

DS34C87 CMOS Quad TRI-STATE® Differential Line Driver

General Description

The DS34C87 is a quad differential line driver designed for digital data transmission over balanced lines. The DS34C87 meets all the requirements of EIA standard RS-422 while retaining the low power characteristics of CMOS. This enables the construction of serial and terminal interfaces while maintaining minimal power consumption.

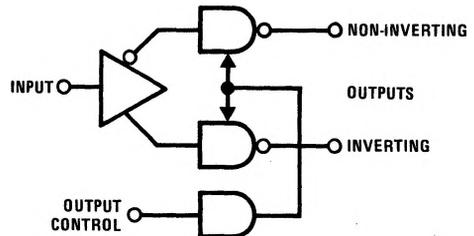
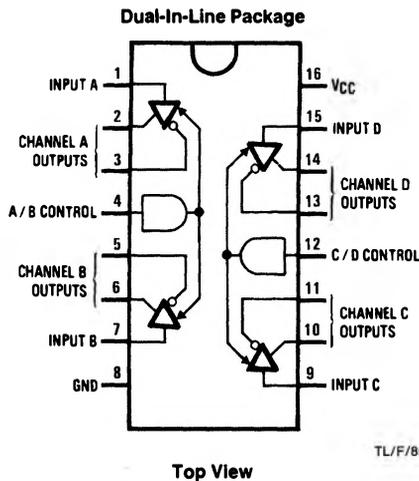
The DS34C87 accepts TTL or CMOS input levels and translates these to RS-422 output levels. This part uses special output circuitry that enables the individual drivers to power down without loading down the bus. The DS34C87 also includes special power up and down circuitry which will TRI-STATE the outputs during power up or down, preventing spurious glitches on its outputs. This device has separate enable circuitry for each pair of the four drivers. The DS34C87 is pin compatible to the DS3487.

All inputs are protected against damage due to electrostatic discharge by diodes to V_{CC} and ground.

Features

- TTL input compatible
- Typical propagation delays: 6 ns
- Typical output skew: 0.5 ns
- Outputs won't load line when $V_{CC} = 0V$
- Meets the requirements of EIA standard RS-422
- Operation from single 5V supply
- TRI-STATE outputs for connection to system buses
- Low quiescent current
- Available in surface mount

Connection and Logic Diagrams



Truth Table

Input	Control Input	Non-Inverting Output	Inverting Output
H	H	H	L
L	H	L	H
X	L	Z	Z

L = Low logic state

X = Irrelevant

H = High logic state

Z = TRI-STATE (high impedance)

Order Number DS34C87J, DS34C87M or DS34C87N
See NS Package Number J16A, M16A or N16A