



## DS1691A/DS3691 (RS-422/RS-423) Line Drivers with TRI-STATE® Outputs

### General Description

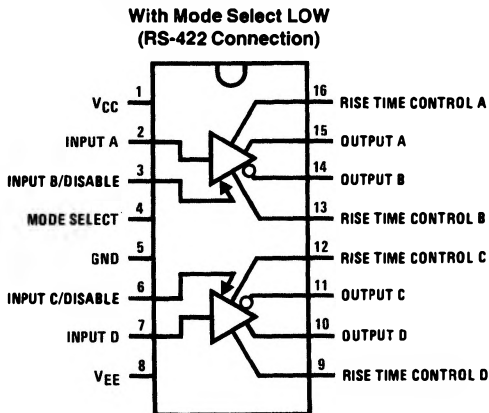
The DS1691A/DS3691 are low power Schottky TTL line drivers designed to meet the requirements of EIA standards RS-422 and RS-423. They feature 4 buffered outputs with high source and sink current capability with internal short circuit protection. A mode control input provides a choice of operation either as 4 independent line drivers or 2 differential line drivers. A rise time control pin allows the use of an external capacitor to reduce rise time for suppression of near end crosstalk to other receivers in the cable.

With the mode select pin low, the DS1691A/DS3691 are dual-differential line drivers with TRI-STATE outputs. They feature  $\pm 10V$  output common-mode range in TRI-STATE mode and 0V output unbalance when operated with  $\pm 5V$  supply.

### Features

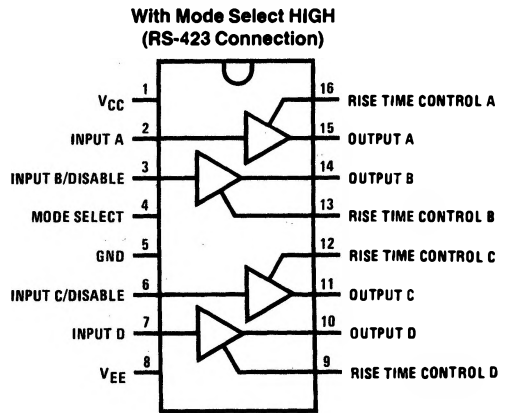
- Dual RS-422 line driver with mode pin low, or quad RS-423 line driver with mode pin high
- TRI-STATE control for individual outputs
- Short circuit protection for both source and sink outputs
- Outputs will not clamp line with power off or in TRI-STATE
- Individual rise mode time control for each output
- 100 $\Omega$  transmission line drive capability
- Low  $I_{CC}$  and  $I_{EE}$  power consumption
  - RS-422 35 mW/driver typ
  - RS-423 26 mW/driver typ
- Low current PNP inputs compatible with TTL, MOS and CMOS
- Pin compatible with AM26LS30

### Connection Diagram



Top View

TL/F/5783-1



Top View

TL/F/5783-2

### Truth Table

Operation	Inputs			Outputs	
	Mode	A (D)	B (C)	A (D)	B (C)
RS-422	0	0	0	0	1
	0	0	1	TRI-STATE	TRI-STATE
	0	1	0	1	0
	0	1	1	TRI-STATE	TRI-STATE
RS-423	1	0	0	0	0
	1	0	1	0	1
	1	1	0	1	0
	1	1	1	1	1

Order Number DS1691AJ, DS3691J, DS3691M or DS3691N  
See NS Package Number J16A, M16A or N16A