

Part No. M310220

Wi-Fi / BT / Zigbee Ceramic Antennas

2.4 GHz

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



Ethertronics' series of Ceramic 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.

Ceramic Wi-Fi / Bluetooth Antenna

2400 – 2485 MHz

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.

Electrical Specifications

Typical performance on 40 x 60 mm PCB

Frequency (MHz)	2400 – 2485
Peak Gain	1.7 dBi
Average Efficiency	67%
VSWR Match	2.0:1 max
Feed Point Impedance	50 ohms unbalanced
Polarization	Linear
Power Handling	0.5 Watt CW

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

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

Mechanical Specifications & Ordering Part Number

Ordering Part Number	M310220
Size (mm)	3.00 x 1.50 x 1.08
Mounting	Surface mounted
Weight (grams)	0.1
Packaging	Tape & Reel, M310220 – 1,000 pieces per reel
Demo Board	M310220-01

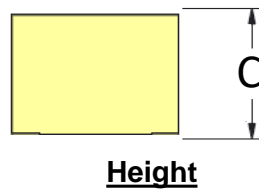
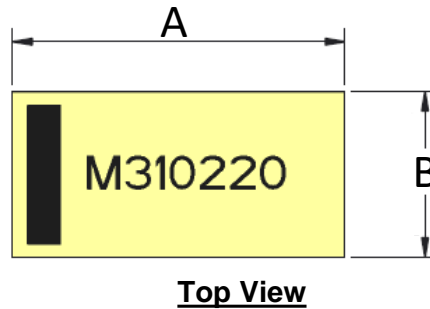
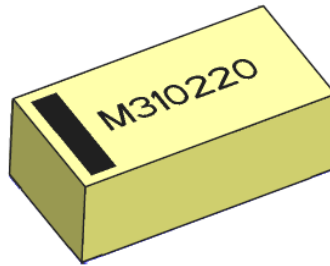


2.4 GHz Ethertronics' Embedded Antenna Specifications
Ethertronics produces a wide variety of standard and custom antennas to meet user needs.

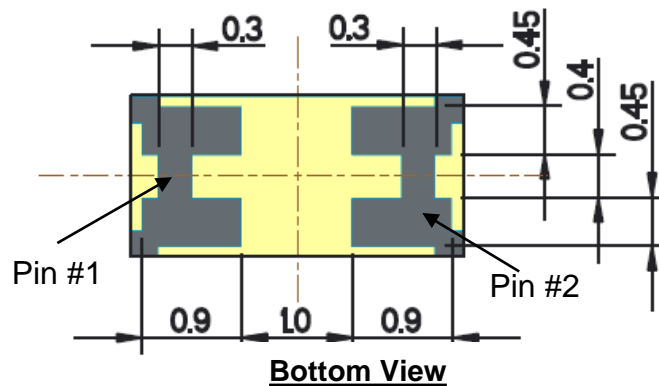
Antenna Dimensions

Typical antenna dimensions (mm)

Part Number	A (mm)	B (mm)	C (mm)
M310220	3.00 ± 0.2	1.50 ± 0.2	1.08 ± 0.1



Pin	Description
1	Feed
2	Ground



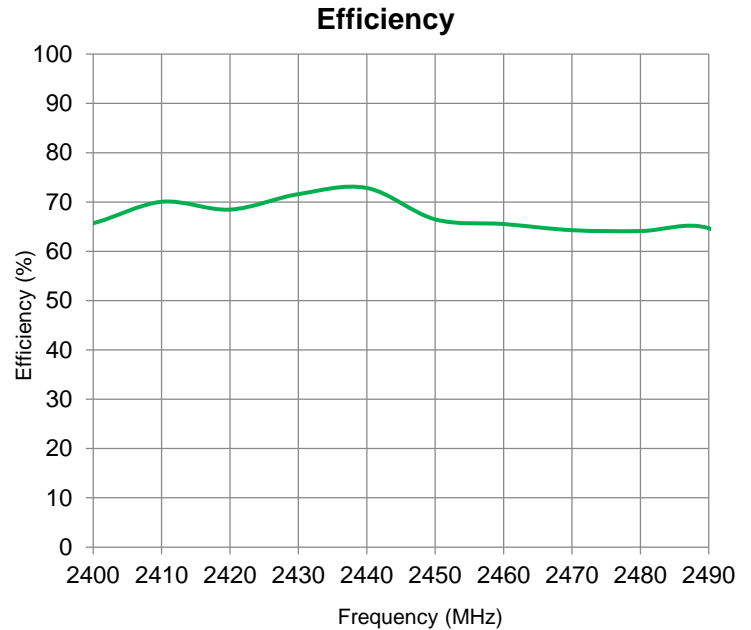
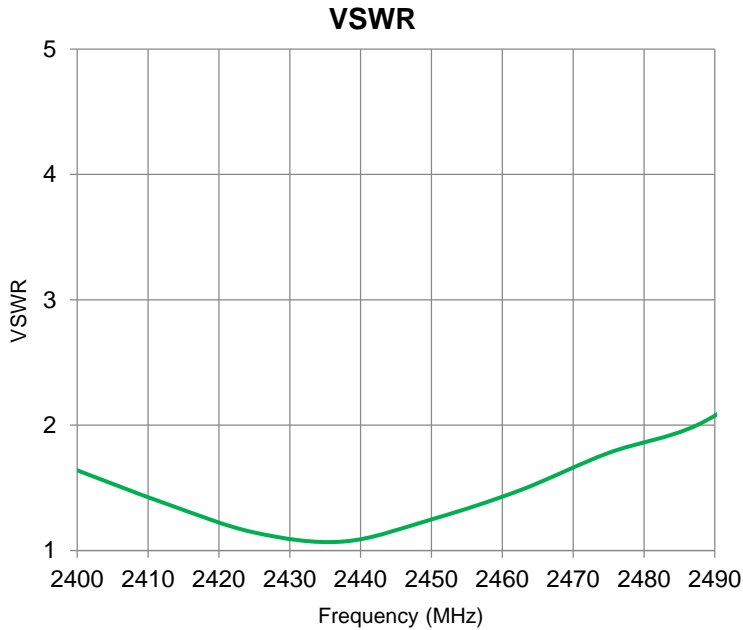


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VSWR, Efficiency Plots

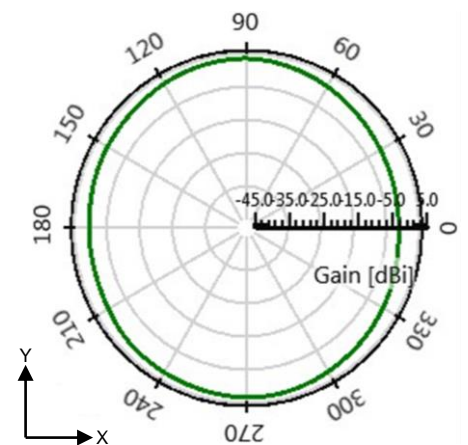
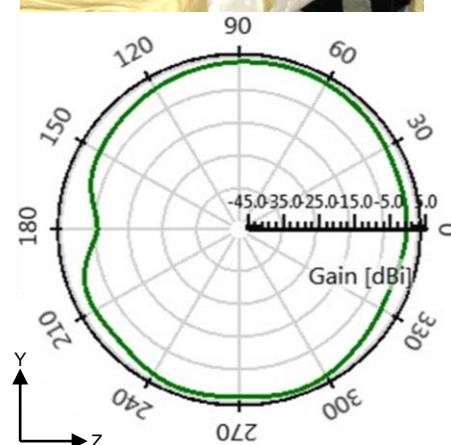
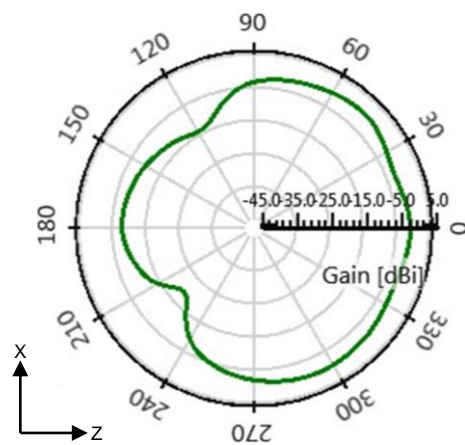
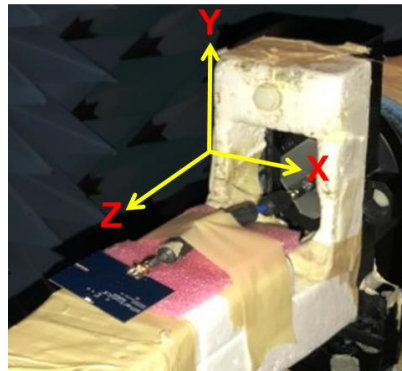
Typical performance on 40 x 60 mm PCB



Antenna Radiation Patterns

Typical performance on 40 x 60 mm PCB

Measured @ 2440 MHz



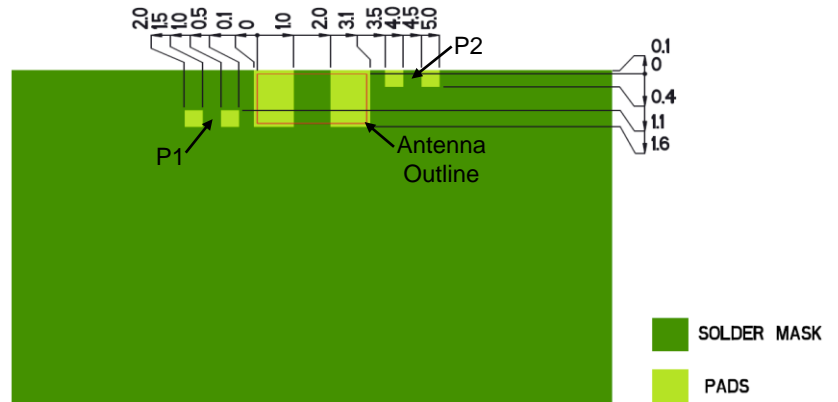
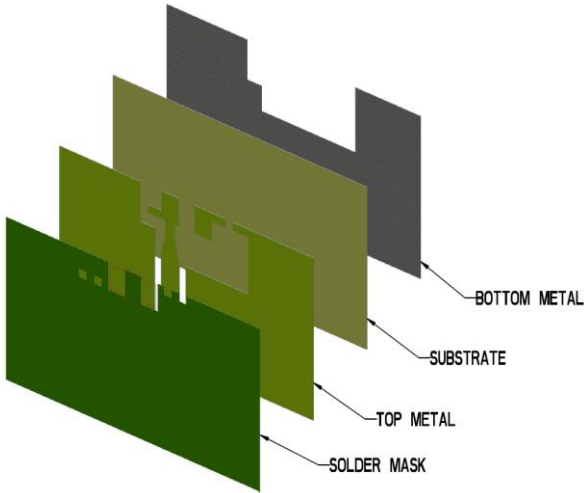


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Antenna Layout

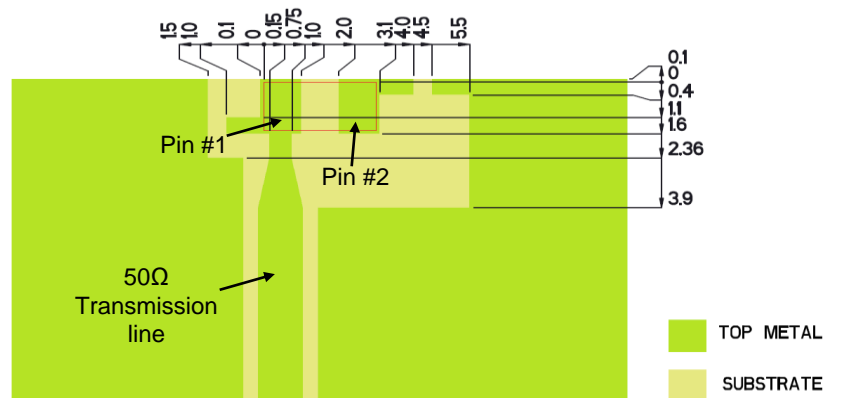
Typical layout dimensions (mm)



- Additional VIAS: Diam. 0.2mm to be placed around antenna, (no vias on transmission lines).
- Via holes must be covered by solder mask

Pin Descriptions

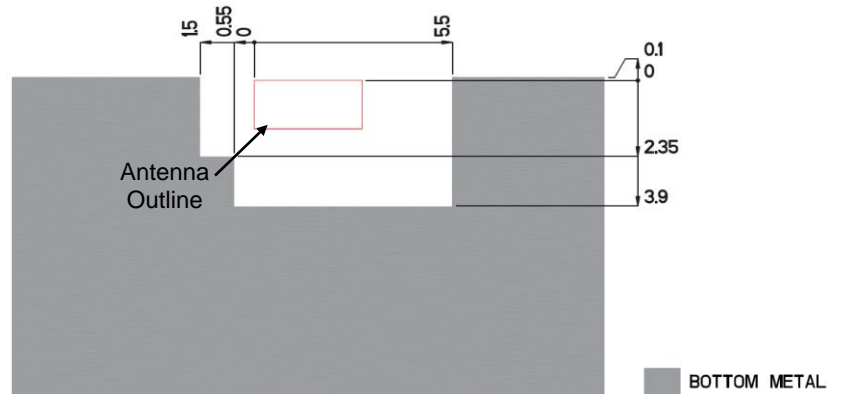
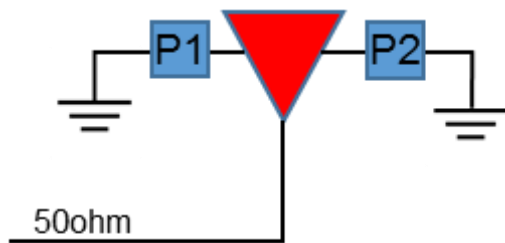
Pin#	Description
1	Feed
2	Ground



Matching Network (Demo Board)

Component	Value	Tolerance
P1	4.7pF	±0.05pF
P2	2.7pF	±0.05pF

*Actual matching values depend on customer design

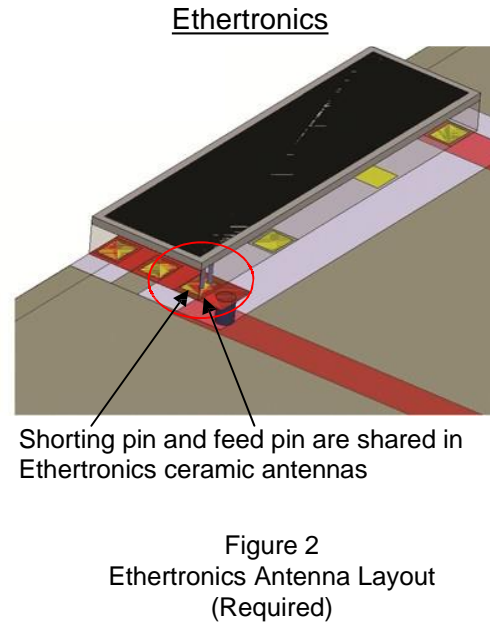
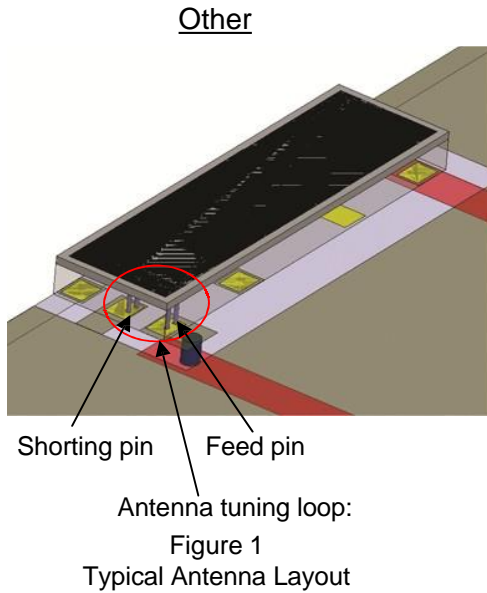




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Antenna Layout Tips (General reference)

Important, layout guidelines for correct operation of Ethertronics Ceramic Antennas. Please read guidelines below before laying out the antenna in a device. Figure 1 shows the typical antenna layout. Figure 2 shows Ethertronics' antenna layout.



- The antenna tuning loop is formed by the PCB layout.
- The feed pin and shorting pin are combined because it requires very close proximity to achieve more band- width.

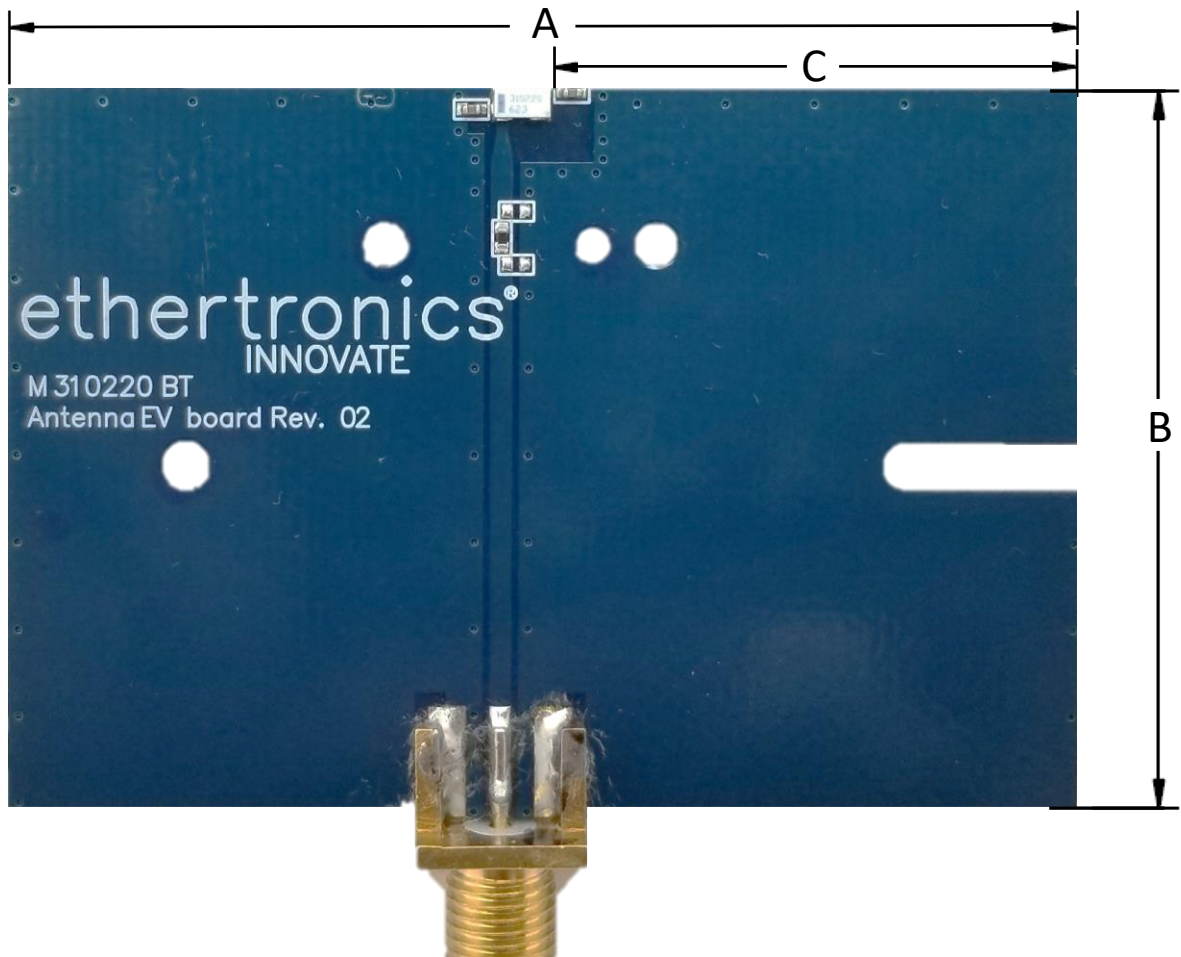


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Antenna Demo Board

Typical layout dimensions (mm)

Part Number	A (mm)	B (mm)	C (mm)
M310220-01	60.0	40.0	30.0



Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

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- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

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- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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