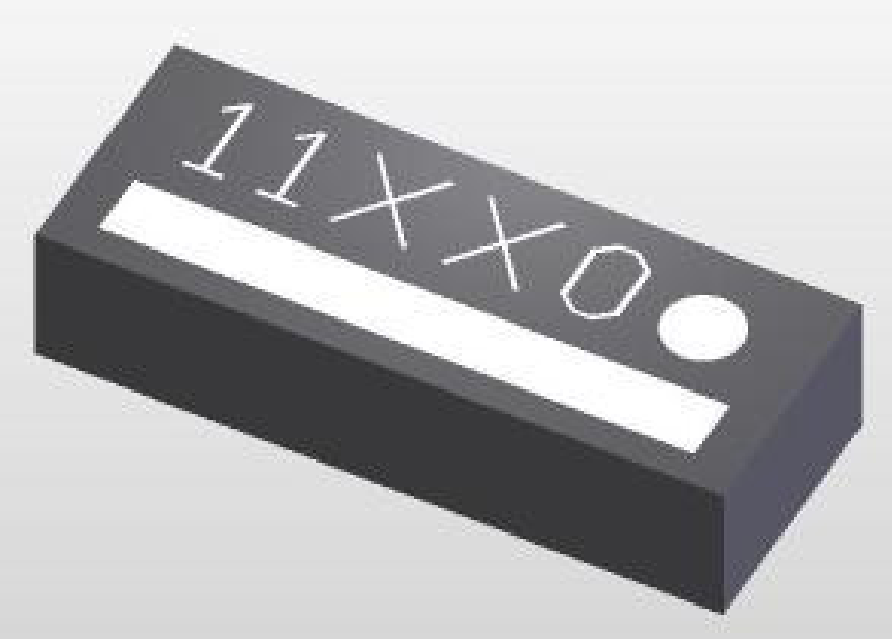
ISM Band Planar Chip Antenna
Bluetooth, WLAN IEEE802.11b/g
2.4GHz ISM Band

Approval Sheet

2.4 GHz ISM Band Chip Antenna



920D07G11XX0003

Ver. 1.00

2009/01/08

CHANT SINCERE CO.,LTD.

DESCRIPTIONS

The exciting **920D07G11XX0003** 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. The incredibly compact surface mountable package measures a merely 5.2mm(L) × 2.0mm(W) × 1.15mm (H) in dimensions and is fully compatible with SMT reflow process. 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 **(5.2×2.0×1.15 mm^3)**
- Omni-Directional Antenna Patterns
- 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
- Cost-Effective

APPLICATIONS

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

SPECIFICATIONS

- **920D07G11XX0003**

KEY FEATURES:

- Low Profile, Ultra-Thin, Light Weight (0.05g)
- Miniaturized Size (5.2×2.0×1.15mm^3)
- SMD Type
- Cost-Effective

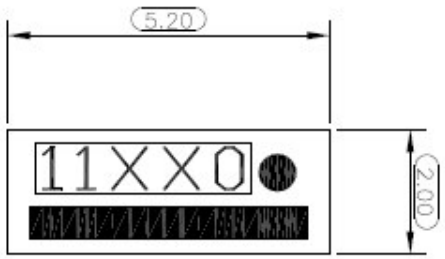
MAIN APPLICATIONS:

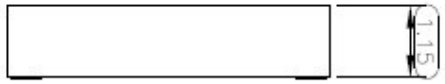
- Wireless communications in 2.4GHz ISM Band

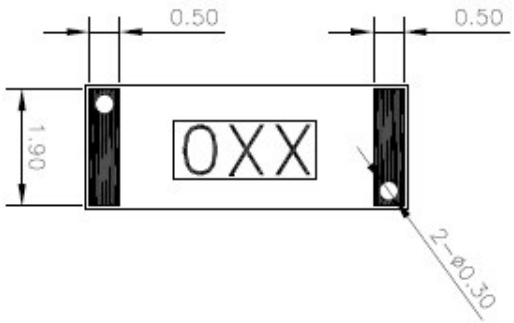
	Single-Band Planar Chip Antenna
Dimension (mm^3)	5.2×2.0×1.15
Central Frequency (GHz)	2.45
Bandwidth (MHz)	>100
Gain (dBi) (Typical)	2
VSWR	2.0 (max.)
Return Loss (dB)	-10 (max.)
Polarization	Linear
Pattern	Omni-Directional
Impedance (Ω)	50
Operating Temperature (℃)	-25 ~ +85

CHARACTERISTICS

Layout (unit: mm)

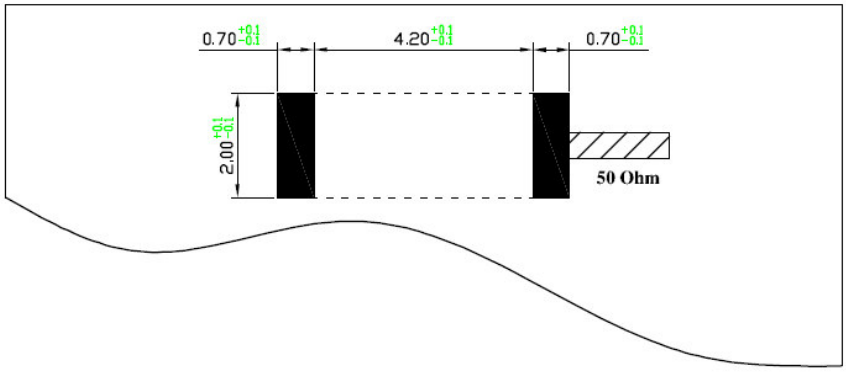






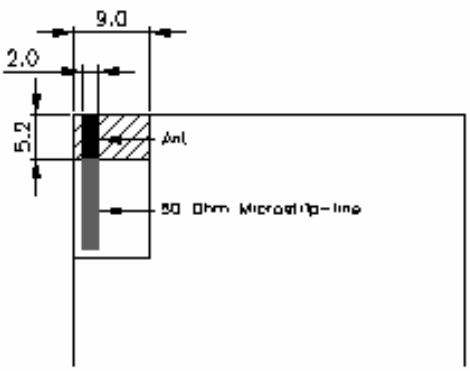
Antenna size: 5.2mm (L) × 2.0mm (W) × 1.15mm (H)

Land Pattern Reference

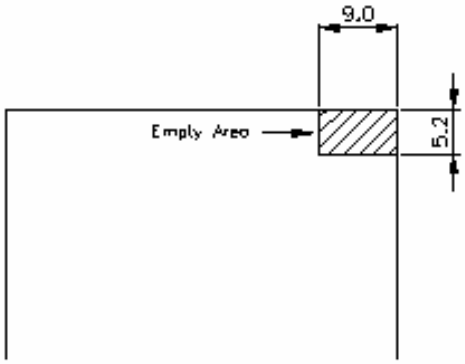


Antenna Placement

Top view



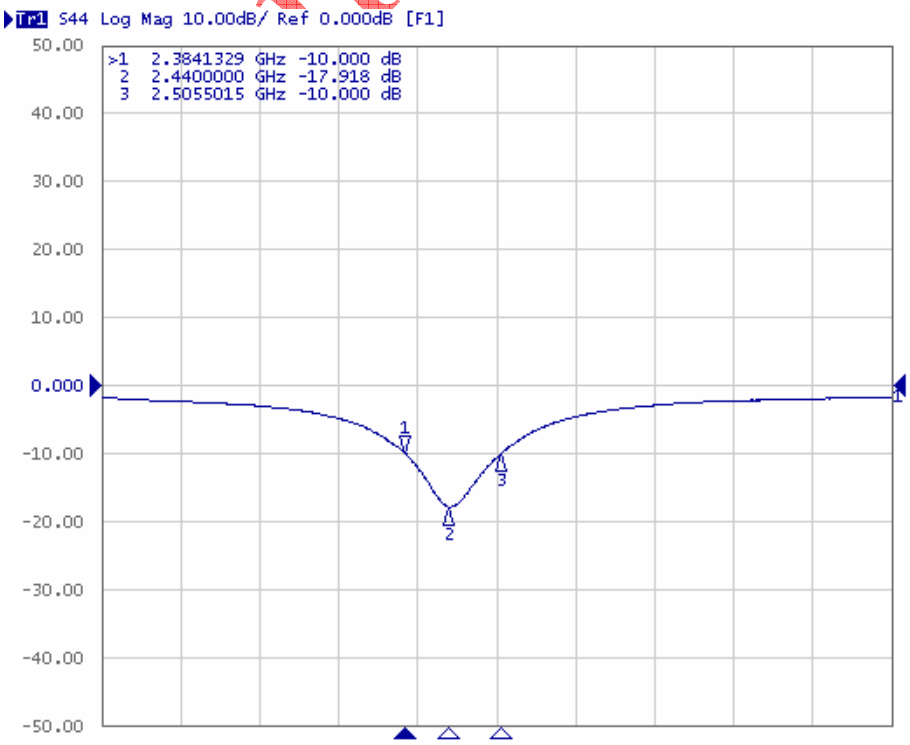
Bottom view



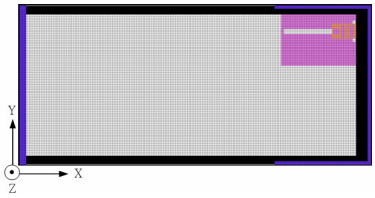
Note:

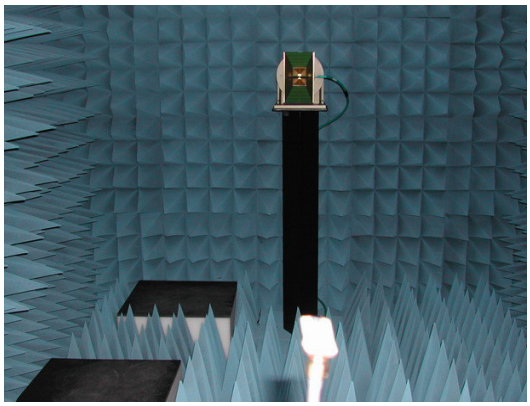
The empty area demonstrated above is 5.2×9.0mm^2. The antenna performance increases with large empty area, and vice versa. Empty area smaller than 5.2×5 mm^2 is not recommended. The antenna placement at the corner area will perform better than in other locations.

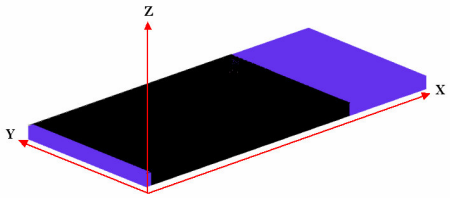
Return Loss and Bandwidth

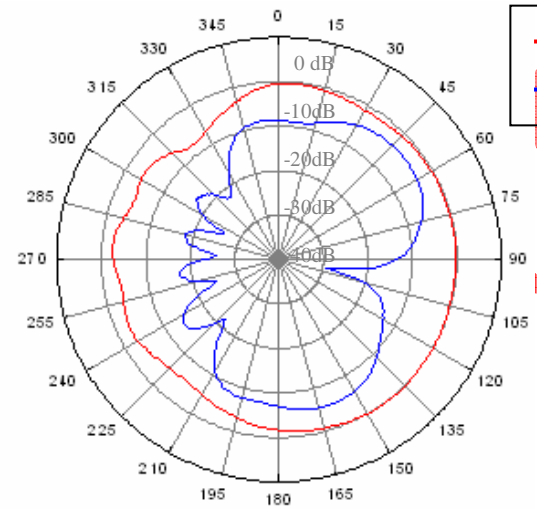


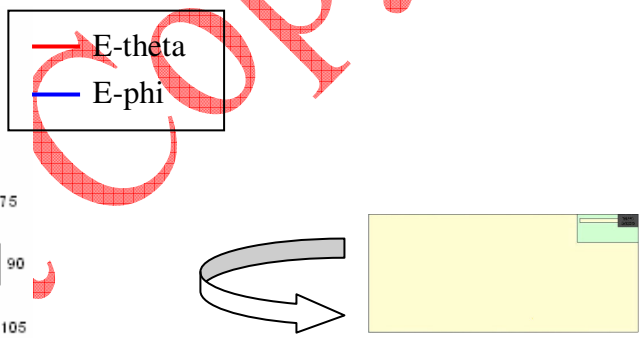
Radiation Pattern (unit: dBi)



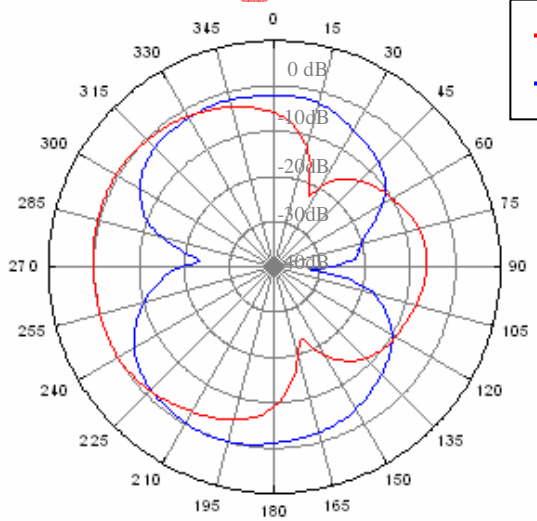


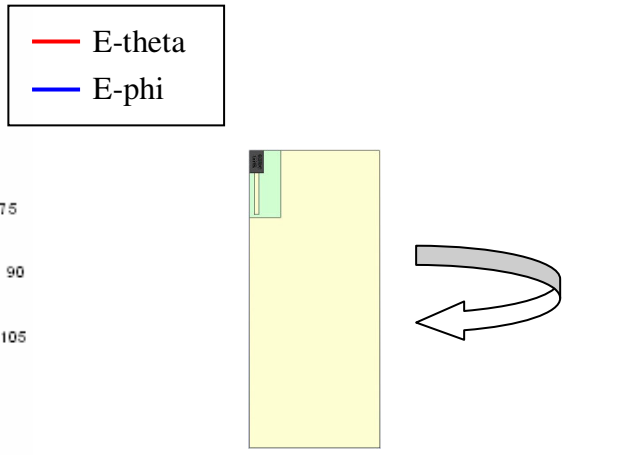




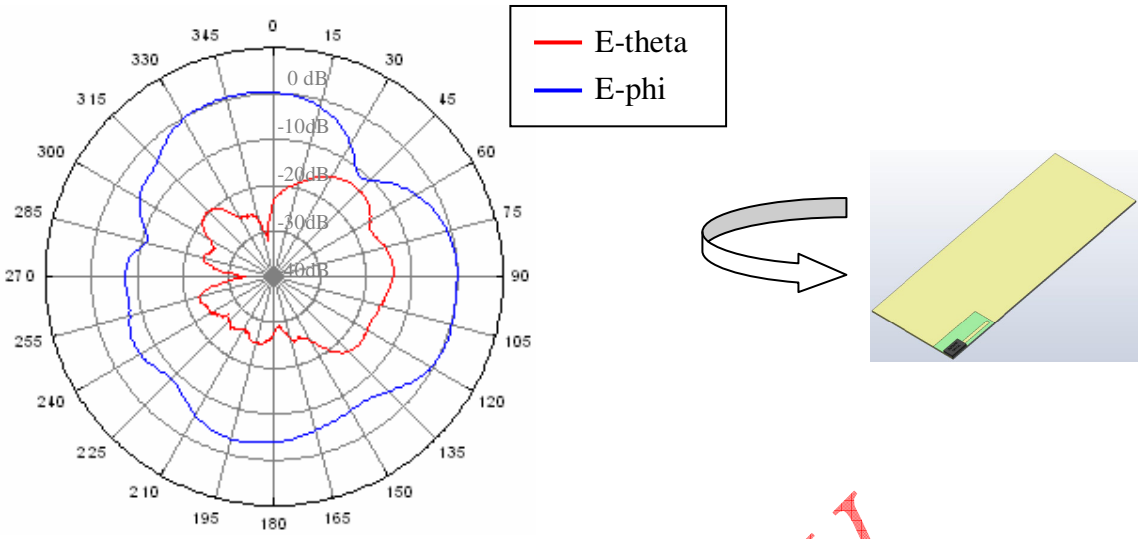


Phi=0° (X-Z plane) for 2.45 GHz





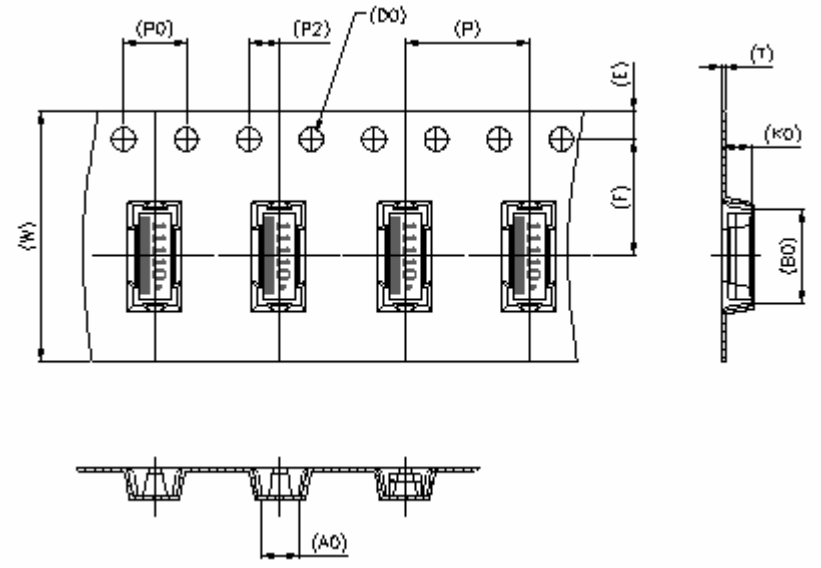
Phi=90° (Y-Z plane) for 2.45 GHz



Theta=90° (X-Y plane) for 2.45 GHz

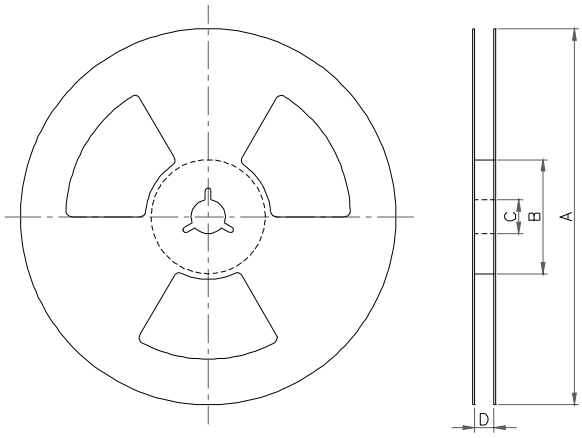
PACKING

Plastic Tape Specification (unit: mm)



Index	W	E	F	T	P	K0
Dimension(mm)	16.00 ± 0.30	1.75 ± 0.10	7.50 ± 0.10	0.25 ± 0.05	8.00 ± 0.10	1.90± 0.10
Index	P0	P2	D0	A0	B0	
Dimension(mm)	4.00 ± 0.10	2.00 ± 0.10	Φ1.50	2.40 ± 0.10	6.00 ± 0.10	

REEL DIMENSIONS (unit: mm)



Index	A	B	C	D
Dimension(mm)	Φ330	Φ100	Φ13.5	17.0 ± 0.5

Taping Quantity: MOQ=2K pieces per 13” reel.

HOW TO ORDER

920 D07 G 11 XX0 0 0 3

1 2 3 4 5

1. SERIES NO.

920=Chip Antenna

2. TYPE:

D07=2×5.2mm^2

3. ENVIRONMENT PROTECTION MATERIAL:

E=RoHS

G=RoHS (Halogen-free)

4. THICKNESS:

11=1.15mm

5. CENTRE FREQUENCY:

110 = 2.4 GHz

210 > 2.4GHz (Type 1)

220 > 2.4GHz (Type 2)

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