



Part No. 1002427

Embedded GPS ISM Stamped metal SMT Antennas

915MHz, 1.5GHz



Ethertronics' 1002427 stamped metal SMT antenna delivers the device designers' key needs for higher functionality and performance in smaller / thinner designs. This innovative antenna provides compelling advantages for all GPS or ISM enabled handheld devices, media players and other mobile devices.

Unique Form Factors Support Advanced Industrial Designs

Smaller, more efficient on board embedded antennas break through restrictive design rules and provide new freedom in component placement.

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.

Stamped Metal Antenna ISM/GPS

868MHz, 915MHz, 1.5 GHz

KEY BENEFITS

Versatile Antenna

Ethertronics 1002427 can be used to support GPS and ISM bands, allowing reduced BOM complexity while maintaining great performances.

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, in free space using 50x100mm PCB, different layout used for each frequency

Frequency	GPS 1560—1606 MHz	ISM 868 MHz	ISM 915 MHz
Peak Gain	3.0 dBi	1.0 dBi	1.0 dBi
Average Efficiency	75%	63.4%	60%
VSWR Match	2.0:1.0 max		
Feed Point Impedance	50 ohms unbalanced		
Polarization	Linear		
Power Handling	2 Watt CW		

Mechanical Specifications

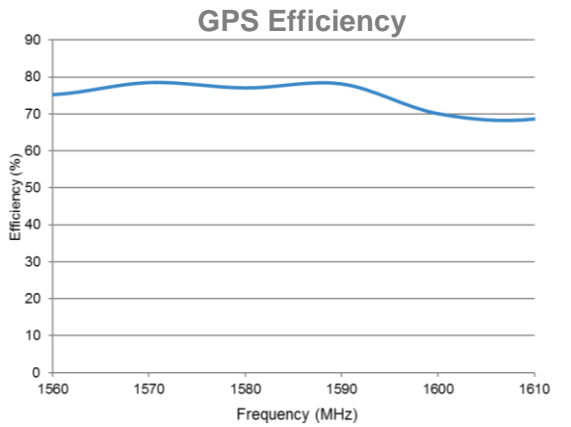
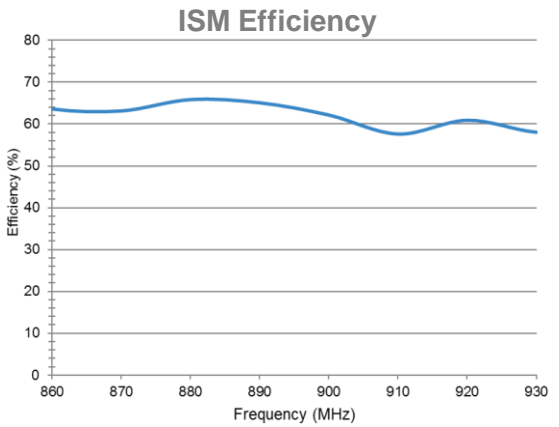
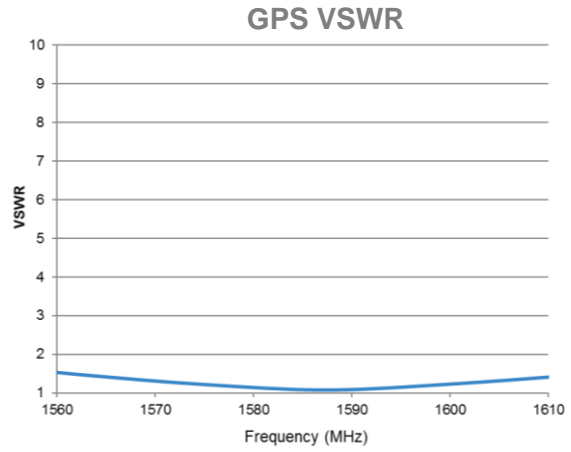
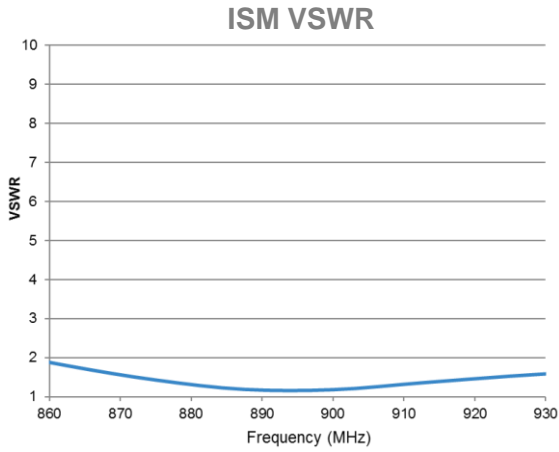
Size	31.20x3.20x1.80 mm
Mounting	Surface mount
Weight	0.1 g
Packaging	Tape & Reel, 5,400 pieces per box, 1,800 per reel

1002427 GPS ISM layout performances

Ethertronics produces a wide variety of standard and custom antennas to meet user needs. Below are the typical performances.

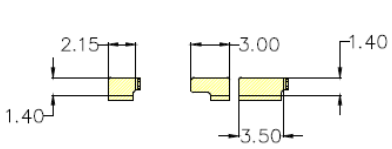
Typical VSWR and Efficiency Plots

Measured on 50x100mm PCB demo board

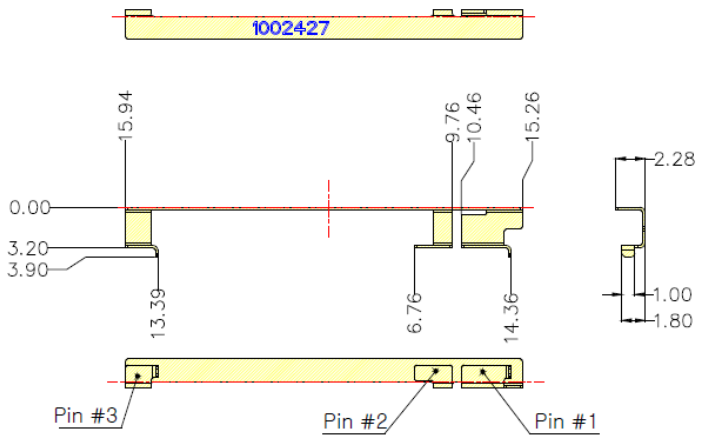


Typical antenna dimensions

For reference only



**BOTTOM
ANTENNA PAD**



Pin	Description
1	GND
2	Feed
3	Dummy Pad

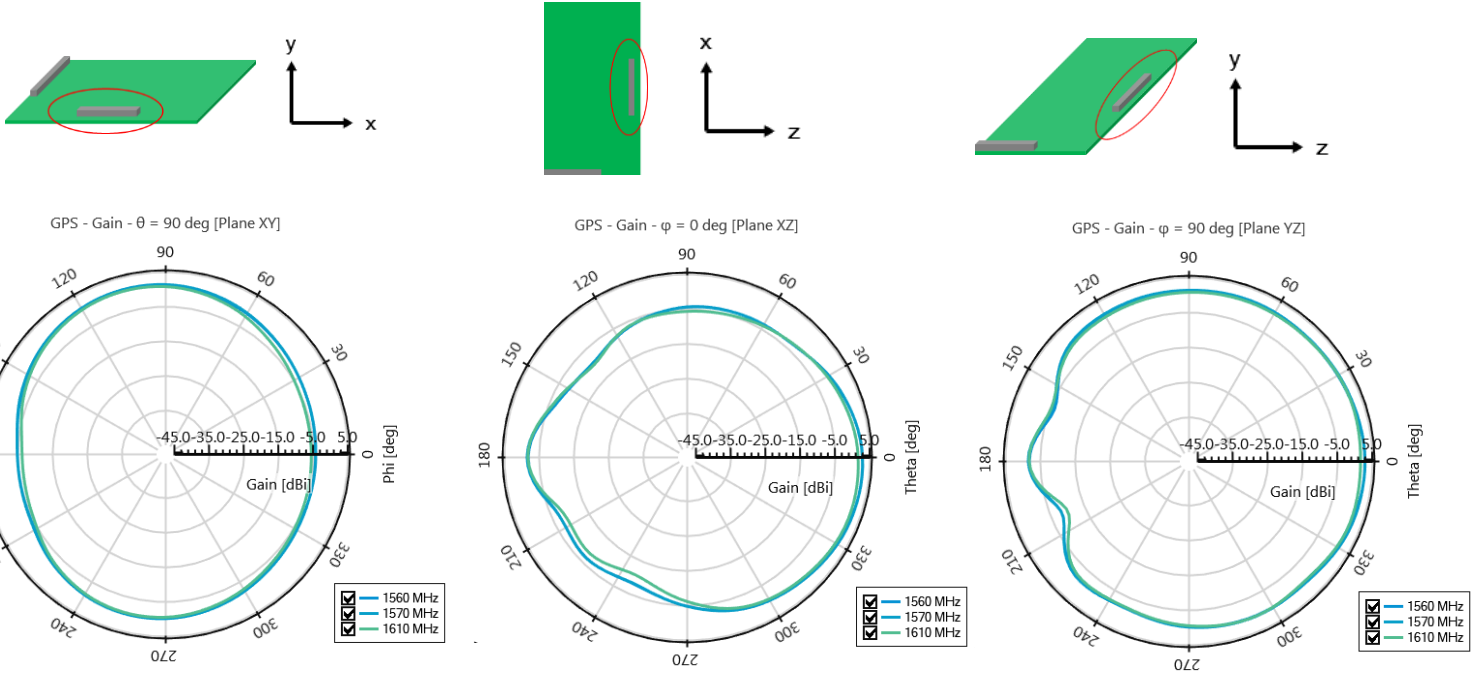
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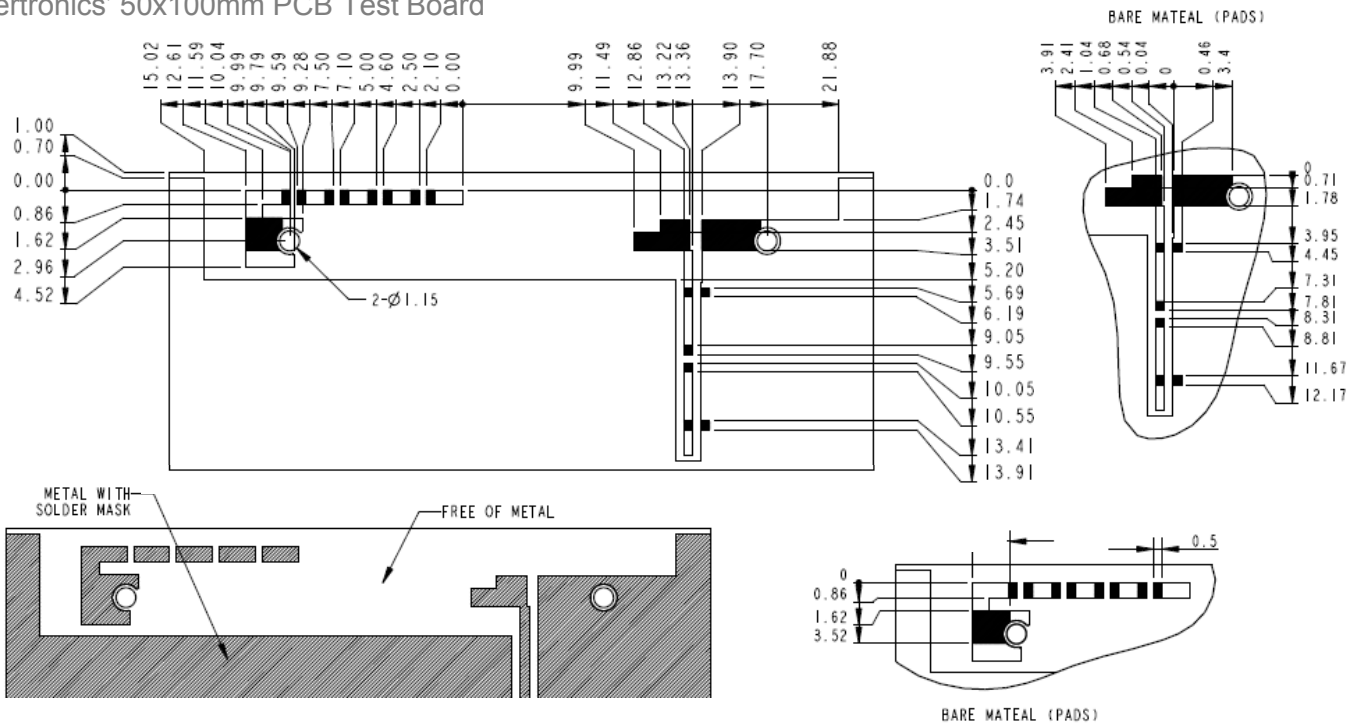
GPS Antenna Radiation Patterns

Typical Performances on Ethertronics' 50x100mm PCB Test Board



GPS Antenna board layout

Ethertronics' 50x100mm PCB Test Board



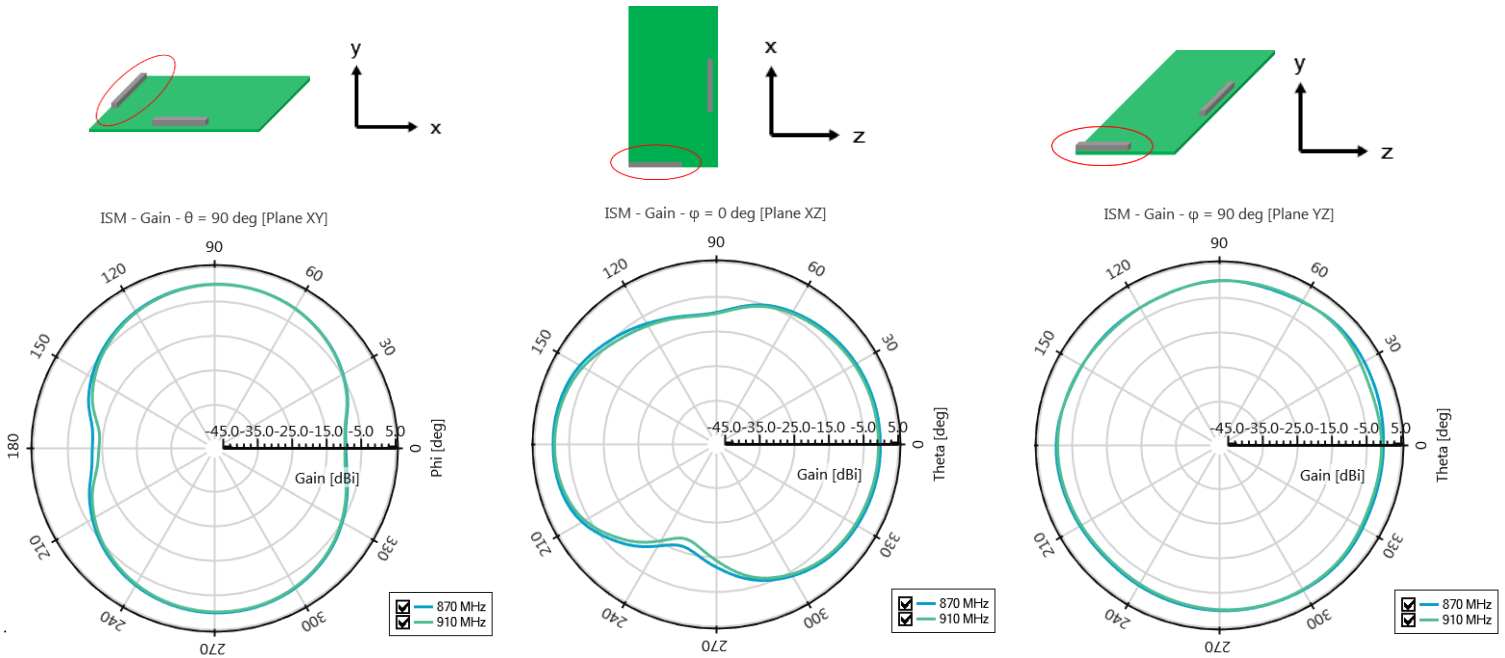
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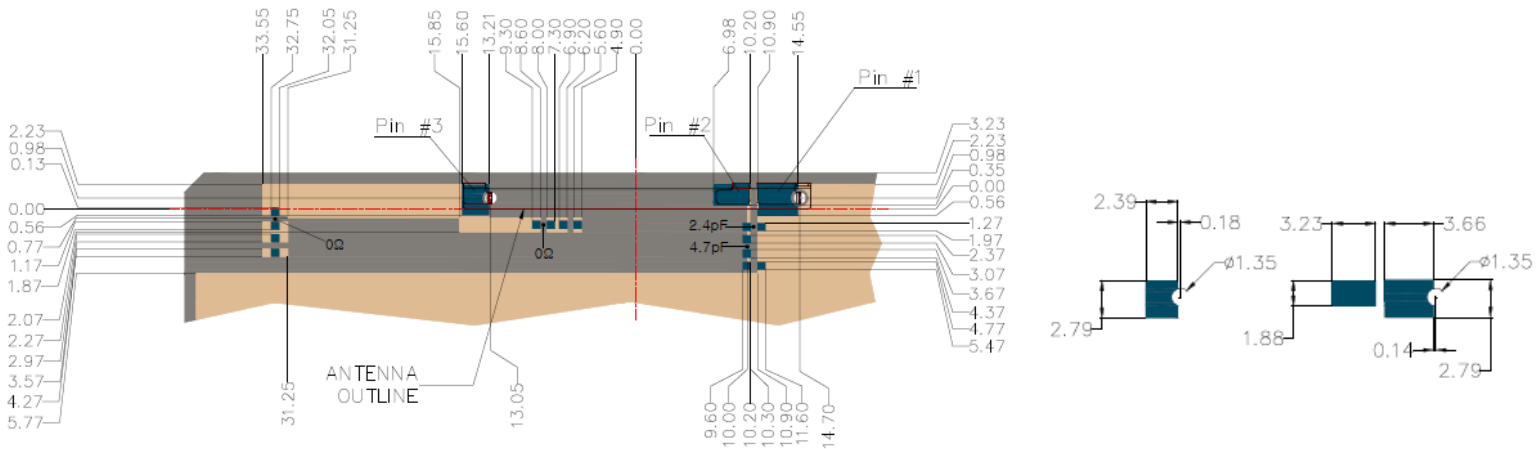
ISM Antenna Radiation Patterns

Typical Performances on Ethertronics' 50x100mm PCB Test Board



ISM Antenna board layout

Ethertronics' 50x100mm PCB Test Board



BARE METAL

FREE OF METAL

METAL WITH SOLDER MASK

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