

PI2127 Features

- Integrated high performance
12 A, 8.5 mΩ MOSFET
- Very small, high density fully-optimized solution with simple PCB layout
- Fast dynamic response to power source failures, with 80 ns reverse current turn-off delay time
- Accurate sensing capability to indicate system fault conditions (-6 mV reverse threshold)
- Internal charge pump
- Active low fault flag output
- Low thermal impedance $R_{\theta J-PCB} < 10^{\circ}\text{C/W}$

PI2127



7 mm x 8 mm
17-Pin Thermally Enhanced LGA

Product Description

The PI2127 *Cool-ORing*® is a complete full-function Active ORing solution with a high-speed ORing MOSFET controller and a very low on-state resistance MOSFET designed for use in redundant power system architectures. The PI2127 *Cool-ORing* solution is offered in an extremely small, thermally enhanced 7 mm x 8 mm LGA package and can be used in high-side, medium voltage Active ORing applications. The PI2127 enables extremely low power loss with fast dynamic response to fault conditions, critical for high availability systems.

The PI2127, with its 8.5 mΩ internal MOSFET provides very high efficiency and low power loss during steady state operation, while achieving highspeed turn-off of the internal MOSFET during input power source fault conditions that cause reverse current flow.

The PI2127 provides an active low fault flag output to the system during reverse current, excessive forward over-current and UVLO fault conditions.

Applications

- N+1 redundant power systems
- Servers & high-end computing
- Telecom systems
- High-side Active ORing

Part Numbering

Part Number	Package	Voltage Rating	Current Handling	Target Application	Internal MOSFET On-State Resistance	Bias Supply	Turn-off Delay Time	Thermal Resistance	Shipment Packaging
PI2127-00-LGIZ	7 x 8 mm 17-pin LGA	60 V	12 A	48 V narrow range	8.5 mΩ	Supplied by internal charge pump	80 ns	$R_{\theta J-PCB}$: 10°C/W	Tape and Reel

Typical Application

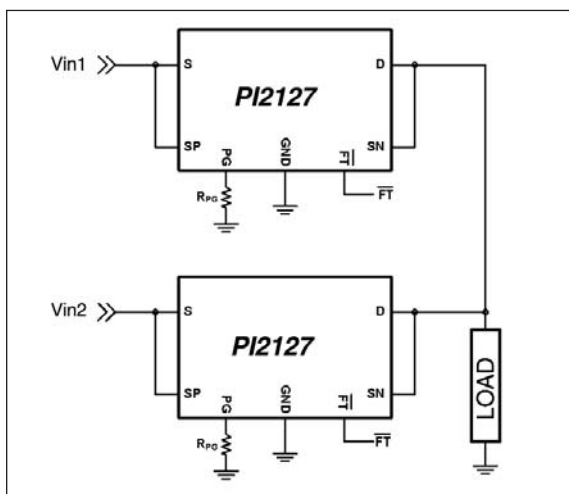


Figure 1: PI2127 High Side Active ORing

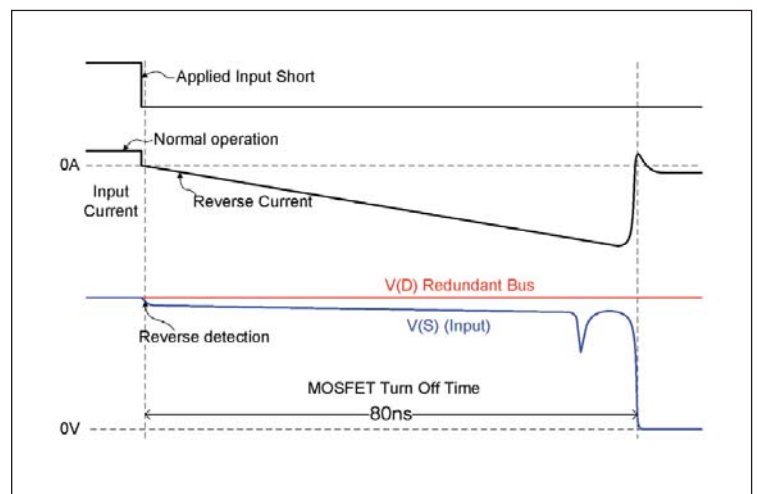


Figure 2: PI2127 response time to an input short fault condition