

# APPROVAL SHEET

## (RoHS)

**CUSTOMER** : Laird

**CUSTOMER'S  
PART NO.** :

**DESCRIPTION** : RF ANTENNA ASSEMBLY

**PART NO.** : EDA-8709-2G4C1-B27-CY

**DATE** :

**AUTHORIZED BY** : *Marco Hsu*

|                   | FULLY<br>APPROVED | PARTIALLY<br>APPROVED | REJECTED |
|-------------------|-------------------|-----------------------|----------|
| <b>SIGN</b>       |                   |                       |          |
| <b>SUGGESTION</b> |                   |                       |          |

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EDA-8709-2G4C1-B27\_V01 Dec. 2012

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# RF Antenna Assembly Specification

## ELECTRICAL PROPERTIES

- 1.1 Frequency Range..... 2.4GHz ~2.5GHz**
- 1.2 Impedance..... 50 Ohm Nominal**
- 1.3 VSWR..... 2 (Max)**
- 1.4 Return Loss..... -10dB (Max)**
- 1.5 Radiation..... Omni-directional (Only Antenna)**
- 1.6 Gain(peak)..... 2.32dBi (Only Antenna)**
- 1.7 Cable Loss..... 0.7dB**
- 1.8 Polarization..... Linear Vertical**
- 1.9 Admitted Power..... 1W**

## PHYSICAL PROPERTIES

- 2.1 Cable..... § 1.13 Black**
- 2.2 Antenna Cover..... TPEE**
- 2.3 Antenna Base..... PC/PBT**
- 2.4 Operating Temp..... -25°C ~ +75°C**
- 2.5 Storage Temp..... -30°C ~ +75°C**
- 2.6 Color..... Black**
- 2.7 Connector..... IPEX Compatible(MHF4)**



# Mechanical Specification

| LTR | DESCRIPTION | DATE     | REQ. BY |
|-----|-------------|----------|---------|
| △   | NEW Release | 12/05/12 | HWCHAN  |
|     |             |          |         |
|     |             |          |         |

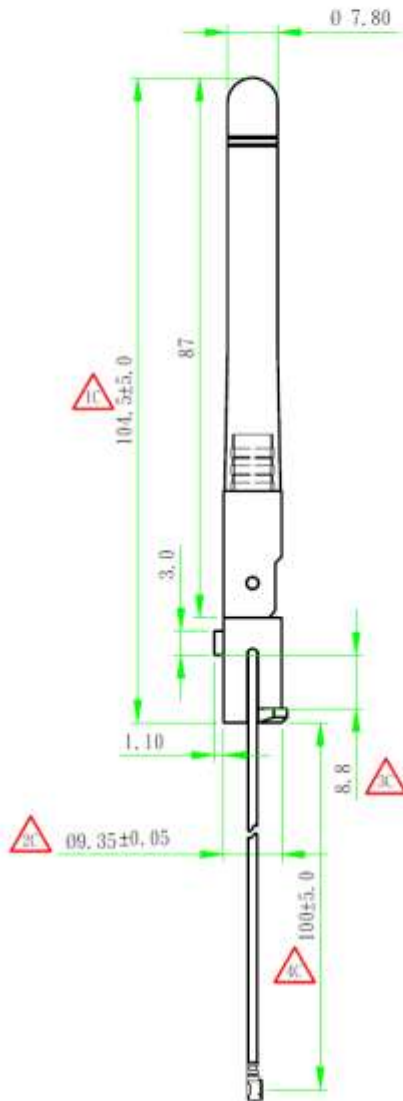
RoHS COMPLIANT

## MECHANICAL

Antenna Cover : TPEE  
Antenna Base : PC/PBT  
Color: Black

## ELECTRICAL

Frequency : 2.4GHz  
Cable : Coaxial Cable 1.13( Black)  
Connector : IPEX Compatible(MHF4)



※凡標記△記號者, 為品管檢驗之尺寸

|                                |                                |                                                                            |                                     |
|--------------------------------|--------------------------------|----------------------------------------------------------------------------|-------------------------------------|
| 設計 DR.<br>HWCHAN<br>2012/12/05 | 核准 APP.<br>Marco<br>2012/12/05 | 容許公差 TOLERANCE<br>.XXX ±0.20<br>.XX ±0.35<br>.X ±0.50<br>X ±1.00<br>ANG ±5 | 品名<br>ARTICLE<br>EDA-8709-2G4C1-B27 |
| 版本說明                           | REVISION NOTE                  |                                                                            |                                     |
| MAGLAYERS                      |                                |                                                                            | 單位 UNIT<br>mm                       |
|                                |                                |                                                                            | 比例 SCALE<br>****                    |
|                                |                                |                                                                            | 張數 SHEET<br>1                       |
|                                |                                |                                                                            | 版本 REV.<br>A                        |



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# Test Report

## ELECTRICAL CHARACTERISTICS

P/NO: EDA-8709-2G4C1-B27

Spec: 2.4 GHz ~2.5GHz

S11

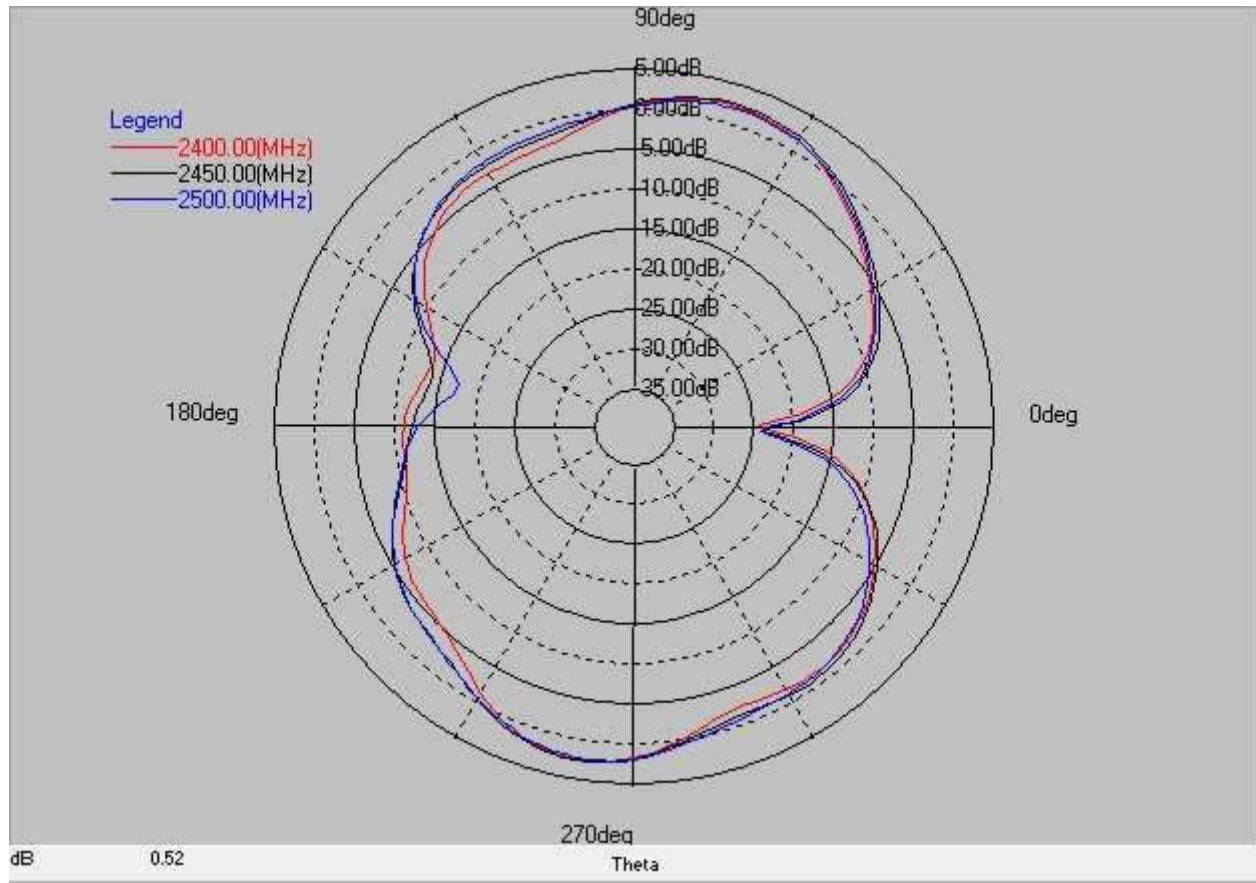


VSWR



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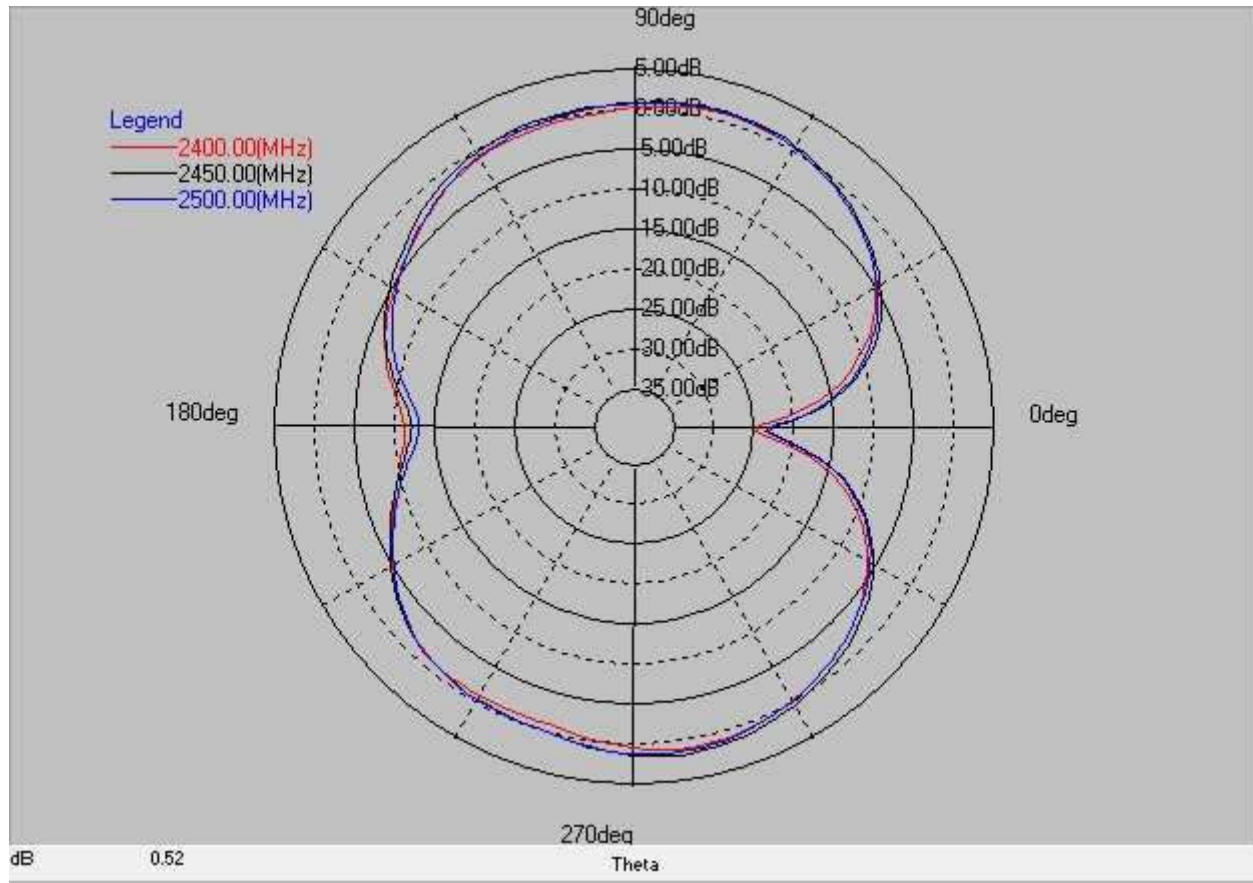
Frequency(MHz) : 2400~2500. Pattern Field : X-Z plane



| Layer     | Max value | Min value | Average  |
|-----------|-----------|-----------|----------|
| 2400(MHz) | 2.05 dB   | -24.34 dB | -2.61 dB |
| 2450(MHz) | 2.25 dB   | -23.80 dB | -2.07 dB |
| 2500(MHz) | 2.16 dB   | -24.13 dB | -2.29 dB |



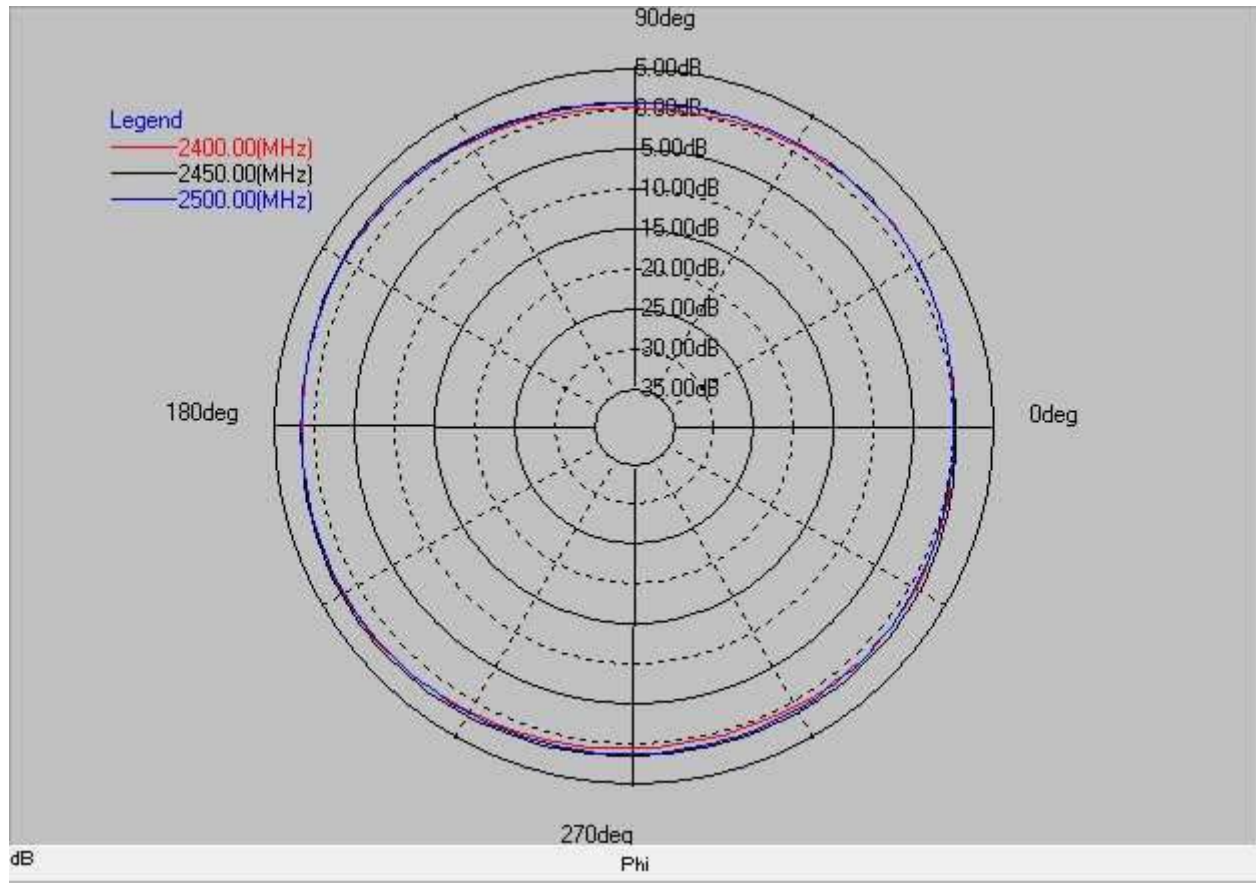
Frequency(MHz) : 2400~2500. Pattern Field : Y-Z plane



| Layer     | Max value | Min value | Average  |
|-----------|-----------|-----------|----------|
| 2400(MHz) | 0.89 dB   | -24.94 dB | -2.45 dB |
| 2450(MHz) | 1.59 dB   | -23.09 dB | -1.85 dB |
| 2500(MHz) | 1.30 dB   | -23.44 dB | -2.16 dB |



Frequency(MHz) : 2400~2500. Pattern Field : X-Y plane

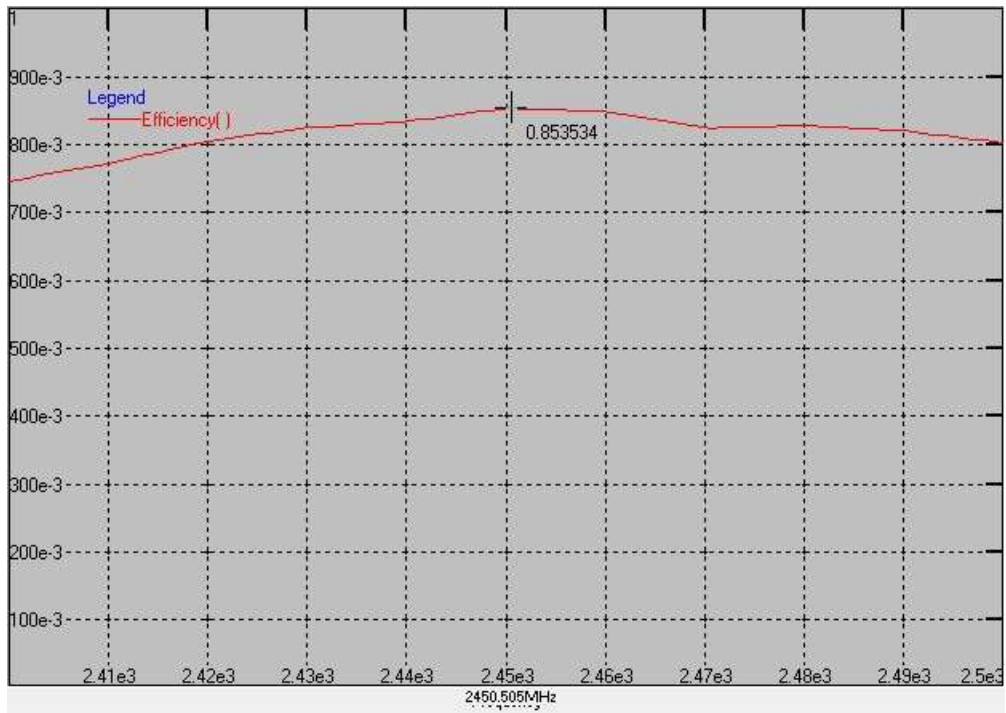


| Layer     | Max value | Min value | Average |
|-----------|-----------|-----------|---------|
| 2400(MHz) | 2.12 dB   | -0.06 dB  | 1.02 dB |
| 2450(MHz) | 2.32 dB   | 0.34 dB   | 1.40 dB |
| 2500(MHz) | 1.91 dB   | 0.16 dB   | 1.15 dB |





## Antenna Efficiency



Maximum Efficiency At 2.4~2.5GHz: 85.35%



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