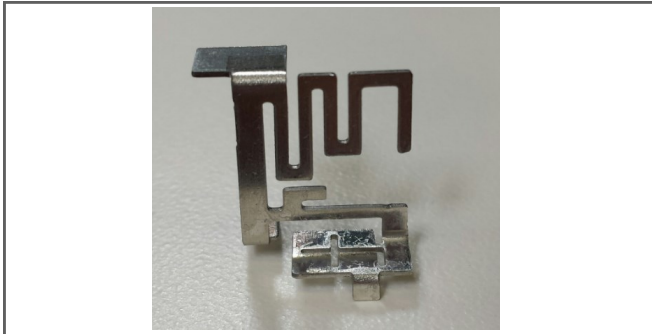


**Prestta™ WLAN with through hole features – Embedded Antenna**  
2.4 GHz (802.11 b/g/n)



**KEY BENEFITS**

Ethertronics' Prestta series of Isolated Magnetic Dipole™ (IMD) stamped metal antennas address the challenges facing today's product designers. IMD's high performance and isolation characteristics offer better connectivity and minimal interference. IMD antennas can be used in a variety of devices:

- Access Points, Gateways, Routers
- Industrial Handhelds
- WiFi enabled Televisions & Monitors
- STB
- M2M

**TECHNOLOGY ADVANTAGES**



**Stays in Tune**

IMD antenna technology provides superior RF field containment, resulting in less interaction with surrounding components. Ethertronics IMD antennas **resist de-tuning**; providing a robust radio link regardless of the usage position.

Prestta WLAN antennas use patented IMD technology in a stamped metal configuration to provide high performance. IMD antennas requires a smaller design keep-out area, carry lower program development risk which yields a quicker time-to-market, without sacrificing RF performance.

**DESIGN ADVANTAGES**

**Quicker Time-to-Market**

- By optimizing antenna size, performance and emissions, customer and regulatory specifications are more easily met.

**Greater Flexibility**

- Ethertronics' first-in-class IMD technology enables you to develop concept designs that are more advanced and that deliver superior performance in reception critical applications.

**RoHS Compliant**

- Ethertronics' antennas are fully compliant with the European RoHS Directive 2011/65/EU.

**END USER ADVANTAGES**

**Unique Form Factors Support Advanced Industrial Designs**

- Smaller, more efficient IMD embedded antennas break through restrictive design rules and provide new freedom in component placement.

**Superior Range & Signal Strength**

- Better antenna function means longer range and greater sensitivity to critically precise signals—delivering greater customer satisfaction while building brand loyalty.

**SERVICE AND SUPPORT**

**Extensive RF Experience**

- Our WLAN antennas are supported by documentation, and when needed, by the expertise of RF engineers who have integrated hundreds of antenna designs into wireless devices.

**Global Operations & Design Support**

- Ethertronics' global operations supports an integrated network of design centers that can take projects from concept to production.

# PRODUCT: Embedded Dual Band antenna WLAN b/g/n - 1002295

## Ethertronics' Internal (Embedded) Antenna Specifications.

Below are the typical specs.

### Electrical Specifications

Typical Characteristics on  
120x180mm PCB

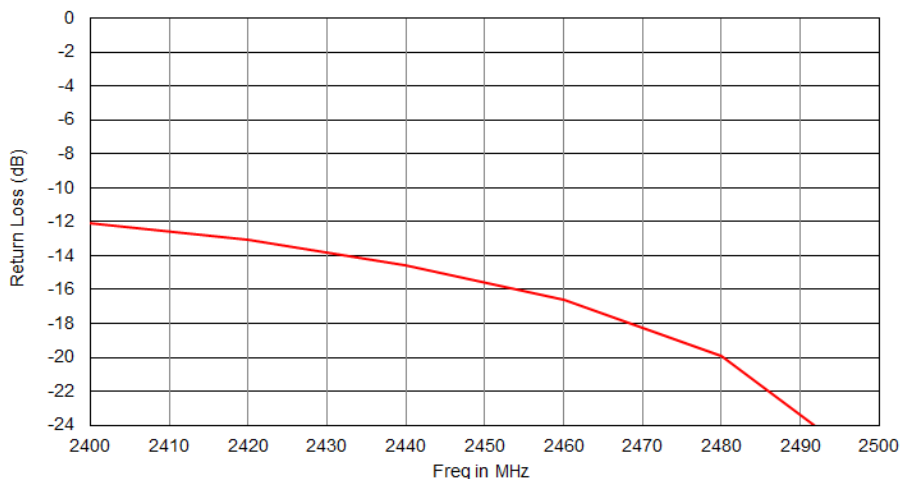
	2.400 - 2.485 GHz
Peak Gain	2.95 dBi
Average Efficiency	70%
Return Loss	$\leq -10$ dB
Feed Point Impedance	50 $\Omega$ unbalanced

### Mechanical Specifications

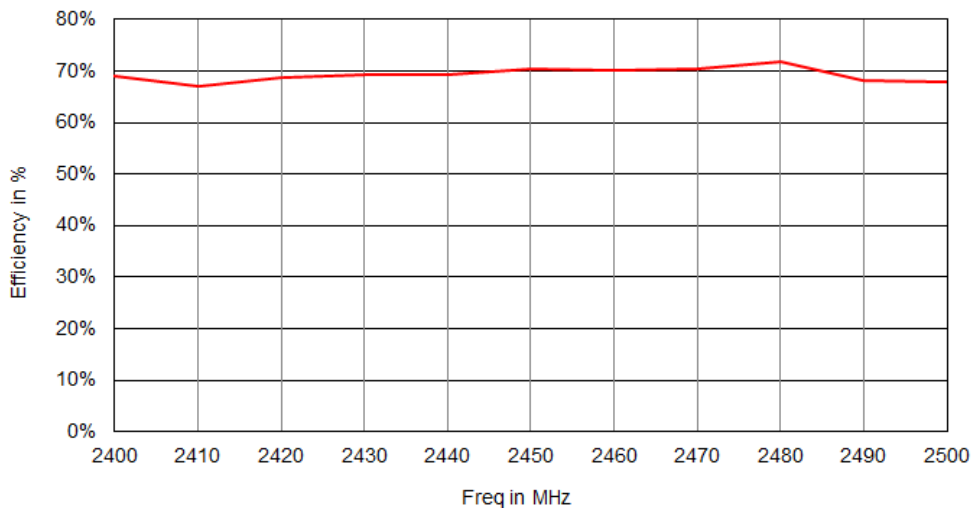
Typical Characteristics on  
120x180mm PCB

Dimensions	15.60 x 16.10 x 9.70 mm (thickness 0.5mm)
Weight	0.75g
Packaging	Delivered in Trays.

### Return Loss in the 2.4GHz band



### Efficiency in the 2.4GHz band in %



**ETHERTRONICS**

5501 Oberlin Drive, Suite 100, San Diego, CA. 92121, USA [www.ethertronics.com](http://www.ethertronics.com)  
Tel +(1) 858.550.3820 | fax +(1) 858.550.3821 | contact: [info@ethertronics.com](mailto:info@ethertronics.com)

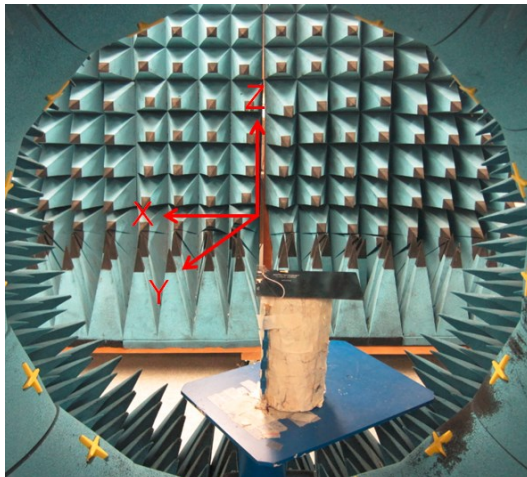
**PRODUCT: Embedded Dual Band antenna WLAN b/g/n - 1002295**

**Ethertronics' Internal (Embedded) Antenna Specifications.**

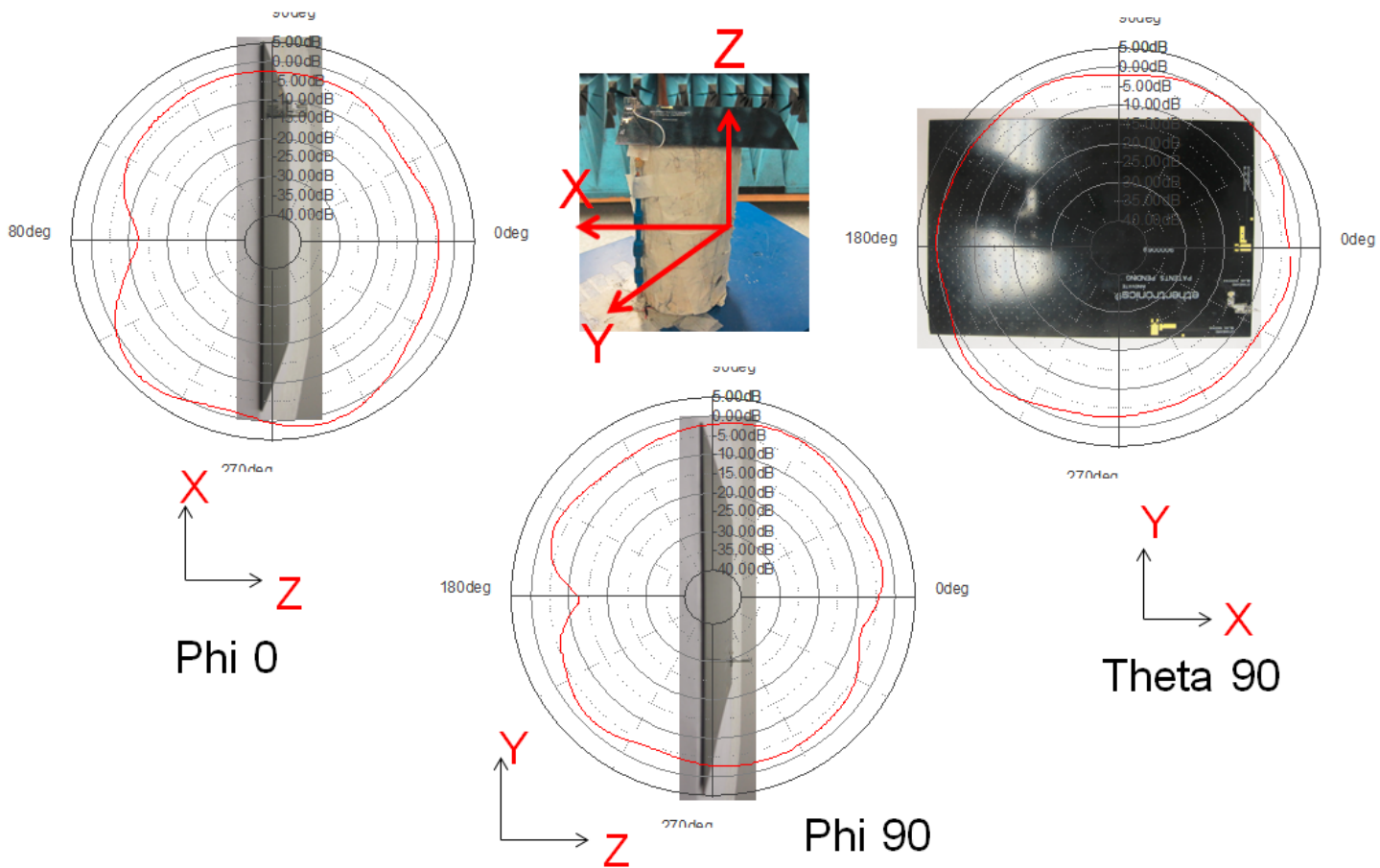
Below are the typical specs.

**Radiation Patterns Set-Up**

Typical Characteristics on 120x180mm PCB



**Radiation Patterns at 2.44 GHz band**

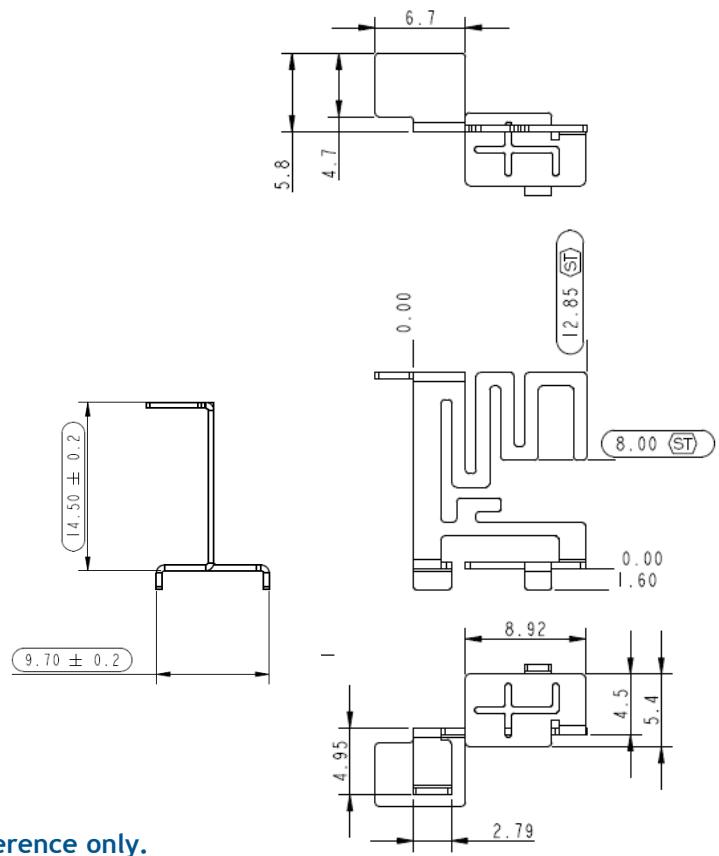
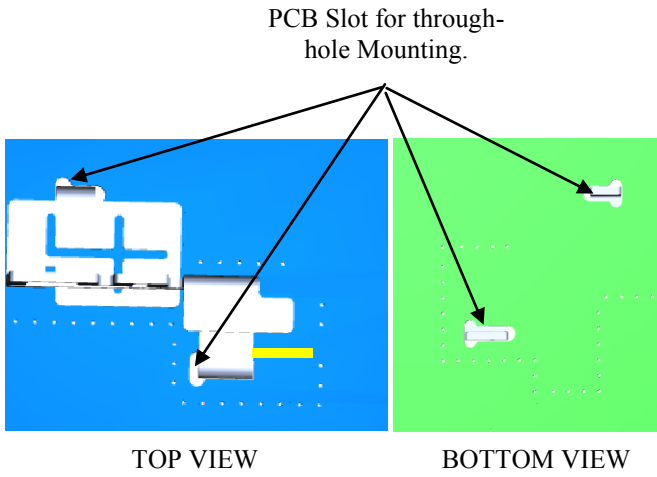


**PRODUCT: Embedded Dual Band antenna WLAN b/g/n - 1002295**

**Ethertronics' Internal (Embedded) Antenna Specifications.**

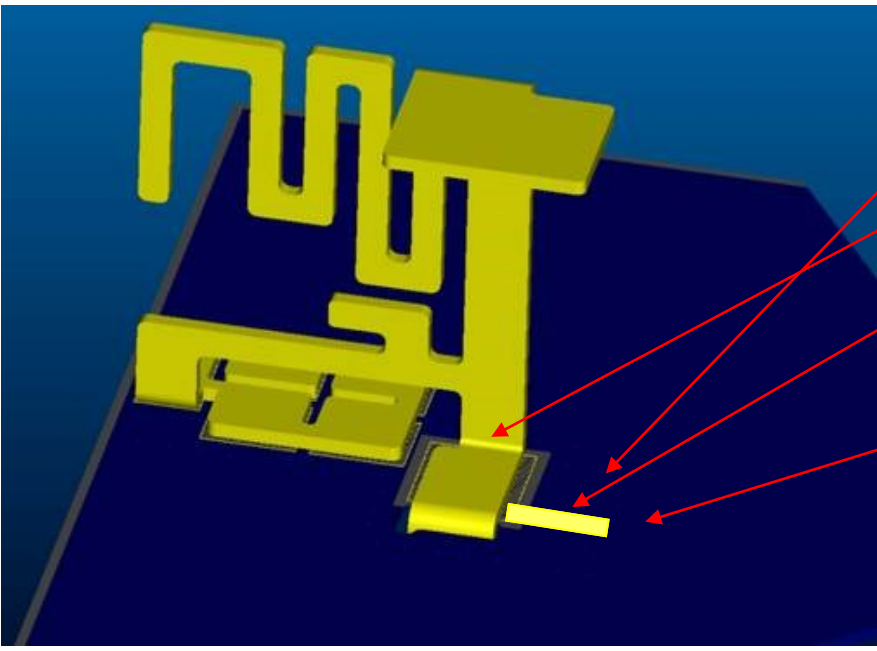
Below are the typical dimensions and footprint.

Main Dimensions (in mm)



\*Dimensions and Tolerances on data sheet are for reference only.

3D View of Antenna on PCB



Clearance Needed around the Feed pad only.

Au plated Pads for GND connection.

Au plated Feed Pad

Based upon Final PCB stack-up, a 50 Ohms line needs to be designed and connected at this location.