

28V 6A Load Switch with True Reverse Blocking and OVP

Description

The MT7285 family of integrated load switches provides easy circuit protections to power the system. The device uses few external components and provides multiple protection modes with flexibility and programmability. Comprehensive protection functions provide robust defense against overload, short circuit, input voltage surge and excessive inrush current.

The built-in low $R_{DS(ON)}$ Power Switches help reducing power loss during normal operation. Current limit level can be set with a single external resistor. Programmable input over voltage protection circuit can shut down Power MOS immediately at input over voltage event so that load electronics could be protected from damage. Internal soft-start controls the slew rate of the output voltage to limit inrush current during plug in. MT7285 integrated true reverse blocking function to protect system from reverse current. It integrates thermal fold-back function and over temperature shutdown protection.

MT7285 is available in low profile 10 leads DFN 3mm x 3mm package.

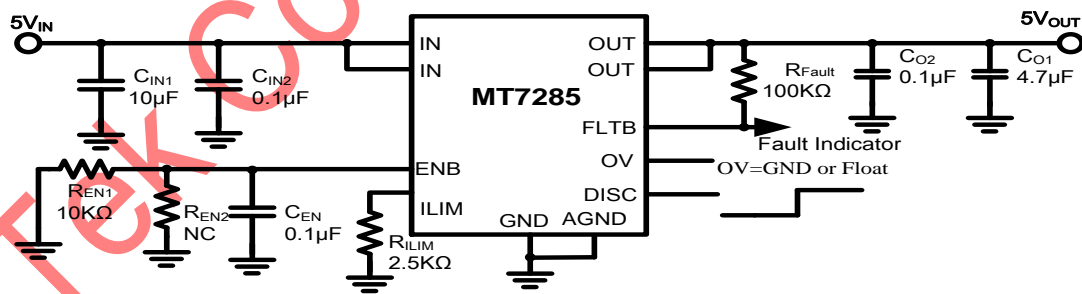
Features

- Wide Input Voltage Range from 3.2V to 24V with surge up to 28V.
- Extremely Low $R_{DS(ON)}$ for the Integrated Protection Switch: 45m Ω
- External Programmable Current Limit 1~6Amp
- Short-circuit Protection
- Fault Indicator
- True reverse current blocking
- Enable Interface Pin
- Output discharge function
- Programmable over voltage protection
- Thermal Shutdown Protection & Auto Recovery
- DFN3x3_10L Package
- Pb-Free ROHS compliant

Application

- HDD and SSD Drives
- Adapter Powered Devices
- Notebook PC
- PCI, PCIe Cards
- Service PC

Typical Application



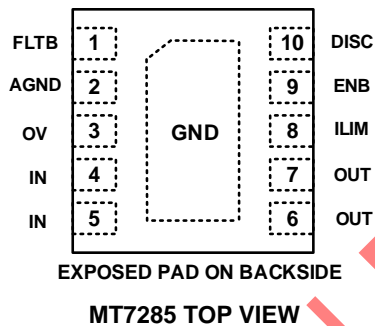
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Ordering Information

Part No.	Marking	Temp. Range	Package	MOQ
MT7285NDCR	MT7285 YWWXX	-40°C ~+85°C	DFN3X3_10L	5000/Tape & Reel

Note: Y: Year, WW: Week, XX: Control Code

Pin Configuration



Pin Description

DFN3x4_14L PIN NO	PIN NAME	DESCRIPTION
1	FLTB	Fault event indicator.
2	AGND	Ground pin.
3	OV	Input over voltage protection programmable pin. OV connect GND: OVP is 23V; OV is floating: OVP is 6V;
4, 5	IN	Power IN pin. Decouple high frequency noise by connecting at least 0.1μF MLCC to ground.
6, 7	OUT	Power OUT pin. Decouple high frequency noise by connecting at least 0.1μF MLCC to ground.
8	ILIM	Current limit program pin. Program the current limit by connecting a resistor to ground.
9	ENB	The enable control pin of the MT7285 chip. Internal pull down resistor is included. ENB is low, enable MT7285; ENB is high, disable MT7285.
10	DISC	OUT port discharge control input. Pull high will start port discharge.
EP	GND	Ground pin.