HL8520E

16V, 20A, 2.8mΩ R_{DS_ON}, Hot-Swap E-Fuse

Description

The HL8520EGA01 is a hot-swap/E-fuse device designed to protect its load circuitry from input transients. It also prevents the input from unwanted shorts and transients coming from the output.

During start-up, inrush current is limited by the output slew rate, which is in turn controlled by an external capacitor on pin SS.

The maximum load current is limited by a built-in current-sense circuitry, and a low-power resistor from ISET to ground sets the current limit.

The gate of the power device is driven by a built-in charge pump, enabling a very low R_{DS_ON} of 2.8mΩ.

Connect a resistor from IMON to ground to generate a voltage signal that is proportional to the current through the power device.

Full protection features include current limit (OCP), short-circuit protection (SCP), thermal shutdown (TSD), damaged MOSFET detection, over-voltage protection (OVP), and under-voltage lockout (UVLO).

HL8520EGA01 is available in LGA-26 (4mm x 4mm) package.

Features

- 2.7V to 16V Operating Input Range
- Maximum 20A Output Current
- Integrated 2.8mΩ Power FET
- Adjustable Over-current Limit and Fault Regulation Time
- Adjustable Short-circuit Current Limit
- 3.3V LDO Output
- ±1% Current Monitor Accuracy
- Fast Response (<200ns) for Short Protection
- PG Detector and FLTB Indication
- PG De-assert Low at VIN = 0
- Input-to-Output Short-Circuit Detection
- External adjustable Soft Start (SS)
- Programmable LOADEN Blanking Time
- Configurable Input Over-Voltage (OV) Threshold
- Under-Voltage Lockout (UVLO)
- Output Short-circuit Protection (SCP)
- Thermal Protection (OTP)
- E-fuse Health Reporting
- Available in LGA (4mm x 4mm) Package

Applications

- Servers
- Hot Swap
- Laptops
- Disk Drives

Typical Application Diagram

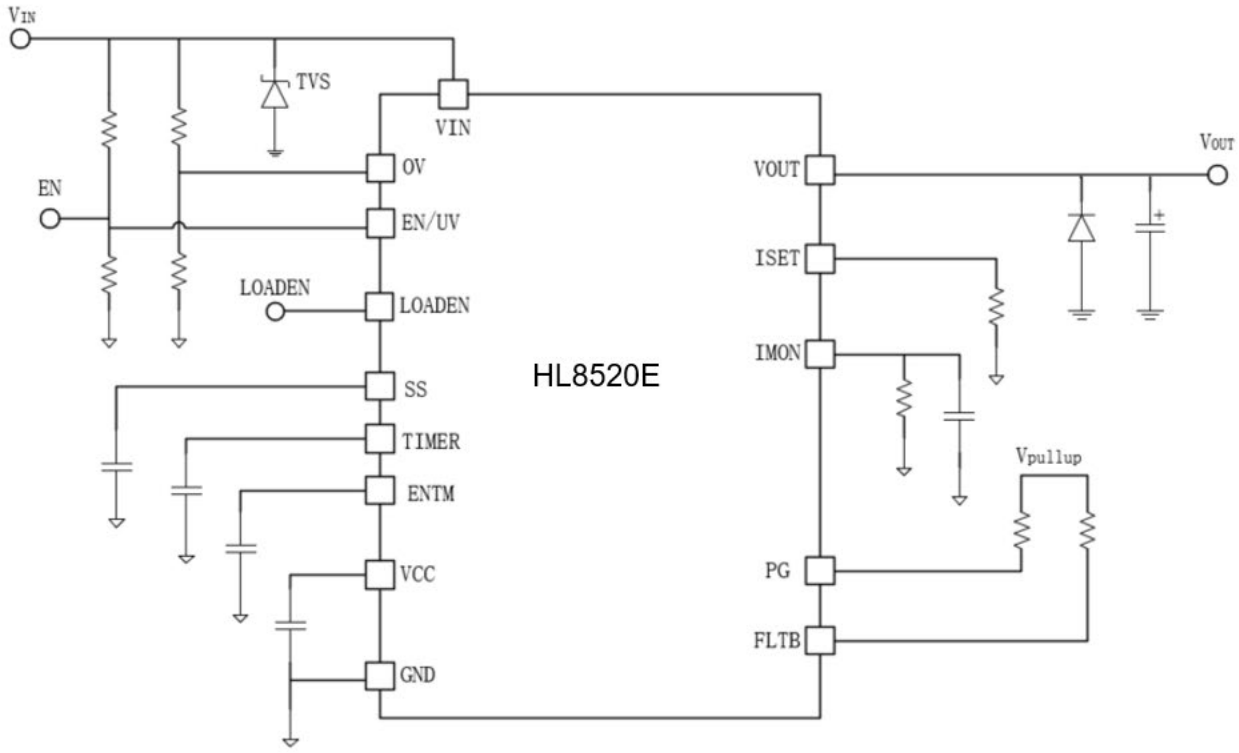

Figure 1. Typical Application Diagram

Order Information

Part Number	Package	Packing Method
HL8520EGA01	26 pin TLGA (4mm x 4mm)	Tape & Reel

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