



ST2349

2-bit dual supply level translator without control pin

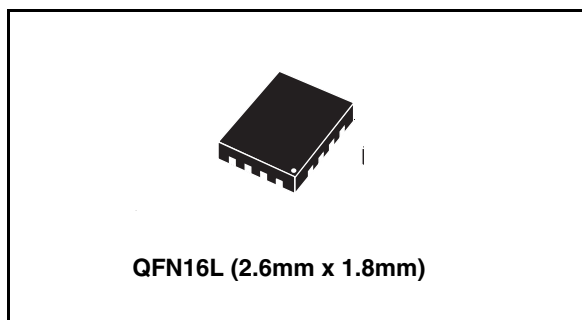
Data Brief

Features

- 100 Mbps (typ.) data rate when driven by a totem pole driver
- 4 Mbps (typ.) data rate when driven by a Open Drain pole driver
- Bidirectional level translation, without direction pin
- Wide VL voltage range of 1.65V to 3.6V
- Wide V_{CC} voltage range of 1.80V to 5.5V
- Power down mode feature – when either supply is off, all I/Os are in High Impedance.
- Low quiescent current (max 10μA)
- Suitable to be driven by Totem Pole and Open Drain driver.
- 5.5V tolerant enable pin
- ESD Performance on all Pins : ±2kv HBM
- Small package and footprint
QFN10 (1.8 x 1.4 mm) package

Application

- Low voltage system level translation
- Mobile phone
- Other mobile devices
- I²C level translation
- UART level translation



Description

ST2349 is a level translator providing level shifting necessary to allow data transfer in a multi-voltage system. Externally applied voltages, V_{CC} and V_L, set the logic levels on either side of the device. It utilizes transmission gate based design that allows bidirectional level translation without control pin.

The ST2349 accepts VL from 1.65V to 3.6V and V_{CC} from 1.80V to 5.5V, making it ideal for data transfer between low-voltage ASICs /PLD and higher voltage system. This device has three-state output mode that disables all I/Os.

ST2349 supports power-down mode at either of its supply (V_L or V_{CC}) where it will disable all I/Os when one of the supply is off. This feature will protect the device from current backflow through the device.

Table 1. Device summary

Part number	Package	Packaging
ST2349QTR	QFN16L (2.6mm x 1.8mm)	Tape and Reel (3000 parts per reel)

Package mechanical data

In order to meet environmental requirements, ST offers these devices in ECOPACK® packages. These packages have a Lead-free second level interconnect. The category of second level interconnect is marked on the package and on the inner box label, in compliance with JEDEC Standard JESD97. The maximum ratings related to soldering conditions are also marked on the inner box label. ECOPACK is an ST trademark. ECOPACK specifications are available at: www.st.com

Table 2. QFN16L (2.6x1.8mm) mechanical data

Dim.	mm.		
	Min	Typ	Max
A	0.45	0.55	0.60
A1	0	0.02	0.05
b	0.15	0.20	0.25
D	2.50	2.60	2.70
E	1.70	1.80	1.90
e		0.40	
L	0.35	0.40	0.45

- Note:
- 1 VFQFPN - Standard for thermally enhanced very fine pitch quad flat package no leads.
 - 2 The leads size is comprehensive of the thickness of the leads finishing material.
 - 3 Dimensions do not include mold protusion.
 - 4 Package outline exclusive of metal burrs dimensions.
 - 5 Shipping media tape and reel units: 3000

Figure 1. Foot print recommendation

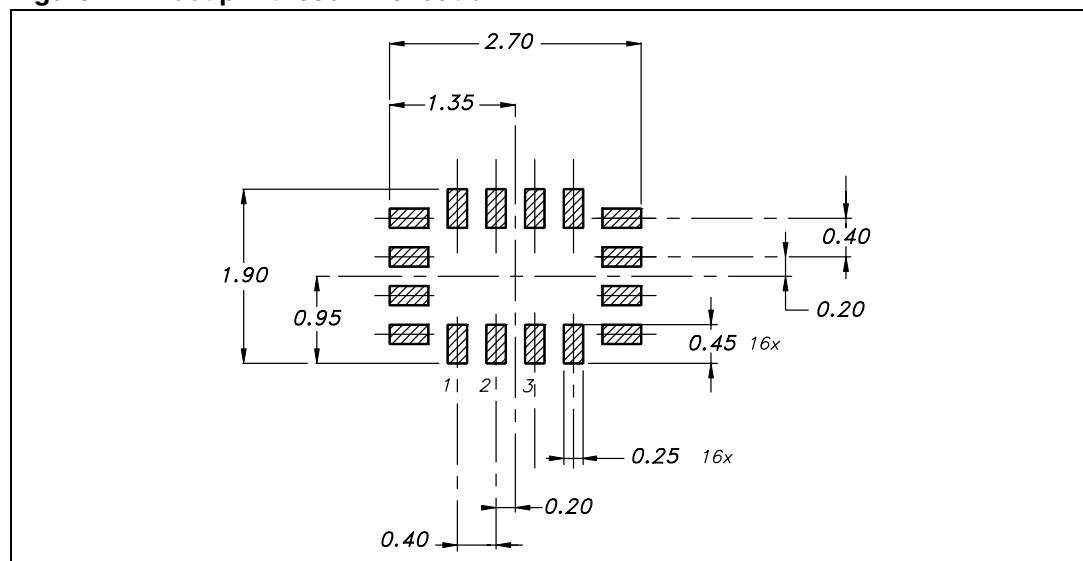


Figure 2. Package information

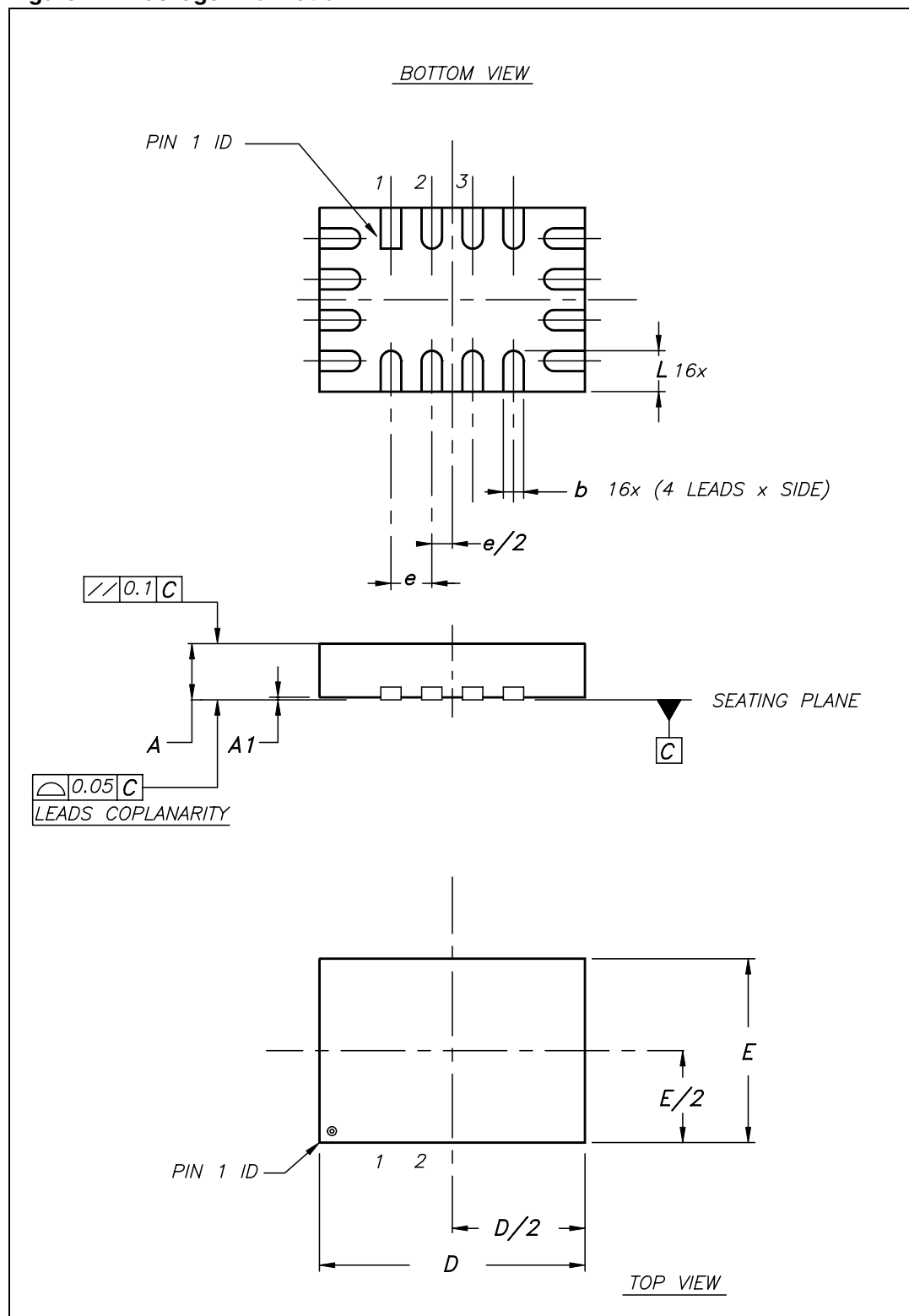
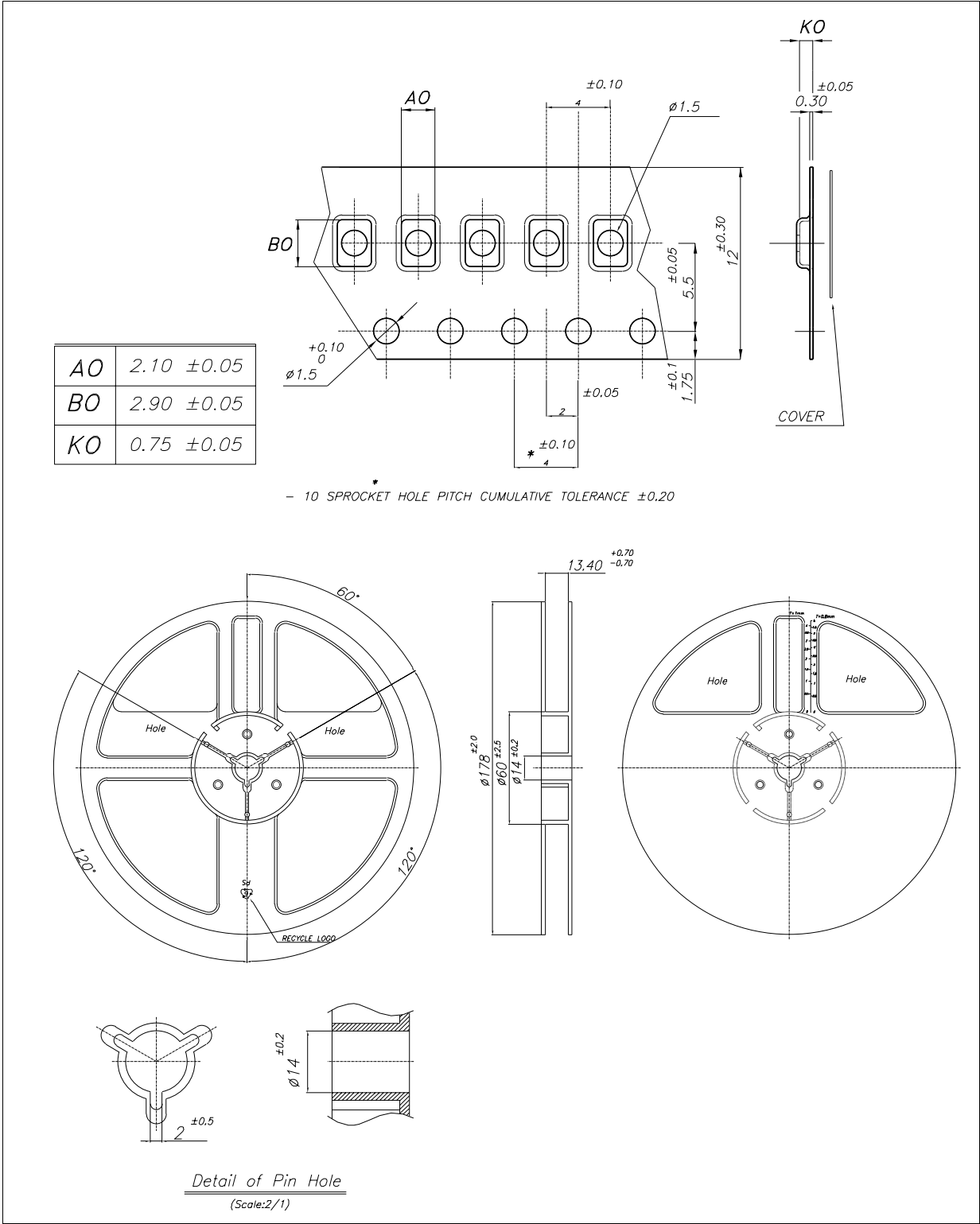


Figure 3. TSSOP24 tape & reel



1 **Revision history**

Table 2. Revision history

Date	Revision	Changes
07-May-2007	1	First release

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