



MPQ278XX

3kVrms 2 to 4 Channel Digital Isolator with Integrated Isolated Power Supply

PRELIMINARY SPECIFICATIONS SUBJECT TO CHANGE

DESCRIPTION

The MPQ278XX is a 2 to 4 channel digital isolator family optimized to replacing traditional opto-coupler isolation in application. It supports up to 50Mbps data rate and 5V or 3.3V isolated power supply.

MPQ278XX uses capacitive isolation technology, supporting up to 3kVrms insulation voltage rating. This isolator provides small size, low-power-consumption and higher reliability operation comparing to traditional opto-coupler isolator.

MPQ278XX integrates one isolated DC-DC converter with up to 200mA output and 3kVrms isolation, providing isolated power for the isolated data port.

MPQ278XX still provides schmitt trigger input and isolation encoding/decoding for high immunity in noise environment. High/low selectable default fail-safe output supports flexible design in application.

The MPQ278XX is available in a wide-body SOICW-16 package.

FEATURES

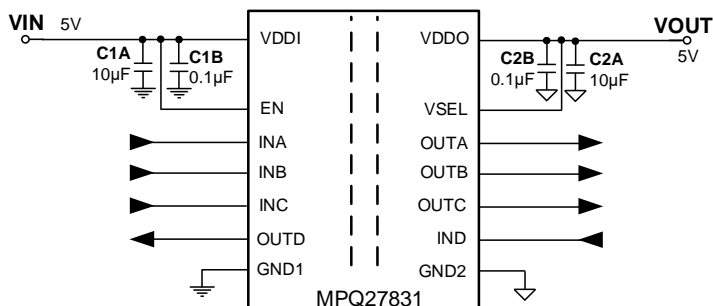
- Integrated Isolated Power Supply
- Support DC to 50Mbps Data Rate
- 3kVrms Isolation
- 4.5V to 5.5V Input Range
- Programmable 5V and 3.3V Output
- Up to 5V/1W Output Power
- Default Output with Optional Logic High (MPQ278XX-H) or Low (MPQ278XX-L)
- High Electromagnetic Immunity
- $>\pm 100\text{kV}/\mu\text{s}$ Common-mode Transient Immunity
- 16ns Propagation Delay
- Isolated Power with Overload and Short-Circuit Protection
- Certificate for IEC62368-1, UL1577, VDE 0884-11 (planning)
- Available in SOICW-16 Package

APPLICATIONS

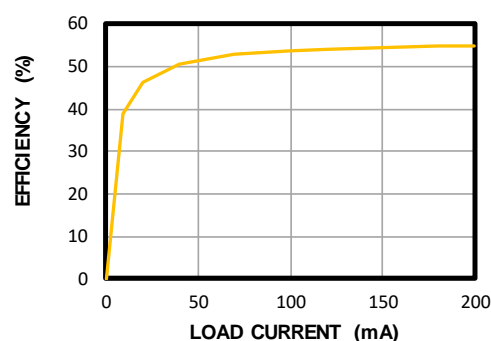
- EV Charging Stations
- Battery Management System (BMS)
- Industrial Communication Systems
- Industrial Automation Systems and PLC

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TYPICAL APPLICATION



Efficiency vs. Load Current





ORDERING INFORMATION

Part Number*	Output Default	Forward/Reverse Channel	Package	Top Marking
MPQ27831-HP-MGY-3	High	3/1	SOICW-16	TBD
MPQ27822-LP-MGY-3	Low	2/2	SOICW-16	
MPQ27821-LP-MGY-3	Low	2/1	SOICW-16	
MPQ27811-HP-MGY-3	High	1/1	SOICW-16	

* For Tape & Reel, add suffix –Z (e.g.: MPQ278XX-XP-MGY-3–Z).

Contact MPS FAE/SALES for other options with different forward/reverse channels and different default output logic.

PACKAGE REFERENCE

