



General Description

The MxL745950 is a single-channel current-limited power switch that integrates a MOSFET and a controller. It features a low $R_{DS(ON)}$ of $1m\Omega$, and a single device can support continuous currents of up to 50A. It also supports parallel operation for applications requiring higher currents.

The MxL745950 can limit the high inrush current generated during hot-plug scenarios, preventing significant voltage drops on the power bus. It also provides high-precision over-current protection (OCP), ensuring effective circuit protection.

The MxL745950 supports a programmable soft-start time and includes a current mirror function for accurate current reporting. It also features a temperature monitoring function, eliminating the need for an external temperature-detection circuit. Additionally, the device provides fault indication, allowing clear visibility into its operational status.

The MxL745950 features robust protection capabilities, including under-voltage protection (UVP), over-voltage protection (OVP), OCP, short-circuit current limiting, MOSFET fault diagnosis protection, over-temperature protection (OTP), and 3.3V LDO current-limit protection.

The MxL745950 is available in a 5mm × 5mm, 32-pin LGA package.

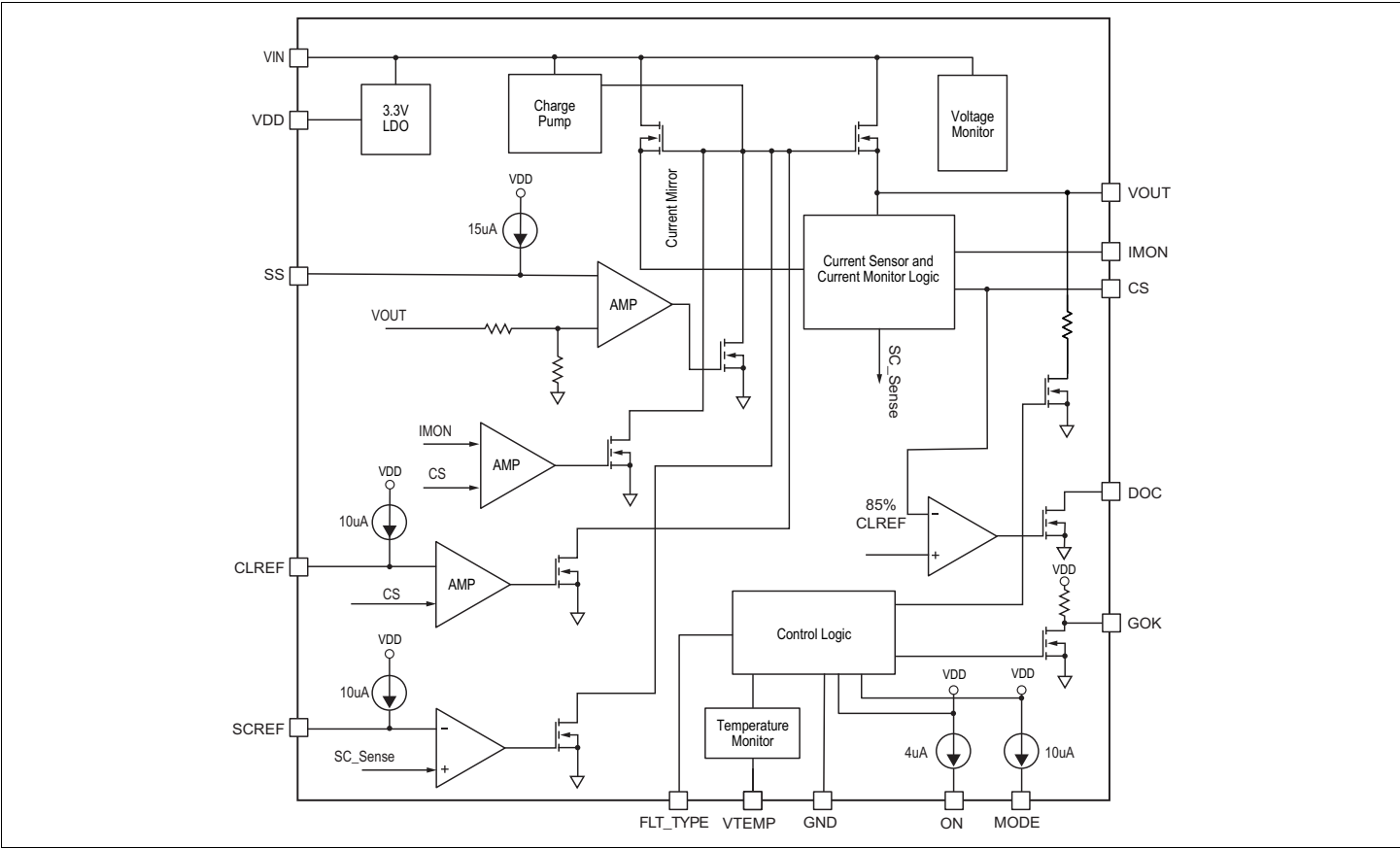
Features

- 4V to 16V operating input range
- Up to 50A output current (I_{OUT})
- $1m\Omega$ on-resistance
- Supports transient OCP as a circuit breaker
- 3.3V LDO output with current limiting
- Integrated current sensing with sense output
- $10\mu A/A$ current-sense analog output
- Built-in insertion delay
- Adjustable soft-start
- Output short-circuit protection
- OVP
- OTP
- Fault signal output
- Parallel operation for high-current applications
- $8.7mV/^{\circ}C$ temperature analog output
- Available in a 5mm × 5mm, 32-pin LGA package

Applications

- Servers
- Networking
- Plug-in modules

Block Diagram



Ordering Information

Ordering Part Number	Operating Temperature Range	Lead Free	Package	Packaging Method
MXL745950-AYA-R	−40°C to 125°C	Yes	LGA-32	Tape and Reel



MaxLinear, Inc.

5966 La Place Court, Suite 100

Carlsbad, CA 92008

Tel.: +1 (760) 692-0711

Fax: +1 (760) 444-8598

www.maxlinear.com

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