



ISM Band Planar Chip Antenna
Bluetooth, WLAN IEEE802.11b/g
2.4GHz ISM Bands

Approval Sheet

2.4GHz ISM Band Chip Antenna



920D01E13115013

Ver. 1.01

2005/8/10

CHANT SINCERE CO.,LTD.

DESCRIPTIONS

The exciting **920D01E13115013** is one of the world's high-performance 2.4GHz small chip antennas. It is for all 2.4GHz applications, including Bluetooth, IEEE802.11b/g, home RF, ZigBee and other popular and emerging standards. This chip antenna comprises a radiating structure of multiple meandered conducting strips, which are developed on a tiny piece of Printed Circuit Board (PCB) and packed with a Liquid Crystal Polymer (LCP) dielectric composite material to achieve size, performance characteristics and cost effectiveness superior to other designs. The incredibly compact surface mountable package measures a merely 8mm (L) x 5mm (W) in dimensions and is fully compatible with hand- and reflow-attachment processes. Also, no additional impedance-matching circuit is required so that the occupied length for using this antenna on PCB is just 8mm. The antenna's favorable electrical specifications, stability and cost-effectiveness make it the logical choice for a wide variety of applications in the 2.4GHz ISM band.

FEATURES

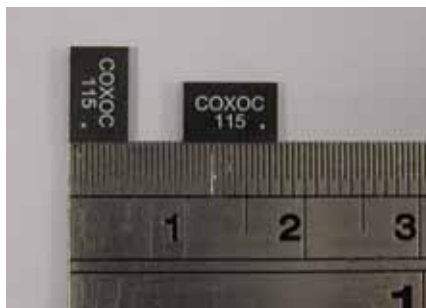
- Low Profile, Ultra-Thin, Light Weight (0.05g)
- Miniaturized Size (**8×5mm²**)
- Omni-Directional Antenna Patterns
- Low Loss (Gain > 1 dBi)
- 50Ω Characteristic Impedance
- Impedance-Matching Free
- Wide Bandwidth
- Favorable Linear Polarization
- Fully Manual and Surface Mount Compatible
- Incredibly Compact SMD Package
- Highly Stable with Variations in Temperature and Humidity
- LCP Insert Molding Technology
- Cost-Effective

APPLICATIONS

- Bluetooth
- IEEE802.11b/g
- Wireless PCMCIA Cards
- Telemetry
- Data Collection
- Industrial Process Monitoring
- Compact Wireless Products
- External Antenna Elimination
- ZigBee

SPECIFICATIONS

- 920D01E13115013



KEY FEATURES:

- Low Profile, Ultra-Thin, Light Weight (0.05g)
- Miniaturized Size (8×5mm²)
- Impedance-Matching Free
- SMD Type
- Cost-Effective

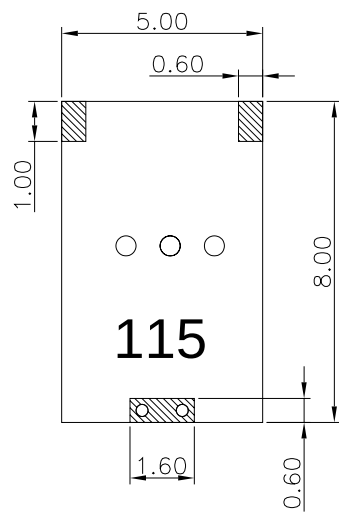
MAIN APPLICATIONS:

- Wireless communications in 2.4GHz ISM Band

	Single-Band Planar Chip Antenna
Dimension (mm ²)	8×5
Central Frequency (GHz)	2.45
Bandwidth (MHz)	>230
Gain (dBi) (Typical)	0
VSWR	2.0 (max.)
Return Loss (dB)	-10 (max.)
Polarizaion	Linear
Pattern	Omni-Directional
Impedance (Ω)	50
Operating Temperature (°C)	-25 ~ +85
Construction	LCP Insert Molding

CHARACTERISTICS

Pad Layout (unit: mm)

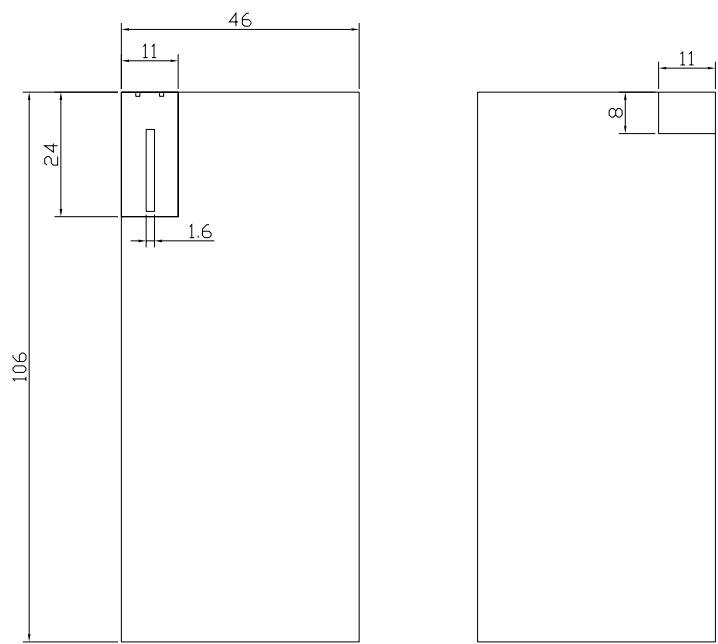


Land Pattern (unit: mm)

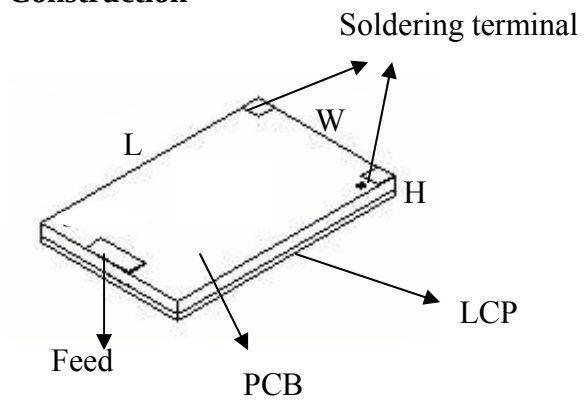
For best results, the chip antenna [920D01E13115013](#) should be mounted on one corner of 0.8mm thick FR4 PCB with 8.0×11mm² empty area and 50 Ω microstrip-line input, as shown below.

Top view

Bottom view

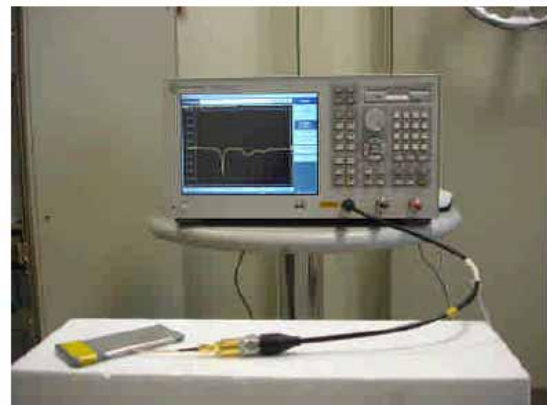
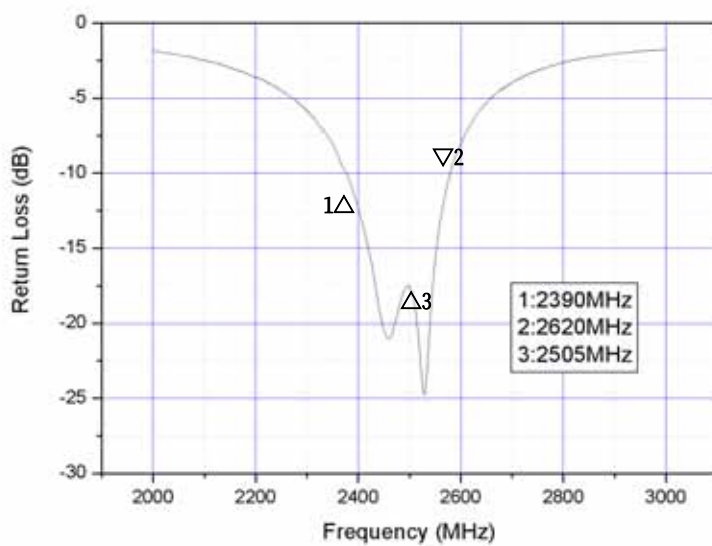


Construction

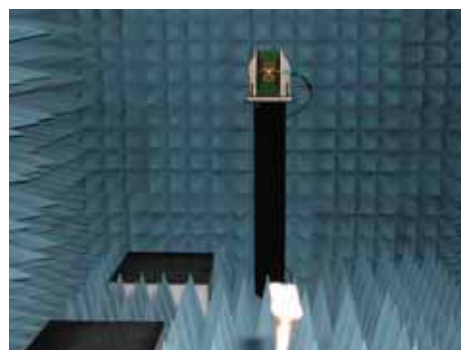
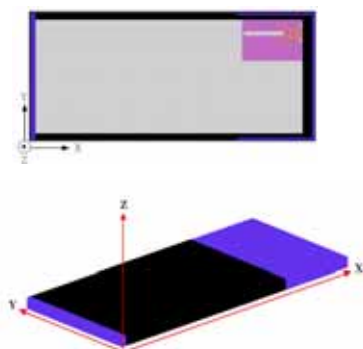


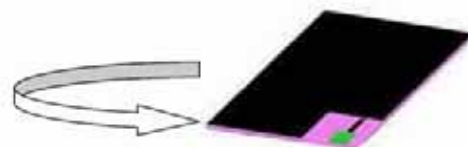
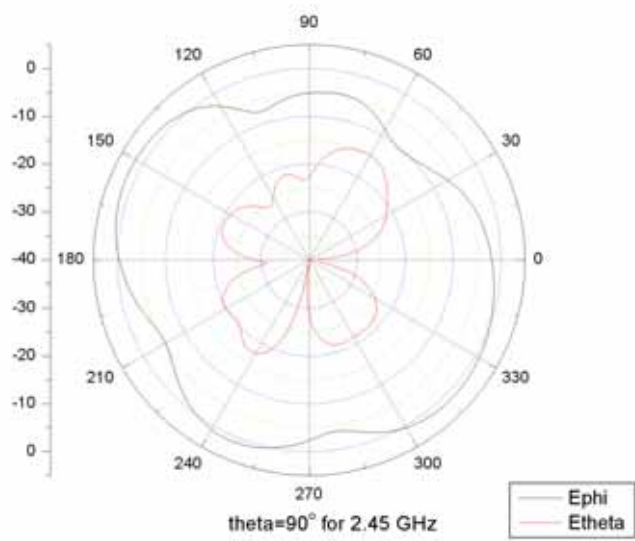
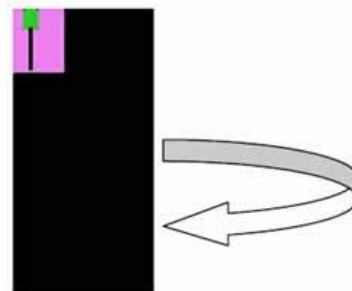
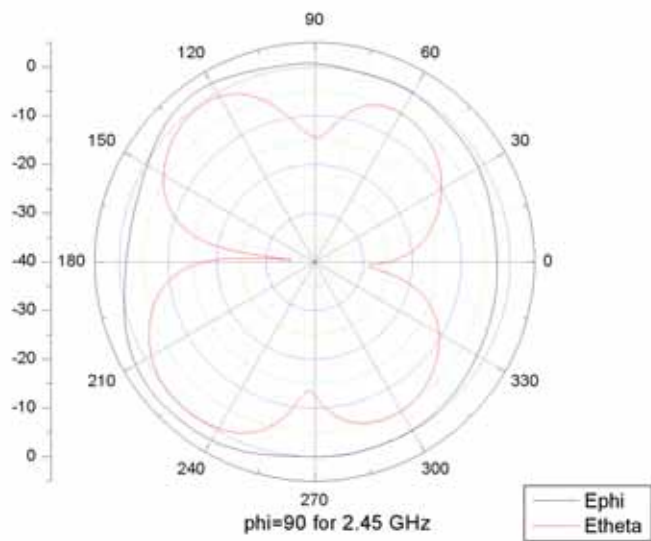
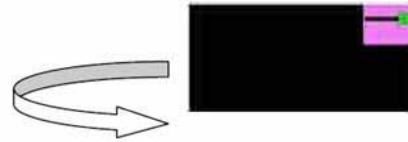
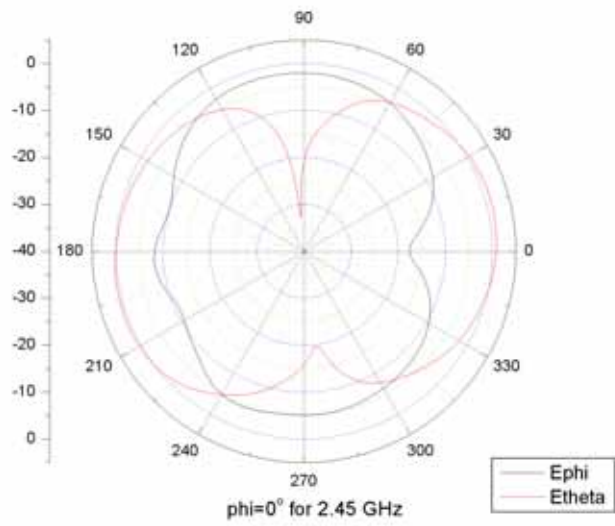
Antenna size: 8mm(L)×5mm(W)

Return Loss and Bandwidth



Radiation Pattern (unit: dBi)





HOW TO ORDER

920 D01 E 13 115 0 1 3

1 2 3 4 5

1.SERIES NO.

920=Chip Antenna

2.TYPE:

D01=SMD TYPE (5X8mm)

3.ENVIRONMENT PROTECTION MATERIAL:

E=RoHS

4.THICKNESS:

13=1.3mm

5.CENTRE FREQUENCY:

115 = 2.4 GHz

Change:

Add the no. of centre frequency on LCP molding in order to recognize.

CHANT SINCERE CO., LTD.

7F.-2, No.188, Datong Rd., Sec. 3

Sijhih City, Taipei County 221, Taiwan

TEL : 886-2-8647-1251

FAX : 886-2-8647-1872, 886-2-8647-2962

E-MAIL : aaron.hu@coxoc.com.tw

www.coxoc.com.tw