Power over Ethernet IEEE 802.3af PD Interface with Integrated Switching Regulator

FEATURES

- **Complete Power Interface Port for IEEE 802®.3af Powered Device (PD)**
- **Onboard 100V, 400mA UVLO Switch**
- **Precision Dual Level Inrush Current Limit**
- **Integrated Current Mode Switching Regulator**
- Onboard 25kΩ Signature Resistor with Disable
- Programmable Classification Current (Class 0-4)
- Thermal Overload Protection
- Power Good Signal
- Integrated Error Amplifier and Voltage Reference
- Low Profile 16-Pin SSOP and 3mm × 5mm DFN Packages

APPLICATIONS

- IP Phone Power Management
- Wireless Access Points
- Security Cameras
- Power over Ethernet

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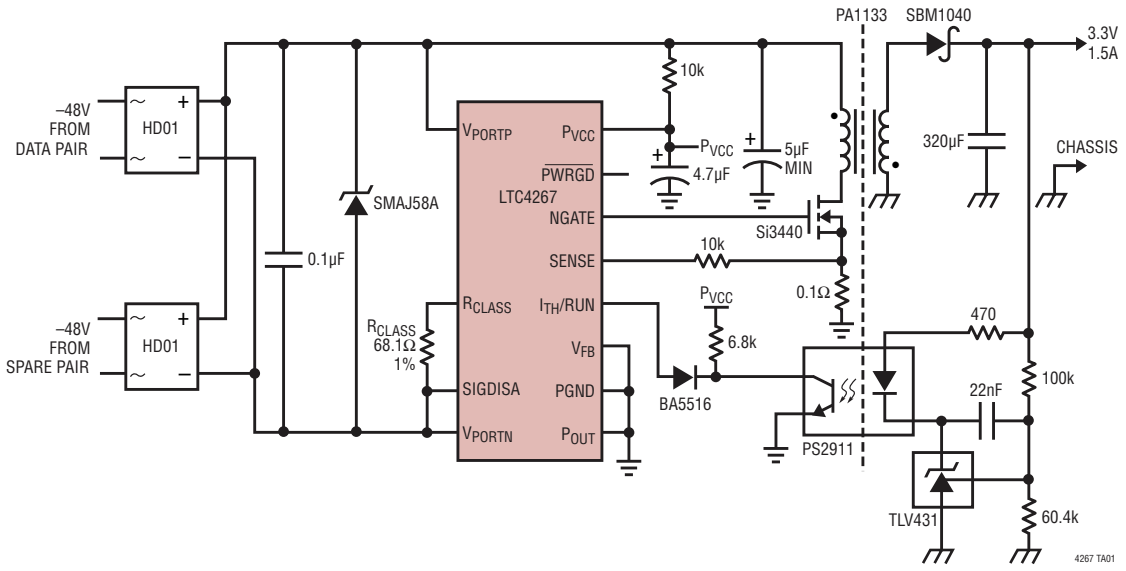
DESCRIPTION

The LTC®4267 combines an IEEE 802.3af compliant Powered Device (PD) interface with a current mode switching regulator, providing a complete power solution for PD applications. The LTC4267 integrates the 25kΩ signature resistor, classification current source, thermal overload protection, signature disable and power good signal along with an undervoltage lockout optimized for use with the IEEE-required diode bridge. The precision dual level input current limit allows the LTC4267 to charge large load capacitors and interface with legacy PoE systems.

The current mode switching regulator is designed for driving a 6V rated N-channel MOSFET and features programmable slope compensation, soft-start, and constant frequency operation, minimizing noise even with light loads. The LTC4267 includes an onboard error amplifier and voltage reference allowing use in both isolated and nonisolated configurations.

The LTC4267 is available in space saving, low profile 16-pin SSOP or DFN packages.

TYPICAL APPLICATION

Class 2 PD with 3.3V Isolated Power Supply