

Product Brief



ANT-868-CPA

868 MHz Directional Embedded Ceramic Patch Antenna

The 868-CPA compact ceramic patch antenna offers directional signaling at 868 MHz with a footprint of only 25 mm x 25 mm on a recommended ground plane size of 70 mm x 70 mm.

The 868-CPA antenna is ideal for low-power, wide-area (LPWA) applications including LoRaWAN®, Sigfox®, remote controls and other 868 MHz ISM band applications where directional signaling is desired.

The 868-CPA antenna mounts to the printed circuit board (PCB) using re-peelable 5000NS adhesive backing which allows for repositioning or reorientation of the antenna. The pin-type connection feeds through the PCB where it is soldered to the feed line.



Features

- Directional radiation pattern orthogonal to antenna surface
- Compact size, 25 mm x 25 mm x 4 mm
- Peak gain: 1.4 dBi when used with a 70 mm x 70 mm ground plane. Larger ground planes provide increased gain performance
- Pin-mount solder connection for direct PCB attachment
- Right-hand circularly polarized (RHCP)
- Durable re-peelable self-adhesive backing

Applications

- Low-power, wide-area (LPWA) networks
 - LoRaWAN®
 - Sigfox®
- Smart Home networking
 - Security systems
 - Home weather stations
- Remote sensing, monitoring and control
 - Security systems
 - Industrial machinery
 - Keyless entry systems
 - UHF RFID devices
- Hand-held devices

Ordering Information

Part Number	Description
ANT-868-CPA	868 MHz ceramic patch antenna

Available from LinX Technologies and select distributors and representatives.

Electrical Specifications

Frequency Range	863 MHz to 870 MHz
VSWR (max.)	9.5
Return Loss (max.)	-1.8
Peak Gain (dBi)	1.4
Average Gain (dBi)	-5.9
Efficiency (%)	33
Polarization	RHCP
Radiation	Directional
Max Power	8 W
Wavelength	1/4-wave
Electrical Type	Radiating patch
Impedance	50 Ω
Connection	Pin type
Weight	13.2 g (0.46 oz)
Dimensions	25.0 mm x 25.0 mm x 4.0 mm (1.00 in x 1.00 in x 0.16 in)
Operating Temperature Range	-40 °C to +85 °C
ESD Sensitivity	NOT ESD sensitive. As a best practice, Linx may use ESD packaging.

Electrical specifications and plots measured with a 70 mm x 70 mm (2.8 in x 2.8 in) 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.

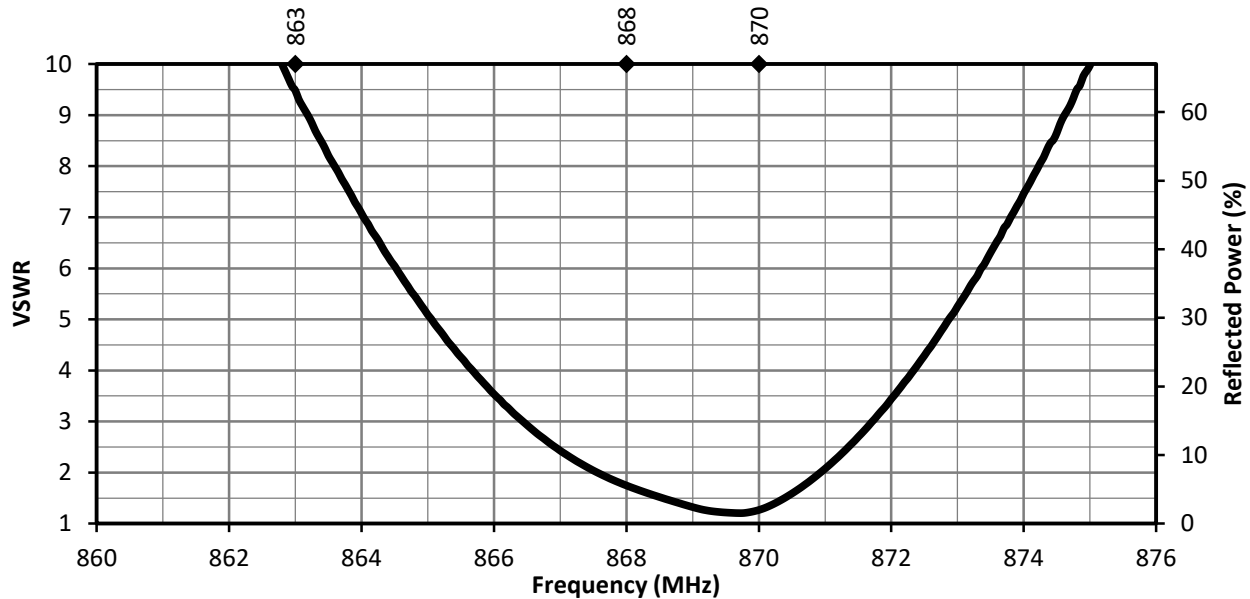


Figure 1. ANT-868-CPA VSWR

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

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