

## Prestta™ Standard Penta-Band Cellular Embedded Antenna

850/900/1800/1900/2100 MHz



Ethertronics' Prestta series of Isolated Magnetic Dipole™ (IMD) embedded antennas address the challenges facing today's product designers. IMD's high performance and isolation characteristics offer better connectivity and minimal interference. Prestta antennas can be used in a variety of applications including:

- M2M
- Automotive
- Automatic Meter Reading
- Healthcare
- Point of Sale
- Tracking

### TECHNOLOGY ADVANTAGES



**Stays in Tune**  
IMD antenna technology provides superior RF field containment, resulting in less interaction with surrounding components. Ethertronics IMD antennas resist de-tuning; providing a robust radio link regardless of the usage position.

Prestta antennas use patented IMD technology in a stamped metal configuration to provide high performance. IMD antennas requires a smaller design keep-out area, carry lower program development risk which yields a quicker time-to-market, without sacrificing RF performance.



### KEY BENEFITS

#### DESIGN ADVANTAGES

##### Reduced Costs and Time-to-Market

- Standard antenna eliminates design fees and cycle time associated with a custom solution; getting products to market faster.

##### Greater Flexibility with Unique Form Factors

- Ethertronics' IMD technology helps you deliver more advanced ergonomic designs without adverse impact on product performance.
- SMD mountable design enables faster and lower cost manufacturing.

##### RoHS Compliant

- Ethertronics' antennas are fully compliant with the European RoHS Directive 2002/95/EC.

#### END USER ADVANTAGES

##### Unique Form Factors Support Advanced Industrial Designs

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

##### Superior Range

- Better antenna function means longer range and greater sensitivity to critically precise signals—delivering greater customer satisfaction while building brand loyalty.

#### SERVICE AND SUPPORT

##### Extensive RF Experience

- Our Prestta antennas are supported by documentation, 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 supports an integrated network of design centers that can take projects from concept to production.

# PRELIMINARY PRODUCT BRIEF: Cellular

## Example: Ethertronics' Penta-Band Internal (Embedded) Antenna Specifications.

Below are the typical specs for a Penta-Band application (subject to change).

### Electrical Specifications

Typical Characteristics

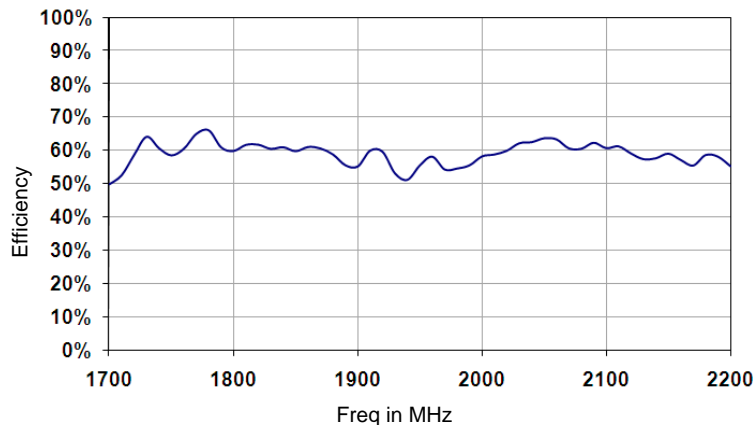
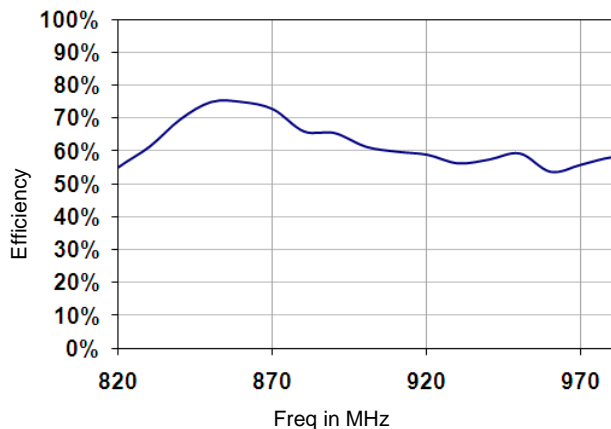
Measurements taken with a matching circuit on a 50 x 110 mm ground plane.

Cellular Antenna	824-849, 869-894	880-915, 925-960	1710-1785, 1805-1880	1850-1910, 1930-1990	1920- 1980, 2110-2170
Peak Gain	1.4 dBi	1.2 dBi	1.8 dBi	1.1 dBi	2.5 dBi
Average Efficiency	64%		59%		
VSWR Match	2.5:1 max				
Feed Point Impedance	50 ohms unbalanced (other if required)				
Power Handling	2 Watt cw				
Polarization	Linear				

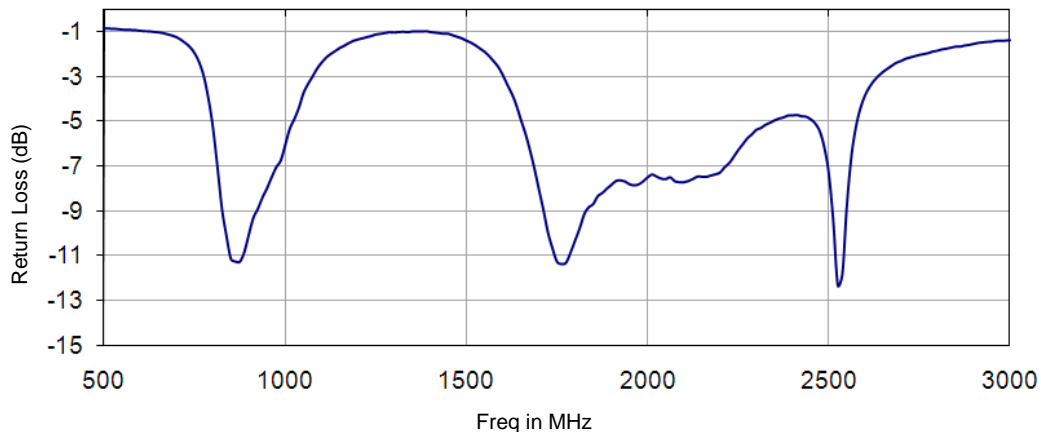
### Mechanical Specifications

Maximum Dimensions	35.0 x 9.0 x 3.2 mm
Mechanical Mounting	Antenna Assembly is SMD attached to main PCB.
RF Mounting	RF and Ground feed pads are SMD attached to main PCB.

### Typical Efficiency



### Typical Return Loss



Antenna Radiation Patterns

Typical Performance

Ethertronics' Test Board  
PCB: 50x110mm

