

AJ-PIR-DB2 V1.0 433MHz PCB Antenna Specification

1. Product Description

This antenna is designed for 433MHz ISM band wireless communication devices (doorbells, IoT sensors, etc.). Features: omnidirectional radiation, excellent VSWR, good impedance matching.

2. Electrical Specifications

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Parameter	Standard Value	Notes
Center Frequency	433.92 MHz	420 - 440 MHz customizable
Frequency Range	430 - 438 MHz	Complies with most regional regulations
Impedance	50 Ω	Standard RF interface impedance
Gain	0 dBi (PCB)	Omnidirectional vertical polarization
VSWR	≤ 2.0	≤ 1.8 for premium grade
Polarization	Linear polarization	—
Max Power	3 - 5 W	—
Bandwidth	≥ 10 MHz	Covers 433.05 - 434.79 MHz

3. Mechanical Specifications

- Total Length: 8.5–180 mm (approx. 165 mm for 1/4 λ)
- Wire Diameter: 0.5 mm
- Interface: On-board pad
- Color: Black

4. Environmental Specifications

- Operating Temperature: -40℃ to +85℃
- Storage Temperature: -45℃ to +90℃
- Humidity: 5%–95% RH (non-condensing)
- Protection: IP54 (outdoor version)

5. Outline Drawing

Size: 18 mm × 8.5 mmPCB antenna: low cost, small size, 0dBi gain, ideal for space-constrained applications.

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