# imall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



# Contact us

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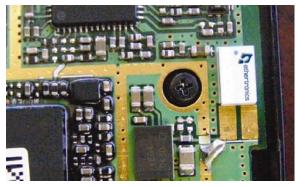
# ethertronics<sup>®</sup>

## PRODUCT DATA SHEET: BLUETOOTH<sup>®</sup>/WiFi

Part No. M310210

# Savvi<sup>™</sup>Embedded Ceramic Bluetooth/WiFi Antennas

2.35, 2.45 & 2.59 GHz



Ethertronics' Savvi series of Isolated Magnetic Dipole<sup>™</sup>(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<sup>®</sup> enabled cell phones, media players and other mobile devices.

# TECHNOLOGY ADVANTAGES

#### **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.



#### Stays in Tune

High RF isolation means IMD antennas resist detuning regardless of usage position. And one standardized part can typically be placed in a variety of locations.

#### Smallest Effective Size

IMD antennas require a smaller keep-out area for surrounding components, leading to a smaller effective size.

#### **High Performance**

IMD's high efficiency and simple design rules lower development risk and speed time-to-market without sacrificing performance. Plus, high RF selectivity eliminates the cost and space for band-pass circuitry.

More information is available on our Website at www.ethertronics.com/resources/.



## **KEY BENEFITS**

#### DESIGN ADVANTAGES

#### Best in Class Performance—Smallest Occupied Volume

- Powerful combination of 76% peak efficiency and simple implementation guidelines.
- Minimal ground clearance and component "keep out" areas. Very low component height.
- High selectivity eliminates the cost for additional filters and frees up board space

#### High Tolerance to Frequency Shifts

- IMD's high RF isolation resists antenna de-tuning that otherwise impair reception.
- Single part works for various PCB sizes and layouts.

#### Quicker Time-to-Market

· Fewer design modifications required to pass RF test suite.

#### **RoHS Compliant**

• Ethertronics' antennas comply with the European RoHS Directive 2002/95/EC.

### END USER ADVANTAGES

#### **Superior Range**

 Greater antenna efficiency means longer range and a better end user experience.

#### **Exceptional Coverage**

• Better coverage delivers more reliable wireless connections for mobile phones, laptops, stereo headsets, cars, media players, audio systems and more.

### SERVICE AND SUPPORT

#### Extensive RF Experience

Our Savvi ceramic antennas are supported by extensive application notes, 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 encompass an integrated network of design centers that provide local customer support.

#### **ETHERTRONICS**

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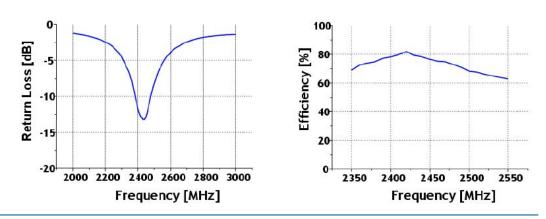
# PRODUCT: Bluetooth<sup>®</sup> / WiMAX/ ZigBee Antenna

#### Ethertronics' Savvi<sup>™</sup> Bluetooth/WiFi Embedded Antenna Specifications Ethertronics produces a wide variety of standard and custom antennas to meet user needs. Below are the typical specs for a Bluetooth/ WiFi application.

<b>Electrical Specifications</b> Typical Characteristics (Inside an enclosure)	BT/WiFi Antenna	2.400-2.480 GHz
	Peak Gain	-1.3 dBi
	Average Efficiency	75%
	VSWR Match	1.02:1 max
	Feed Point Impedance	50 ohms unbalanced
	Power Handling	0.5 Watt cw
	Polarization	Linear
Mechanical Specifications	Size	3.00x

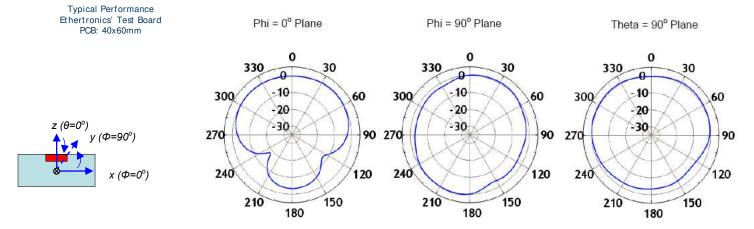
incar specifications	3126	3.00x1.30x1.001111
	Mounting	Surface mount
	0 0	Tape & Reel M310210: Minimum Order Quantity of 100,000 pcs. Order multiples of 10,000 pcs. M310210-1K: Minimum Order Quantity of 1,000 pcs. Order multiples of 1,000 pcs.

#### **Typical Efficiency, Return Loss**



#### **Antenna Radiation Patterns**

#### 2.440 GHz Band



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