

Active Rectifier Controller with Reverse Protection

NORWOOD, MA – November 13, 2017 – [Analog Devices](#) announces the Power by Linear™ [LT8672](#), an active rectifier controller with reverse input protection to -40V . Its 3V to 42V input voltage capability is ideal for automotive applications which must regulate through cold-crank and stop-start scenarios with minimum input voltages as low as 3.0V and load dump transients up to 40V. The LT8672 drives an external N-channel MOSFET, offering a 20mV drop, reducing power dissipation by 90% compared to a Schottky diode, eliminating requirements for a costly heat sink. The ultrafast transient response enables it to meet stringent automotive applications requiring AC input ripple rectification up to 100kHz. Additionally, its 20 μA quiescent current while operating and 3.5 μA in shutdown are ideal for always-on systems. The combination of the MSOP-10 package and external MOSFET ensures a compact solution footprint.

The LT8672's solution offers the combination of 3V minimum input capability and a 20mV drop, enabling it to ease the minimum input voltage requirement during cold-crank and stop-start, providing simpler and more efficient circuits. If the input power source fails or is shorted, a very fast turn-off minimizes reverse current transients. Also, a power good pin signals when the external MOSFET is ready to take load current.

The LT8672EMS is packaged in an MSOP-10 package. An industrial temperature version, the LT8672IMS, is tested and guaranteed to operate from a -40°C to 125°C operating junction temperature. The LT8672HMS version is tested and guaranteed to operate from a -40°C to 150°C operating junction temperature. For more information, visit www.linear.com/product/LT8672.

Summary of Features: LT8672

- Reverse Input Protection to -40V
- Wide Operating Voltage Range: 3V to 42V
- Low $20\mu\text{A}$ Quiescent Current in Operation
- Improved Performance Compared to a Schottky Diode:
 - Reduce Power Dissipation by $>90\%$
 - Reduce Drop to 20mV
- Ultrafast Transient Response
 - Rectifies $6\text{V}_{\text{P-P}}$ Up to 50kHz
 - Rectifies $2\text{V}_{\text{P-P}}$ Up to 100kHz
- Low $3.5\mu\text{A}$ Shutdown Current
- Accurate 1.21V Enable Pin Threshold
- Available in Small 10-Lead MSOP

Pricing & Availability

Product	Sample Availability	Production Availability	Price Each Per 1,000	Package
LT8672	Now	Now	Starts at \$2.25	MSOP-10

About Analog Devices

Analog Devices (NASDAQ: ADI) is the leading global high-performance analog technology company dedicated to solving the toughest engineering challenges. We enable our customers to interpret the world around us by intelligently bridging the physical and digital with unmatched technologies that sense, measure, power, connect and interpret. Visit <http://www.analog.com>.

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