

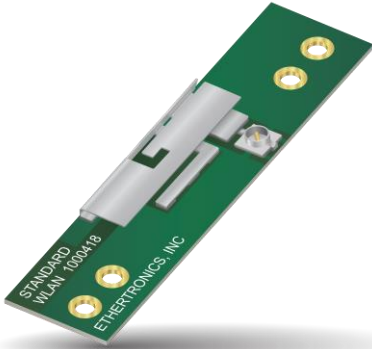


**Part No. 1000418**

## WLAN BT Zigbee Embedded Stamped Metal Antenna

**2.4 / 4.9 / 5.2 / 5.8 GHz (802.11 a/b/g/n/c + Japan)**

Supports: Wi-Fi applications, Agriculture, Automotive, Bluetooth, Zigbee, WLAN, Smart Home, Healthcare, Digital Signage



### Wi-Fi Dual Band Stamp Metal Embedded Antenna

2.4 GHz; 5 GHz

#### KEY BENEFITS

##### Stay-in-Tune

Ethertronics antenna technology provides superior RF field containment, resulting in less interaction with surrounding components.

##### Quicker Time-to-Market

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

##### Reliability

Products are the latest RoHS version compliant

#### APPLICATIONS

- Embedded design
- Cellular, Headsets, Tablets
- Gateway, Access Point
- Handheld
- Telematics
- Tracking
- Healthcare
- M2M, Industrial devices
- Smart Grid
- OBD-II

Ethertronics WLAN antennas use specific technology in a trace configuration to provide high performance. This antenna has unique features enabling limited range RF tuning. Ethertronics antennas requires a smaller design keep-out area, carry lower program development risk which yields a quicker time-to-market, without sacrificing RF performance.

#### Electrical Specifications

Typical Characteristics in Free Space

| Frequency            | 2400 – 2485 MHz    | 5150 – 5825 MHz |
|----------------------|--------------------|-----------------|
| Peak Gain            | 4.0 dBi            | 4.2 dBi         |
| Average Efficiency   | 70%                | 70%             |
| VSWR Match           | 2:1 max            |                 |
| Feed Point Impedance | 50 ohms unbalanced |                 |
| Polarization         | Linear             |                 |
| Power Handling       | 0.5 Watt CW        |                 |

#### Mechanical Specifications & Ordering Part Number

| Ordering Part Number | 1000418                                                                                                         |
|----------------------|-----------------------------------------------------------------------------------------------------------------|
| Size (mm)            | 45.0 x 11.3 x 5.1                                                                                               |
| Weight (grams)       | 1.6                                                                                                             |
| Mounting             | (Apply with Plastic Screw)<br>Non-Metallic Surface: Mount antenna directly<br>Metallic Surface: > 12 mm air gap |
| Connectors           | U.FI compatible receptacle on the PCB                                                                           |
| Cable Length         | Cables sold separately, please contact Ethertronics                                                             |

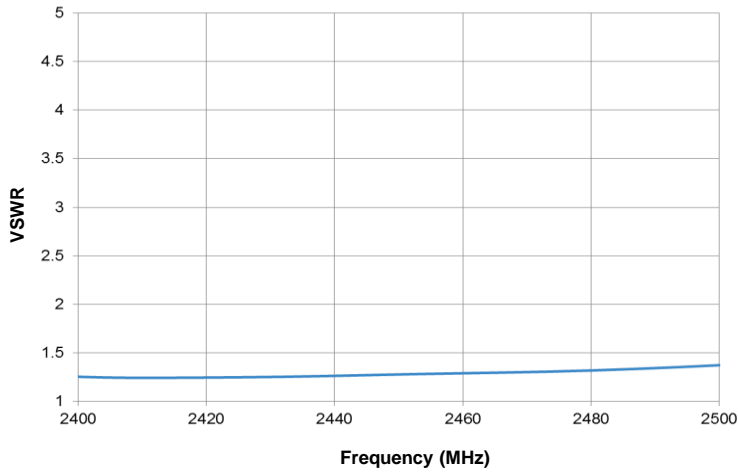


2.4 / 5 GHz Ethertronics' Embedded Antenna Specifications  
Ethertronics produces a wide variety of standard and custom antennas to meet user needs.

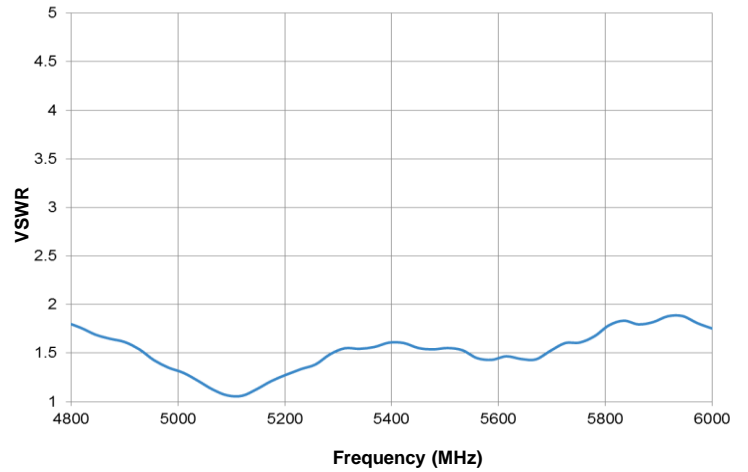
**VSWR and Efficiency Plots**

Typical Performance in Free-space

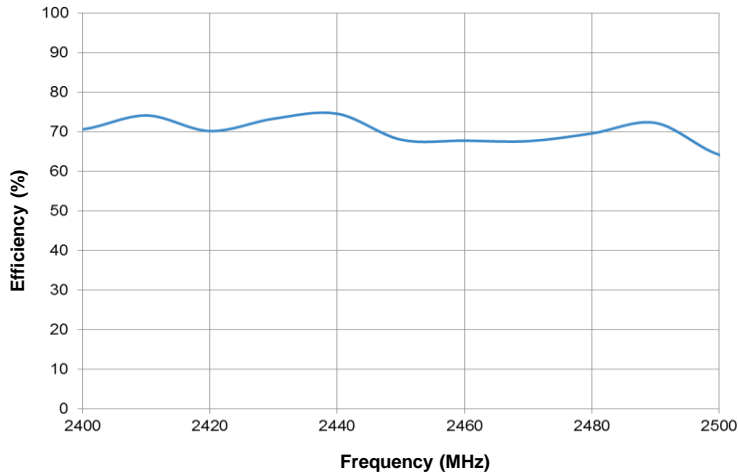
**2.4 GHz VSWR**



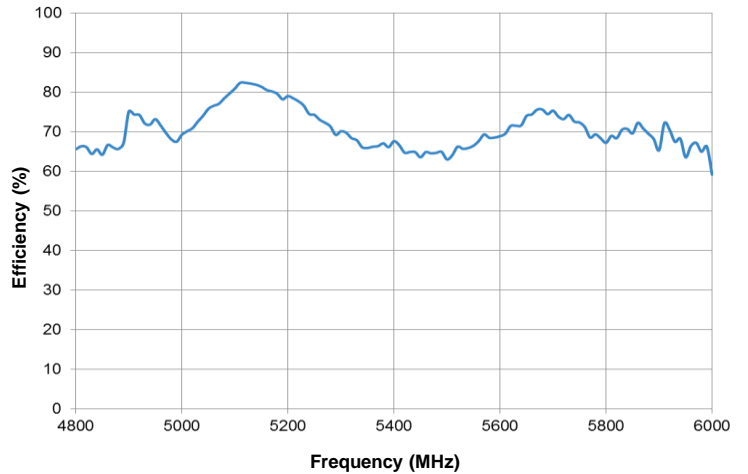
**5 GHz VSWR**



**2.4 GHz Efficiency**



**5 GHz Efficiency**



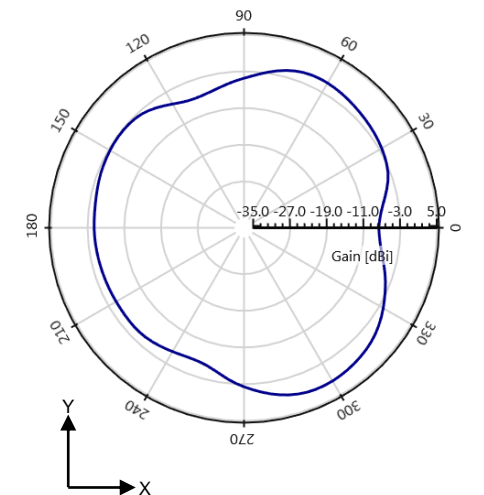
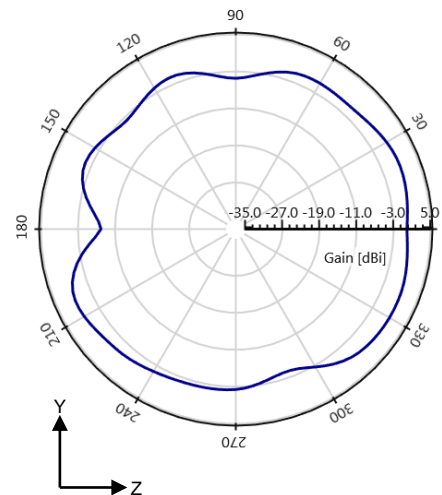
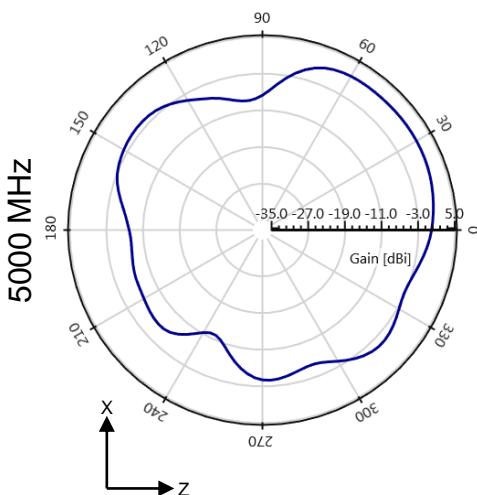
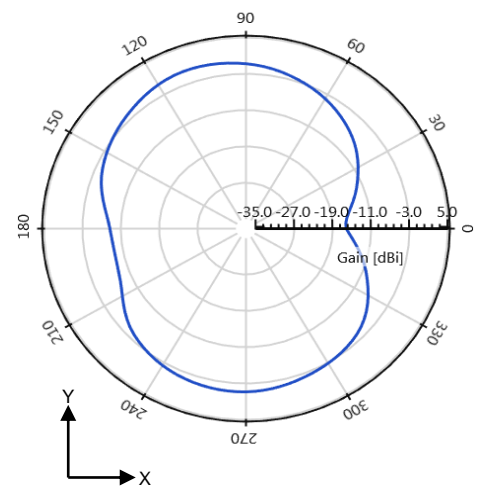
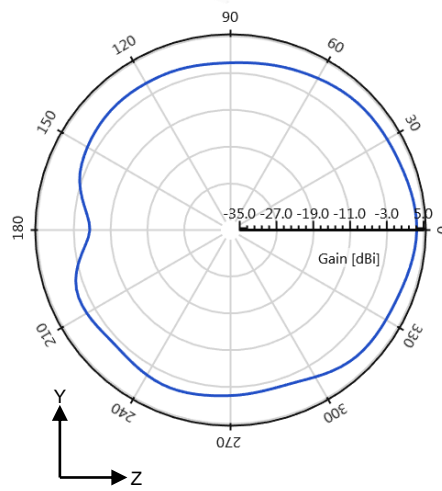
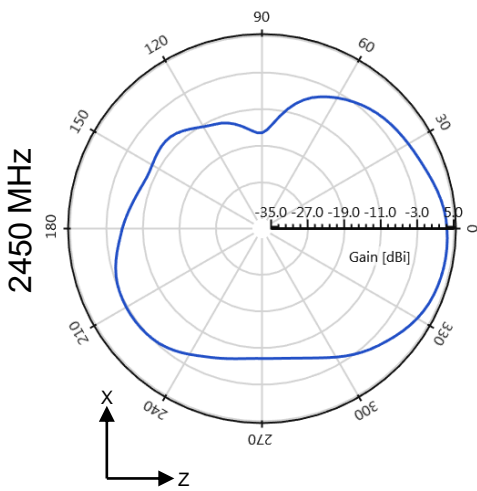
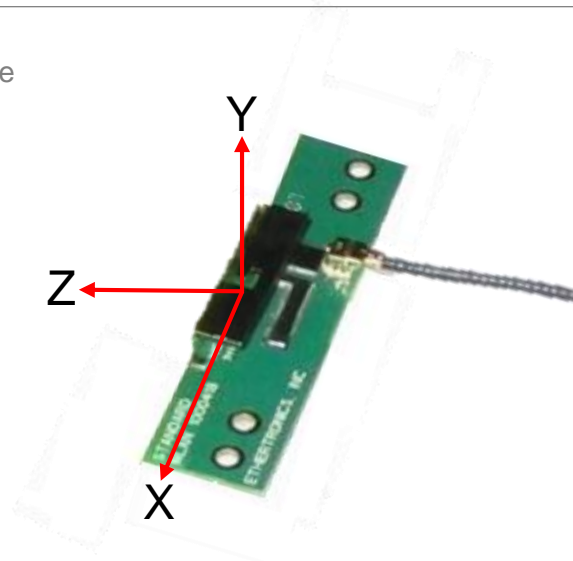


**2.4 / 5 GHz Ethertronics' Embedded Antenna Specifications**

Ethertronics produces a wide variety of standard and custom antennas to meet user needs.

**Antenna Radiation Patterns**

Typical Performance in Free-space  
Measured @ 2450, 5000 MHz



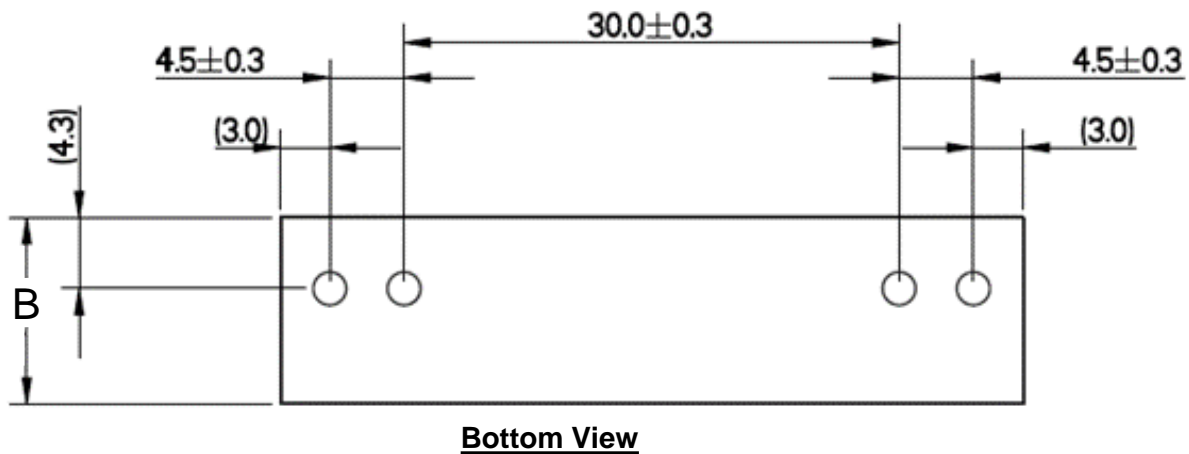
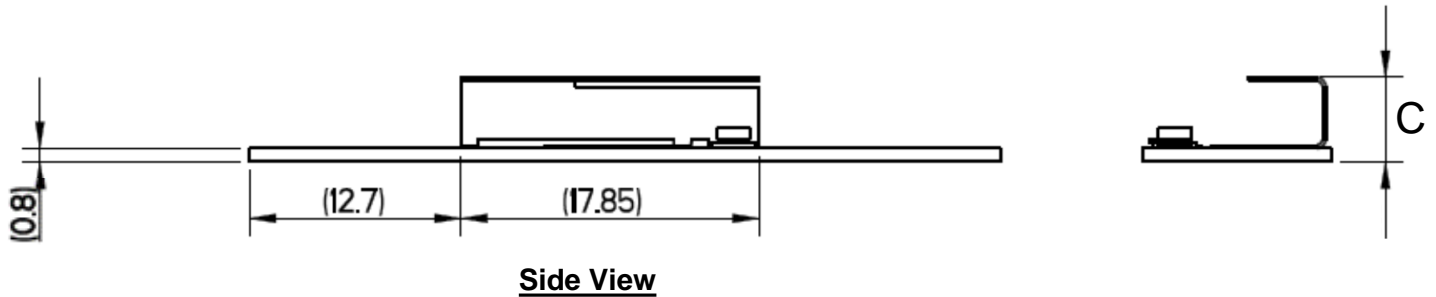
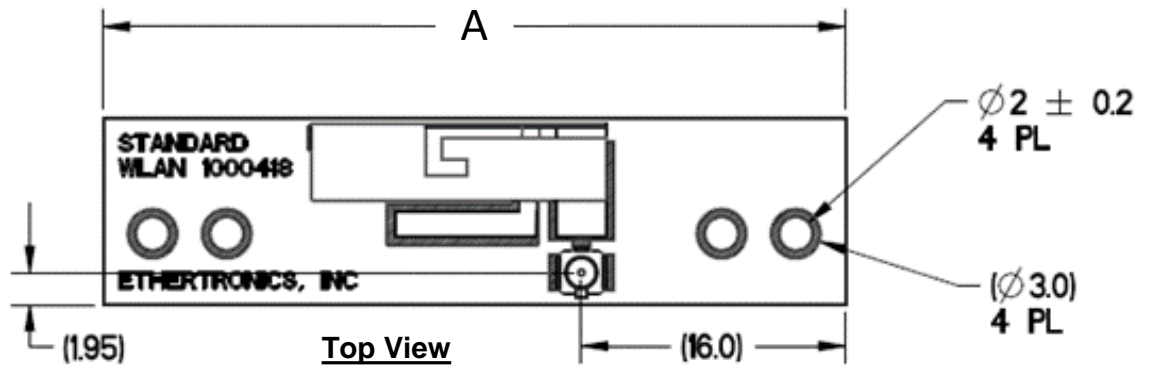


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**Mechanical Dimensions**

Typical antenna dimensions measured in mm.  
Dimensions in ( ) parenthesis are Reference Only.

| Part Number | A      | B      | C     |
|-------------|--------|--------|-------|
| 1000418     | (45.0) | (11.3) | (5.1) |

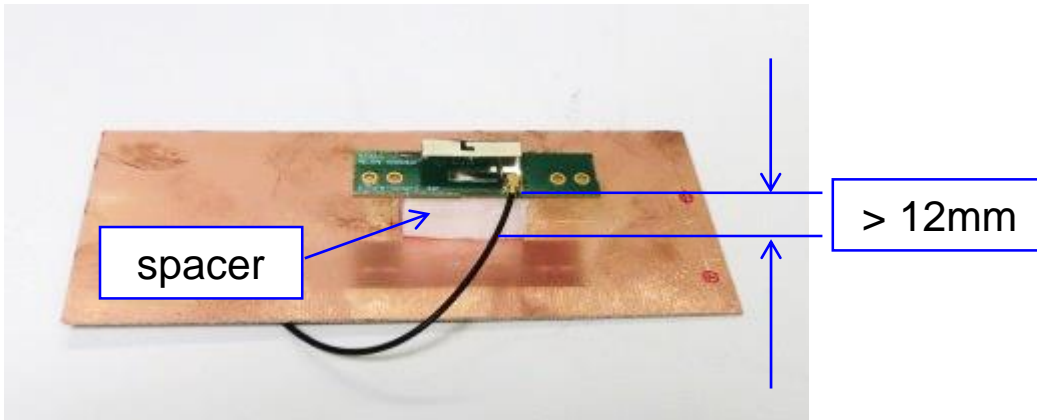




2.4 / 5 GHz Ethertronics' Embedded Antenna Specifications  
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### Mounting Recommendations (On-Ground)

Typical antenna dimensions (mm)



\*Recommended minimum spacing when the 1000418 antenna is installed over a ground plane

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