

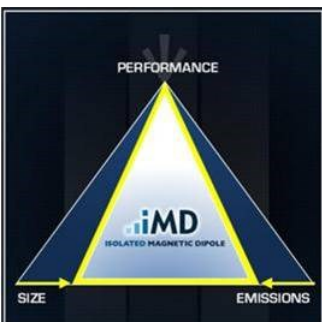
**Prestta™ Standard Octa-Band Cellular Embedded Antenna**  
700/750/850/900/1800/1900/2100/2700 MHz



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:

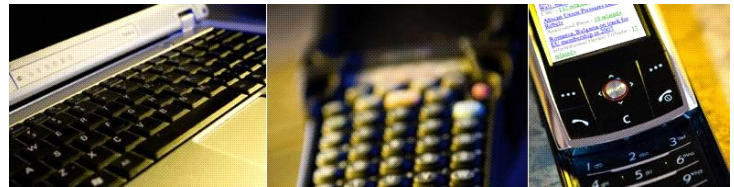
- M2M
- Automotive
- Automatic Meter Reading
- Healthcare
- Point of Sale
- Tracking...

**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.

**PRODUCT: Cellular Antenna - P/N 1002292**

**Ethertronics' Cellular Internal (Embedded) Antenna Specifications.**

Below are the typical performances for a cellular application.

**Electrical Specifications**

Typical Characteristics. Antenna mounted directly on PC + ABS plastic carrier

Balanced Pentaband Antenna (1002292)	Low Band (LTE,GSM, EGSM)	High Band (DCS, PCS, WCDMA, LTE)
	704 – 960 MHz	1710 – 2690 MHz
Average Efficiency (No ground)	46 %	67 %
Average Efficiency (180 x 190 sq.mm ground)	51 %	67 %
VSWR	3:1 max , 5:1 max (LTE B13/B17)	
Feed Point Impedance	50 ohms unbalanced (other if required)	
Radiation Pattern	Omni-directional	
Power Handling	2 Watt cw	
Polarization	Linear	

**Mechanical Specifications**

Maximum Dimensions	85.2 x 42.1 x 0.15 mm (1.25mm high at cable solder connection)
Cable / Connector	U.fl compatible connector, Cable diameter 1.13mm, 28.5mm Cable length.
Mounting	Antenna backing using 3M468 Adhesive on FPC substrate

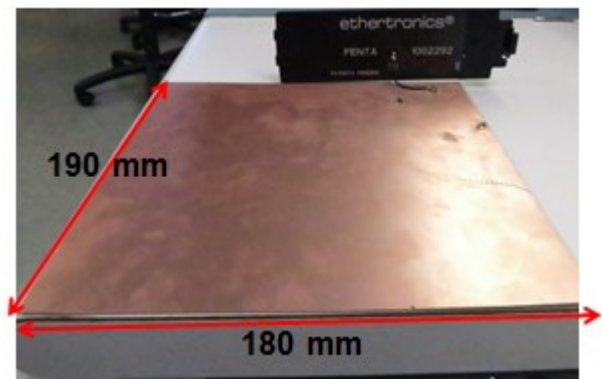
**Antenna Configuration 1**

Antenna located in Free Space



**Antenna Configuration 2**

Antenna located at the end of a PCB.

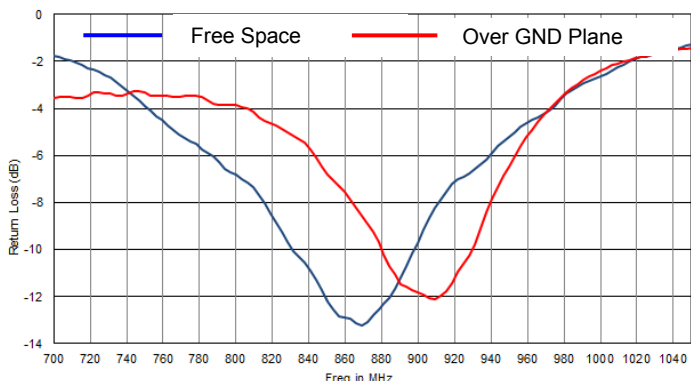


In this position, the antenna is located 1 mm away from the PCB and 5 mm above the PCB.

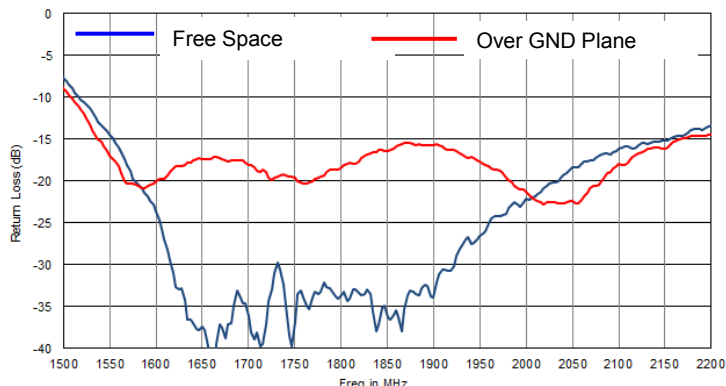
**ETHERTRONICS**

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Tel +(1) 858.550.3820 | fax +(1) 858.550.3821 | contact: [info@ethertronics.com](mailto:info@ethertronics.com)

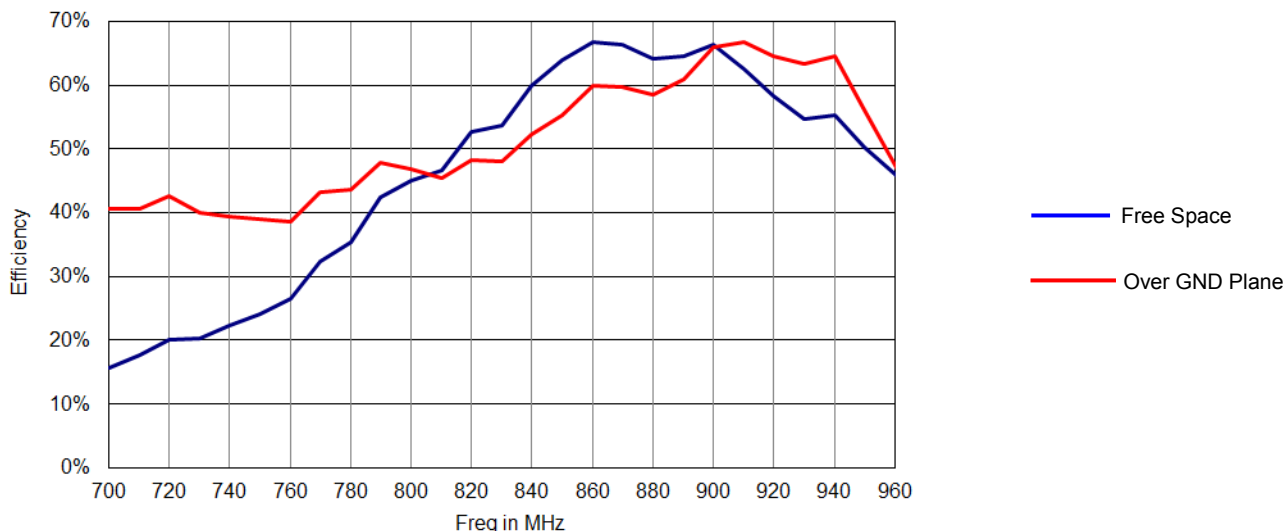
Return Loss in dB (Low Band)



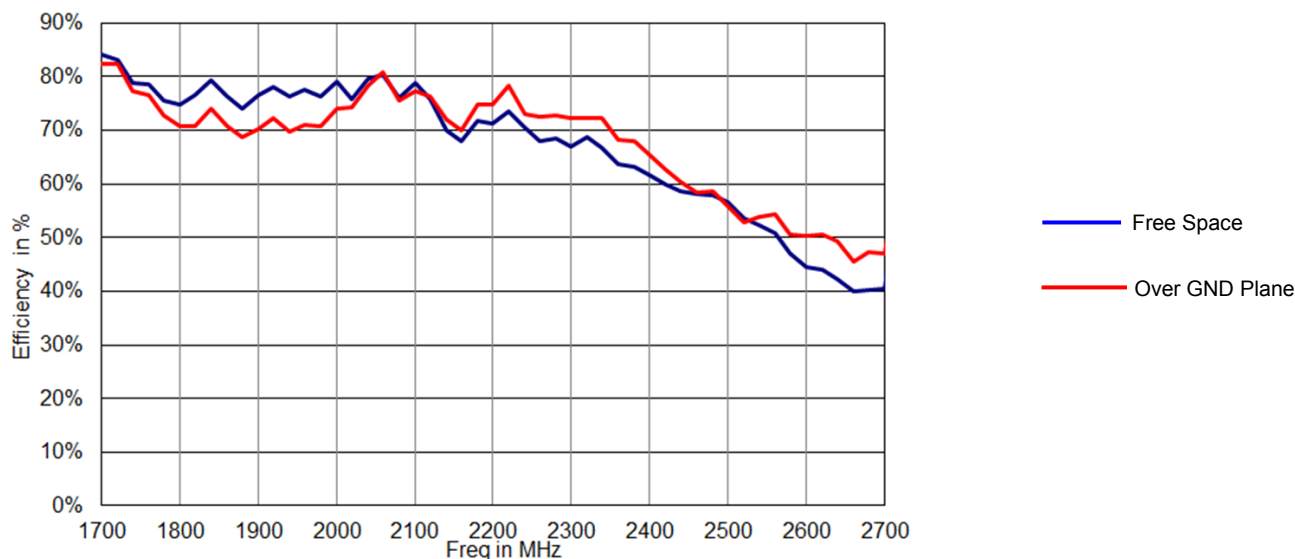
Return Loss, in dB (High Band)



Typical Low Band Efficiency, 700-960MHz

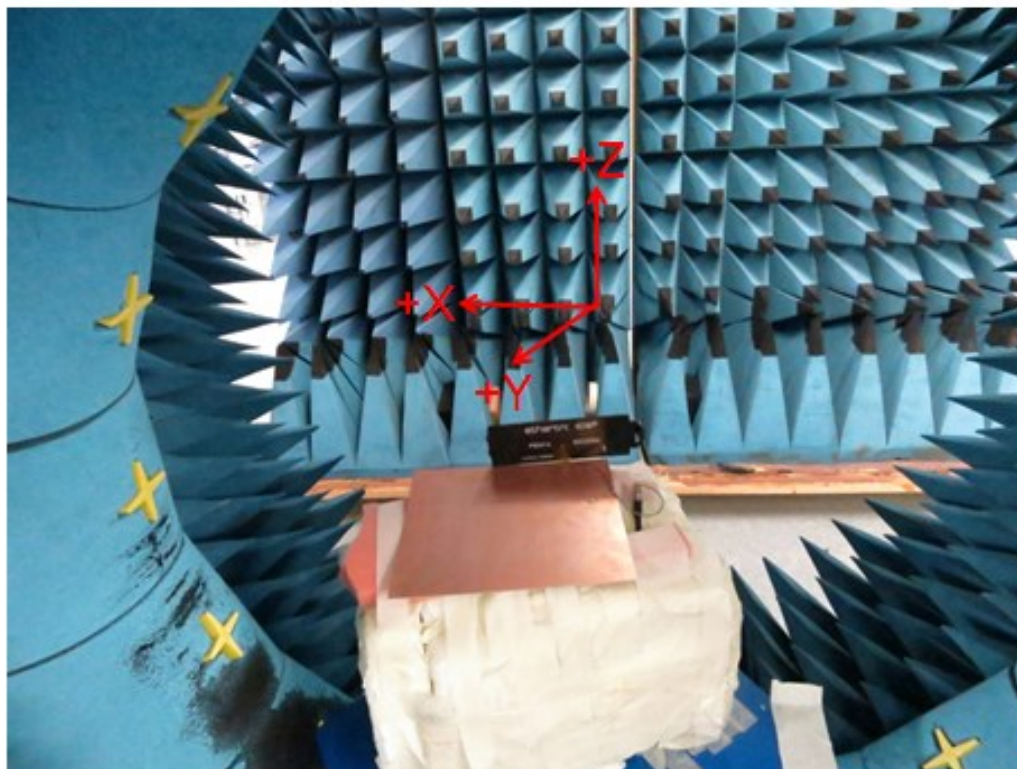


Typical High Band Efficiency, 1700-2700MHz



PRODUCT: Cellular Antenna - P/N 1002292

### Radiation Patterns Setup Conditions

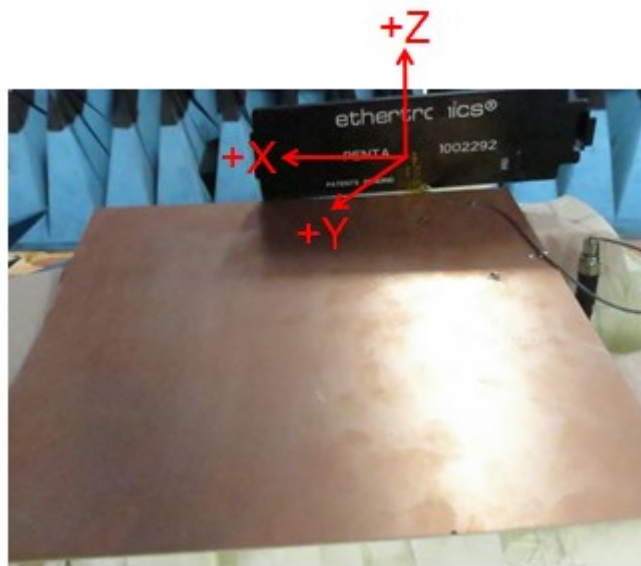


Antenna Configuration 1

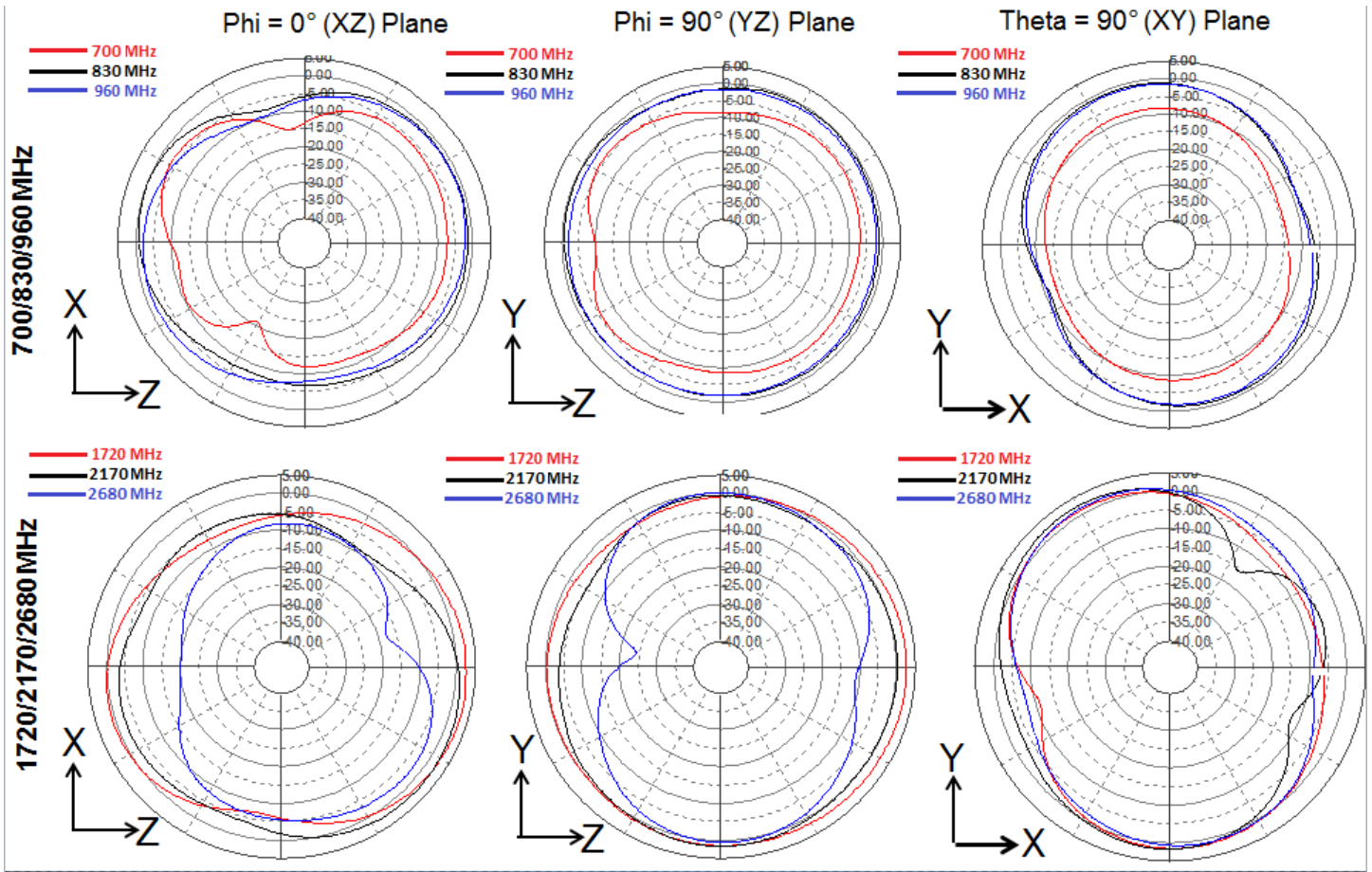
Antenna located in Free Space

Antenna Configuration 2

Antenna located at the end of a PCB.



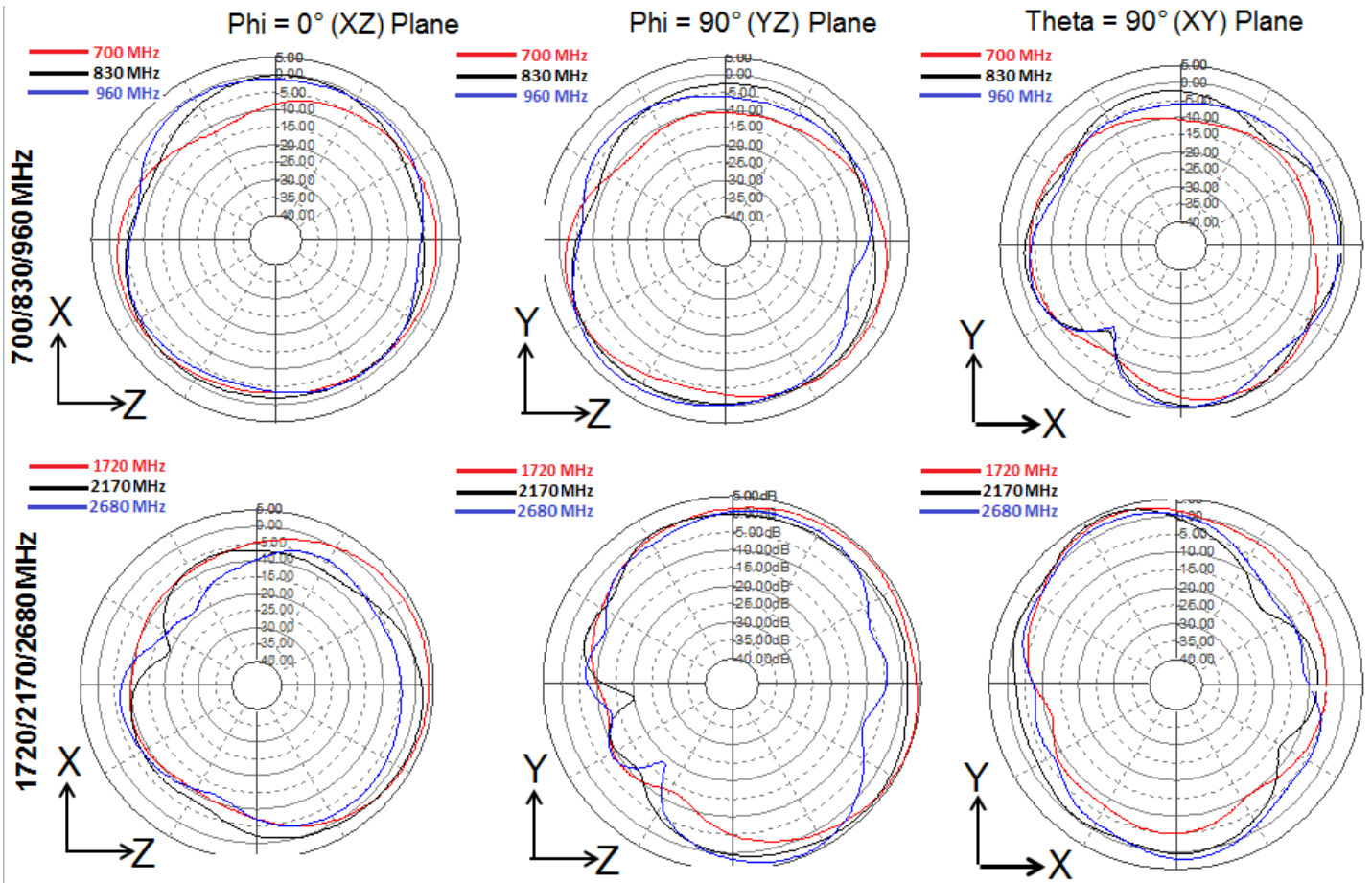
Typical Radiation Patterns - Antenna Configuration 1 : In Free Space



The Peak gain in the frequency band 700-960MHz is 0.5 dBi.

The Peak gain in the frequency band 1710-2200MHz is 3.0 dBi.

Typical Radiation Patterns - Antenna Configuration 2 : Over the Ground Plane



The Peak gain in the frequency band 820-960MHz is 3.0 dBi.

The Peak gain in the frequency band 1710-2200MHz is 5.0 dBi.