

Circuit Components and Symbols

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1. Resistor

- **Symbol:** Zigzag line
- **Function:** Limits the flow of electric current
- **Unit:** Ohm (Ω)

2. Capacitor

- **Symbol:** Two parallel lines
- **Function:** Stores electric charge
- **Unit:** Farad (F)

3. Inductor

- **Symbol:** Coiled wire
- **Function:** Stores energy in a magnetic field
- **Unit:** Henry (H)

4. Battery

- **Symbol:** Two parallel lines with + and - signs
- **Function:** Provides voltage to the circuit
- **Unit:** Volt (V)

5. Diode

- **Symbol:** Arrow pointing in one direction
- **Function:** Allows current flow in one direction
- **Types:** Light-emitting diode (LED), Zener diode

6. Transistor

- **Symbol:** Three layers with arrows
- **Function:** Amplifies or switches electronic signals

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7. Switch

- **Symbol:** Open or closed circle
- **Function:** Controls the flow of current

8. Fuse

- **Symbol:** Zigzag line with arrow
- **Function:** Protects circuit from overcurrent

9. Ground

- **Symbol:** Three horizontal lines
- **Function:** Reference point for voltages in a circuit

10. Wire

- **Symbol:** Straight line
- **Function:** Conducts electricity between components

Understanding circuit components and symbols is essential for designing, analyzing, and troubleshooting electronic circuits effectively.