

## Advance Product Brief



### ANT-868-CPA 868 MHz Directional Embedded Ceramic Patch Antenna

The 868-CPA ceramic patch antenna offers directional signalling at 868 MHz in a compact package. The antenna provides gain of 0 dBi at 868 MHz with a footprint of only 25 mm x 25 mm on a recommended minimum ground plane size of 70 mm x 70 mm.

The 868-CPA antenna supports ISM, LoRaWAN® (EU863-870, IN865-867), and Sigfox® bands as well as RFID UHF applications.

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 to the bottom where it is soldered to the feed line.



#### Features

- Directional radiation pattern
- Compact size, 25 mm x 25 mm x 4 mm
- Peak gain: 0 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

- Internet of Things (IoT) devices
- Low-power, wide-area (LPWA) networks
  - LoRaWAN® (EU863-870, IN865-867)
  - Sigfox® (862 MHz to 876 MHz)
- RFID-UHF readers
- Sensing and remote monitoring

#### Ordering Information

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

Available from Linx Technologies and select distributors and representatives.

## Electrical Specifications

	ANT-868-CPA
Frequency Range	859 MHz to 877 MHz
VSWR	$\leq 2.8 : 1$
Peak Gain	-0.3 dBi
Average Gain	-7.6 dBi
Efficiency	44%
Polarization	RHCP
Radiation	Directional
Max Power	5 W
Wavelength	1/2-wave
Electrical Type	Radiating patch
Impedance	50 $\Omega$
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	-40 °C to +85 °C
ESD Sensitivity	NOT ESD sensitive. As a best practice, Linx may use ESD packaging.

## 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.

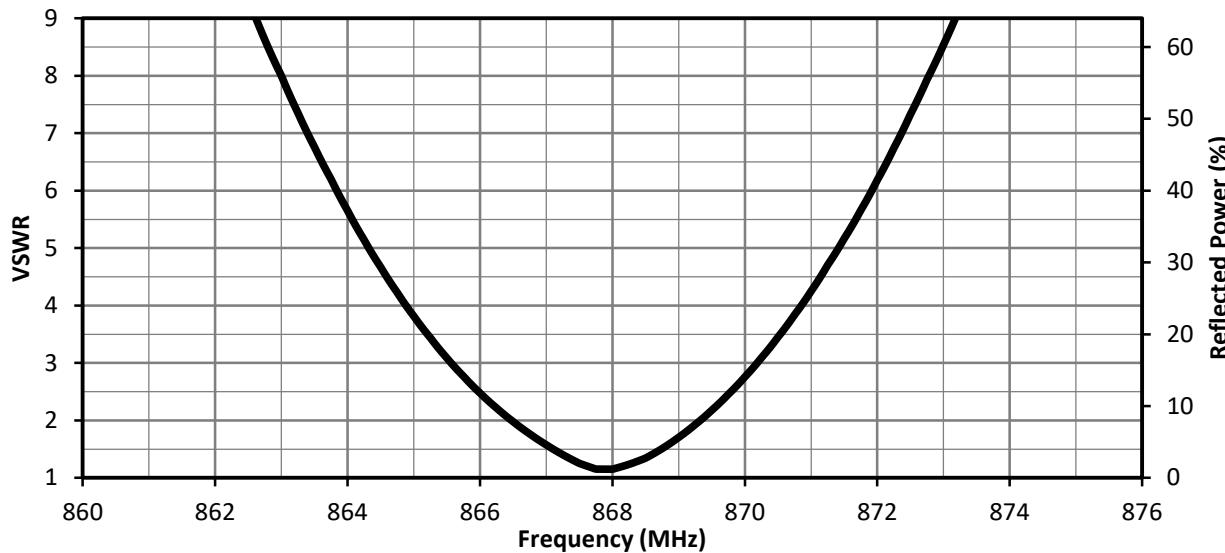


Figure 1. ANT-868-CPA VSWR

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