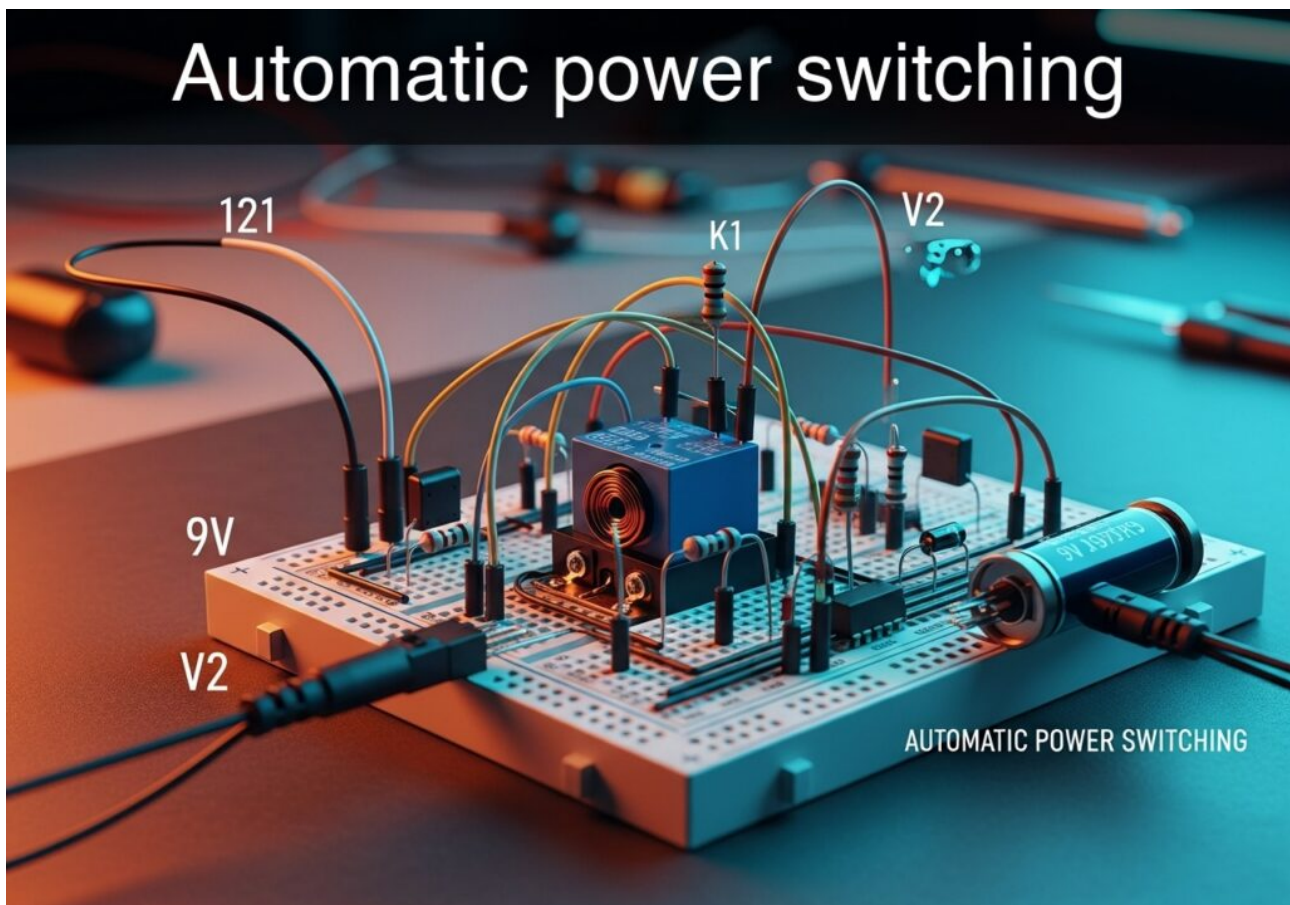


Practical case: Automatic power switching



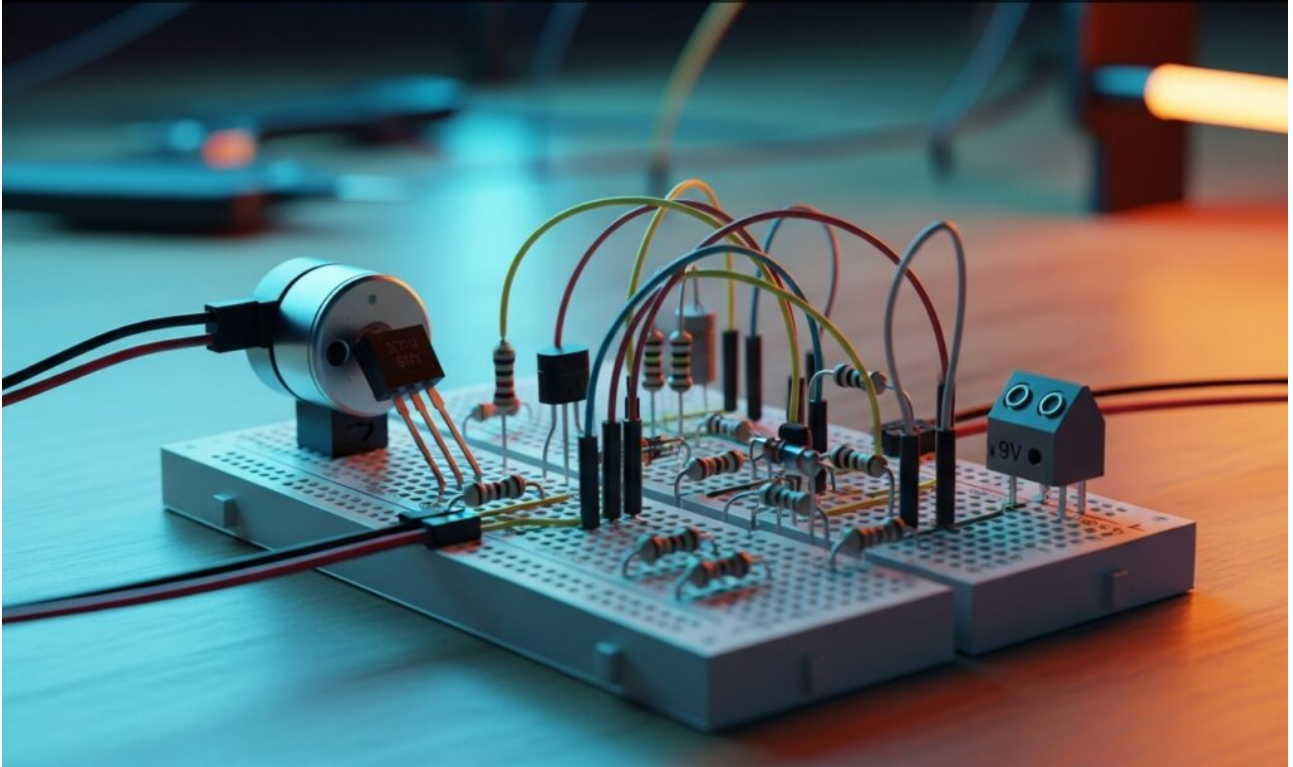
Level: Medium - Implement an SPDT relay to automatically alternate between a main power supply and a backup battery.

Objective and use case

In this...

Practical case: DC motor control with a transistor

DC motor control with a transistor



Level: Basic - Learn to use an NPN transistor as a switch to drive a DC motor, including the use of a flyback diode.

Objective and use case

In this...

Practical case: Noise suppression with RF choke

Level: Medium - Demonstrate the high impedance of the inductor at high frequencies to block noise in power lines.

Objective and use case

You will...

Practical case: Resonance in LC tank circuit

Level: Medium | Analyze the energy exchange and determine the resonant frequency of an AC-driven LC tank.

Objective and use case

In this practical case,...

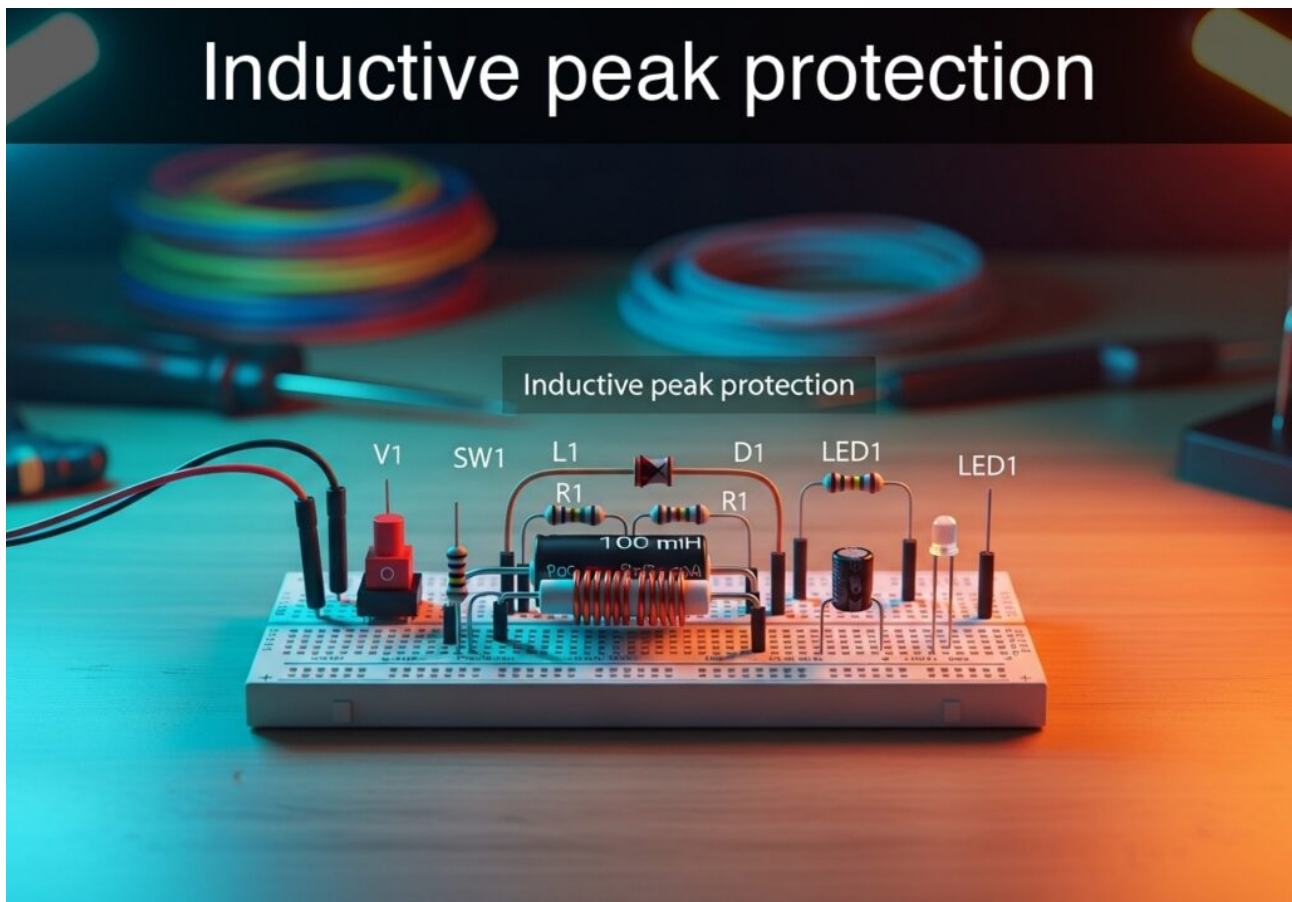
Practical case: Boost converter storage

Level: Medium | Understand magnetic energy storage to boost voltage.

Objective and use case

In this practical case, you will build a basic open-loop Boost...

Practical case: Inductive peak protection



Level: Medium | Objective: Analyze the transient voltage generated when disconnecting an inductor and mitigate it using a flyback diode.

Objective and use...