

USB Power-Distribution Switch with Fault Blanking

DESCRIPTION

The EUP3545/A is an incorporated 100mΩ P-channel MOSFET power-distribution switch for self-powered and bus-powered Universal Serial Bus (USB) applications.

When the output load exceeds the current-limit threshold or a short is present, the device limits the output current to safe level by switching into a constant-current limit mode with fold back, pulling the over-current (\overline{OC}) logic output low. When continuous heavy overloads or short-circuits increase the power dissipation in the switch, causing the junction temperature to rise, a thermal protection circuit shutdown the switch to prevent damage. Internal Under Voltage Lock-Out (UVLO) circuitry ensures that the switch remains off until valid input voltage is present.

\overline{OC} is open-drain output which is asserted when over-current or over-temperature event occurs. A 8ms fault-blanking feature enables the circuit to ignore momentary faults, such as those caused when hot-swapping a capacitive load, preventing false alarms to the host system. The EUP3545/A eliminates any reversed current flow across the switch when it is powered off.

The EUP3545/A are available in SOT23-5, 8-pin MSOP and 8-pin MSOP(EP) packages, operates over the extended (-40°C to +85°C) temperature range.

FEATURES

- 100mΩ POWER MOSFET
- Operating Range : 2.7V to 5.5V
- Under Voltage Lockout
- 11μA Quiescent Current
- 1μA Shutdown Current
- Logic Level Enable Pin, Available with Active-Low or Active-High Version
- No Reverse Current when Power Off
- Fault Blanking Open-Drain Over-Current Flag Output (\overline{OC})
- Output Shutdown Pull-low Resistor
- Available in SOT23-5,MSOP-8 and MSOP-8 (EP) Packages
- RoHS Compliant and 100% Lead(Pb)-Free Halogen-Free
- UL Listed-File No. E334299

APPLICATIONS

- USB Ports and Self-Powered Hubs
- USB Bus-Powered Hubs
- Hot Plug-In Power Supplies
- General Purpose High Side Switch Applications

Typical Application Circuit

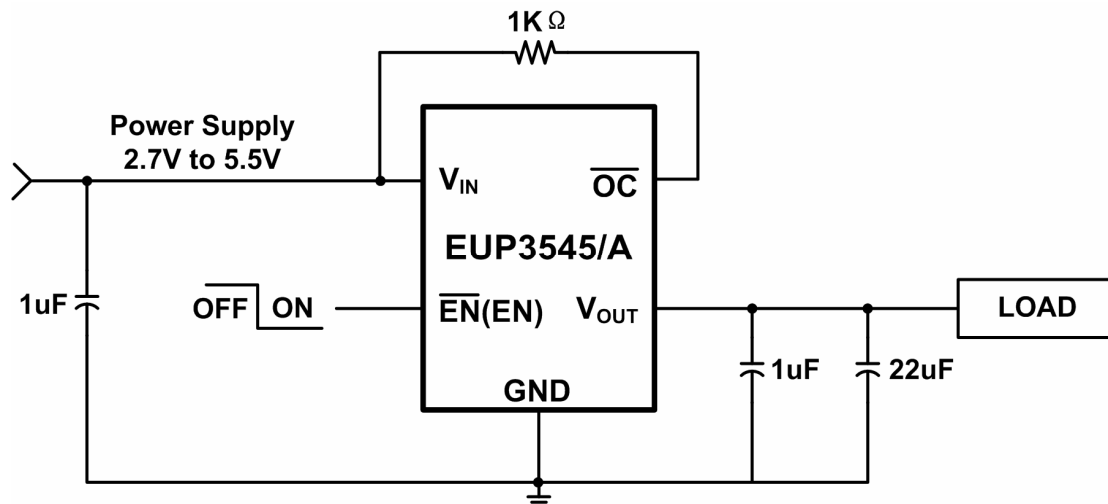


Figure 1.