

## Product Brief



**ANT-2.4-CPA**

### **2.4 GHz Directional Embedded Ceramic Patch Antenna**

The 2.4-CPA compact ceramic patch antenna offers directional signaling at 2.4 GHz with a footprint of only 20 mm x 20 mm on a recommended ground plane size of 40 mm x 40 mm.

The 2.4-CPA antenna supports 2.4 GHz ISM applications including Bluetooth® and ZigBee®, as well as single-band WiFi.

The 2.4-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, 20 mm x 20 mm x 4 mm
- Peak gain: 5.5 dBi when used with a 40 mm x 40 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**

- 2.4 GHz ISM:
  - Bluetooth®
  - ZigBee®
- Single-band WiFi/802.11
- Sensing and remote monitoring
- Hand-held devices
- Internet of Things (IoT) devices
- Gateways

#### **Ordering Information**

Part Number	Description
ANT-2.4-CPA	2.4 GHz ceramic patch antenna

Available from Linx Technologies and select distributors and representatives.

## Electrical Specifications

Frequency Range	2.4 GHz to 2.5 GHz
VSWR (max.)	2.7
Return Loss (max.)	-6.9
Peak Gain (dBi)	5.5
Average Gain (dBi)	-0.8
Efficiency (%)	88
Polarization	RHCP
Radiation	Directional
Max Power	8 W
Wavelength	1/4-wave
Electrical Type	Radiating patch
Impedance	50 Ω
Connection	Pin type
Weight	6.1 g (0.22 oz)
Dimensions	20.0 mm x 20.0 mm x 4.0 mm (0.79 in x 0.79 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 40 mm x 40 mm (1.6 in x 1.6 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.

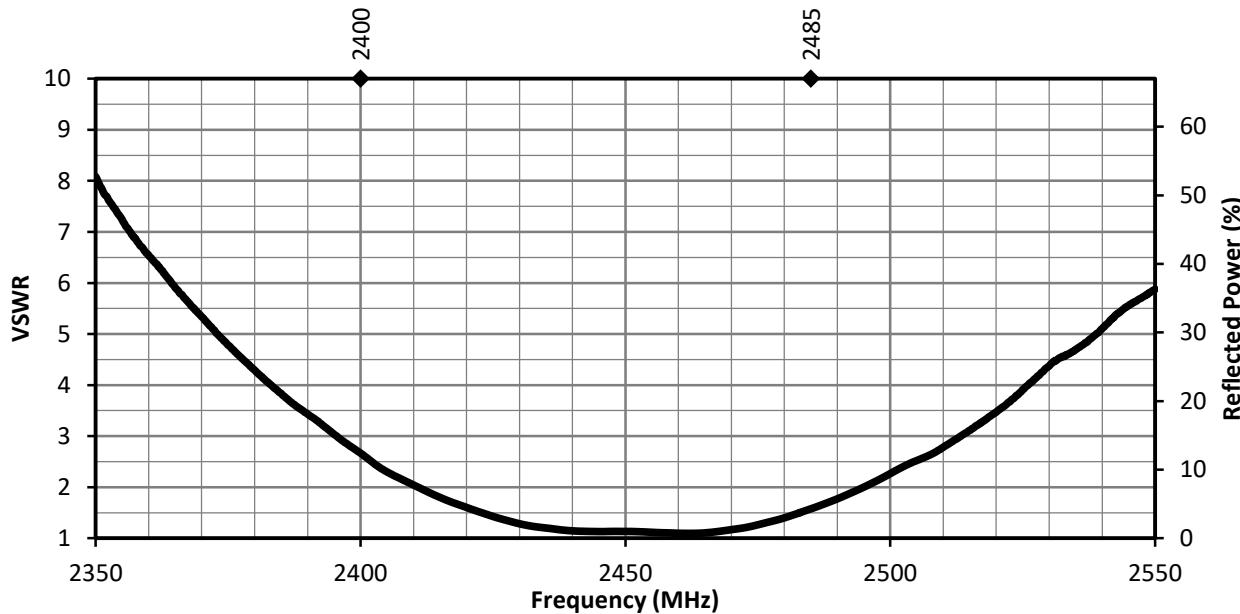


Figure 1. ANT-2.4-CPA Dimensions

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