

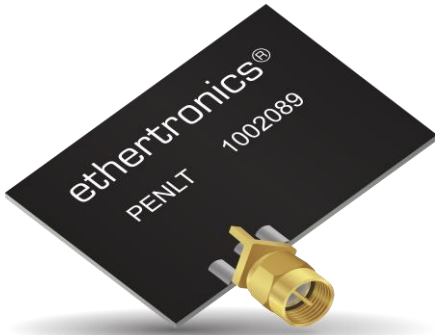


Part No. 1002089

LTE PCB Antenna with SMA Connector

700 / 750 / 850 / 900 / 1800 / 1900 / 2100 / 2700 MHz

Supports: Broadband LTE (OCTA-BAND), LTE CAT-M, NB-IoT, SigFox, LoRa, Cellular LPWA, RPMA, Firstnet



LTE PCB Antenna with SMA connector

Low Band : 698-960 MHz
High Band: 1710-2700 MHz

KEY BENEFITS

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' technology helps you deliver more advanced ergonomic designs without adverse impact on product performance.

Reliability

Comply with latest RoHS requirements

APPLICATIONS

- Medical applications
- Home automation
- Smart metering
- M2M, Industrial devices
- IoT
- Firstnet
- Automotive
- Healthcare
- Point of Sale
- Tracking
- NB-IoT
- Sigfox
- LoRa
- Cellular LPWA
- RPMA
- LTE CAT-M

Stays in Tune

Ethertronics' LTE antennas use patented IMD technology in a trace 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.

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

Electrical Specifications

Typical characteristics in housing using a 135 x 200 mm ground plane

| Frequency | 698-960 MHz | 1710-2700 MHz |
|----------------------|--------------------|---------------|
| Efficiency | > 50 % | > 50% |
| VSWR | < 3.0:1 | < 3.0:1 |
| Peak Gain | 5.1 dBi | 4.9 dBi |
| Polarization | Linear | |
| Power Handling | 2 Watts CW | |
| Feed Point Impedance | 50 ohms unbalanced | |

Mechanical Specifications & Ordering Part Number

| Ordering Part Number | 1002089 |
|------------------------------|----------------------------|
| Dimensions (mm) | 45.0 x 43.8 x 8.0 |
| Weight (grams) | 5.6 |
| Antenna Assembly on the PCBA | Using SMA (Male) connector |



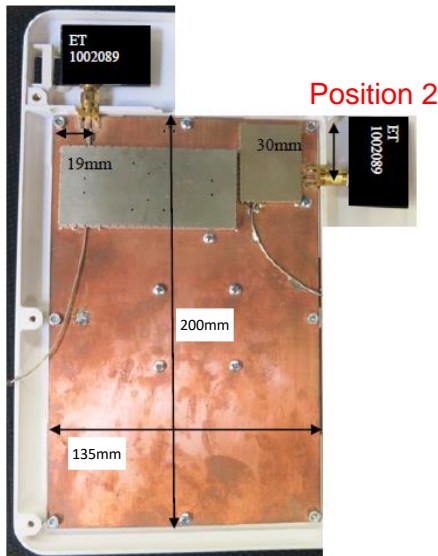
1002089 PCB LTE/Cellular performances

Ethertronics produces a wide variety of standard and custom antennas to meet user needs.

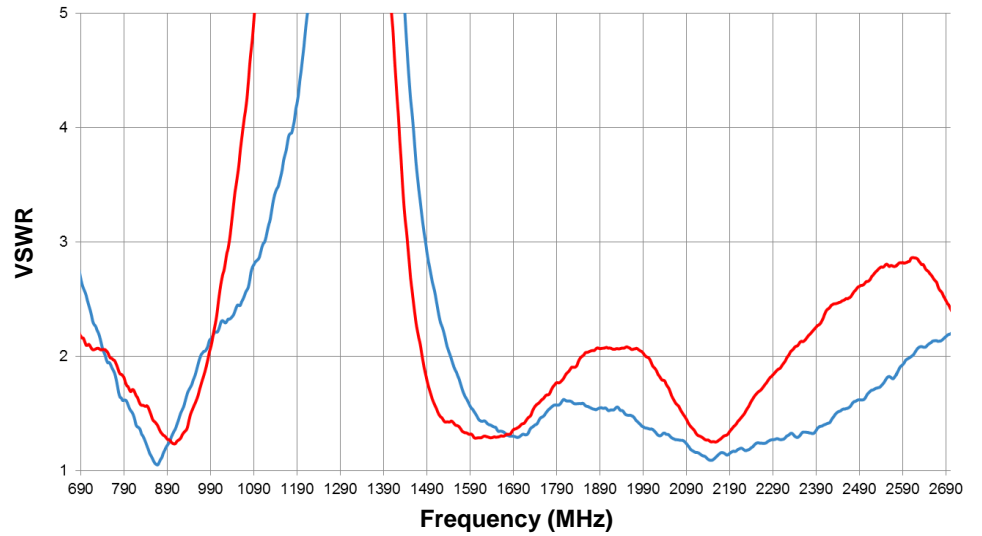
VSWR and Efficiency Plots

Typical performances on 135 x 200 mm PCB

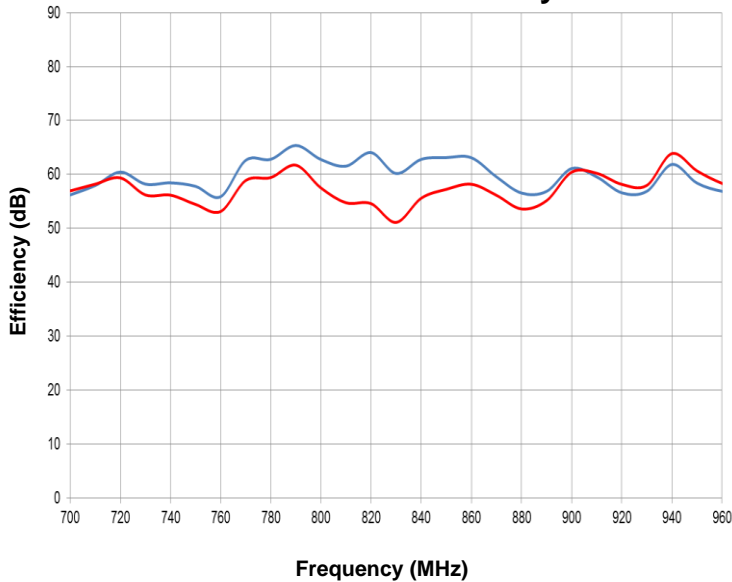
Position 1



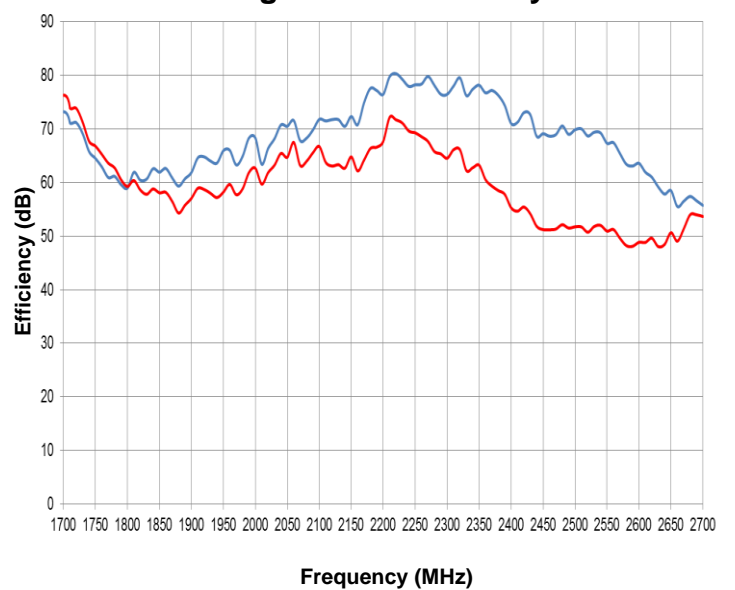
VSWR



Low Band Efficiency



High Band Efficiency





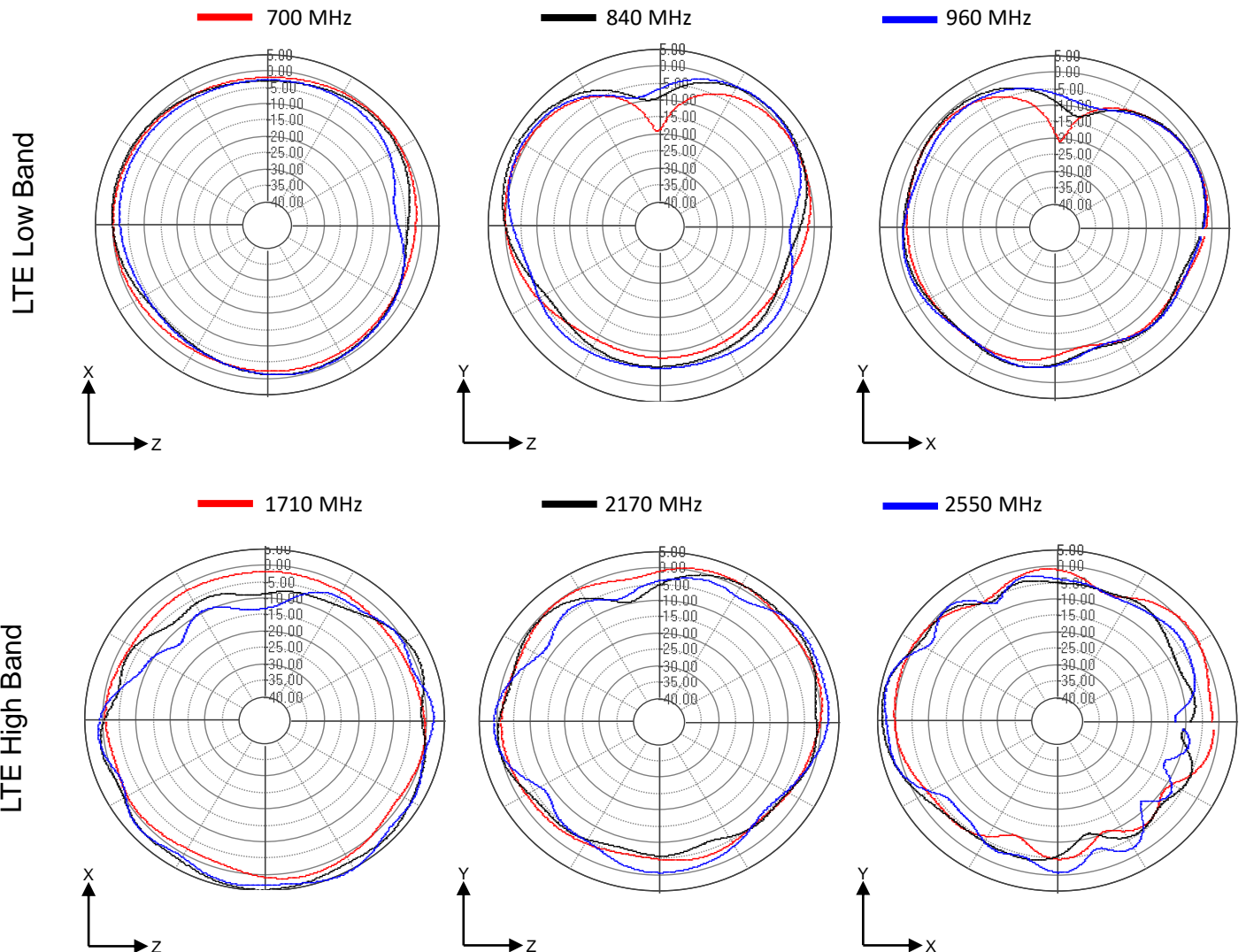
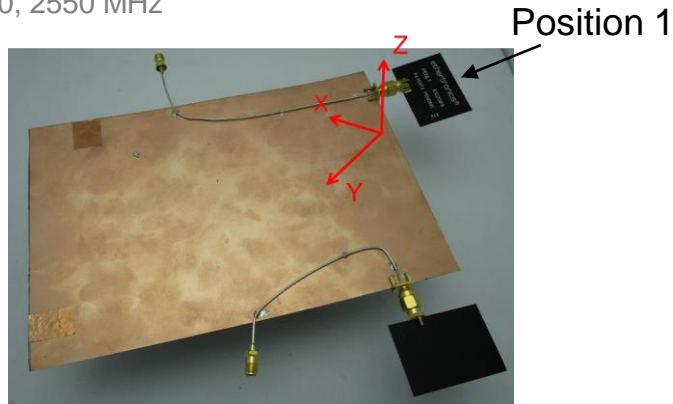
1002089 PCB LTE/Cellular performances

Ethertronics produces a wide variety of standard and custom antennas to meet user needs.

Antenna Radiation Patterns (Position 1)

Typical performances measured on 135 x 200 mm PCB

Measured @ 700, 840, 960, 1710, 2170, 2550 MHz





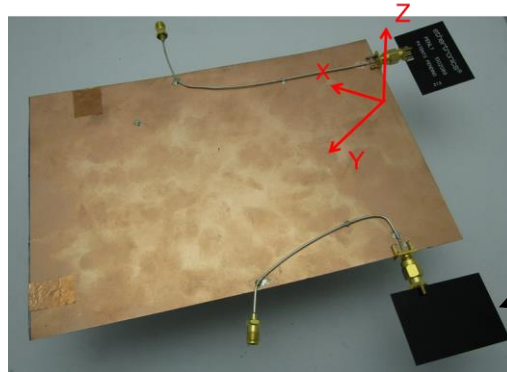
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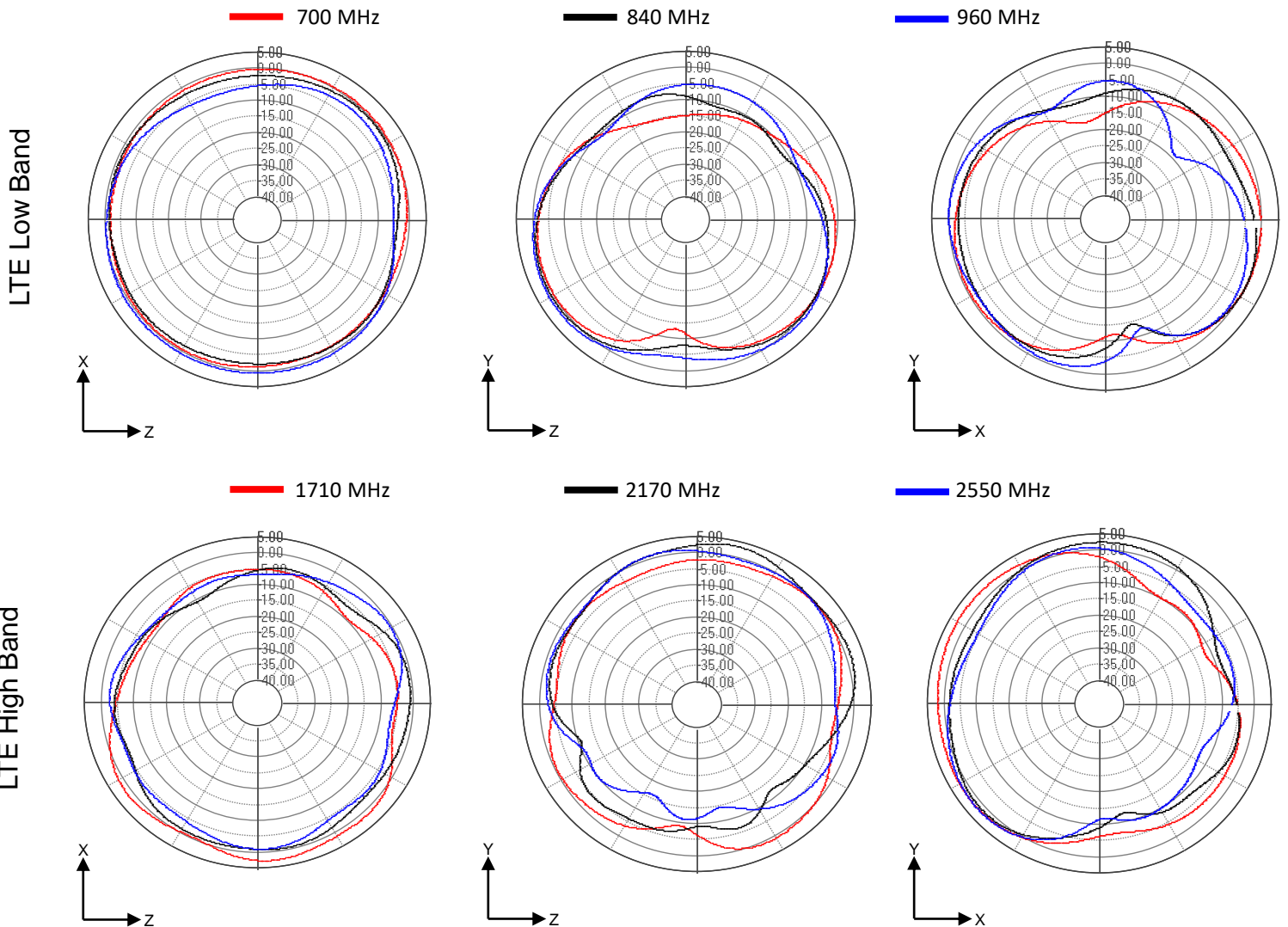
Antenna Radiation Patterns (Position 2)

Typical performances measured on 135 x 200 mm PCB

Measured @ 700, 840, 960, 1710, 2170, 2550 MHz



Position 2





1002089 PCB LTE/Cellular performances

Ethertronics produces a wide variety of standard and custom antennas to meet user needs.

Mechanical Dimensions

Typical antenna dimensions (mm)

| Part Number | A (mm) | B (mm) | C (mm) | Connector |
|-------------|------------|------------|-----------|------------|
| 1002089 | 45.0 ± 0.3 | 43.8 ± 0.8 | 8.0 ± 0.3 | SMA (Male) |

