



TRA9023

Phantom Antennas 902-928 MHz

The patented TE Connectivity Phantom® is a tough low-profile antenna for outdoor or indoor applications. Measuring only 2.3" tall, the Phantom 902-928 MHz antenna is designed and performance engineered with vertical polarization components. This antenna provides frequency agility, low visibility, and a low angle radiation pattern that delivers superior performance in challenging application environments.

The industry standard NMO mounting socket mates with all TE Connectivity magnetic, trunk lid, and hole mounts. Also available is optional threaded permanent stud mount model that is vandal resistant for mounting on brackets, panels, ceilings, or any other kind of housing.

The patented Phantom® antenna technology is beneficial when high performance is desired and extreme ruggedness and low profile is required.

FEATURES

- Mechanically robust for both indoor and outdoor applications
- NMO mount and vandal resistant permanent mount option
- IP67 rated for dust intrusion and temporary water immersion
- RoHS tested and compliant components

MARKETS - APPLICATIONS

- Cellular
- GSM and PCS
- Wi-Fi
- 802.11
- Bluetooth wireless applications

ELECTRICAL SPECIFICATIONS

| | |
|---------------------------------|-----------------|
| Model Name | TRA9023 |
| Operating Frequency (MHz) | 902-928 |
| VSWR | <2.0:1 |
| Gain (dBi) | 3.0 |
| Nominal Impedance (Ohms) | 50 |
| Max Power - Ambient 25°C (W) | 100 |
| Polarization | Vertical |
| Radiation Pattern | Omnidirectional |
| Vertical Plane 3 dB Beamwidth | 360° |
| Horizontal Plane 3 dB Beamwidth | 78° |

MECHANICAL SPECIFICATIONS

| | |
|----------------------------------|--|
| Dimensions - H x D - mm (inches) | 58.42 x 36.6 (2.3 x 1.44) |
| Weight - g (lbs.) | TRA9023N: 184 (0.405) TRA9023NP: 240 (0.529) |
| Color | Black/Black Chrome or White/Chrome |

ENVIRONMENTAL SPECIFICATIONS

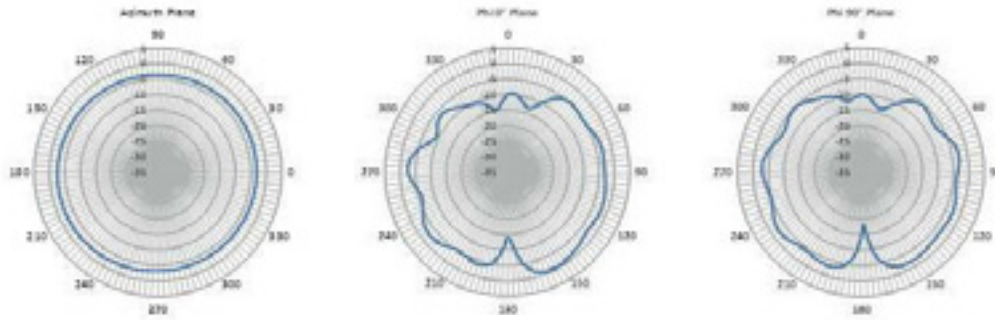
| | |
|---|------------------------------|
| Operating Environment (Indoor or Outdoor) | Indoor or outdoor |
| Operating Temperature - °C (°F) | -40 to +85°C (-40 to +185°F) |
| Storage Temperature - °C (°F) | -45 to +85°C (-49 to +185°F) |
| Wind Rating - km/hr (mph) | 282 (175) |
| Ingress Protection Rating | IP67 |
| Material Substance Compliance | RoHS |

CONFIGURATION

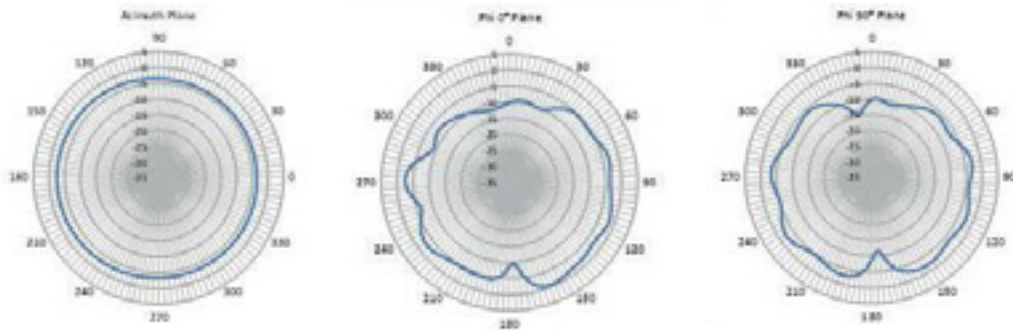
| PART NUMBER | MOUNTING | COMMENTS |
|-------------|----------------------|--------------------------|
| TRA9023 | NMO Mount | |
| TRA9023P | Permanent Stud Mount | |
| TRA9023N | NMO Mount | No ground plane required |
| TRA9023NP | Permanent Stud Mount | No ground plane required |

RADIATION PATTERNS

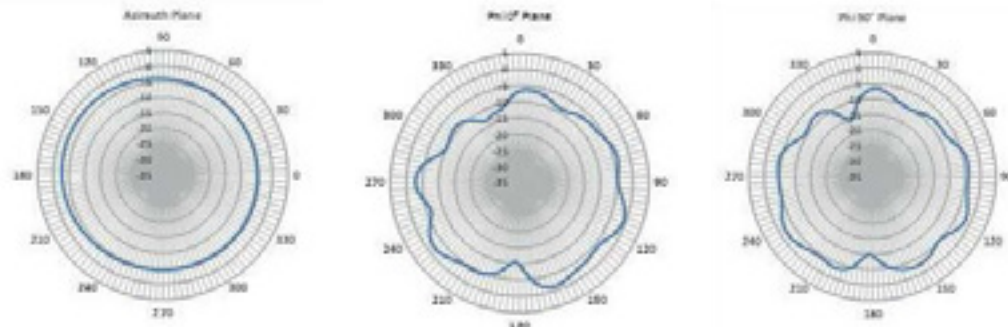
902 MHz



910 MHz



928 MHz



TE TECHNICAL SUPPORT CENTER

| | |
|-------------------|-----------------------|
| USA: | +1 (800) 522-6752 |
| Canada: | +1 (905) 475-6222 |
| Mexico: | +52 (0) 55-1106-0800 |
| Latin/S. America: | +54 (0) 11-4733-2200 |
| Germany: | +49 (0) 6251-133-1999 |
| UK: | +44 (0) 800-267666 |
| France: | +33 (0) 1-3420-8686 |
| Netherlands: | +31 (0) 73-6246-999 |
| China: | +86 (0) 400-820-6015 |

te.com

TE, TE Connectivity, TE connectivity (logo), and EVERY CONNECTION COUNTS are trademarks owned or licensed by the TE Connectivity plc family of companies. Other product names, logos, and company names mentioned herein may be trademarks of their respective owners.

While TE has made every reasonable effort to ensure the accuracy of the information in this document, TE does not guarantee that it is error-free, nor does TE make any other representation, warranty or guarantee that the information is accurate, complete, correct, reliable or current. TE reserves the right to make any adjustments to the information contained herein at any time without notice. TE EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES REGARDING THE INFORMATION CONTAINED HEREIN, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. In no event will TE be liable for any direct, indirect, incidental, special or consequential damages arising from or related to recipient's use of the information. It is the sole responsibility of recipient of this information to verify the results of this information using their engineering and product environment. Recipient assumes any and all risks associated with the use of the information. Antenna performance may vary. TE is a component manufacturer, and customer and/or end-user is responsible for all end-use compliance and regulatory requirements.

©2025 TE Connectivity. All Rights Reserved.

05/25 Original