



Dual Ideal Diode & Hot Swap Controllers Save Power & Board Area

MILPITAS, CA – March 14, 2011 – Linear Technology Corporation introduces the [LTC4227](#), a compact, dual ideal diode with Hot Swap™ controller that provides PowerPath™ and inrush current control for redundant supplies operating from 2.9V to 18V. The LTC4227 regulates the forward voltage drop across two external N-channel MOSFETs to ensure smooth current transfer between supplies in diode-OR applications. The ideal diodes replace two high power Schottky diodes and associated heat sinks, saving space while providing a low loss path to the load. The downstream Hot Swap control MOSFET protects the board and backplane from damage during live insertion and removal, and protects from short-circuit faults with a fast acting current limit and circuit breaker. Prioritization of the two supplies is made possible by a dedicated D2ON# pin, which turns off the ideal diode for a lower priority supply. In addition to redundant power supply ORing, the LTC4227 makes an excellent diode replacement in supply holdup applications where momentary collapse of supply voltage is isolated from the load.

Linear Technology is also introducing the LTC4225, which provides two independent ideal diode and Hot Swap paths for two power rails. While offering many similar features to the LTC4227, the LTC4225 can be configured as a power prioritizer and is also suited to MicroTCA systems, where the outputs of 12V power modules are used to power multiple advanced mezzanine cards.

The LTC4227 and LTC4225 are offered in two versions: the LTC422x-1 latches off after a fault, whereas the LTC422x-2 provides automatic retry after a fault. Commercial and industrial grades offer unique operating temperature ranges from 0°C to 70°C and -40°C to 85°C, respectively. The LTC4227 is available in 20-lead 4mm x 5mm QFN or 16-lead SSOP packages, while the LTC4225 is offered in 24-lead 4mm x 5mm QFN or SSOP packages. Pricing starts at \$3.41 each in 1,000 piece quantities. Please visit www.linear.com/product/LTC4227 or www.linear.com/product/LTC4225 for more product selection information.


Photo Caption: Compact Dual Ideal Diode & Single Hot Swap™ Controller

Summary of Features: LTC4227/LTC4225

- LTC4227: Dual Ideal Diode & Single Hot Swap™ Controller
- LTC4225: Dual Ideal Diode & Dual Hot Swap Controller
- PowerPath™ & Inrush Current Control for Redundant Supplies
- Low Loss Replacement for Power Schottky Diodes
- 2.9V to 18V Operating Range
- Controls N-Channel MOSFETs
- Limits Peak Fault Current in $\leq 1\mu\text{s}$
- 0.5 μs Turn-On and Reverse Turn-Off Time
- Adjustable Current Limit with Circuit Breaker
- Smooth Switchover without Oscillation
- Adjustable Current Limit Fault Delay
- Fault and Power Status Output
- Latchoff or Automatic Retry Versions

About Linear Technology

Linear Technology Corporation, a member of the S&P 500, has been designing, manufacturing and marketing a broad line of high performance analog integrated circuits for major companies worldwide for three decades. The Company's products provide an essential bridge between our analog world and the digital electronics in communications, networking, industrial, automotive, computer, medical, instrumentation, consumer, and military and aerospace systems. Linear Technology produces power management, data conversion, signal conditioning, RF and interface ICs, and $\mu\text{Module}^{\text{®}}$ subsystems.

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