

### Features

- Compliant to USB Specifications
- Integrated 80mΩ Power MOSFET
- Low Supply Current  
15μA Typical at Switch On State  
1μA Typical at Switch Off State
- Wide Input Voltage Range:2.4V to 5.5V
- Fast Transient Response:<2μs
- Reverse Current Flow Blocking
- Thermal Shutdown Protection
- Hot Plug-In Application (Soft-Start)
- Available in a 5-Pin SOT23-5 Package

### Applications

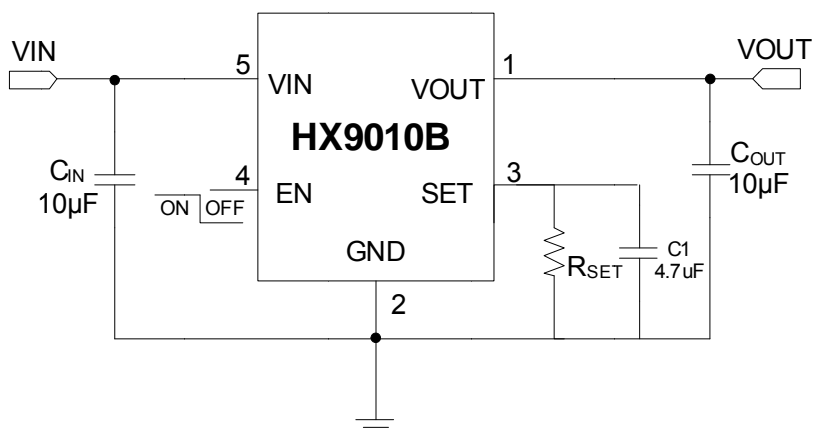
- USB Bus/Self Powered Hubs
- USB Peripherals
- Battery-Charger Circuits
- Notebook Computers
- Personal Communication Devices

### Description

The HX9010B is a cost-effective, low voltage, single P-MOSFET load switch, optimized for self-powered and bus-powered Universal Serial Bus (USB) applications. This switch operates with inputs ranging from 2.4V to 5.5V, making it ideal for both 3V and 5V systems. The switch's low  $R_{DS(ON)}$ , 80mΩ, meets USB voltage drop requirements. The HX9010B is also protected from thermal overload which limits power dissipation and junction temperatures.

Current limit threshold is programmed with a resistor from SET to ground. The quiescent supply current is typically 15μA at switch on state. At switch off state the supply current decreases to less than 1μA. The HX9010B is available in SOT23-5 package.

### Typical Application Circuit



\*The current limit threshold is programmed with a resistor  $R_{SET}$ .