

Product Brief



VHETH Series 868 MHz and 915 MHz Helical Antennas

VHETH series antennas are compact surface mount helical antennas for low-power, wide-area (LPWA) applications including LoRaWAN® and Sigfox®. remote controls, and ISM band applications.

The ANT-868-VHETH antenna operates in the 862 MHz to 876 MHz range while the ANT-915-VHETH antenna is designed for applications in the 902 MHz to 930 MHz range requiring a rugged, compact and omnidirectional embedded antenna.

The connector-style base of the antenna ensures proper mounting for uniform performance in high-volume manufacturing.



Features

- Performance at 862 MHz to 876 MHz
 - VSWR: ≤ 2.7
 - Peak Gain: -0.7 dBi
 - Efficiency: 42%
- Performance at 902 MHz to 930 MHz
 - VSWR: ≤ 2.3
 - Peak Gain: 0.9 dBi
 - Efficiency: 58%
- Direct PCB attachment
- Reflow- or hand-solder assembly
- Omnidirectional radiation pattern
- Compact size
 - 44.3 mm x 7.0 mm x 7.0 mm

Applications

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

Ordering Information

| Part Number | Description |
|----------------------|---|
| ANT-868-VHETH | 868 MHz helical antenna with connector-style PCB-mount base |
| AEK-868-VHETH | 868 MHz helical antenna evaluation kit |
| ANT-915-VHETH | 915 MHz helical antenna with connector-style PCB-mount base |
| AEK-915-VHETH | 915 MHz helical antenna evaluation kit |

Available from Linx Technologies and select distributors and representatives.

Table 1. Electrical Specifications

| ANT-fff-VHETH | 868 MHz | 915 MHz |
|--------------------|--|--------------------|
| Frequency Range | 862 MHz to 876 MHz | 902 MHz to 930 MHz |
| VSWR (max) | 2.7 | 2.3 |
| Peak Gain (dBi) | -0.7 | 0.9 |
| Average Gain (dBi) | -3.8 | -2.5 |
| Efficiency (%) | 42 | 58 |
| Polarization | Linear | |
| Radiation | Omnidirectional | |
| Max Power | 15 W | |
| Wavelength | 1/4-wave | |
| Electrical Type | Monopole | |
| Impedance | 50 Ω | |
| ESD Sensitivity | NOT ESD sensitive. As a best practice, Linx may use ESD packaging. | |

Electrical specifications and plots measured with a 100 mm x 100 mm (3.94 in x 3.94 in) reference ground plane.

Table 2. Mechanical Specifications

| ANT-fff-VHETH | |
|-----------------------------|--|
| Connection | Solder pin |
| Operating Temperature Range | -40 °C to +80 °C |
| Weight | 0.4 g (0.01 oz) |
| Dimensions | 44.3 mm x 7.0 mm x 7.0 (1.75 in x 0.28 in x 0.28 in) |

Product Dimensions

Figure 1 provides dimensions of the ANT-868-VHETH and ANT-915-VHETH antennas.

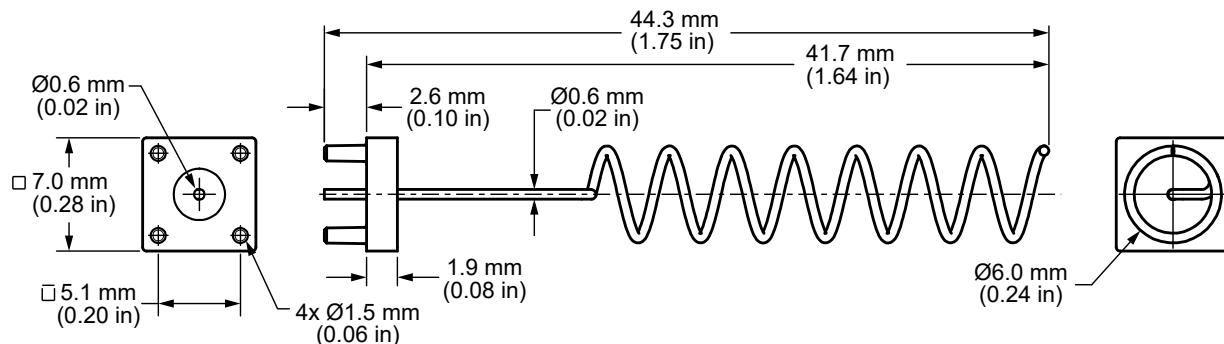


Figure 1. VHETH Series Antenna Dimensions

Antenna Installation

The VHETH series antenna feed is mounted in a non-conductive 4-pin connector-style base which simplifies insertion during manufacturing and helps maintain antenna alignment for consistent end-product performance.

Packaging Information

The ANT-868-VHETH antenna is packaged in a protective plastic tray in quantities of 90 pcs. Distribution channels may offer alternative packaging options.

SWR

Figure 2 provides the voltage standing wave ratio (VSWR) for the ANT-868-VHETH, and Figure 3 provides VSWR for the ANT-915-VHETH antenna. 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.

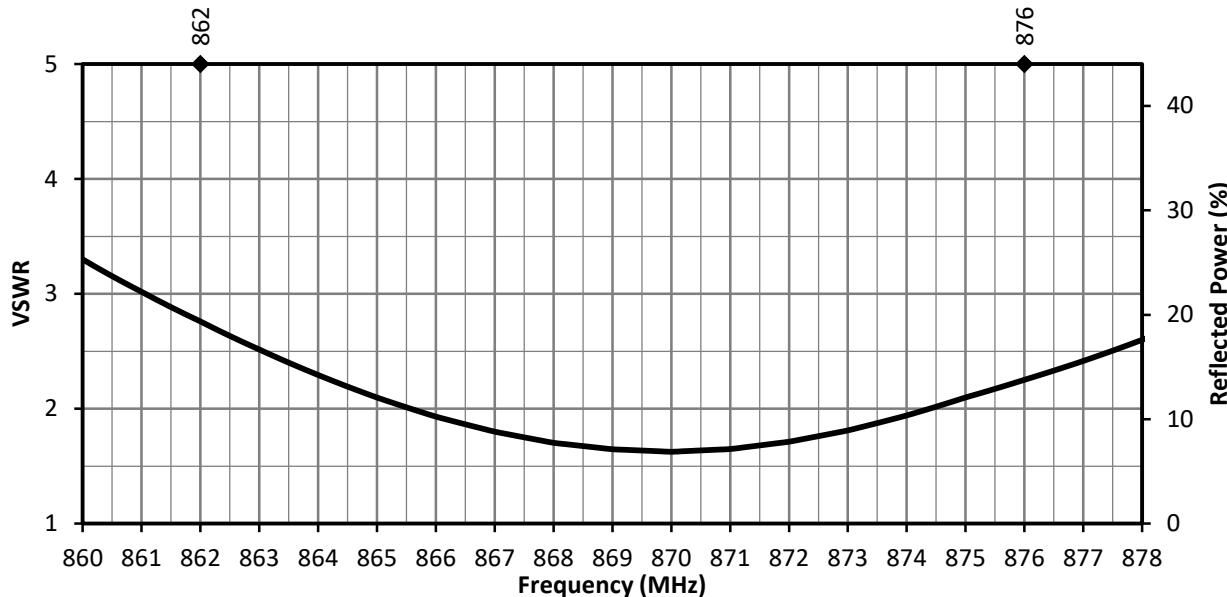


Figure 2. ANT-868-VHETH Antenna VSWR

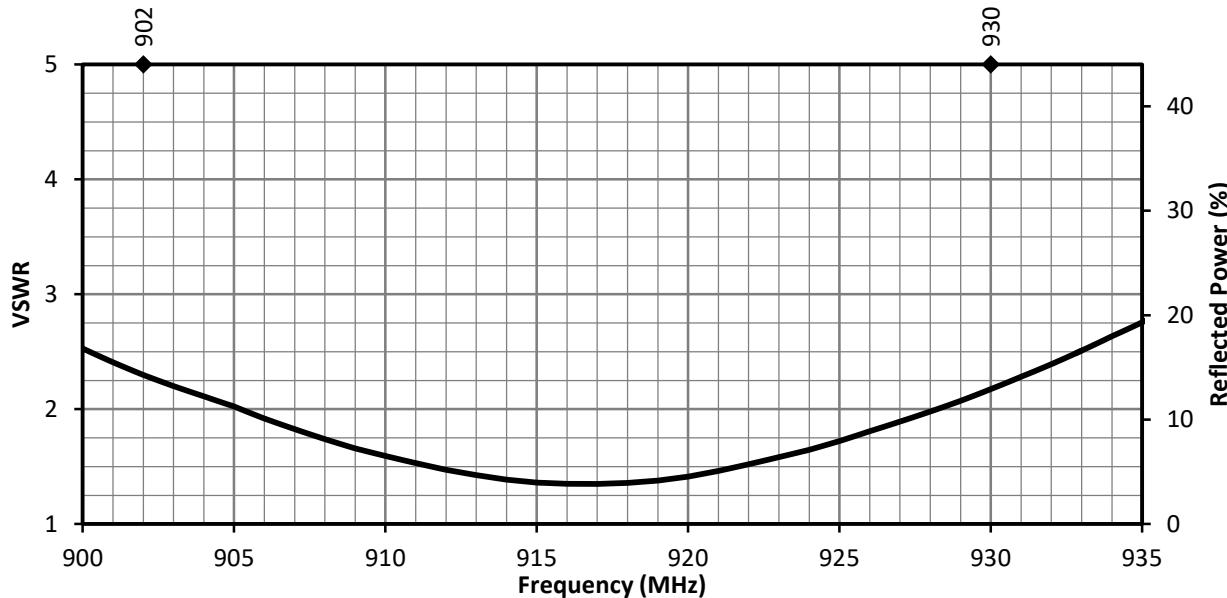


Figure 3. ANT-915-VHETH Antenna VSWR

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

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 © 2021 Linx Technologies

All Rights Reserved

Doc# PB21021-79ANT



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Linx Technologies](#):

[ANT-915-VHETH](#) [ANT-868-VHETH](#)