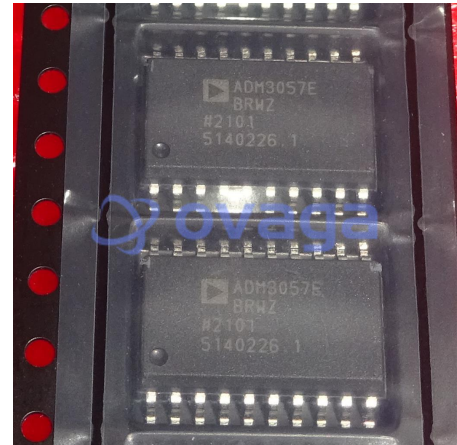


3 kV rms, Signal and Power Isolated, CAN Transceiver for CAN FD

Manufacturers	Analog Devices, Inc
Package/Case	SOIC-20
Product Type	Interface ICs
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for ADM3057EBRWZ or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The ADM3057E is a 3 kV rms isolated controller area network (CAN) physical layer transceiver with an integrated isolated dc-to-dc converter. The ADM3057E meets flexible data rate (CAN FD) requirements for operation to 5 Mbps and higher and complies with the ISO 11898-2: 2016 standard. The ADM3057E is capable of supporting data rates as high as 12 Mbps.

The device employs Analog Devices, Inc., iCoupler® technology to combine a 3-channel isolator, a CAN transceiver, and an Analog Devices isoPower® dc-to-dc converter into a single, surface-mount, small outline integrated circuit (SOIC) package. The device is powered by a single 5 V supply, realizing a fully isolated solution for CAN and CAN FD. Radiated emissions from the high frequency switching of the dc-to-dc converters are kept below EN 55022 Class B limits by continuous adjustments to the switching frequency.

The ADM3057E provide complete isolation between the CAN controller and physical layer bus. The ADM3057E has an isolation voltage of 3 kV rms and 7.8 mm creepage in a 20-lead, wide body SOIC.

Low propagation delays through the isolation support longer bus cables. Slope control mode is available for standard CAN at low data rates. Standby mode minimizes power consumption when the bus is idle or if the node goes offline. Silent mode allows the TXD input to be ignored for listen only mode.

Dominant timeout functionality protects against bus lock up in a fault condition. The current limiting and thermal shutdown features protect against output short circuits. The device is fully specified over an industrial temperature range of -40°C to +105°C.

Features

3 kV rms signal and power isolated CAN transceivers

isoPower integrated isolated dc-to-dc converter

VIO pin for 1.7 V to 5.5 V logic levels

ISO 11898-2:2016 compliant (CAN FD)

Data rates up to 12 Mbps for CAN FD

Low maximum loop propagation delay: 150 ns

Extended common-mode range: ± 25 V

Bus fault protection: ± 40 V on CANH and CANL pins

Low power standby support remote wake request

Extra isolated signal for control (such as termination switches)

Passes EN 55022 Class B by 6 dB

Slope control for reduced EMI

Creepage and clearance: 7.8 mm minimum with 20-lead SOIC_W

High common-mode transient immunity: >75 kV/ μ s

Industrial operating temperature range: -40°C to $+105^{\circ}\text{C}$

ADM3057E-EP Supports defense and aerospace applications (AQEC standard)

Download

Full military temperature range: -55°C to $+125^{\circ}\text{C}$

Controlled manufacturing baseline

1 assembly/test site

1 fabrication site

Product change notification

Qualification data available on request

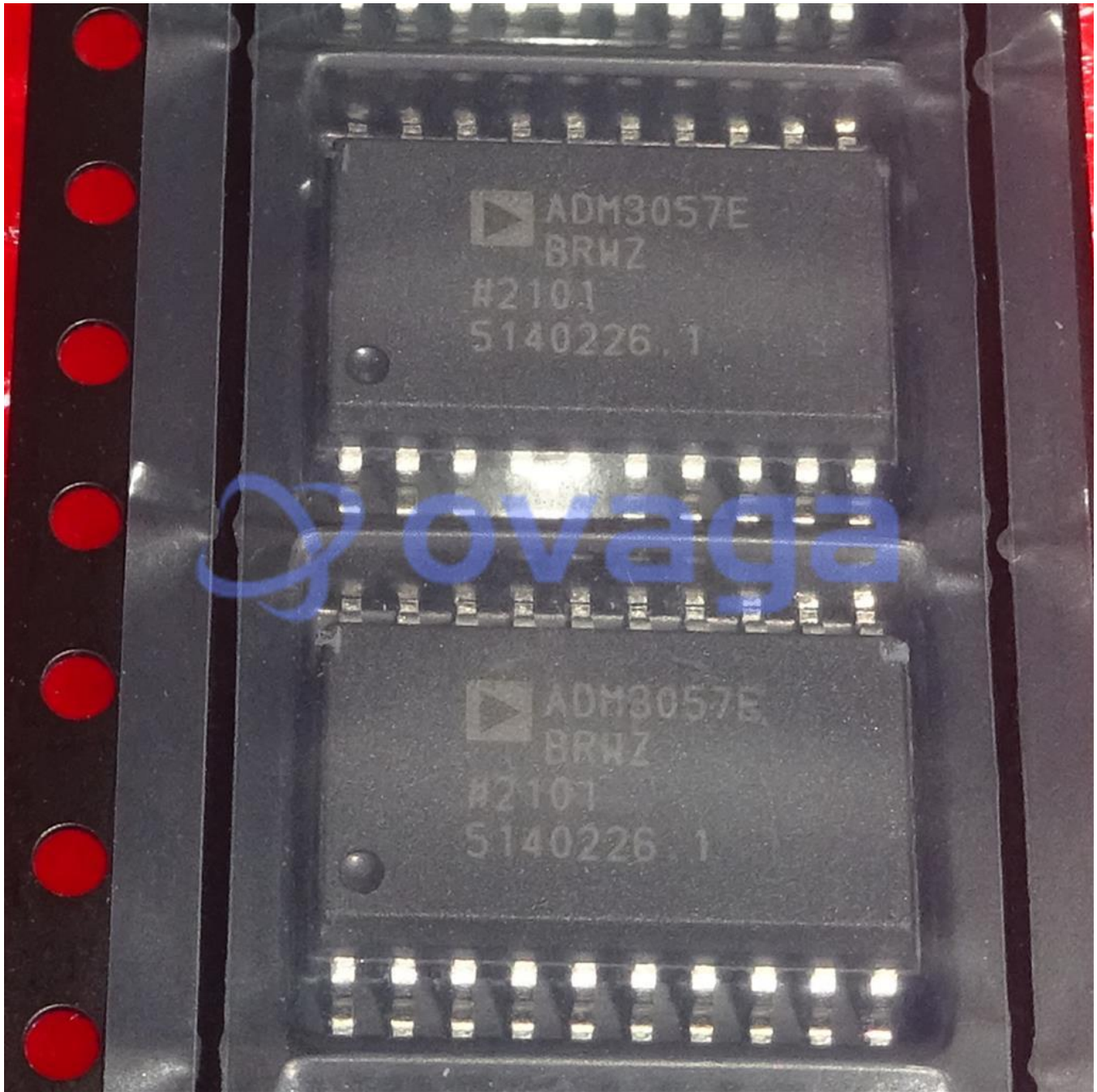
Application

CANOpen, DeviceNet, and other CAN bus applications

Industrial automation

Process control and building control

Transport and infrastructure



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



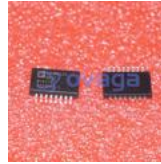
[ADV7390BCPZ](#)

Analog Devices, Inc
QFN32



[ADV7341BSTZ](#)

Analog Devices, Inc
LQFP-64



[ADUM4160BRIZ](#)

Analog Devices, Inc
SOIC-16