

Digital Isolator Logic 2-CH 100Mbps Automotive 8-Pin SOIC T/R

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| Manufacturer: | Texas Instruments, Inc | <input type="text" value="ISO7720FQDRQ1 Image"/> |
| Package/Case: | SOP8 | Images are for reference only |
| Product Type: | Drivers | Inquiry |
| RoHS: | RoHS Compliant/Lead free  | |
| Lifecycle: | Active | |

General Description

The ISO772x-Q1 devices are high-performance, dual-channel digital isolators with 5000 V_{RMS} (DW package) and 3000 V_{RMS} (D package) isolation ratings per UL 1577. This family includes devices with reinforced insulation ratings according to VDE, CSA, TUV and CQC.

The ISO772x-Q1 devices provide high electromagnetic immunity and low emissions at low power consumption, while isolating CMOS or LVCMOS digital I/Os. Each isolation channel has a logic input and output buffer separated by a double capacitive silicon dioxide (SiO₂) insulation barrier. The ISO7720-Q1 device has both channels in the same direction while the ISO7721-Q1 device has both channels in the opposite direction. In the event of input power or signal loss, the default output is *high* for devices without suffix F and *low* for devices with suffix F. See the *Device Functional Modes* section for further details. Used in conjunction with isolated power supplies, these devices help prevent noise currents on data buses, such as CAN and LIN, from damaging sensitive circuitry. Through innovative chip design and layout techniques, the electromagnetic compatibility of the ISO772x-Q1 devices has been significantly enhanced to ease system-level ESD, EFT, surge, and emissions compliance. The ISO772x-Q1 family of devices is available in 16-pin SOIC wide-body (DW) and 8-pin SOIC narrow-body (D) packages.

Key Features

Qualified for automotive applications

AEC-Q100 qualified With the following results:

Device temperature grade 1: -40°C to +125°C ambient operating temperature range

Device HBM ESD classification level 3A

Device CDM ESD classification level C6

Functional Safety-Capable

Documentation available to aid functional safety system design: ISO7720-Q1, ISO7721-Q1

100 Mbps data rate

Robust isolation barrier:

>100-Year projected lifetime at 1.5 kVRMS working voltage

Up to 5000 VRMS Isolation Rating

Up to 12.8 kV surge capability

±100 kV/μs Typical CMTI

Wide supply range: 2.25 V to 5.5 V

2.25-V to 5.5-V level translation

Default output *High* (ISO772x) and *Low* (ISO772xF) Options

Low power consumption, typical 1.7 mA per channel at 1 Mbps

Low propagation delay: 11 ns typical

Robust electromagnetic compatibility (EMC)

System-Level ESD, EFT, and surge immunity

±8 kV IEC 61000-4-2 contact discharge protection across isolation barrier

Low emissions

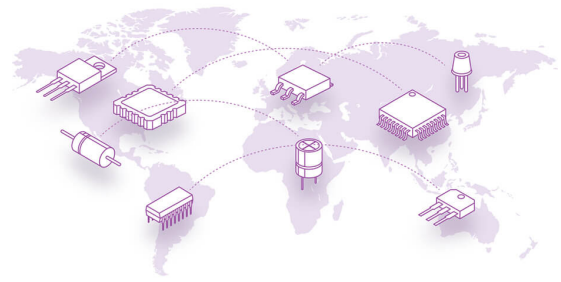
Wide-SOIC (DW-16) and Narrow-SOIC (D-8) package options

Section 6.7

DIN VDE V 0884-11:2017-01

UL 1577 component recognition program

IEC 60950-1, IEC 62368-1, IEC 61010-1, IEC 60601-1 and GB 4943.1-2011 certifications



Recommended For You

ISO7221BDR

Texas Instruments, Inc

SOP8

ISO7740FDWR

Texas Instruments, Inc

SOIC-16

ISO1432BDWR

Texas Instruments, Inc

SOIC16

ISO7341CQDWRQ1

Texas Instruments, Inc

SOP-16

ISO7760FQDBQRQ1

Texas Instruments, Inc

SSOP-16

ISO7421EDR

Texas Instruments, Inc

SOP8

ISO7720DR

Texas Instruments, Inc

SOP8

ISO6721FBQDRQ1

Texas Instruments, Inc

SOIC-8

ISO7721FQDRQ1

Texas Instruments, Inc

SOP8

ISO7721FDR

Texas Instruments, Inc

SOP8

ISO1540QDRQ1

Texas Instruments, Inc

SOP8

ISO7760DBQR

Texas Instruments, Inc

SSOP-16

ISO7421AQDRQ1

Texas Instruments, Inc

SOP8

ISO7731FQDWRQ1

Texas Instruments, Inc

SOIC-16

ISO7710FQDRQ1

Texas Instruments, Inc

SOP8