

33V 5A Load Switch with I2C Interface and Programmable Over-current Over-voltage protection for USB PD Application

DESCRIPTION

The MT7932 is an advanced 33V 5A rated bidirectional load switch which provides overload, short circuit, input voltage surge, excessive inrush current and over-temperature protections to power the system.

The built-in 25mΩ ultra-low RDS(ON) power switch helps reducing power loss. The device features two input/output ports, VBUS1 and VBUS2, which are rated at 36V Absolute Maximum.

With I2C interface, power flow direction, current limit, overvoltage threshold, undervoltage threshold, soft start time and discharge time could be programmed by host PD controller. The integrated two N-channel power switch M1 and M2 common drain configuration blocks any leakage between VBUS1 and VBUS2 ports when the device is disabled.

The MT7932 is available in low profile QFN 3x3_16L package.

FEATURES

- Wide Supply Voltage Range from 3.3V to 33V
- 36V ABM rating on Port VBUS1 and VBUS2
- Integrate a 25mΩ Ultra Low Rdson Protection Switch
- I2C Interface
 - Programmable Soft-Start Time
 - Programmable Input Over-voltage Threshold
 - Programmable current limit
 - Programmable power direction
 - Programmable ideal diode function
- Each Port VBUS1/VBUS2 Independent Control
- Analog current monitoring output signal for load current on both ports
- Enable Interface Pin
- Port Discharge Interface Pin
- Bi-direction Control with reverse blocking function
- Fast Role Swap
- Protection:
 - OCP/OVP/UVP
 - Thermal Warning indicator
 - Thermal Shutdown Protection and Auto Recovery
- Fault Indicator
- Compact Package QFN 3x3_16L
- Pb-Free ROHS compliant

APPLICATIONS

- USB-C/ PD HUB
- Desktop PC
- Laptop PC
- Smart Phone

TYPICAL APPLICATIONS

