

2A Line Switch with Low On-Resistance

DESCRIPTION

The EUP3508 is a low dropout line switch IC with ON/OFF control, output soft-start and output current protection which integrates a P-channel MOSFET.

By connecting the EUP3508 to the output pin of a step-down DC/DC converter, the EN pin controls ON/OFF for each distribution switch to deliver power per requirements and maximize total power efficiency. As a result, the EUP3508 helps to extend battery life and product operation time.

The EUP3508 contains a current limit and protection circuit, so the external MOSFETs and resistors are not required unlike discrete circuit solutions. Externally programmable soft-start allows for proper power on sequencing with respect to other power supplies and avoids input inrush current during startup.

When a low signal is input to the EN pin, the IC enters shutdown mode. Even where a load capacitor is connected to the output pin during shutdown, the electric charge stored at the load capacitor is discharged through the internal switch. As a result, the VOUT pin voltage falls quickly to the GND level. The EUP3508 contains over current protection. The EUP3508 eliminates any reversed current flow across the switch when it is powered off.

FEATURES

- 1.4V to 5.5V Input Voltage Range
- Low On Resistance
 - $r_{ON} = 55m\Omega$ at $V_{IN} = 5V$
 - $r_{ON} = 60m\Omega$ at $V_{IN} = 3.6V$
 - $r_{ON} = 80m\Omega$ at $V_{IN} = 1.8V$
 - $r_{ON} = 90m\Omega$ at $V_{IN} = 1.5V$
- 2A Maximum Continuous Switch Current
- Low Shutdown Current: $<2\mu A$
- ON/OFF Control
- High Speed Auto Discharge
- Programmable Soft-start
- Output Current Limit
- No Reverse Current when Power Off
- Thermal Shutdown
- Available in 2mm×2mm TDFN-6 , and SOT23-5 Packages
- RoHS Compliant and 100% Lead (Pb)-Free Halogen-Free

APPLICATIONS

- Set-top Boxes
- Ultrabook
- Tablet PC
- Portable Electronics Devices
- Point of Sales Terminals
- Smartphones
- Wireless Handsets

Typical Application Circuit

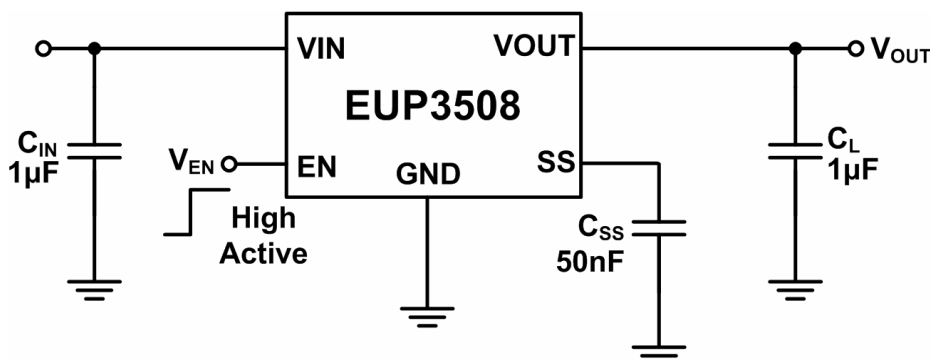


Figure 1.