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[Linx Technologies](#)

[ANT-868-CW-HW](#)

For any questions, you can email us directly:

sales@integrated-circuit.com

ANT-868-CW-HW Data Sheet

AntennaFactor
by Linx

Product Description

HW Series 1/2-wave center-fed dipole antennas deliver outstanding performance in a rugged and cosmetically attractive package. The antenna contains a helical element and internal counterpoise which eliminates external ground plane dependence and maximizes performance. HW Series antennas attach via a standard SMA or Part 15 compliant RP-SMA connector. Custom colors and connectors are available for volume OEM customers.

Features

- Low cost
- Internal counterpoise
- Excellent performance
- Omni-directional pattern
- Outstanding VSWR
- Rugged & damage-resistant
- Standard SMA or Part 15 compliant RP-SMA connector
- Internal O-ring seal on connector

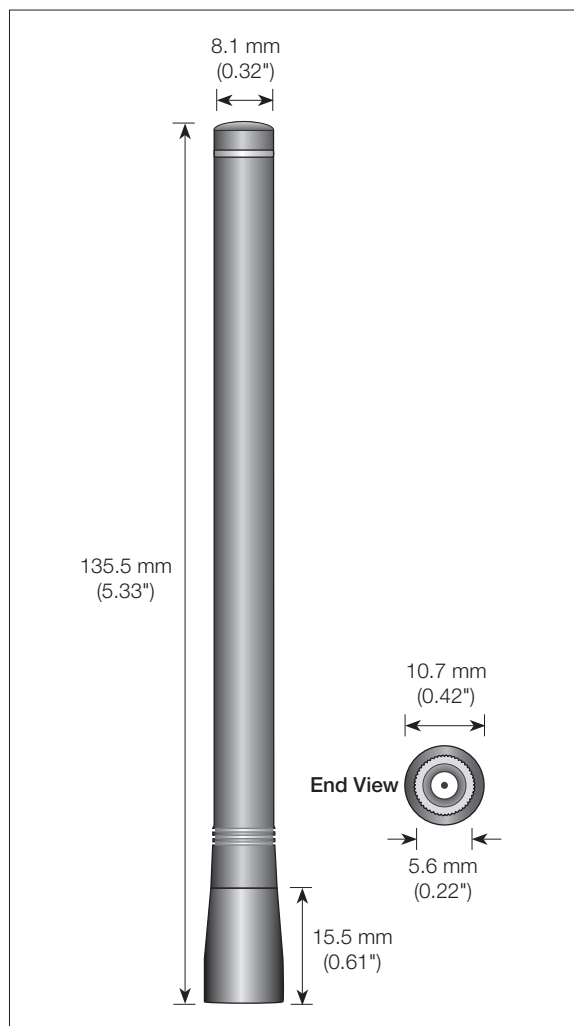
Electrical Specifications

Center Frequency:	868MHz
Recmd. Freq. Range:	855–880MHz
Wavelength:	1/2-wave
VSWR:	≤ 2.0 typical at center
Peak Gain:	0dBi
Impedance:	50-ohms
Connection:	SMA or RP-SMA
Oper. Temp. Range:	–20°C to +85°C

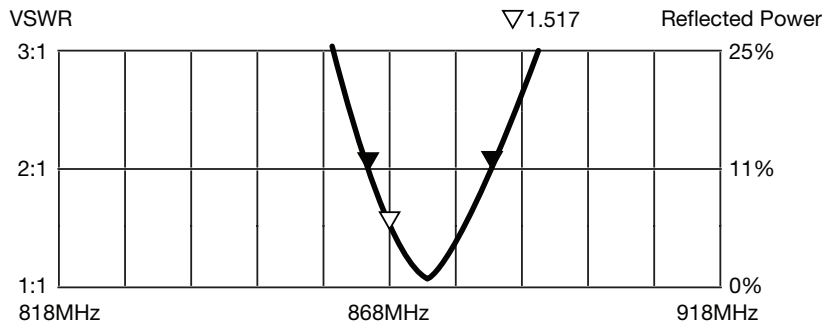
Electrical specifications and plots measured with a 10.16 cm x 10.16 cm (4.00" x 4.00") reference ground plane.

Ordering Information

ANT-868-CW-HW (with RP-SMA connector)
 ANT-868-CW-HW-SMA (with SMA connector)



VSWR Graph



What is VSWS?

The Voltage Standing Wave Ratio (VSWS) is a measurement of how well an antenna is matched to a source impedance, typically 50-ohms. It is calculated by measuring the voltage wave that is headed toward the load versus the voltage wave that is reflected back from the load. A perfect match will have a VSWS of 1:1. The higher the first number, the worse the match, and the more inefficient the system. Since a perfect match cannot ever be obtained, some benchmark for performance needs to be set. In the case of antenna VSWS, this is usually 2:1. At this point, 88.9% of the energy sent to the antenna by the transmitter is radiated into free space and 11.1% is either reflected back into the source or lost as heat on the structure of the antenna. In the other direction, 88.9% of the energy recovered by the antenna is transferred into the receiver. As a side note, since the “:1” is always implied, many data sheets will remove it and just display the first number.

How to Read a VSWS Graph

VSWS is usually displayed graphically versus frequency. The lowest point on the graph is the antenna’s operational center frequency. In most cases, this will be different than the designed center frequency due to fabrication tolerances. The VSWS at that point denotes how close to 50-ohms the antenna gets. Linx specifies the recommended bandwidth as the range where the typical antenna VSWS is less than 2:1.