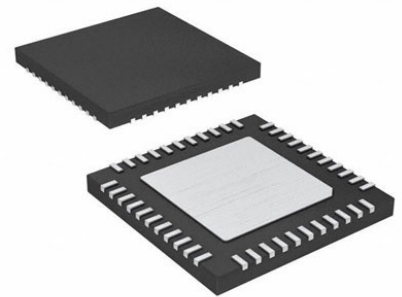



**Voltage Level Translator 4-CH Bidirectional 12-Pin UQFN T/R**



Images are for reference only

[Inquiry](#)

<b>Manufacturer:</b>	<a href="#">Texas Instruments, Inc</a>
<b>Package/Case:</b>	UQFN12
<b>Product Type:</b>	Logic ICs
<b>RoHS:</b>	RoHS Compliant/Lead free 
<b>Lifecycle:</b>	Active

### General Description

This TXB0104 4-bit noninverting translator uses two separate configurable power-supply rails. The A port is designed to track VCCA. VCCA accepts any supply voltage from 1.2 V to 3.6 V. The B port is designed to track VCCB. VCCB accepts any supply voltage from 1.65 V to 5.5 V. This allows for universal low-voltage bidirectional translation between any of the 1.2-V, 1.5-V, 1.8-V, 2.5-V, 3.3-V, and 5-V voltage nodes. VCCA must not exceed VCCB.

When the OE input is low, all outputs are placed in the high-impedance state. To ensure the high-impedance state during power up or power down, OE must be tied to GND through a pulldown resistor. The current sourcing capability of the driver determines the minimum value of the resistor.

The TXB0104 device is designed so the OE input circuit is supplied by VCCA.

This device is fully specified for partial power-down applications using IOFF. The IOFF circuitry disables the outputs, which prevents damaging current backflow through the device when the device is powered down.

## Key Features

1.2-V to 3.6-V on A Port and 1.65-V to 5.5-V on B Port ( $V_{CCA} \leq V_{CCB}$ )

VCC Isolation Feature: If Either VCCInput Is at GND, All Outputs Are in the High-Impedance State

Output Enable (OE) Input Circuit Referenced to VCCA

Low Power Consumption, 5- $\mu$ A Maximum ICC

I OFF Supports Partial Power-Down Mode Operation

Latch-Up Performance Exceeds 100 mA Per JESD 78, Class II

ESD Protection Exceeds JESD 22

A Port:

2500-V Human-Body Model (A114-B)

1500-V Charged-Device Model (C101)

B Port:

$\pm 15$ -kV Human-Body Model (A114-B)

1500-V Charged-Device Model (C101)

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When the OE input is low, all outputs are placed in the high-impedance state. To ensure the high-impedance state during power up or power down, OE must be tied to GND through a pull-down resistor. The current sourcing capability of the driver determines the minimum value of the resistor.

The TXB0104 device is designed so the OE input circuit is supplied by VCCA.

This device is fully specified for partial power-down applications using IOFF. The IOFF circuitry disables the outputs, which prevents damaging current backflow through the device when the device is powered down.

## Recommended For You

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### TXB0102YZPR

Texas Instruments, Inc

DSBGA-8

### TXB0102DCUR

Texas Instruments, Inc

VSSOP8

### TXS0104EDR

Texas Instruments, Inc

SOP14

### TXB0108PWR

Texas Instruments, Inc

TSSOP20

### TXS0104EPWR

Texas Instruments, Inc

TSSOP14

### TXS0102QDCURQ1

Texas Instruments, Inc

VSSOP8

### TXS0104EQPWRQ1

Texas Instruments, Inc

TSSOP14

### TXB0104QRGYRQ1

Texas Instruments, Inc

VQFN14

### TXB0104QRUIRQ1

Texas Instruments, Inc

UQFN12

**TXS0102DCTT**

Texas Instruments, Inc

SSOP8

**TXS0102DCUT**

Texas Instruments, Inc

VSSOP8

**TXS0102YZPR**

Texas Instruments, Inc

DSBGA-8

**TXB0104QPWRQ1**

Texas Instruments, Inc

TSSOP14

**TXS0104ED**

Texas Instruments, Inc

SOP14

**TXB0101DRLR**

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SOT563