

# Part No. M310220

## WiFi/ISM/BT/Zigbee Savvi™ Ceramic Antennas

### 2.4GHz



Ethertronics' Savvi series of Isolated Magnetic Dipole™ (IMD) antennas deliver on the key needs of device designers for higher functionality and performance in smaller/thinner designs. These innovative antennas provide compelling advantages for Bluetooth® enabled cell phones, media players and other mobile devices.

#### Real-World Performance and Implementation

Ceramic antennas may look alike on the outside, but the important difference is inside. Other antennas may contain simple PiFA or monopole designs that interact with their surroundings, complicating layout or changing performance with use position. Ethertronics' antennas utilize patented IMD technology to deliver a unique size and performance combination.

### Savvi™ Ceramic Antennas

#### WiFi, Bluetooth, Zigbee

2.4 GHz

#### 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.

#### KEY BENEFITS

##### Stay-in-Tune

IMD 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

Fully compliant with the European RoHS Directive 2011/65/EU.

#### APPLICATIONS

- Embedded design
- Cellular, Headsets, Tablets
- Gateway, Access Point
- M2M, Industrial devices
- Handheld

#### Electrical Specifications

Typical Characteristics, inside an enclosure

	2.400 – 2.480 GHz
Peak Gain	-1.3 dBi
Average Efficiency	75%
VSWR Match	1.20.: 1 max
Feed Point Impedance	50 ohms unbalanced
Polarization	Linear
Power Handling	0.5 Watt CW

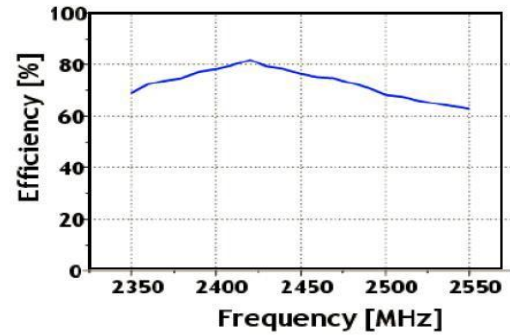
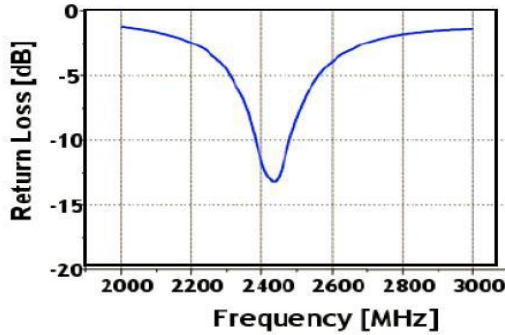
#### Mechanical Specifications

Size	3.00 x 1.50 x 1.08 mm
Mounting	Surface mount
Weight	0.1 g
Packaging - Tape & Reel	M310220 : 1,000 pieces per reel
	M310220-10K : 10,000 pieces per reel

2.4GHz Ethertronics' Savvi™ Embedded Antenna Specifications  
 Ethertronics produces a wide variety of standard and custom antennas to meet user needs.  
 Below are the typical performances.

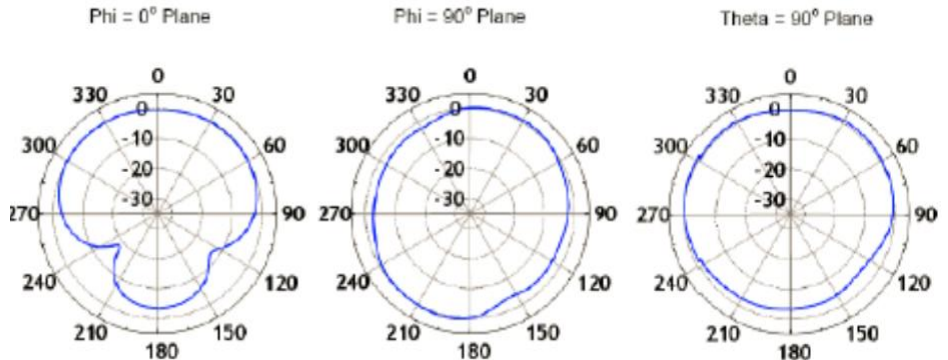
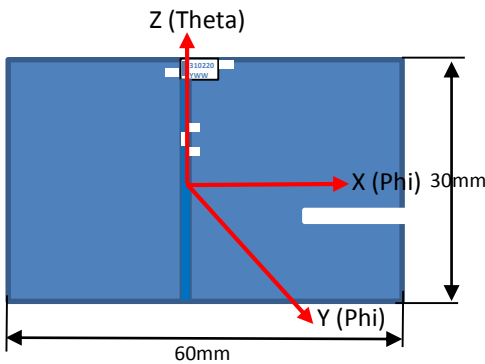
### Typical Return Loss and Efficiency Plots

Measured on 30 x 60 mm demo board



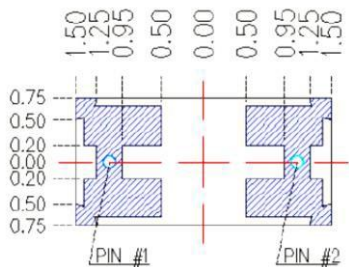
### Antenna Radiation Patterns

Typical Performances on Ethertronics' 30 x 60 mm PCB Test Board  
 Measured at 2.440 GHz

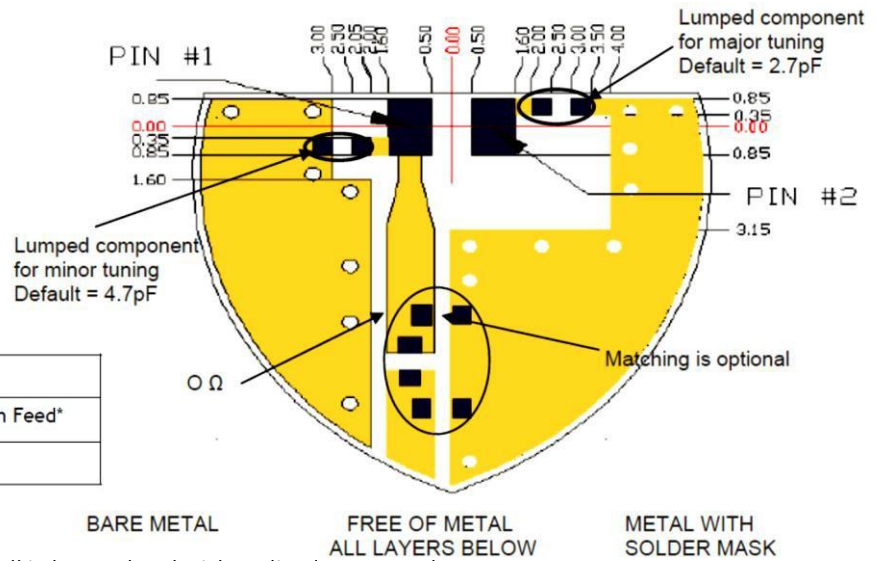


### Antenna Layout

Tuning values for references only



Pin	Description
1	Ground/ Bluetooth Feed*
2	Ground



\*All dimensions provided in this document are for informational purposes only.