



3.3V/5V 4Mbps CAN Transceiver Provides $\pm 60V$ Fault Protection for Improved System Reliability

MILPITAS, CA – February 17, 2015 – Linear Technology Corporation introduces the [LTC2875](#), an exceptionally rugged, high voltage tolerant CAN (controller area network) transceiver to greatly reduce field failures without the need of costly external protection devices. In practical CAN systems, installation cross-wiring faults, ground voltage faults or lightning induced surge voltages can cause overvoltage conditions that exceed absolute maximum ratings of typical transceivers. The LTC2875 features $\pm 60V$ overvoltage fault and $\pm 25kV$ HBM ESD protection on the data transmission lines, protecting bus pins during operation and shutdown. Whether a circuit is transmitting, receiving or powered off, the LTC2875 tolerates any voltage within $\pm 60V$ without damage, increasing the robustness of typical CAN networks.

CAN bus systems are becoming increasingly popular in industrial controls, instrumentation networks and automotive electronics. The CAN bus has a well defined protocol stack, with support for standalone controllers, FPGAs and ASICs, making implementation easier over alternative interfaces, such as RS485. The LTC2875 provides the flexibility to be powered from a 3.3V or 5V rail, which is very useful in industrial applications where a 5V rail may not be present. In addition to the high fault and ESD protection, the device features a low electromagnetic emission (EME) driver with a transmit data (TXD) dominant timer to prevent faulty controllers from clamping the bus, as well as a high electromagnetic immunity (EMI) receiver with an extended $\pm 36V$ common mode range to enable operation in electrically noisy environments and in the presence of ground loops. The LTC2875 features a high speed data rate of 4Mbps with an adjustable slew rate for data rates as low as 1kbps. A shutdown mode brings all of the LTC2875's outputs to high impedance and reduces power consumption to $1\mu A$.

The LTC2875 is offered in commercial, industrial, automotive and military ($-55^{\circ}C$ to $125^{\circ}C$) temperature grades and is available in 3mm x 3mm DFN-8 and SO-8 packages, with industry-standard pinouts. Pricing starts at \$1.72 each in 1,000 piece quantities. Visit www.linear.com/products/CAN_Transceivers for more product selection and information.

Photo Caption: $\pm 60V$ Fault Protected CAN Transceiver with 25kV ESD


Summary of Features: LTC2875

- Protected from Overvoltage Line Faults to $\pm 60V$
- 3.3V or 5V Supply Voltage
- High Speed Operation up to 4Mbps
- $\pm 25kV$ ESD Interface Pins, $\pm 8kV$ All Other Pins
- Active Symmetry Control Driver with Variable Slew Rate & SPLIT Pin for Low Electromagnetic Emission (EME)
- Extended Common Mode Range ($\pm 36V$)
- Transmit Data (TXD) Dominant Timeout Function
- Micropower Shutdown Mode
- 3mm x 3mm DFN-8 & SO-8 Packages

The USA list pricing shown is for budgetary use only. International prices may differ due to local duties, taxes, fees and exchange rates.

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 over 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, μ Module[®] subsystems, and wireless sensor network products. For more information, visit www.linear.com

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