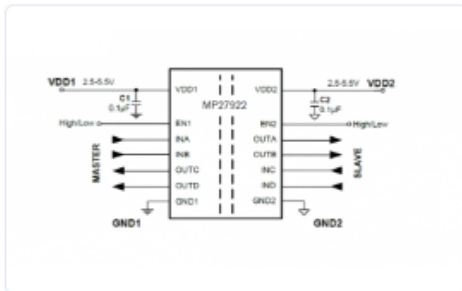


MP27922

5kV_{RMS}, Quad-Channel Digital Isolator with 2 Forward and 2 Reverse Channels

Pre-Release

 [Datasheet](#)



Description

The MP27922 is a high-performance, 4-channel digital isolator designed for robust applications with two forward channels and two reverse channels. The device can support a 5000V_{RMS} isolation rating per UL 1577.


The MP27922 is optimized to replace optocouplers, and it can support a high data rate of up to 150Mbps. The device can maintain its performance across a wide temperature range while minimizing power consumption. Capacitive isolation technology supports up to a 5kV_{RMS} insulation voltage rating.

The device includes safety-related certifications according to UL 1577, VDE, CSA, and CQC. The MP27922 features a small size, low power consumption, and highly reliable operation when compared to traditional optocoupler isolators.

A Schmitt trigger input and isolated encoding/decoding are provided for high electromagnetic immunity in noisy environments. The selectable high/low fail-safe output supports a fixed output, even if the input signal power fails.

The MP27922 is part of a family of 4-channel digital isolators that can have 2 to 4 forward channels and 0 to 2 reverse channels, for a total of 4 channels.

The MP27922 is available in a wide-body (WB) SOIC-16 package.

Show less 

Features & Benefits

- ✓ Channel Direction: 2 Forward, 2 Reverse
- ✓ 5kV_{RMS} Isolation Voltage
- ✓ Supports DC to 150Mbps Data Rate
- ✓ 2.5V to 5.5V Operation Range
- ✓ ≥100kV/μs Common-Mode Transient Immunity (CMTI)
- ✓ High System-Level ESD, EFT, and Surge Immunity Performance
- ✓ 13ns Propagation Delay for 5V Operation
- ✓ Ultra Low Power Supply Current
- ✓ Default Output Logic High (MP27922) and Low (MP27922-L) Options
- ✓ Tri-State Outputs with Enable (EN) Control
- ✓ 1.2kV Peak V_{IORM} Working Insulation
- ✓ Wide Temperature Range: -40°C to +125°C
- ✓ Available in a Wide-Body (WB) SOIC-16 Package
- ✓ UL 1577 Recognized:
 - SOIC-16 WB: Up to 5000V_{RMS} for 1 Minute
- ✓ CSA Component Notice 5A Approval
- ✓ DIN EN IEC 60747-17 (VDE 0884-17): 2021-10 Certified (In Progress):
 - SOIC-16 WB: 7071V_{PK} Isolation
- ✓ QC Certification per GB4943.1-2011 (In Progress)