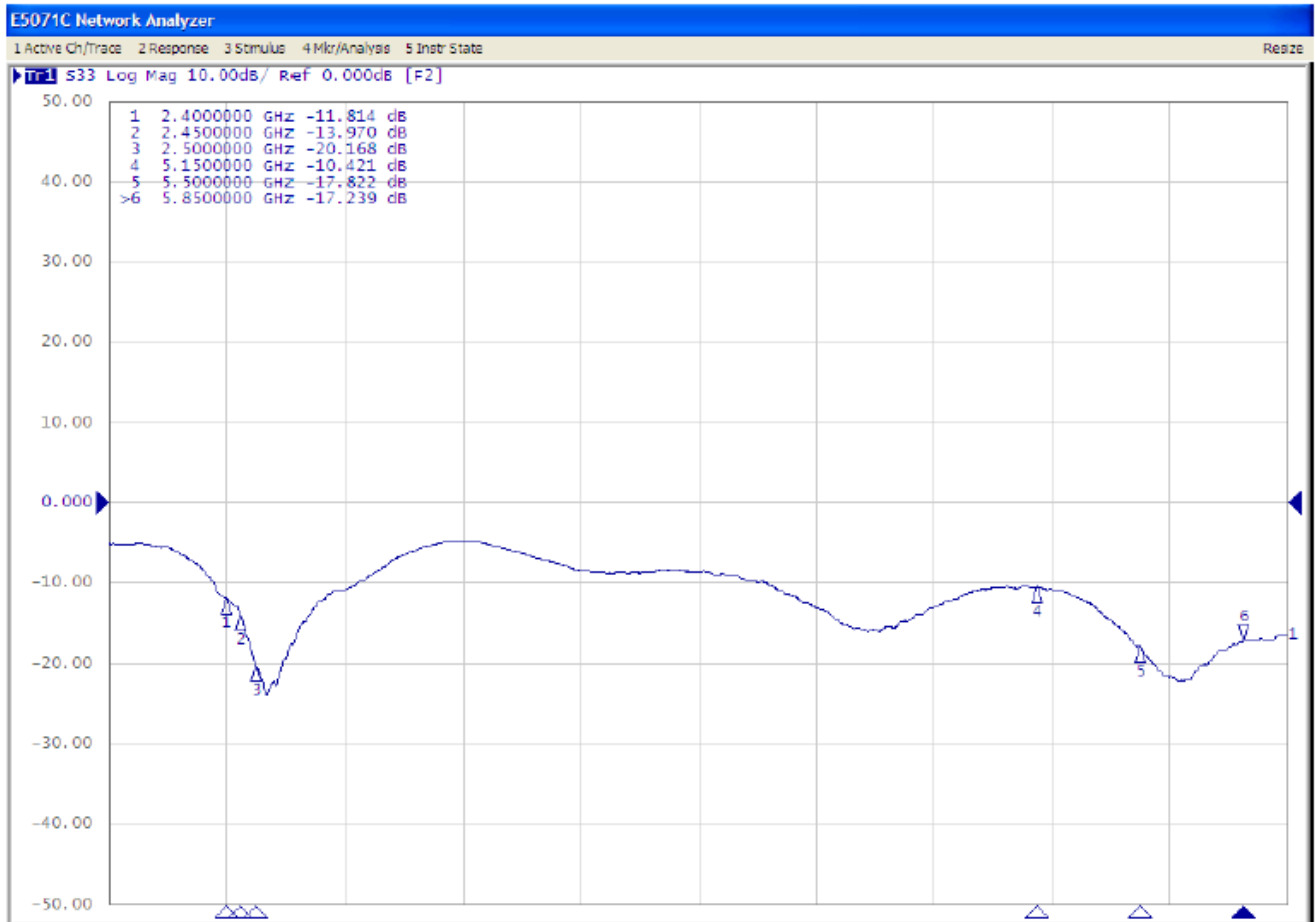
# Test Report

## PCB Layout



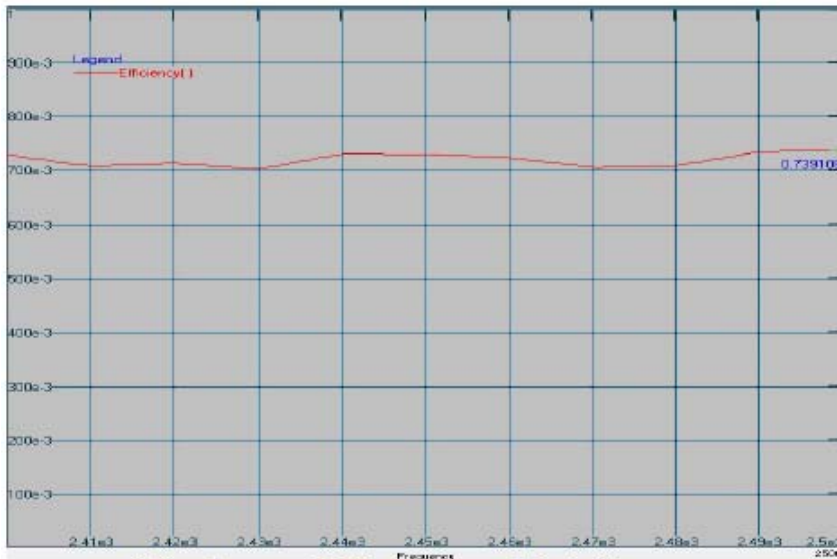
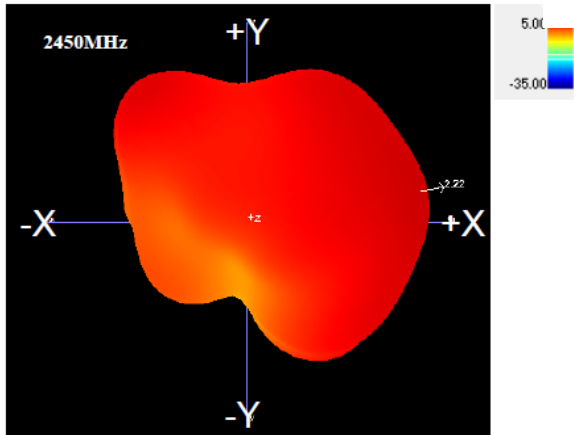
# ELECTRICAL CHARACTERISTICS

## Return Loss

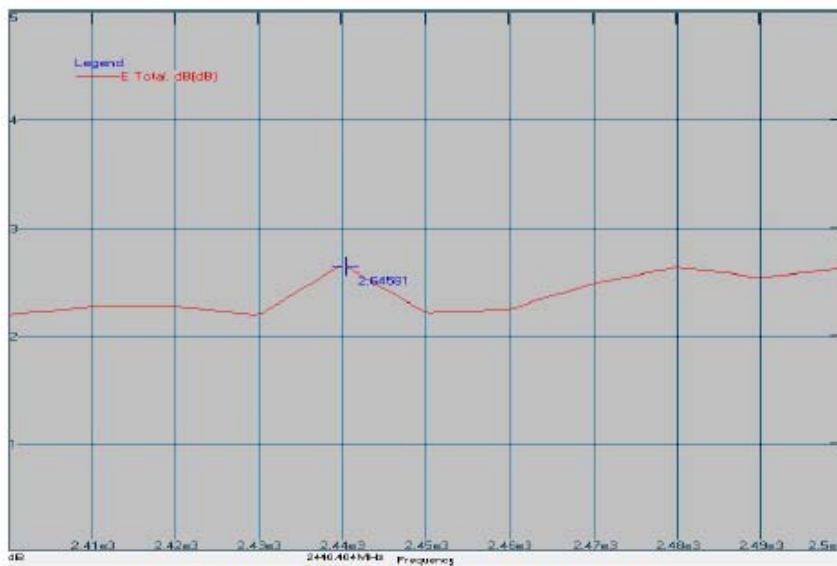


# Antenna Efficiency and Peak Gain

@2G  
f(c)@2450MHz

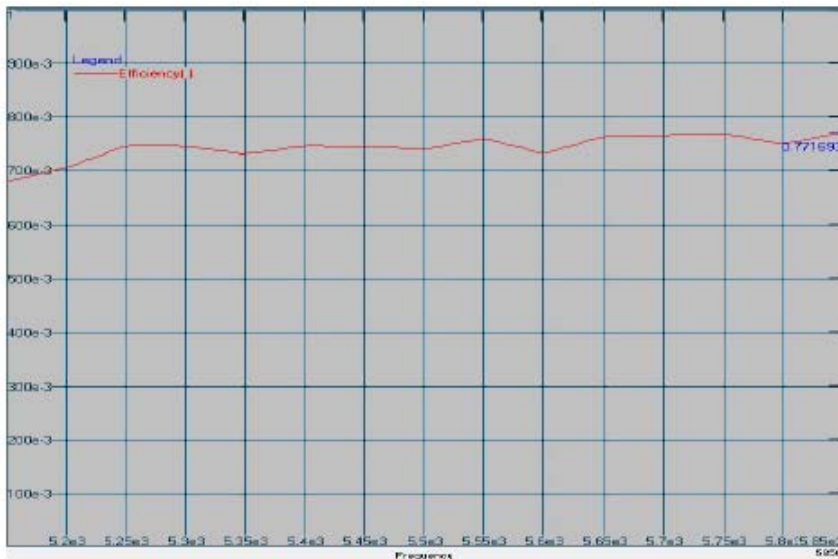
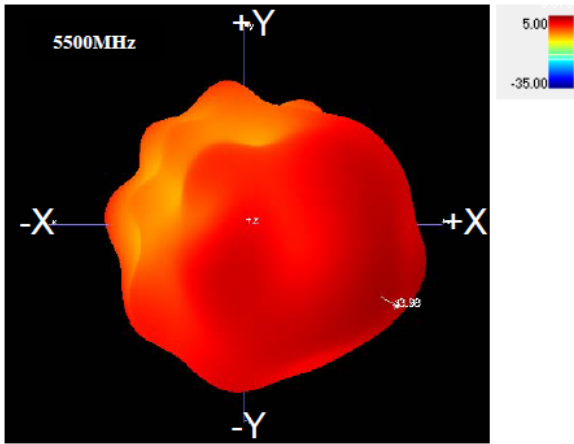


**Maximum Efficiency : 73.9 %**

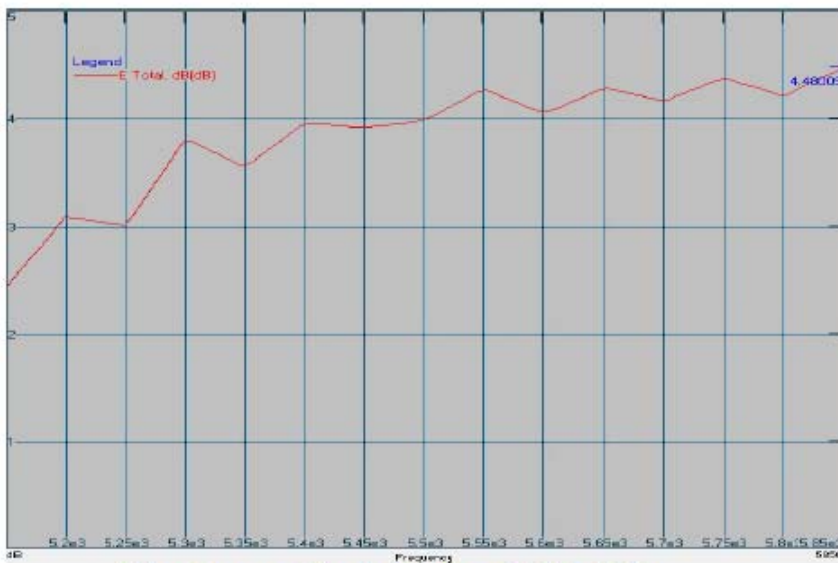


**Maximum Peak Gain : 2.64 dBi**

@5G  
f(c)@5500MHz



**Maximum Efficiency : 77.1 %**



**Maximum Peak Gain : 4.48 dBi**

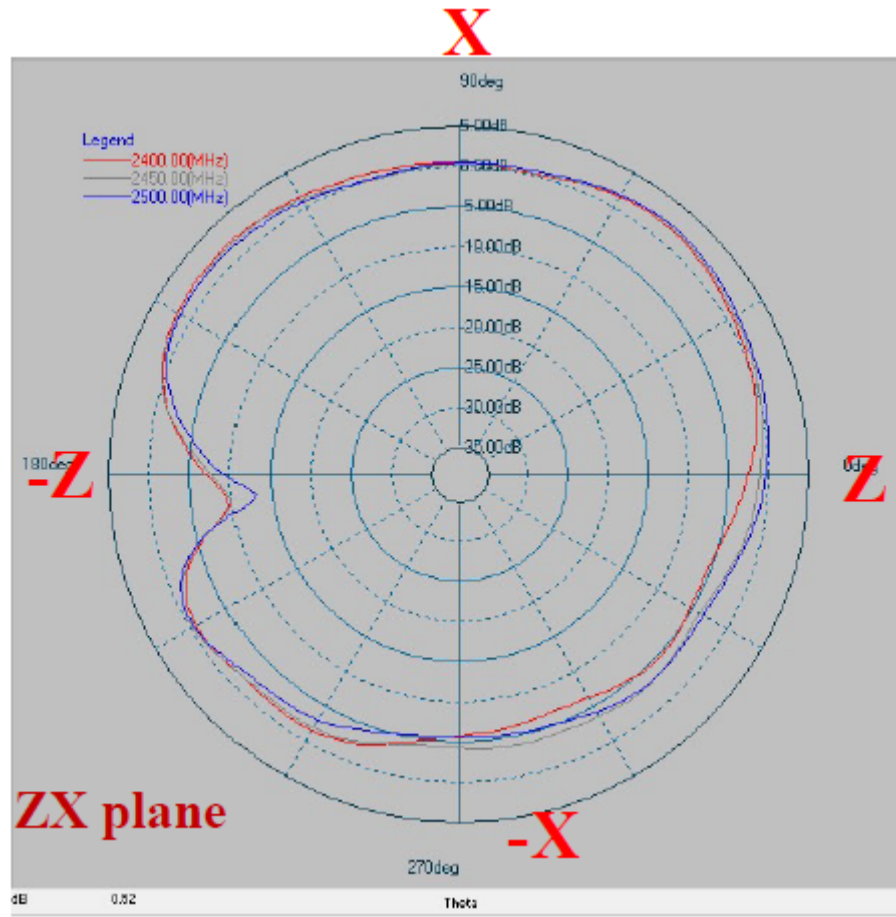


# RADIATION PATTERN

2400~2500 MHz

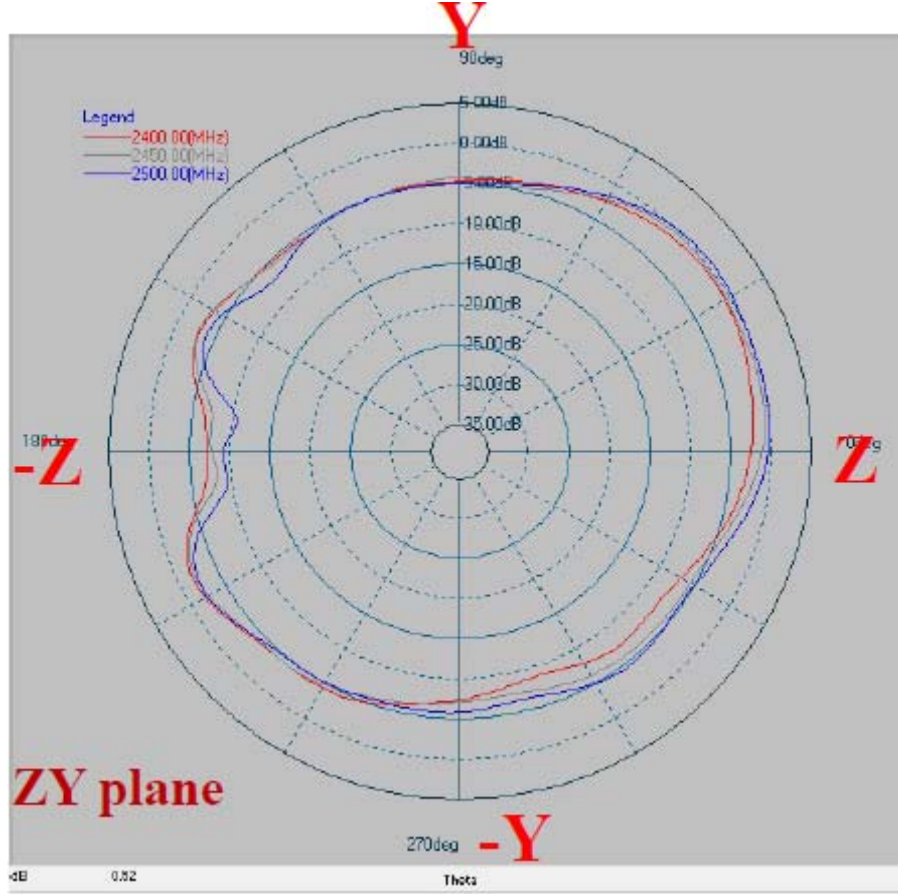
Phi=0.00deg

Gain . dB



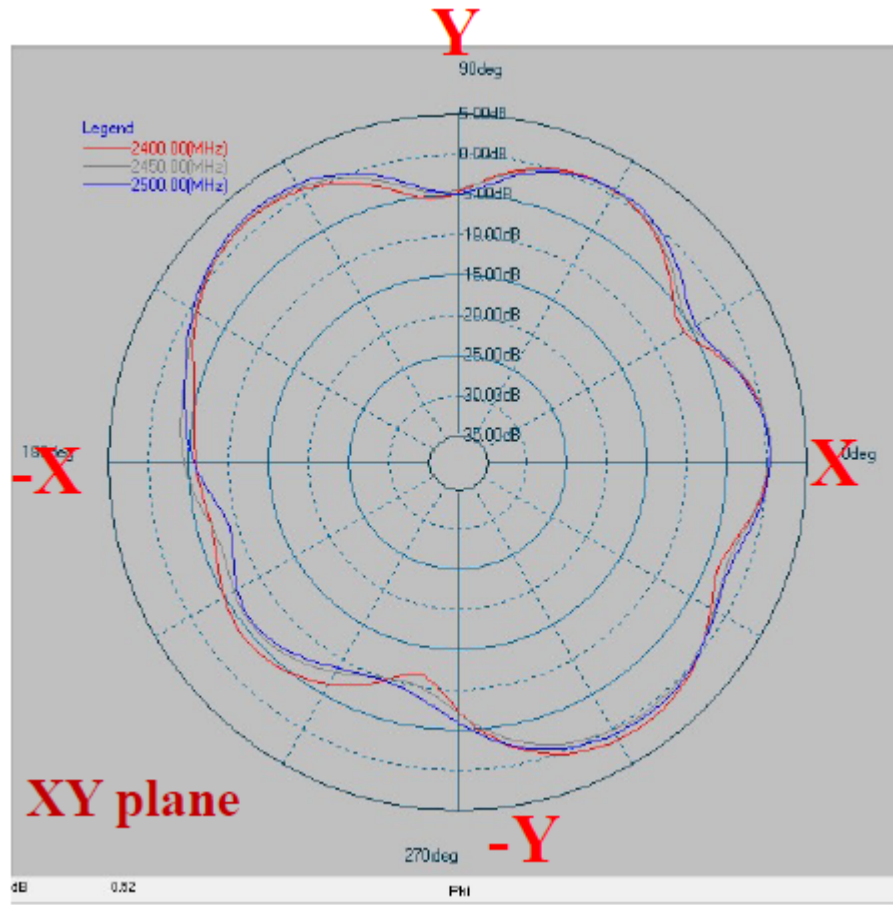
Phi=90.00deg

Gain . dB



Theta=90.00deg

Gain . dB

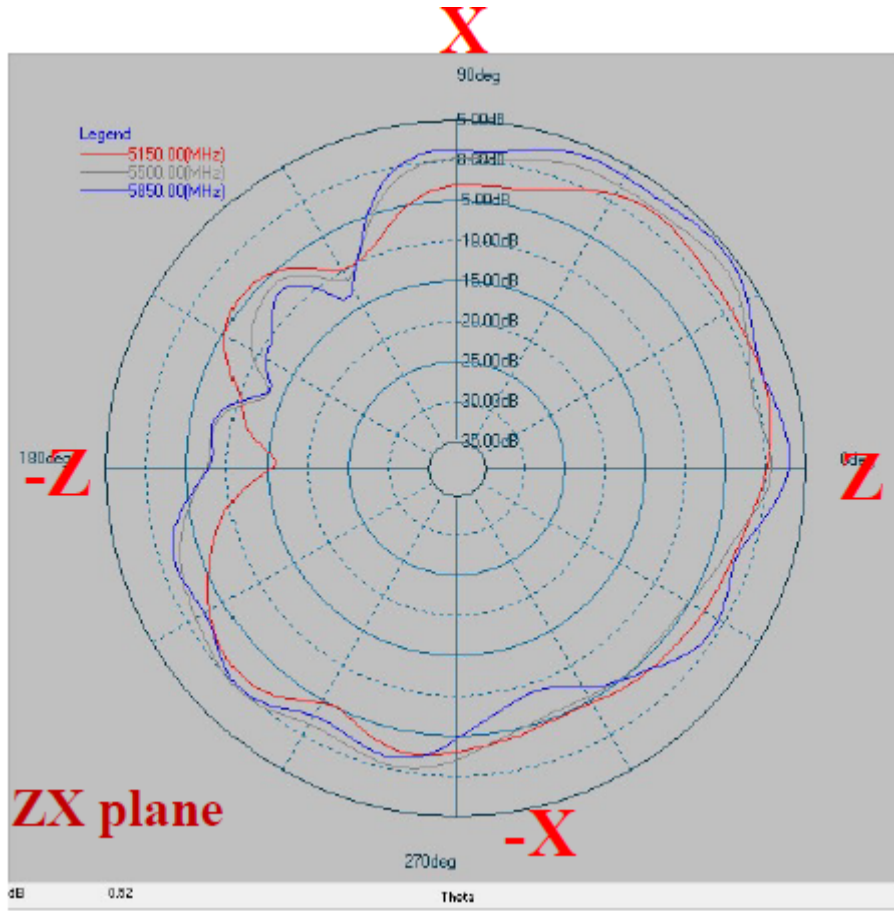


Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
2400	2.10 dB	-1.03 dB	-0.65 dB	-4.11 dB	1.58 dB	-1.92 dB
2450	2.10 dB	-0.80 dB	-0.26 dB	-3.81 dB	1.53 dB	-1.99 dB
2500	2.26 dB	-0.87 dB	0.48 dB	-3.58 dB	1.88 dB	-1.78 dB

5150~5850 MHz

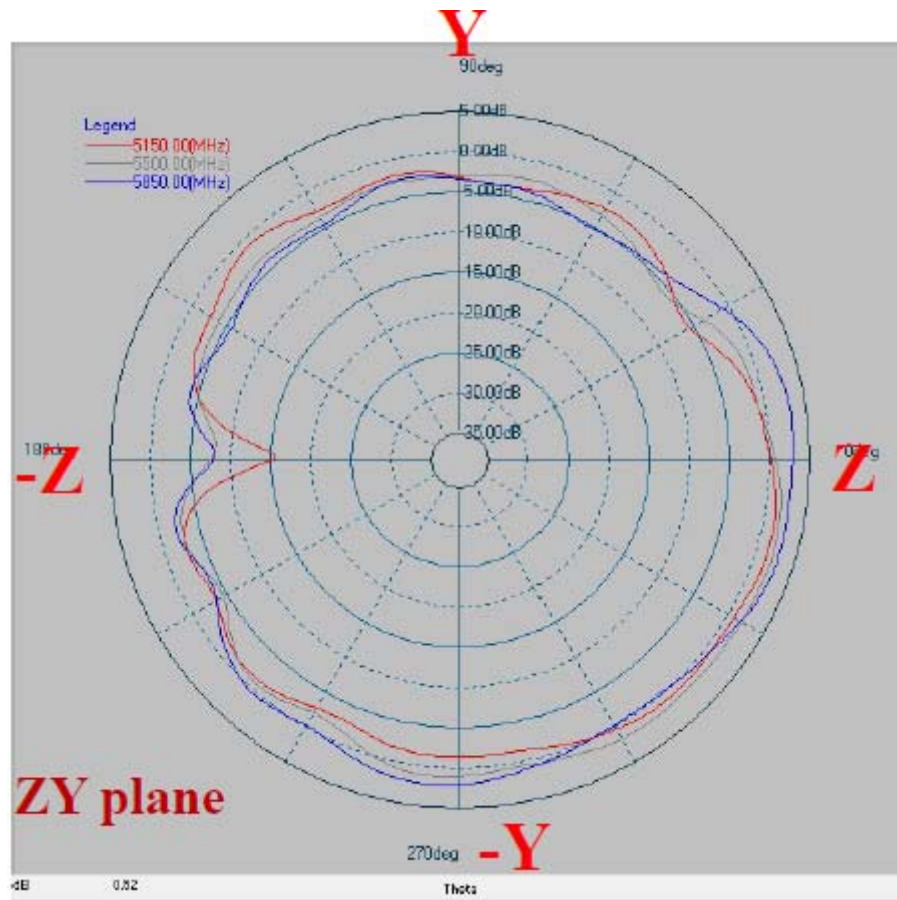
Phi=0.00deg

Gain . dB



Phi=90.00deg

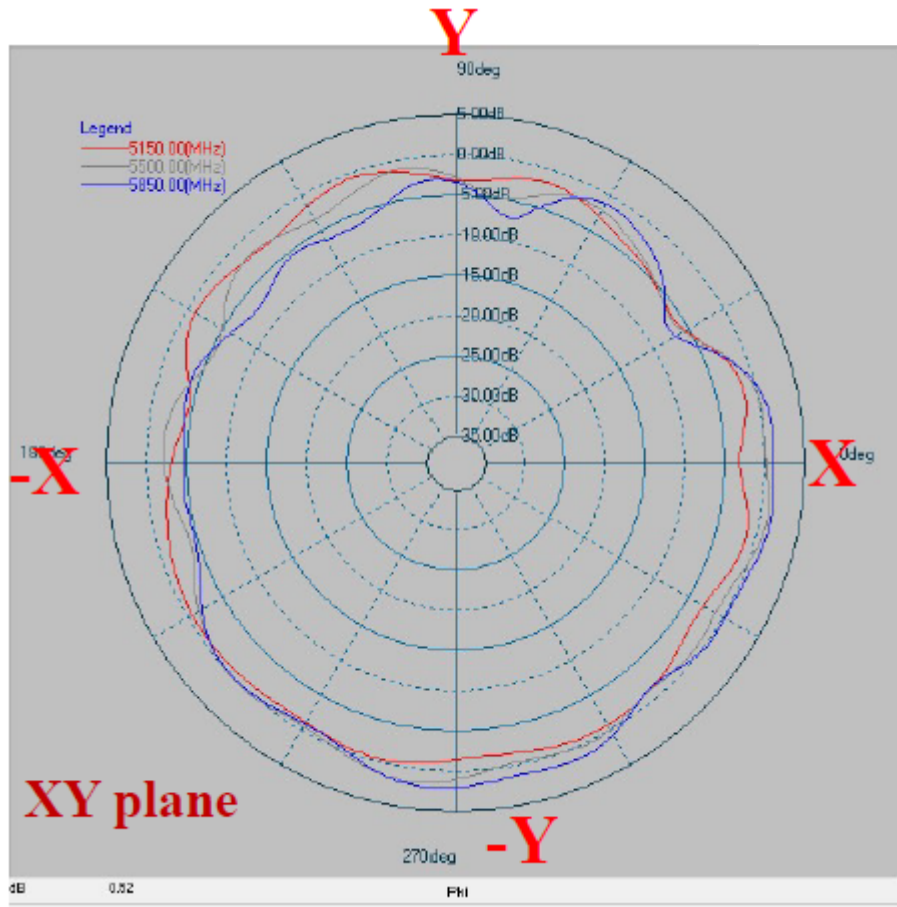
Gain . dB





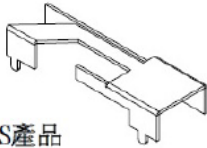

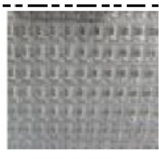









Theta=90.00deg

Gain . dB



Frequency [MHz]	ZX plane		ZY plane		XY plane	
	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]	Max Value [dB]	Average [dB]
5150	1.77 dB	-2.56 dB	1.48 dB	-1.80 dB	-0.48 dB	-1.95 dB
5500	3.19 dB	-1.51 dB	2.14 dB	-1.22 dB	1.64 dB	-1.43 dB
5850	4.45 dB	-0.66 dB	3.05 dB	-0.66 dB	2.09 dB	-1.41 dB

## Packaging

華新科技股份有限公司																							
RFMTA250800NNLB001包規			頁次： 1 之 1																				
規章編號：			版次：A版																				
制修訂日期： 2015/7/13																							
<b>產品包裝圖示：</b>																							
圖一																							
 單PCS產品		 每盤140pcs,		 每匣35盤加一個空盤																			
圖二																							
 纏繞膜纏好后貼成品標籤		 每箱裝1匣																					
圖三																							
 封箱		 貼成品標籤																					
<b>產品包裝規範：</b>																							
1.將產品放入吸塑盤，每格1PCS,每盤140PCS,除尾數盤外,產品放入吸塑盤時要注意方向正確且方向保持一致,不可錯亂;上下盤須錯開疊放。																							
2.每35盤再加一個空盤為一匣，上下各放一塊紙板再用纏繞膜以“丰”字形密封好再貼上成品條碼標籤;（注：用纏繞膜纏時勿纏太緊，以防產品變形），每匣35*140=4900pcs,除尾數																							
3.產品放于紙箱中時不能高出紙箱頂部;每箱裝1匣,4900PCS*1=4900PCS/箱，除尾數箱外																							
<b>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</b>																							
			<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;">2015/7/13</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> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>			變更時間	變更版別	變更內容	2015/7/13	A版	新版發行												
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(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：	張志偉	審核：	尤印化	制定：	潘丹鳳																		