

## Product Brief



## HE Series 916 MHz Helical Antenna

Linx 916 MHz HE series compact printed circuit board (PCB) mount helical monopole antennas support low-power, wide-area (LPWA) applications including LoRaWAN®, remote controls, and ISM band applications in the 902 MHz to 930 MHz range.

The HE series antennas are made from 1.3 mm diameter beryllium copper for use in PCB-mount installations requiring a rugged antenna design.

Designed for reflow-solder mounting directly to a printed circuit board for high-volume applications, the 916-HESM offers a surface-mount design and the 916-HETH is for use in a through-hole installation.



### Features

- Performance at 916 MHz
  - VSWR:  $\leq 1.5$
  - Peak Gain: 6.4 dBi
  - Efficiency: 75%
- Direct PCB attachment
- Reflow- or hand-solder assembly
- Omnidirectional radiation pattern
- Compact size
  - 25.4 mm x 15.3 mm x 8.9 mm

### Applications

- Low-power, wide-area (LPWA) applications
  - LoRaWAN®
- Remote sensing, monitoring and control
  - Security systems
  - Industrial machinery
  - Automated equipment
  - AMR (automated meter reading)
- Internet of Things (IoT) devices
- Smart Home networking
- Hand-held devices

### Ordering Information

Part Number	Description
ANT-916-HESM	916 MHz helical surface-mount antenna
ANT-916-HETH	916 MHz helical through-hole antenna

Available from Linx Technologies and select distributors and representatives.

Electrical Specifications

ANT-916-HExx	916 MHz
Frequency Range	902 MHz to 930 MHz
VSWR (max)	1.5
Peak Gain (dBi)	6.4
Average Gain (dBi)	-1.4
Efficiency (%)	75
Polarization	Linear
Radiation	Omnidirectional
Max Power	15 W
Wavelength	1/4-wave
Electrical Type	Monopole
Impedance	50 Ω
Connection	ANT-916-HESM = surface-mount, ANT-916-HETH = through-hole
Operating Temperature Range	-40 °C to +80 °C
Weight	1.0 g (0.04 oz)
Dimensions	25.4 mm x 15.3 mm x 8.9 (1.00 in x 0.60 in x 0.35 in)
ESD Sensitivity	NOT ESD sensitive. As a best practice, Linx may use ESD packaging.

Electrical specifications and plots measured with a 84.0 mm x 38.0 mm (3.31 in x 1.50 in) reference ground plane.

VSWR

Figure 1 provides the voltage standing wave ratio (VSWR) across the antenna bandwidth. VSWR describes the power reflected from the antenna back to the radio. A lower VSWR value indicates better antenna performance at a given frequency. Reflected power is also shown on the right-side vertical axis as a gauge of the percentage of transmitter power reflected back from the antenna.

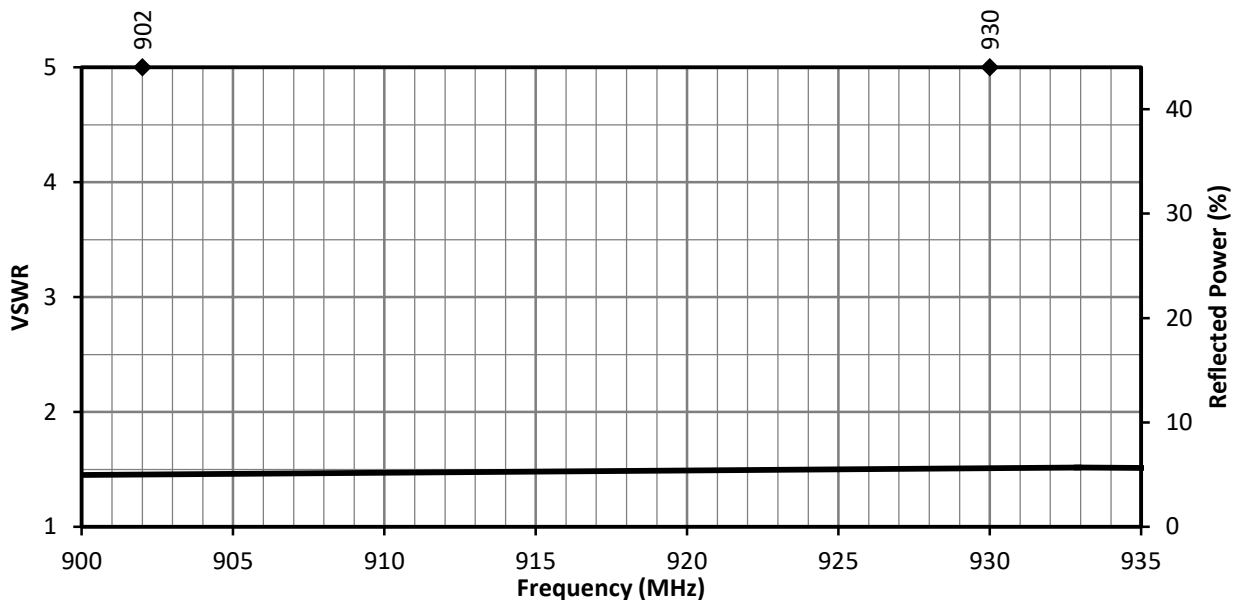


Figure 1. ANT-916-HE Series VSWR

Website: <http://linxtechnologies.com> • Phone: +1 (541) 471-6256 • E-MAIL: [info@linxtechnologies.com](mailto:info@linxtechnologies.com) • Linx Offices: 159 Ort Lane, Merlin, OR, US 97532

Linx Technologies reserves the right to make changes to the product(s) or information contained herein without notice. No liability is assumed as a result of their use or application. No rights under any patent accompany the sale of any such product(s) or information.

Wireless Made Simple is a registered trademark of Linx Acquisitions LLC. LoRaWAN is a registered trademark of Semtech Corporation. Sigfox is a registered trademark of SIGFOX. Other product and brand names may be trademarks or registered trademarks of their respective owners.

Copyright © 2020 Linx Technologies. All Rights Reserved.

