



# 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) Non-Metallic Surface: Mount antenna directly Metallic Surface: > 12 mm air gap
Connectors	U.FI compatible receptacle on the PCB
Cable Length	Cables sold separately, please contact Ethertronics

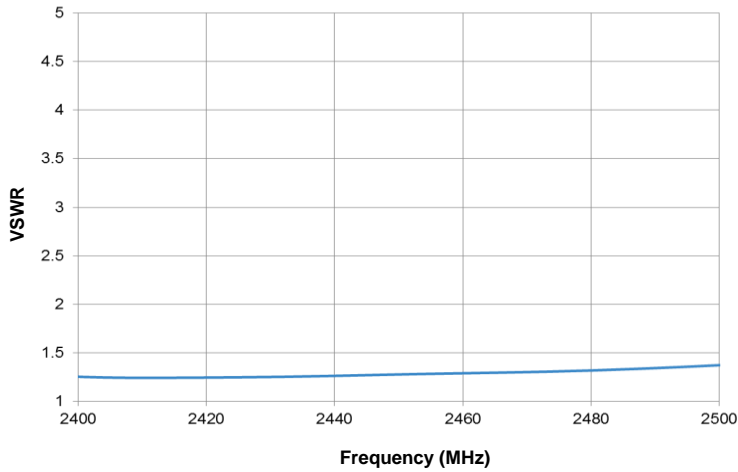


2.4 / 5 GHz Ethertronics' Embedded Antenna Specifications  
Ethertronics produces a wide variety of standard and custom antennas to meet user needs.

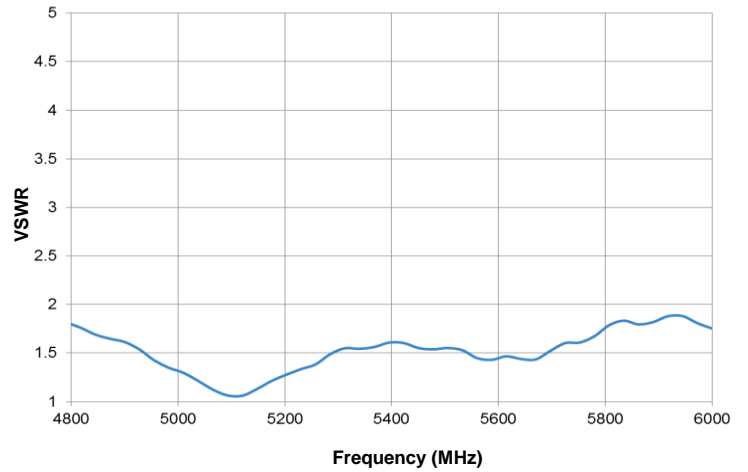
**VSWR and Efficiency Plots**

Typical Performance in Free-space

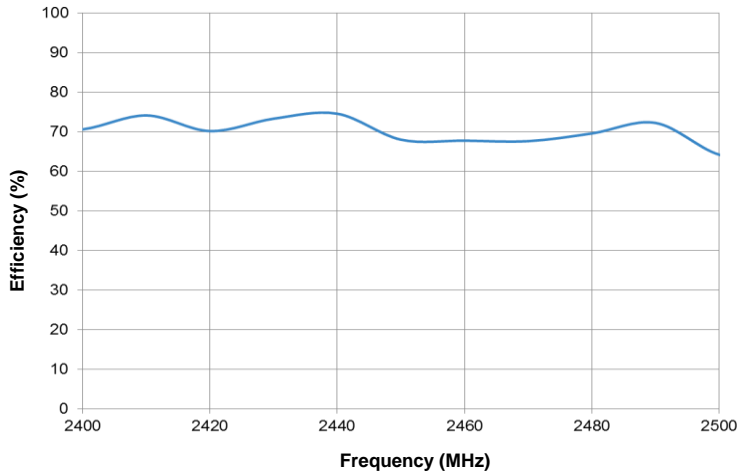
**2.4 GHz VSWR**



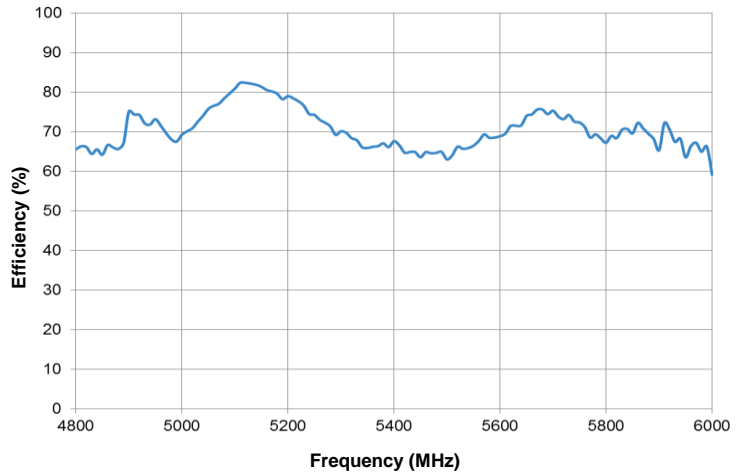
**5 GHz VSWR**



**2.4 GHz Efficiency**



**5 GHz Efficiency**

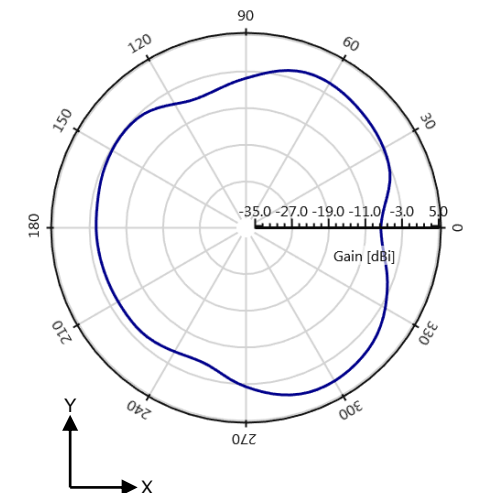
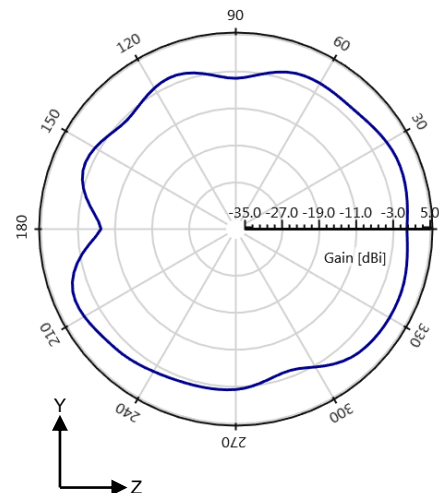
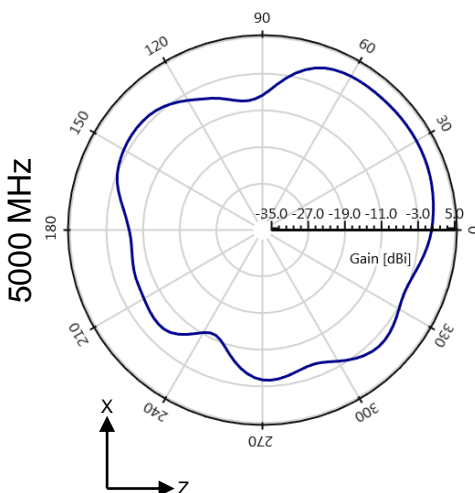
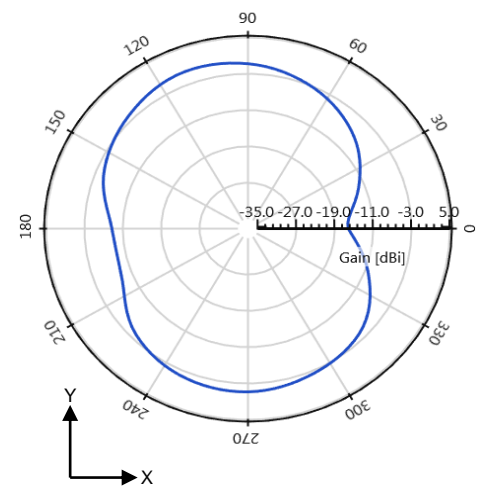
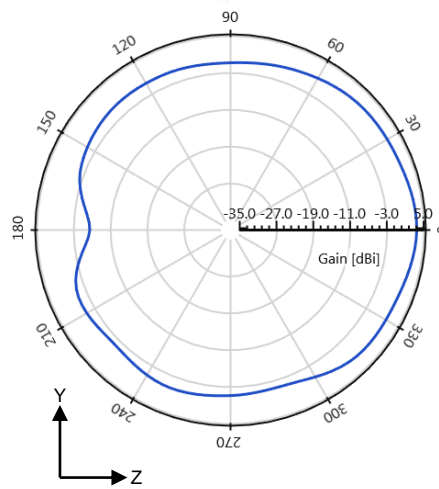
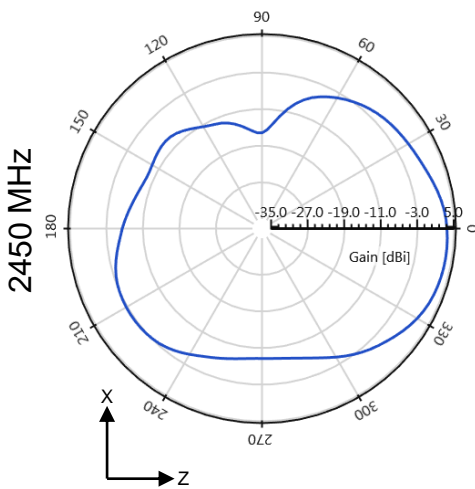
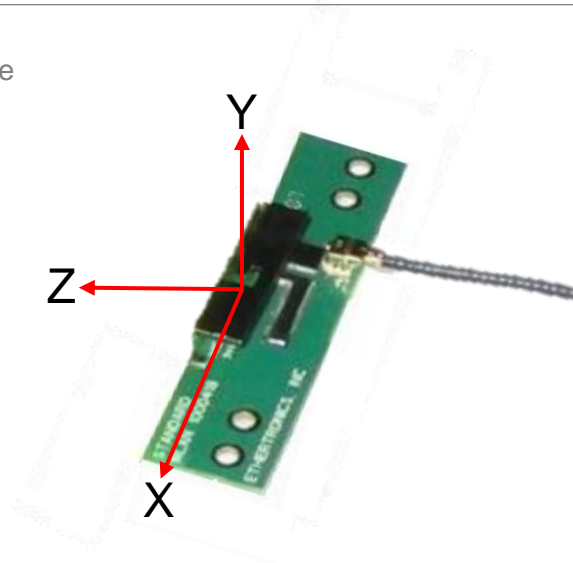




2.4 / 5 GHz Ethertronics' Embedded Antenna Specifications  
Ethertronics produces a wide variety of standard and custom antennas to meet user needs.

Antenna Radiation Patterns

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





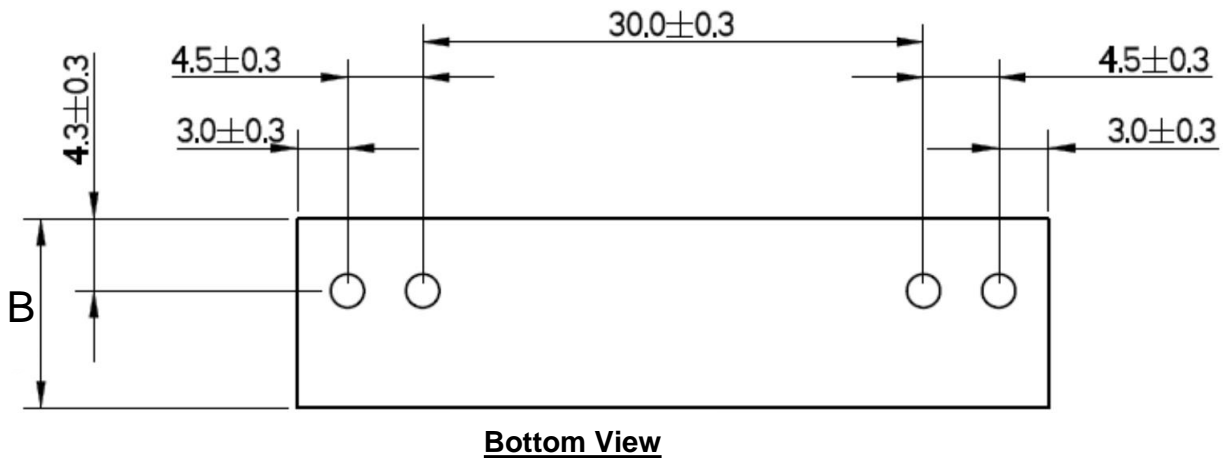
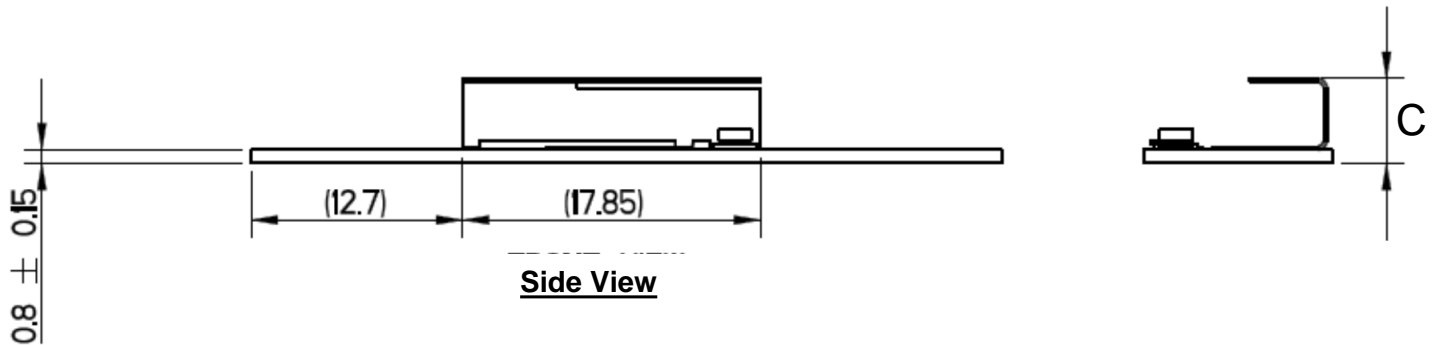
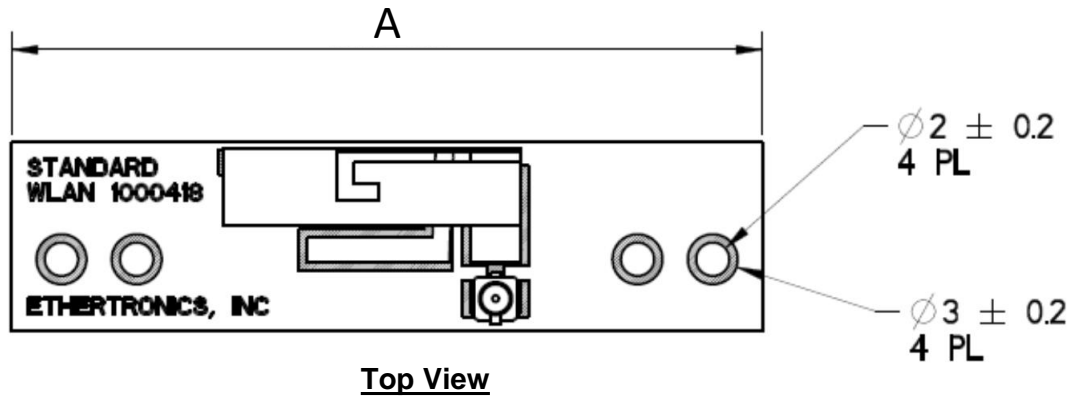
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**Mechanical Dimensions**

Typical antenna dimensions (mm)

Part Number	A (mm)	B (mm)	C (mm)
1000418	45.0 ± 0.3	11.3 ± 0.3	5.1 ± 0.3

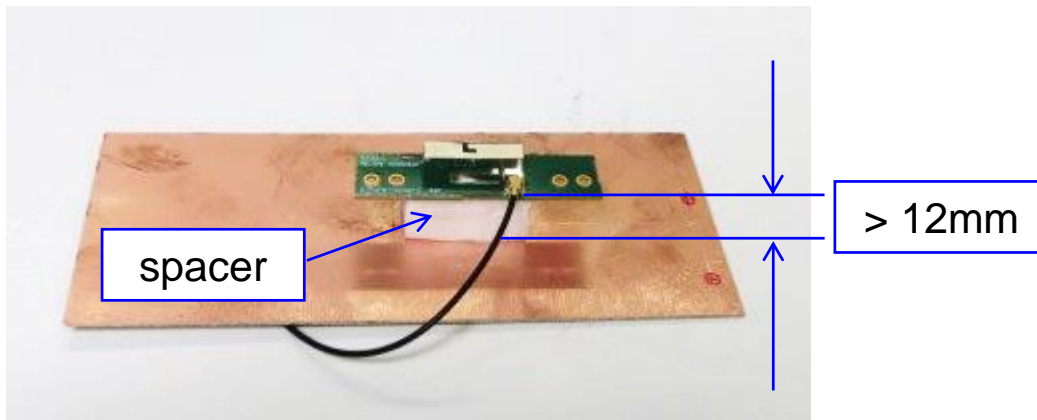




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### Mounting Recommendations (On-Ground)

Typical antenna dimensions (mm)



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

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