

### PI2003 Features

- Optimized for -48 V ORing applications
- Fast Dynamic Response to Power Source failures, with 160 ns reverse current turn-off delay time
- 4 A gate discharge current
- Accurate MOSFET drain-to-source voltage sensing to indicate system level fault conditions
- Low quiescent current enables biasing directly from -48 V (GND)
- 100 V for 100 ms operation in low side applications
- Active low fault flag output



### Product Description

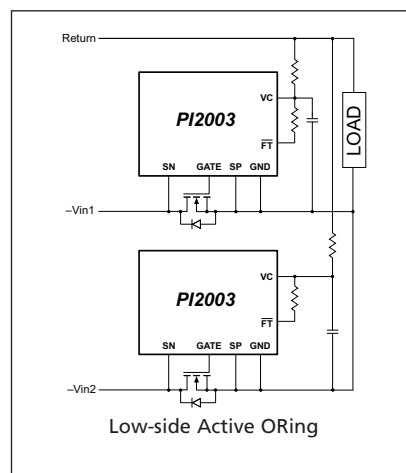
The PI2003 Cool-ORing™ solution is a universal high-speed Active ORing controller IC designed for use with N-channel MOSFETs and is optimized for -48V redundant power system architectures. The PI2003 Cool-ORing controller enables an extremely low power loss solution with fast dynamic response to fault conditions, critical for high availability systems. The PI2003 controls single or parallel MOSFETs to address Active ORing applications protecting against power source failures. The PI2003 is optimized for low-side -48V Active ORing applications. An internal VC shunt regulator enables biasing of the controller directly from -48 V (GND).

The gate drive output turns the MOSFET on in normal steady state operation, while achieving high speed turn-off during input power source fault conditions, that cause reverse current flow, with auto-reset once the fault clears. The MOSFET drain-to-source voltage is monitored to detect normal forward, excessive forward, light load and reverse current flow. The PI2003 provides an active low fault flag output to the system during excessive forward current, reverse current, light load and VC under-voltage.

### Applications

- Low-side -48 V bus Active ORing
- N+1 Redundant Power Systems
- Servers & High End Computing
- Telecom Systems
- High current Active ORing

### Typical Application



### Part Numbering

Part Number	Package	Target Application	Bias Supply	MOSFET Gate Drive Voltage	MOSFET Gate Discharge Current	Turn-off Delay Time	Shipment Packaging
PI2003-00-QEIG	3mm x 3mm 10 Lead TDFN	Universal Low-Side Active ORing Up to 100 V	Internal VC Clamp 10 V – 12 V	VC – 0.25 V	4 A (typ)	160 ns (typ.)	Tape and Reel
PI2003-00-SOIG	8 Lead SOIC						
Evaluation Boards							
PI2003-EVAL1	PI2003 Evaluation Board using 3 mm x 3 mm TDFN package and 100V SO-8 MOSFET in low-side configuration.						