

Capacitors: Tiny Energy Storers

Imagine a capacitor as a tiny battery that can store a small amount of electrical energy. It's like a mini power bank for your circuits!

How does it work?

A capacitor is made up of two conductive plates separated by an insulator. When you connect a capacitor to a power source, one plate becomes positively charged and the other becomes negatively charged. This creates an electric field between the plates, which stores energy.

Standard Unit of Capacitance:

The standard unit of capacitance is the **farad (F)**. However, farads are very large units, so capacitors are usually measured in smaller units like:

- **microfarad (μF)**: One millionth of a farad.
- **nanofarad (nF)**: One billionth of a farad.
- **picofarad (pF)**: One trillionth of a farad.

Uses of Capacitors:

Capacitors have many uses in electronics, including:

- **Smoothing out power supply voltage**: This helps to ensure that devices receive a steady supply of power.
- **Timing circuits**: Capacitors can be used to create timers and oscillators.
- **Filtering signals**: Capacitors can be used to filter out unwanted frequencies from signals.
- **Storing energy**: Capacitors can store small amounts of energy, which can be useful for powering devices during brief power outages.

By understanding how capacitors work, you can use them to build a variety of electronic circuits.

[Everything you need to know about capacitors](#)

[Capacitor Wiki](#)

[Capacitors and Capacitance](#)

[Electrolytic Capacitors: Comprehensive Overview, Teardown, and Experiments](#)

[How To Use a Motor, Inductor, & Two Capacitors To Make a Sine Wave Oscillator Circuit](#)