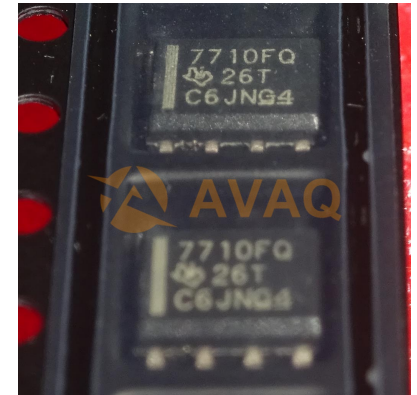



Digital Isolator CMOS 1-CH 100Mbps Automotive 8-Pin SOIC T/R



Images are for reference only

[Inquiry](#)

Manufacturer:	Texas Instruments, Inc
Package/Case:	SOP8
Product Type:	Drivers
RoHS:	RoHS Compliant/Lead free 
Lifecycle:	Active

General Description

The ISO7710-Q1 device is a high-performance, single-channel digital isolator with 5000 V_{RMS} (DW package) and 3000 V_{RMS} (D package) isolation ratings per UL 1577. This device is also certified by VDE, TUV, CSA, and CQC.

The ISO7710-Q1 device provides high electromagnetic immunity and low emissions at low power consumption, while isolating CMOS or LVCMOS digital I/Os. The isolation channel has a logic input and output buffer separated by a double capacitive silicon dioxide (SiO₂) insulation barrier. In the event of input power or signal loss, default output is *high* for a device without suffix F and *low* for a device with suffix F. See the *Device Functional Modes* section for further details.

Used in conjunction with isolated power supplies, the device helps prevent noise currents on data buses, such as CAN and LIN, or other circuits from entering the local ground and interfering with or damaging sensitive circuitry. Through innovative chip design and layout techniques, the electromagnetic compatibility of the ISO7710-Q1 device has been significantly enhanced to ease system-level ESD, EFT, surge, and emissions compliance. The ISO7710-Q1 device 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 $+125^{\circ}\text{C}$ 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

100 Mbps data rate

Robust isolation barrier:

>100-year projected lifetime at 1500 V_{RMS} working voltage

Up to 5000 V_{RMS} 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* (ISO7710) and *low* (ISO7710F) options

Low power consumption, typical 1.7 mA at 1 Mbps

Low propagation delay: 11 ns Typical (5-V Supplies)

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

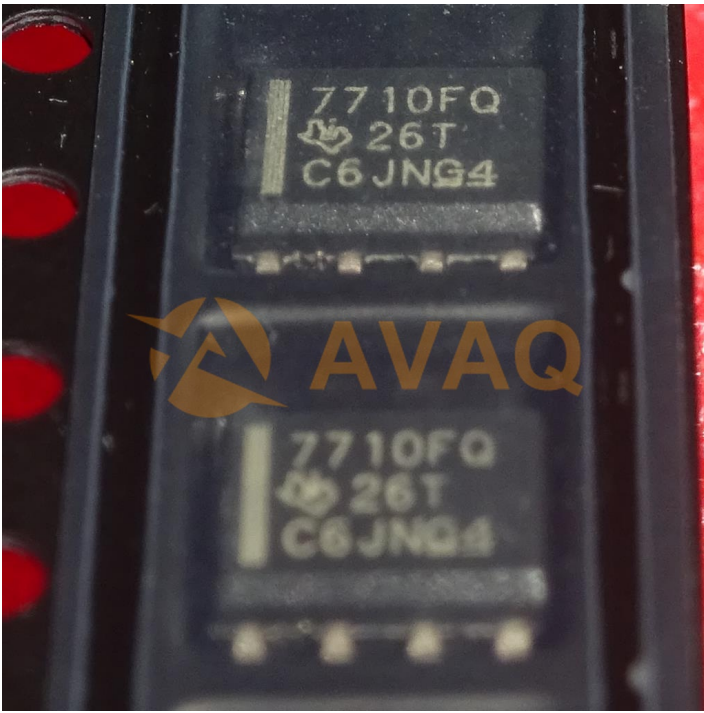
Wide-SOIC (DW-16) and narrow-SOIC (D-8) package options

Section 6.7

VDE reinforced insulation per 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

ISO7720FQDRQ1

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