ADUM4402ARWZ

Data Sheet

Digital Isolator, Quad, 4 Channel, 65 ns, 2.7 V, 5.5 V, WSOIC, 16 Pins

Manufacturers	Analog Devices, Inc
Package/Case	SOIC-16
Product Type	Interface ICs
RoHS	Rohs
Lifecycle	

Images are for reference only

Please submit RFQ for ADUM4402ARWZ or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The ADuM440x are 4-channel digital isolators based on the Analog Devices, Inc., iCoupler® technology. Combining high speed CMOS and monolithic air core transformer technology, these isolation components provide outstanding performance characteristics that are superior to the alternatives, such as optocoupler devices and other integrated couplers.

The ADuM440x isolators provide four independent isolation channels in a variety of channel configurations and data rates (see the Ordering Guide). All models operate with the supply voltage on either side ranging from 3.0 V to 5.5 V, providing compatibility with lower voltage systems as well as enabling a voltage translation functionality across the isolation barrier. The ADuM440x isolators have a patented refresh feature that ensures dc correctness in the absence of input logic transitions and during power-up/power-down conditions.

This family of isolators, like many Analog Devices isolators, offers very low power consumption, consuming one-tenth to one-sixth the power of comparable isolators at comparable data rates up to 10 Mbps. All models of the ADuM440x provide low pulse width distortion (<2 ns for C grade). In addition, every model has an input glitch filter to protect against extraneous noise disturbances.

The ADuM440x contain circuit and layout enhancements to help achieve system-level IEC 61000-4-x compliance (ESD/burst/surge). The precise capability in these tests for the ADuM440x are strongly determined by the design and layout of the user's board or module. For more information, see the AN-793 Application Note, ESD/Latch-Up Considerations with iCoupler Isolation Products.

Features

Enhanced system-level ESD performance per IEC 61000-4-x

UL recognition: 5000 V rms for 1 minute per UL 1577

CSA Component Acceptance Notice #5A

IEC 60601-1: 250 V rms (reinforced)

IEC 60950-1: 400 V rms (reinforced)

Application

General-purpose, high voltage, multichannel isolation

Medical equipment

Motor drives

Power supplies

VDE Certificate of Conformity

DIN V VDE V 0884-10 (VDE V>

Low power operation

5 V operation

1.4 mA per channel maximum @ 0 Mbps to 2 Mbps

4.3 mA per channel maximum @ 10 Mbps

34 mA per channel maximum @ 90 Mbps

3.3 V operation

0.9 mA per channel maximum @ 0 Mbps to 2 Mbps

2.4 mA per channel maximum @ 10 Mbps

20 mA per channel maximum @ 90 Mbps

Bidirectional communication

3.3 V/5 V level translation

High temperature operation: 105°C

High data rate: dc to 90 Mbps (NRZ)

Precise timing characteristics

2 ns maximum pulse width distortion

2 ns maximum channel-to-channel matching

High common-mode transient immunity: >25 kV/µs

Output enable function

16-lead SOIC wide body package version (RW-16)

16-lead SOIC wide body enhanced creepage version (RI-16)

Related Products

[ADV7181CBSTZ](#)

Analog Devices, Inc

LQFP-64

[AD8170AR](#)

Analog Devices, Inc

SOP8

[AD724JR](#)

Analog Devices, Inc

SOIC-16

[ADV7393BCPZ](#)

Analog Devices, Inc

LFCSP-VQ-40

ADV7391WBCPZ

Analog Devices, Inc

LFSCP-3

ADV7390BCPZ

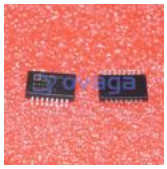
Analog Devices, Inc

QFN32

ADV7341BSTZ

Analog Devices, Inc

LQFP-64



ADUM4160BRIZ

Analog Devices, Inc

SOIC-16