

80mΩ USB Power-Distribution Switch with Programmable Current Limit

DESCRIPTION

The EUP3551 is an incorporated power-distribution switch for USB applications and the 80mΩ P-channel MOSFET realized in this IC.

The EUP3551 integrates several protection features to prevent catastrophic switch failure caused by increasing power dissipation. The current-limit threshold is programmed with an external resistor from ILIM pin to ground. When the output load exceeds the current-limit threshold or a short is present, the system limits the output current by switching into a constant-current limit mode and pulls the OCB logic output low. An internal reverse voltage comparator disables the power switch when the output voltage is driven higher than the input to protect devices on the input side of switch.

OCB is open-drain output which is asserted when over-current or short circuit occurs. A 7ms 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 EUP3551 eliminates any reversed current flow across the switch when it is powered off.

The EUP3551 is available in SOT23-6 packages, operates over the extended (-40°C to +85°C) temperature range.

FEATURES

- 80mΩ(typ.) Power MOSFET
- Adjustable current limit: 125mA to 1.5A
- Operating Range : 2.7V to 5.5V
- Under Voltage Lockout
- 100μA Quiescent Current
- 1μA Maximum Shutdown Current
- No Reverse Current when Power Off
- Fault Blanking Open-Drain limit-Current Flag Output OCB
- Enable Active-High or Active-Low
- Available in SOT23-6 Packages
- RoHS Compliant and 100% Lead(Pb)-Free Halogen-Free

APPLICATIONS

- USB Ports and Hubs
- TV
- Set-Top Boxes

Typical Application Circuit

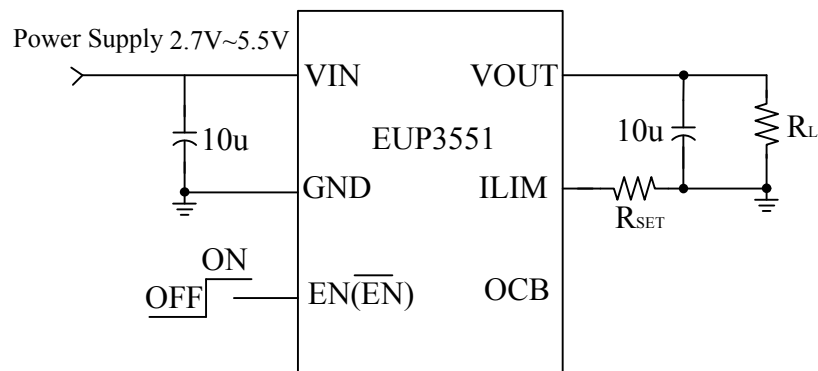


Figure 1.