

1A Current Limited Load Switch

General Description

The PN9710 Smart Switch is a current limited P-channel MOSFET power switch designed for high-side load switching applications. This switch operates with inputs ranging from 2.4V to 5.5V, making it ideal for both 3V and 5V systems. An integrated current-limiting circuit protects the input supply against large currents which may cause the supply to fall out of regulation. The PN9710 is also protected from thermal overload which limits power dissipation and junction temperatures. It can be used to control loads that require up to 1A. Current limit threshold is programmed with a resistor from SET to ground. The quiescent supply current is typically a low 9 μ A. In shutdown mode, the supply current decreases to less than 1 μ A.

The PN9710 is available in a Pb-free 5-pin SOT23 package and is specified over the -40°C to +85°C temperature range.

Applications

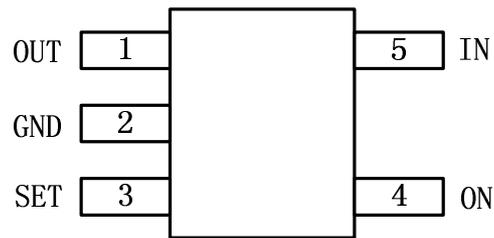
- Hot Swap Supplies
- Notebook Computers
- Peripheral Ports
- Personal Communication Devices

Features

- Input Voltage Range: 2.4V to 5.5V
- Programmable Over-Current Threshold
- Fast Transient Response:
 - 400ns Response to Short Circuit
- Low Quiescent Current
 - 9 μ A Typical
 - 1 μ A Max with Switch Off
- 200m Ω Typical $R_{DS(ON)}$
- Only 2.5V Needed for ON/OFF Control
- Under-Voltage Lockout
- Thermal Shutdown
- 4kV ESD Rating
- 5-Pin SOT23
- Temperature Range: -40°C to +85°C

Package

SOT-23-5L



Typical Application Circuit

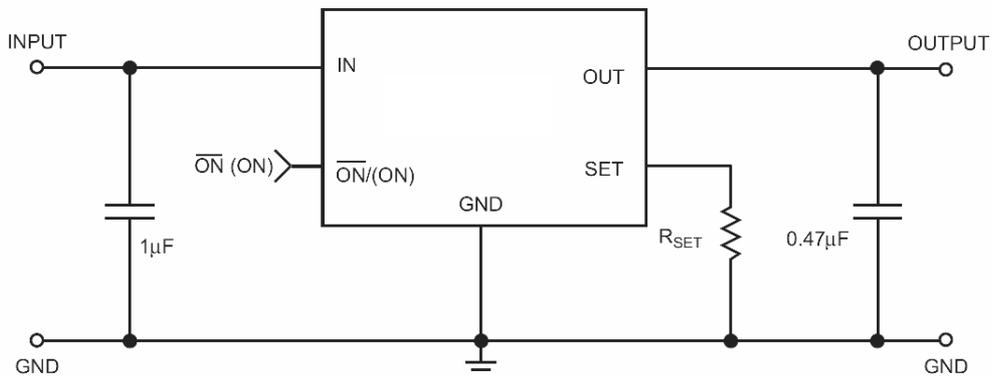


Figure 1. Basic Application Circuit with PN9710