

# Buzzer

## Signaling Device

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### **Overview**

An audio signaling device like a buzzer sensor has the main function of this is to convert the signal from audio to sound. Generally, it is powered through DC voltage and used in timers, alarm devices, printers, alarms, computers, etc. Based on the various designs, it can generate different sounds like alarm, music, bell & siren. A buzzer is an efficient component to include the features of sound in any system or project. It is an extremely small and solid two-pin device thus it can be simply utilized on breadboard or PCB. So in most applications, this component is widely used

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### **Key Features**

- 3-pin interface—simple connection: VDD, GND, and control signal.
  - Microcontroller compatible—directly driven by digital I/O (PWM for tones).
  - Stable operation—internal driver ensures consistent sound output.
  - Compact design—small size, suitable for breadboards and PCBs.
  - Versatile sound output—capable of alarms, beeps, and melodies.
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### **Technical Specifications**

- Rated Voltage: 3.5V
  - Operating Voltage: 2.5 ~ 6.0V
  - Mean Current: 35mA (Max)
  - Peak Current: 105mA (Max)
  - Direct Current Resistance:  $42 \pm 6.3 \Omega$
  - Sound Output: 85dBA (Min)
  - Rated Frequency: 2048 Hz
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### **Application**

- Alarms & security systems – intruder or fire alarms.
- User interface feedback – button press confirmation in electronics.
- Timers & reminders – home appliances, kitchen timers.