

28V, 6A Current Limit Switch with True Reverse Blocking and Fast Role Swap

Description

The MT7231 is an advanced 28V 6A rated current limit switch which provides overload, short circuit, input voltage surge, excessive inrush current, over-temperature and reverse current protections to power the system. The built-in 24mΩ ultra low R_{DS(ON)} power switch helps reducing power loss during normal operation. Current limit level can be set 1A to 6A with an external resistor. The MT7231 integrates thermal fold-back function and over temperature shutdown protection. The MT7231 has all time reverse current blocking function regardless of the enable signal EN logic states. A fast role swap function is also implemented to comply the timing requirement defined in the USB Power Delivery Specification. The integrated input and output discharge function which allows the voltage levels at the input and output ports to be discharged to meet the requirement of the USB Power Delivery Specification. The MT7231 is available in low profile 16 leads QFN 2.5mm x 3.2mm package.

Features

- Wide Input Voltage Range from 3V to 24V with Surge Up to 28V
- Integrate a 24mΩ Ultra Low On Protection Switch
- External Adjustable Current Limit 1A~6Amp
- External Adjustable Input Over- voltage Protection (OVP) Threshold
- External Adjustable Soft-start (SS) Time
- Support Fast Role Swap Function through a logic signal to bypass Soft-start Time
- All Time True Reverse Current Blocking
- Short-circuit Protection
- Fault Indicator
- Input and Output Discharge Function
- Thermal Shutdown Protection and Auto Recovery
- **IEC/UL Safety approvals:**
 Conditions: 20V_{in} and 3.2A continues load current
 Protective Current Limit Rating: 5A
 IEC/UL 62368-1, 3rd Edition, File no. E521699
- QFN2.5x3.2_16L Packages
- Pb-Free ROHS compliant

Application

- Notebook, Desktop, Servers and Tablets
- Dongle and Docking Stations
- Power Accessories
- Thunderbolt/USB Type-C PD power switch

Typical Application (For IEC/UL Safety Approval)

