

Line Transceiver, EIA/TIA-232-E, ITU-T V.28, RS-232, 4.5 → 5.5 V, 20-Pin SOIC

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



Images are for reference only

Please submit RFQ for ADM3251EARWZ-REEL or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The ADM3251E is a high speed, 2.5 kV fully isolated, single-channel RS-232/V.28 transceiver device that operates from a single 5 V power supply. Due to the high ESD protection on the RIN and TOUT pins, the device is ideally suited for operation in electrically harsh environments or where RS-232 cables are frequently being plugged and unplugged.

The ADM3251E incorporates dual-channel digital isolators with isoPower™ integrated, isolated power. There is no requirement to use a separate isolated dc-to-dc converter. Chip-scale transformer iCoupler® technology from Analog Devices, Inc., is used both for the isolation of the logic signals as well as for the integrated dc-to-dc converter. The result is a total isolation solution.

The ADM3251E contains isoPower technology that uses high frequency switching elements to transfer power through the transformer. Special care must be taken during printed circuitboard (PCB) layout to meet emissions standards. Refer to Application Note AN-0971, Control of Radiated Emissions with isoPower Devices, for details on board layout considerations. The ADM3251E conforms to the EIA/TIA-232E and ITU-T V. 28 specifications and operates at data rates up to 460 kbps. Four external 0.1 μF charge pump capacitors are used for the voltage doubler/inverter, permitting operation from a single 5 V supply.

The ADM3251E is available in a 20-lead, wide body SOIC package and is specified over the -40°C to +85°C temperature range.

Features

2.5 kV fully isolated (power and data) RS-232 transceiver

isoPower integrated, isolated dc-to-dc converter

460 kbps data rate

1 Tx and 1 Rx

Meets EIA/TIA-232E specifications

ESD protection on RIN and TOUT pins ± 8 kV: contact discharge ± 15 kV: air gap discharge

0.1 μ F charge pump capacitors

High common-mode transient immunity: >25 kV/ μ s

Safety and regulatory approvals UL recognition 2500 V rms for 1 minute per UL 1577 VDE Certificate of Conformity (pending) DIN EN 60747-5-2 (VDE 0884 Teil 2): 2003-01 CSA Component Acceptance Notice #5A (pending)

Operating temperature range: -40°C to $+85^{\circ}\text{C}$

Wide body, 20-lead SOIC package

Application

High noise data communications

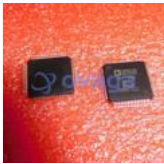
Industrial communications

General-purpose RS-232 data links

Industrial/telecommunications diagnostic ports

Medical equipment

Related Products



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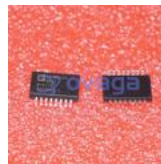
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SOIC-16