



# 承認書

## SPECIFICATION FOR APPROVAL

客戶  
CUSTOMER

麗台科技股份有限公司

品名  
DESCRIPTION

341AEWA0802000A0  
FM BAND&PCB MODULE

詮欣料號  
PART No.

341AEWA0802000A0

客戶料號  
CUSTOMER P/N

341AEWA0802000A0



PREPARED

CHECKED

APPROVED

詮欣股份有限公司  
CHANT SINCERE CO., LTD

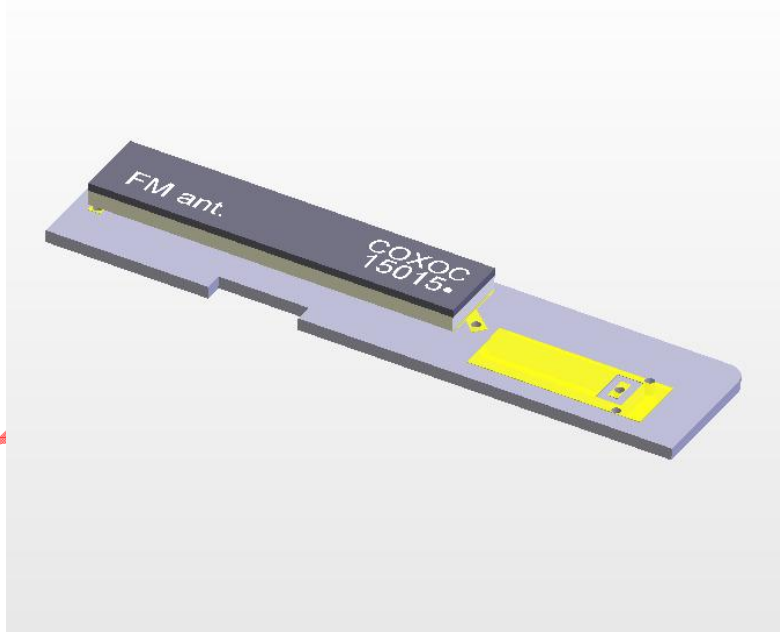
台北縣汐止市大同路三段188號7F-2  
7F-2, No.188, SEC.3, TA TUNG ROAD, HSI CHIH  
TAIPEI HSIEN, TAIWAN,  
TEL : 886-2-86471251  
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FM Band  
<Patent Protection>

# ***Approval Sheet***

***FM Band PCB Module***



**341AEWA0802000A0**

**Ver. 1.00**

**2007/04/30**

**CHANT SINCERE CO.,LTD.**

## DESCRIPTIONS

The exciting **341AEWA0802000A0** is one of the world's high-performance FM 88~108MHz small antennas module. It is for FM Radio, Mobile phone, Audio Player applications. This FM antenna comprises are adiating structure of multiple meandered conducting strips, which are developed on a tiny piece of Printed Circuit Board (PCB) and packed with a Thermal Plastic dielectric composite material to achieve size,performance characteristics and cost effectiveness superior to other designs. The dimensions is 41.23 mm (L) x 9.16 mm (W) x 2.30 mm (T).

## APPLICATIONS

- FM Radio
- Mobile Phone
- Audio Player

Don't Copy

## SPECIFICATIONS

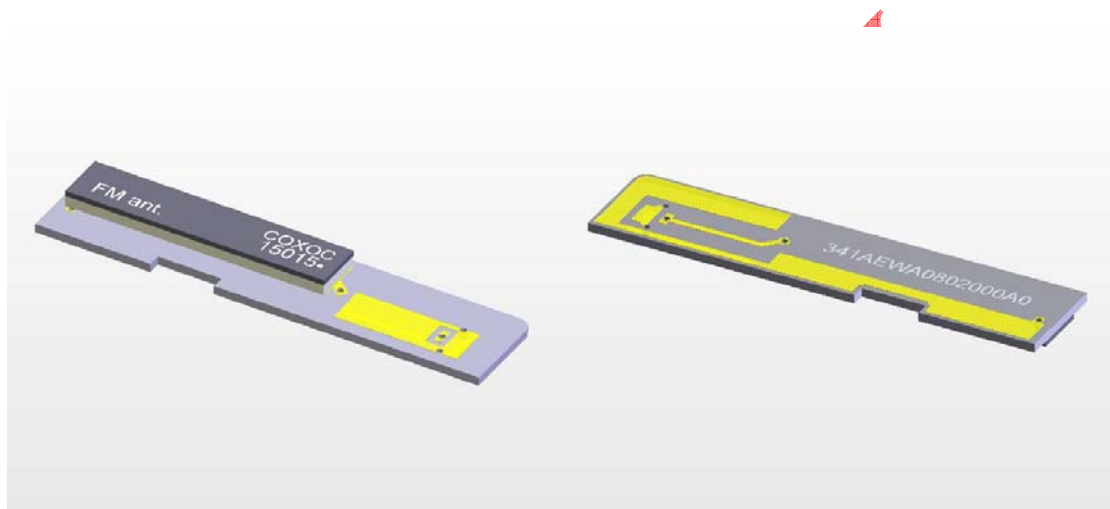
### ■ 341AEWA0802000A0

## KEY FEATURES:

- Miniaturized Size (**41.23×9.16×2.30** mm<sup>3</sup>)
- Impedance-Matching Free
- SMD Type
- Cost-Effective

## MAIN APPLICATIONS:

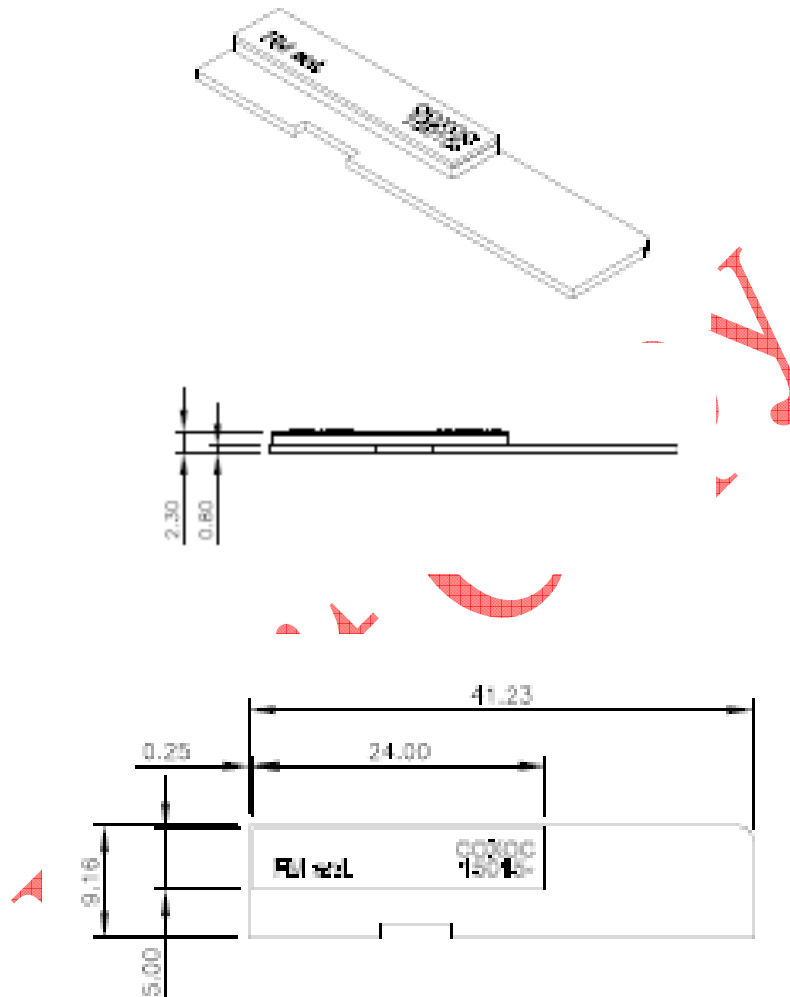
- Wireless communications in FM Band



|                              | FM Antenna module      |
|------------------------------|------------------------|
| Dimension (mm <sup>3</sup> ) | <b>41.23×9.16×2.30</b> |
| Central Frequency (MHz)      | 88~108                 |
| Return Loss                  | -3dB (max.)            |
| Polarization                 | Linear                 |
| Pattern                      | Omni-Directional       |
| Impedance (Ω)                | 50                     |
| Operating Temperature (°C)   | -25 ~ +85              |
| Construction                 | LCP Insert Molding     |

## CHARACTERISTICS

### Construction



**P.C.B size: 41.23mm(L)×9.16mm(W)×2.30mm(T)**

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# CHANT SINCERE CO.,LTD.

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**TITLE** : CHIP ANTENNA MEASUREMENT AND PERFORMANCE REPORT

**REPORT CUSTOMER** : 麗台

**PRODUCT NAME** : PND

**SAMPLE NO.** : 925D01E15015013

**DESCRIPTION** : FM CHIP ANTENNA FOR FM BAND (88~108 MHz) APPLICATION

|                                                                   |                                                   |                     |
|-------------------------------------------------------------------|---------------------------------------------------|---------------------|
| CHANT SINCERE CO.,LTD                                             | MEASURED BY : C. L. Liao                          | APPROVAL BY : Belle |
| WEB SITE : <a href="http://www.coxoc.com.tw">www.coxoc.com.tw</a> | DOCUMENT NO. : CAMR-07041901<br>DATE : 2007-04-19 | PAGE <u>NO. 8</u>   |



# Outline

- **Summary**
- **Product Feature**
- **S Parameter Measurement**
- **Actually Measurement**

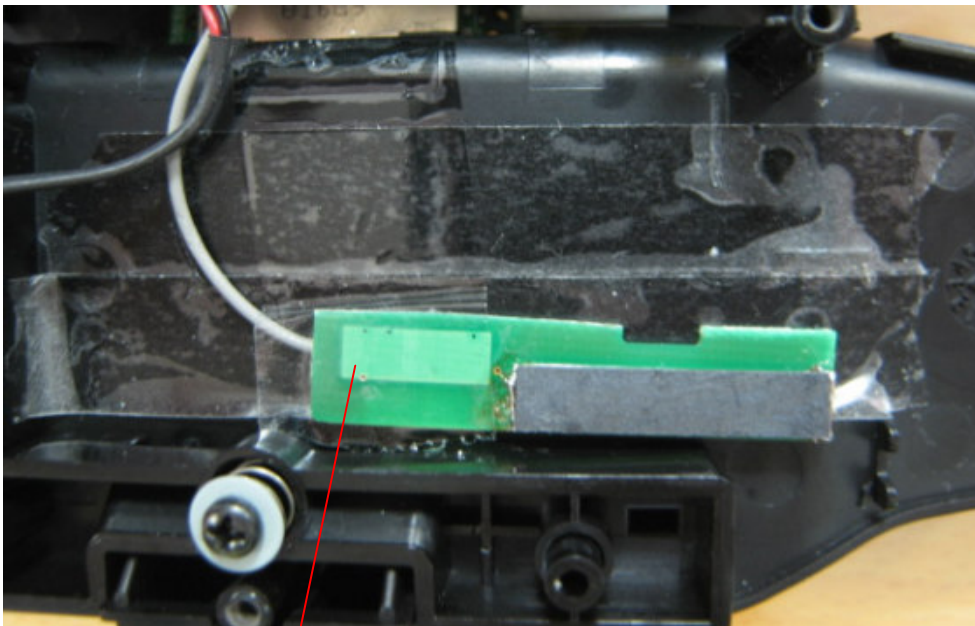


# Summary

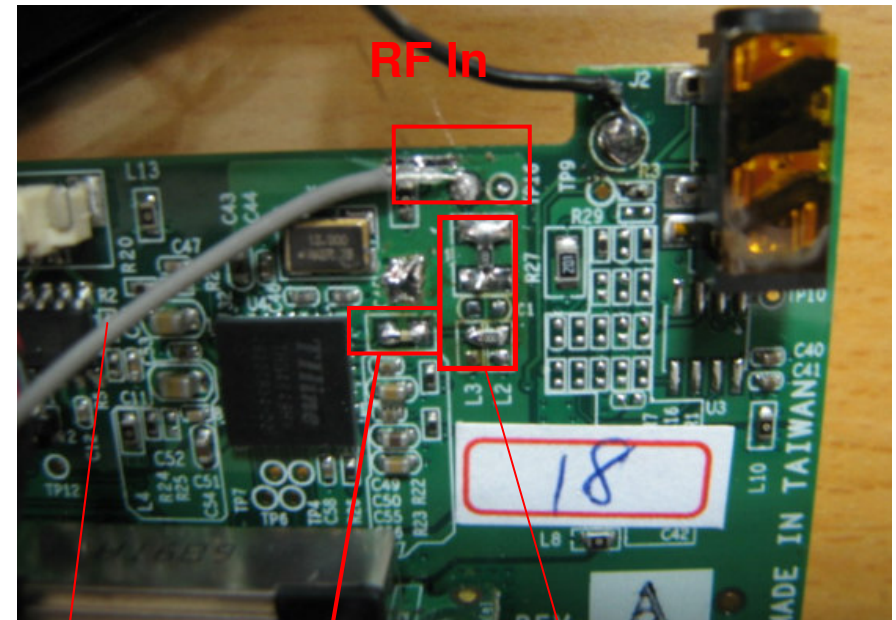
- ✦ 經測試結果在我司汐止辦公室實測距離其高頻皆大於5m的傳輸距離，低頻部分87.7MHz、87.9MHz與88.1MHz亦有約5m的傳輸距離，但88.3 ~ 88.9MHz因在此環境之地下電台干擾，所以傳輸距離約1m，但比較於原Wire antenna皆有不錯的性能表現，建議可送至於國外測試才更能確定產品的效能，在路測方面，其某些頻段皆可正常接收，但由於區域性的不同，地下電台干擾的程度不一，因此有些頻帶數亦會無法正常傳送接收。
- ✦ 在天線反射損失方面，其FM chip antenna 鐳於子板上，天線的共振點約在100MHz處，子板上所預留的Pi電路可利用於不同環境下所造成的天線頻帶偏移，將S11調整至可使用的頻帶中。



# Product Feature (1)



Antenna fix on the housing



IPX Cable

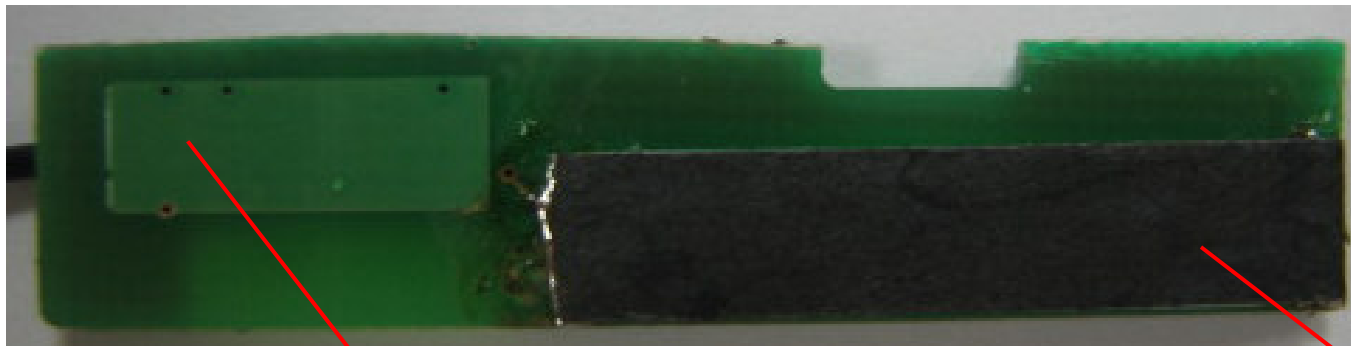
100pF  
capacitor

0 ohm short  
circuit



## Product Feature (2)

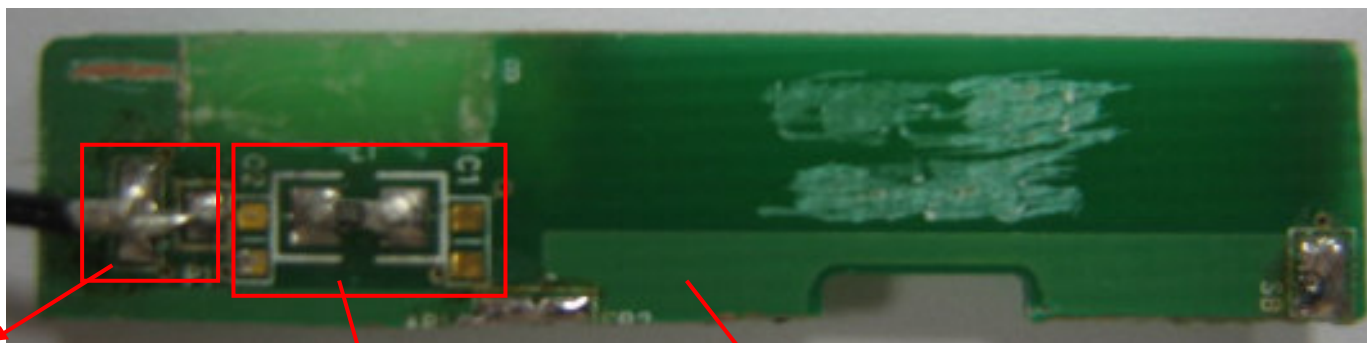
Top View :



Ground Plane

FM Chip Ant.

Bottom View :



RF In

Pi Circuit

Extend metal parts



# S Parameter Measurement

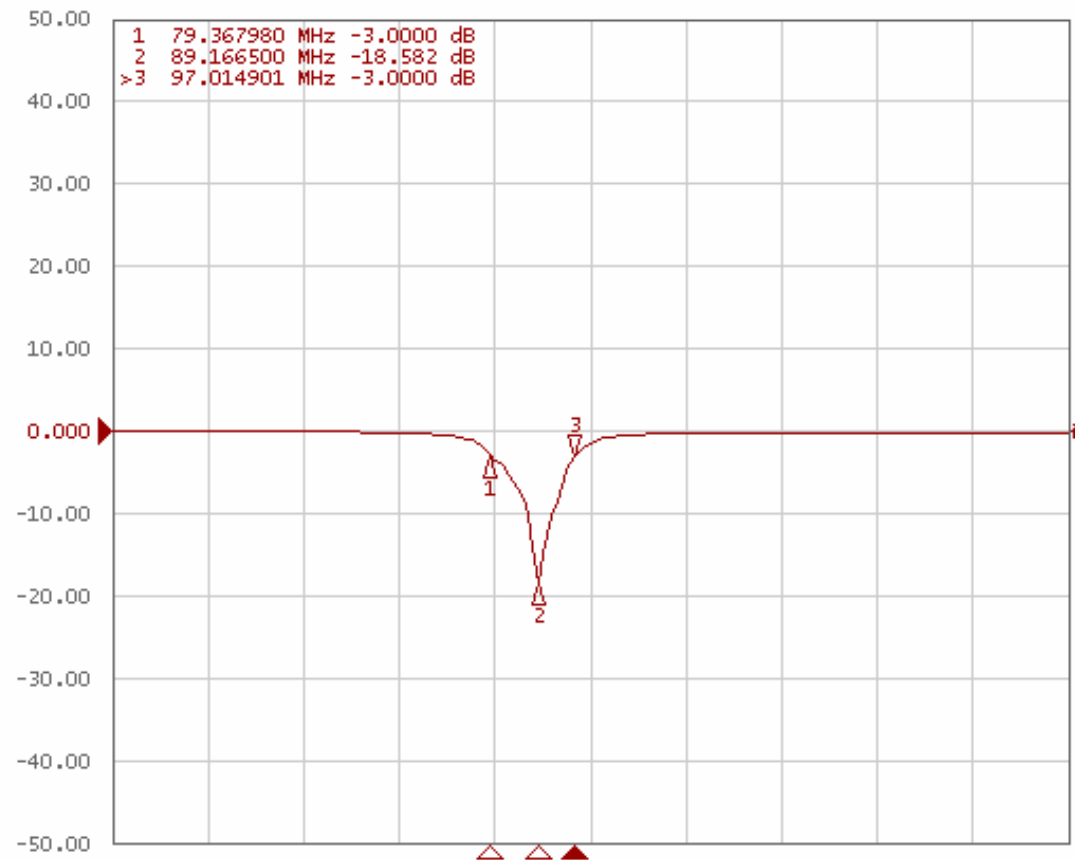
## Return loss (S11) Test Report for FM Wire Antenna

Measurement  
Instrument

(Agilent E5071B ENA, 300KHz~8.5GHz)

### A. WIRE ANTENNA

▶ Tr2 S44 Log Mag 10.00dB/ Ref 0.000dB [F2]





# S Parameter Measurement

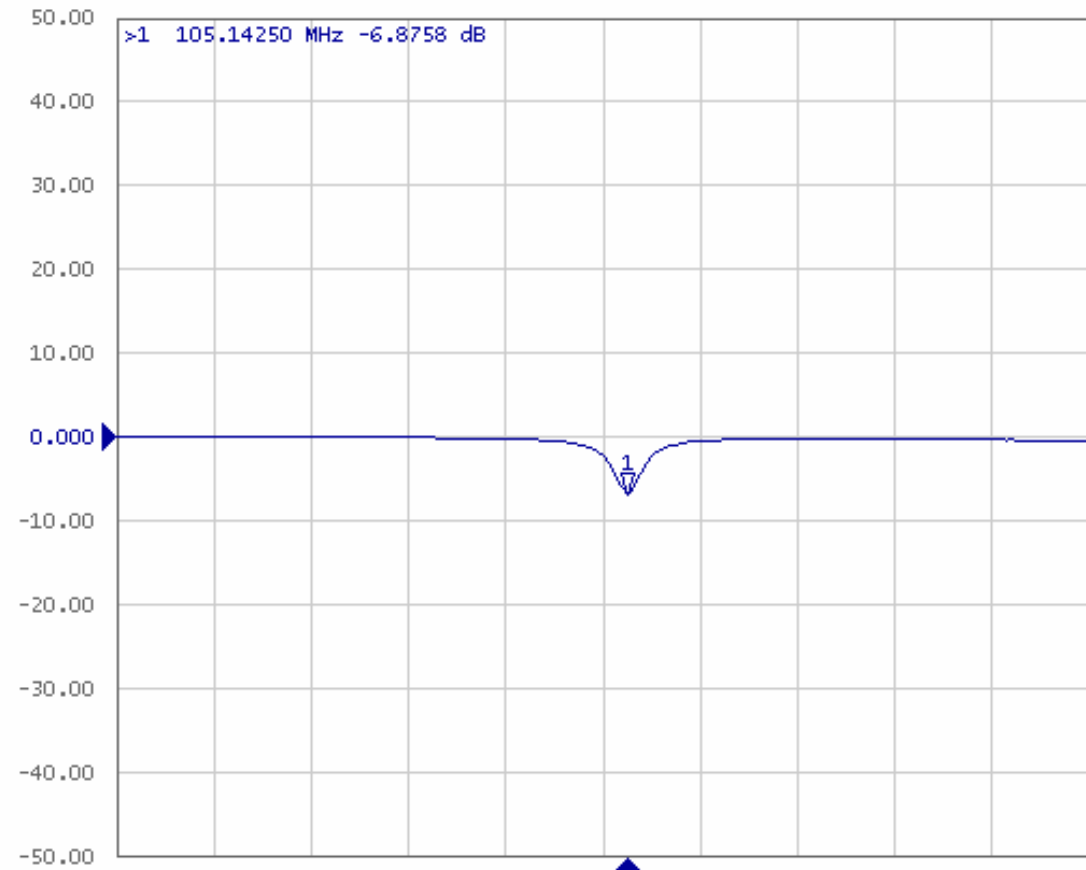
## Return loss (S11) Test Report for FM Chip Antenna

Measurement  
Instrument

(Agilent E5071B ENA, 300KHz~8.5GHz)

▶ Tr1 S44 Log Mag 10.00dB/ Ref 0.000dB [F2]

B. CHIP ANTENNA





# Actually Measurement

Test Place : His Chih Head Office



Using Walkman as receiver

|         |     |          |     |
|---------|-----|----------|-----|
| 87.7MHz | >5m | 106.7MHz | >5m |
| 87.9MHz | >5m | 106.9MHz | >5m |
| 88.1MHz | >5m | 107.1MHz | >5m |
| 88.3MHz | ~1m | 107.3MHz | >5m |
| 88.5MHz | ~1m | 107.5MHz | >5m |
| 88.7MHz | ~1m | 107.7MHz | >5m |
| 88.9MHz | <1m | 107.7MHz | >5m |