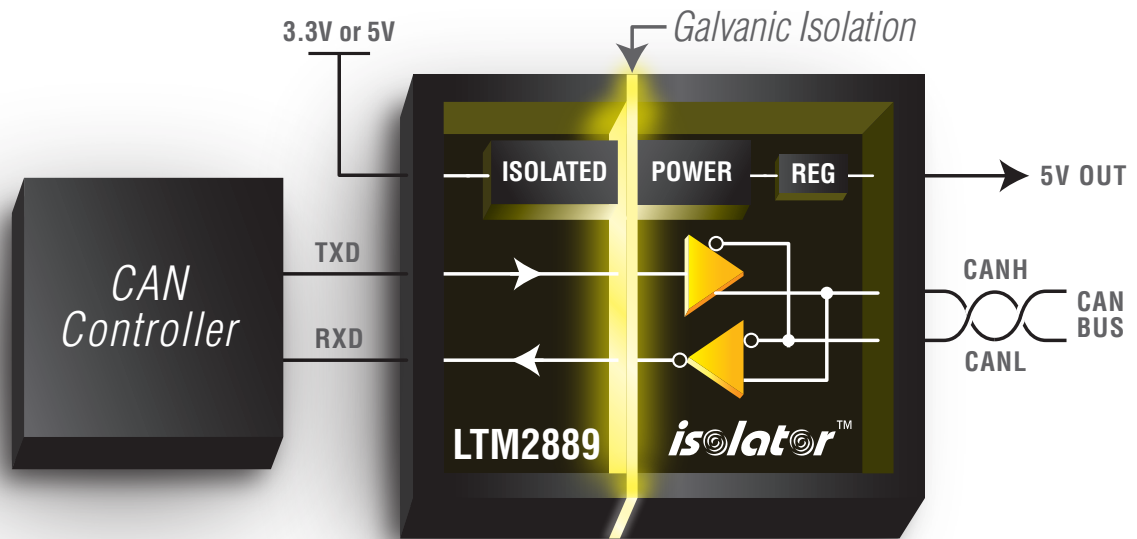


# Isolated CAN + Power



## Rugged 4Mbps $\mu$ Module<sup>®</sup> CAN FD Transceiver Features 2500V<sub>RMS</sub> Isolation and $\pm 25$ kV ESD Protection

The LTM<sup>®</sup>2889 is a robust isolated CAN transceiver that breaks ground loops by isolating the logic level interface and line transceiver. An onboard DC/DC converter powers the transceiver and provides up to 0.75W for powering additional system circuitry. The ISO 11898-2 and CAN FD compliant CAN transceiver supports an extended common mode range of  $\pm 36$ V, is  $\pm 60$ V fault protected and  $\pm 25$ kV ESD protected, and provides uninterrupted communication during common mode transients over 30kV/ $\mu$ s. This ensures high system reliability under harsh operating conditions.

### Features

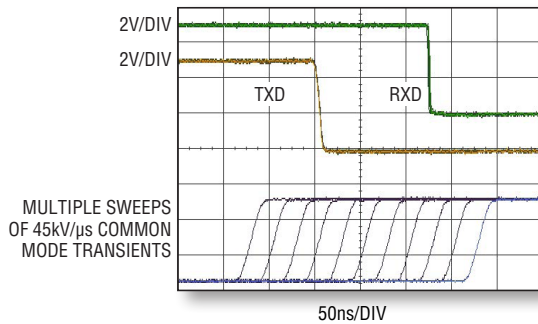
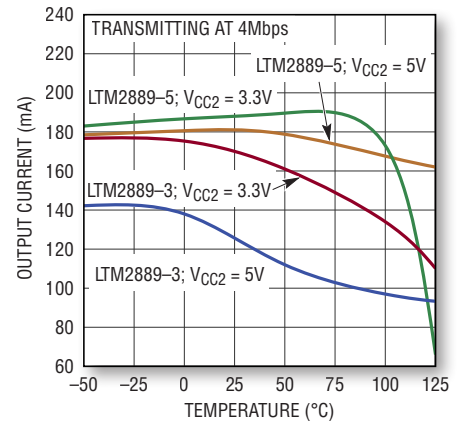
- Isolated 4Mbps CAN FD Transceiver
- 2500V<sub>RMS</sub> for 1 Minute per UL1577
- Up to 150mA Isolated Power Output
- No External Components Required
- $\pm 60$ V Fault Protection
- High Common Mode Transient Immunity: 30kV/ $\mu$ s
- $\pm 25$ kV ESD Transceiver Interface
- Low Power OFF Mode: < 1 $\mu$ A Typical
- 15mm  $\times$  11.25mm BGA Package



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## Isolated Supply Voltage Output

The LTM2889 is self-powered and provides an adjustable 5V, up to 0.75W, isolated supply for powering any supporting components on the isolated bus side. This regulated power is continuously available over the operating temperature range, even while driving full CAN compliant signal levels.

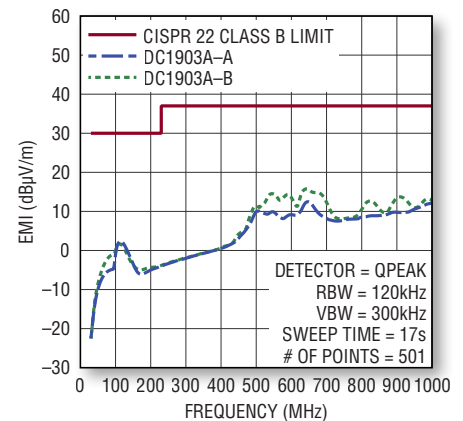


## Common Mode Transient Immunity

Unlike other isolated solutions, the LTM2889 provides continuous, uninterrupted communication through common mode transient events greater than 30kV/μs without introducing any priority data jitter or data corruption.

## Safety, EMI and RF/Magnetic Field Immunity

All Linear Technology μModule isolators, including the LTM2889, pass accepted safety standards, including United States' UL1577 and Europe's IEC60747-5-2, which test isolation barrier performance under various environmental conditions and require 100% production screening. The EMI chart shows the LTM2889 well below the CISPR 22 Class B limit. The LTM2889 passes the RF and magnetic field immunity testing requirements per European Standard EN 55024.



## DeviceNet Compatible

DeviceNet is a network standard based on the CAN bus and places requirements on the transceiver that exceed those of the ISO 11898-2 standard. The LTM2889 meets or exceeds the following ISO 11898-2 and DeviceNet requirements:

Parameter	ISO-11898-2 Requirement	DeviceNet Requirement	LTM2889
Number of Nodes	N/A	64	166
Minimum Differential Input Resistance	10kΩ	20kΩ	50kΩ
Differential Input Capacitance	10pF (Nom)	24pF (Max)	8.4pF (Typ)
Bus Pin Voltage Range (Survivable)	-3V to 16V (for 12V Battery)	-25V to 18V	-60V to 60V
Bus Pin Voltage Range (Operation)	-2V to 7V	-5V to 10V	-36V to 36V (V <sub>CC</sub> = 5V) -25V to 25V (V <sub>CC</sub> = 3.3V)
Connector Mis-Wiring Tests, All Pin-Pin Combinations	N/A	±18V	±60V