
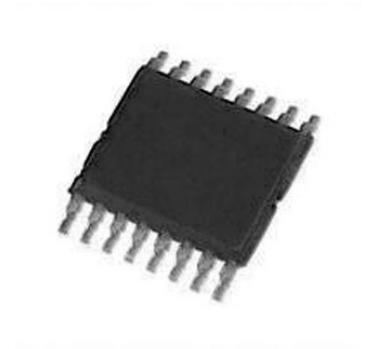


Single Transmitter/Receiver RS-232 16-Pin TSSOP T/R

Manufacturer:	Texas Instruments, Inc
Package/Case:	TSSOP16
Product Type:	Drivers
RoHS:	RoHS Compliant/Lead free 
Lifecycle:	Active



Images are for reference only

[Inquiry](#)

General Description

The TRS3221E is a single driver, single receiver RS-232 solution operating from a single VCC supply. The RS-232 pins provide IEC G1000-4-2 ESD protection. The device meets the requirements of TIA/EIA-232-F and provides the electrical interface between an asynchronous communication controller and the serial-port connector. The charge pump and four small external capacitors allow operation from a single 3-V to 5.5-V supply. These devices operate at data signaling rates up to 250 kbit/s and a maximum of 30-V/ μ s driver output slew rate.

Flexible control options for power management are available when the serial port is inactive. The auto-powerdown feature functions when FORCEON is low and FORCEOFF is high. During this mode of operation, if the device does not sense a valid RS-232 signal on the receiver input, the driver output is disabled. If FORCEOFF is set low and EN is high, both the driver and receiver are shut off, and the supply current is reduced to 1 μ A. Disconnecting the serial port or turning off the peripheral drivers causes the auto-powerdown condition to occur. Auto-powerdown can be disabled when FORCEON and FORCEOFF are high.

With auto-powerdown enabled, the device is activated automatically when a valid signal is applied to the receiver input. The INVALID output notifies the user if an RS-232 signal is present at the receiver input. INVALID is high (valid data) if the receiver input voltage is greater than 2.7 V or less than -2.7 V, or has been between -0.3 V and 0.3 V for less than 30 μ s. INVALID is low (invalid data) if the receiver input voltage is between -0.3 V and 0.3 V for more than 30 μ s. Refer to Figure 5 for receiver input levels.

Key Features

ESD Protection for RS-232 Pins
±15-kV Human-Body Model (HBM)

±8 kV (IEC 61000-4-2, Contact Discharge)

±15 kV (IEC 61000-4-2, Air-Gap Discharge)

Meets or Exceeds the Requirements of TIA/EIA-232-F and ITU v.28 Standards

Operates With 3-V to 5.5-V VCC Supply

Operates up to 250 kbit/s

One Driver and One Receiver

Low Standby Current . . . 1 µA Typical

External Capacitors . . . 4 × 0.1 µF

Accepts 5-V Logic Input With 3.3-V Supply

Alternative High-Speed Pin-Compatible Device (1 Mbit/s)
TRSF3221E

Auto-Powerdown Feature Automatically Disables Drivers for Power Savings

APPLICATIONS

Battery-Powered, Hand-Held, and Portable Equipment

PDA's and Palmtop PC's

Notebooks, Subnotebooks, and Laptops

Digital Cameras

Mobile Phones and Wireless Devices

Recommended For You

PCF8574RGTR

Texas Instruments, Inc

QFN16

DS90UB954TRGZTQ1

Texas Instruments, Inc

QFN48

DS90UB954TRGZRQ1

Texas Instruments, Inc

VQFN48

DS90UB947TRGCTQ1

Texas Instruments, Inc

VQFN-64

DS90UB924TRHSTQ1

Texas Instruments, Inc

WQFN-48

TL16C752BLPTREP

Texas Instruments, Inc

LQFP-48

TUSB2077APTR

Texas Instruments, Inc

LQFP48

XTR305IRGWR

Texas Instruments, Inc

QFN20

TL16C752BIPTRREP

Texas Instruments, Inc

LQFP

DS90UB936TRGZIQ1

Texas Instruments, Inc

VQFN48

DS90UB935TRHBRQ1

Texas Instruments, Inc

VQFN-32

DS90UB914ATRHSRQ1

Texas Instruments, Inc

WQFN48

DS90UH947TRGCTQ1

Texas Instruments, Inc

VQFN-64

XTR101AP

Texas Instruments, Inc

DIP

XTR110AG

Texas Instruments, Inc

DIP