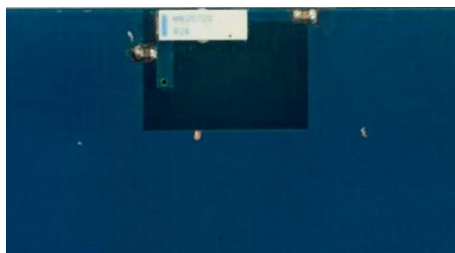


# Part No. M620720

## ISM Savvi™ Ceramic Antennas

868MHz / 915MHz



### Savvi™ Ceramic Antennas

ISM / M2M / IoT

868 / 915 MHz

#### 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

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 ISM enabled handheld devices, 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.

#### 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 Characteristics, on 40x100mm PCB,  
frequency of operation depends on tuning

|                      | 868-870 MHz        | 902—928 MHz |
|----------------------|--------------------|-------------|
| Peak Gain            | 2.56 dBi           |             |
| Average Efficiency   | 58%                |             |
| VSWR Match           | 2.6:1 max          |             |
| Feed Point Impedance | 50 ohms unbalanced |             |
| Polarization         | Linear             |             |
| Power Handling       | 0.5 Watt CW        |             |

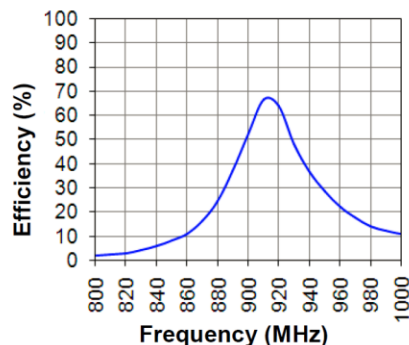
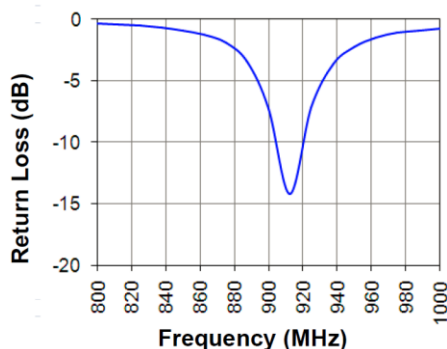
#### Mechanical Specifications

|            |                                                                                         |
|------------|-----------------------------------------------------------------------------------------|
| Size       | 6.00x2.00x1.1mm                                                                         |
| Mounting   | Surface mount                                                                           |
| Weight     | 0.1 g                                                                                   |
| Packaging  | Tape & Reel,<br>M620720 – 1,000 pieces per reel<br>M620720-10K – 10,000 pieces per reel |
| Demo Board | M620720-01                                                                              |

**868/915MHz Ethertronics' Savvi™ Embedded Antenna Specifications**  
 Ethertronics produces a wide variety of standard and custom antennas to meet user needs.  
 Below are the typical performances.

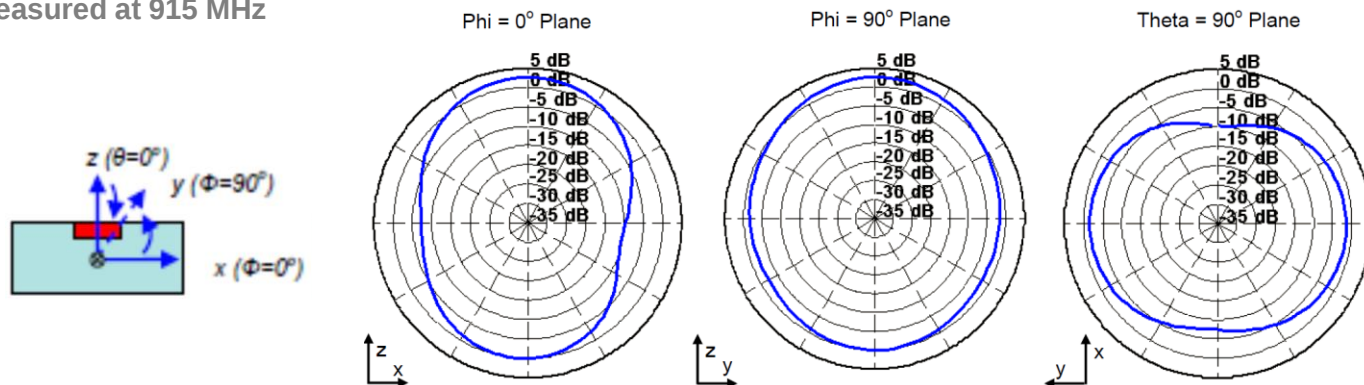
### Typical Return Loss and Efficiency Plots

Measured on 40x100mm demo board, tuned at 915MHz



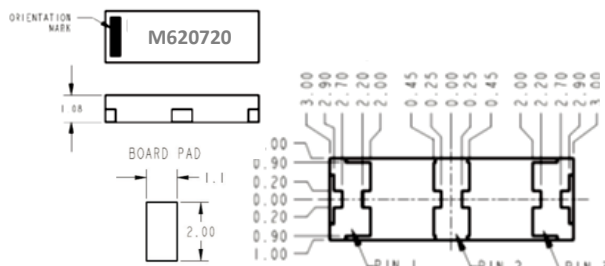
### Antenna Radiation Patterns

Typical Performances on Ethertronics' 40x100mm PCB Test Board  
 Measured at 915 MHz



### Antenna Layout

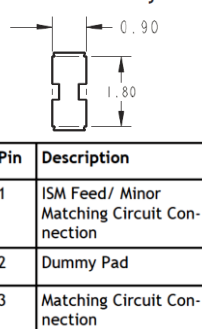
Tuning values for references only



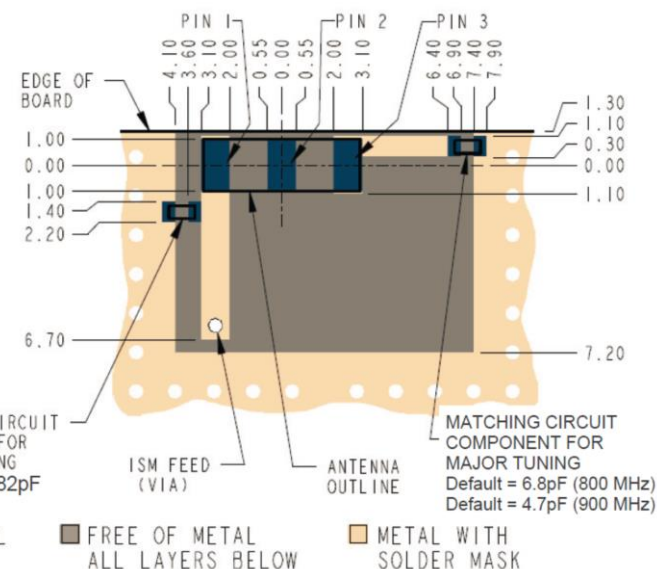
Default matching circuit components :

|              | 868-870 MHz | 902—928 MHz |
|--------------|-------------|-------------|
| Major tuning | 6.8 pF      | 4.7 pF      |
| Minor tuning | 82 pF       |             |

Antenna Pad Layout



MATCHING CIRCUIT COMPONENT FOR MINOR TUNING  
 DEFAULT = 82pF



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