



# LB1291

## 8-Channel Driver Array

### Overview

The LB1291 has been designed for interfacing between low level digital devices and fluorescent display tubes. Its 8-channel independent Darlington output stage is used for digit or segment drivers. Also, with pull-down equivalent resistors, no externally connected resistors are required for ghost prevention. When the input voltage is at a high level, the output gets activated.

### Features

- 8-channel independent Darlington driver.
- Capable of driving digits or segments.
- On-chip sink current circuit for pull-down.
- 55V/30mA rating.

### Specifications

#### Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC\ max}$		-0.3 to +55.0	V
Output supply voltage	$V_{OUT}$		-0.3 to $V_{CC}$	V
Input supply voltage	$V_{IN}$		-0.3 to +20.0	V
Maximum output current	$I_{OUT}$		30	mA
Allowable power dissipation	$P_d\ max$		1.13	W
Operating temperature	$T_{opr}$		-20 to +75	$^\circ\text{C}$
Storage temperature	$T_{stg}$		-40 to +150	$^\circ\text{C}$

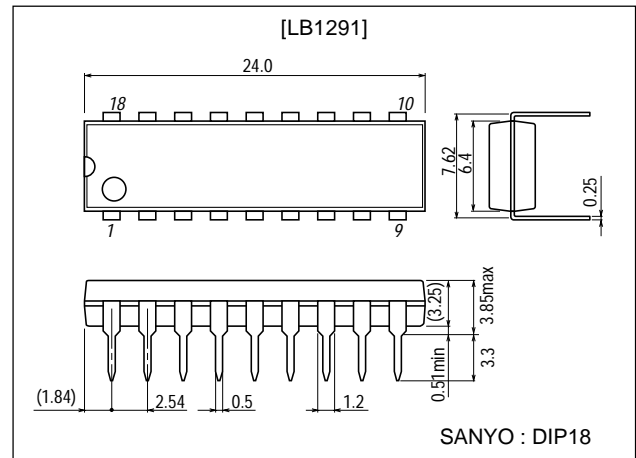
#### Allowable Operating Ranges at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Supply voltage	$V_{CC}$		4.75 to 55.0	V
Input high-level voltage	$V_{IH}$	$I_{OUT} = -30\text{mA}$	4.0 to 20.0	V
Input low-level voltage	$V_{IL}$	$I_{OUT} \leq -30\mu\text{A}$	-0.3 to +0.3	V

### Package Dimensions

unit:mm

3007B-DIP18



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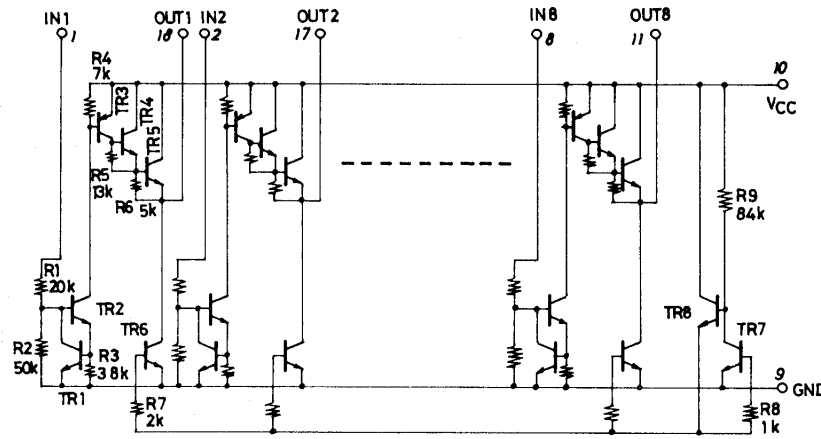
# LB1291

## Electrical Characteristics at $T_a = 25^\circ\text{C}$ , $V_{CC} = 55\text{V}$

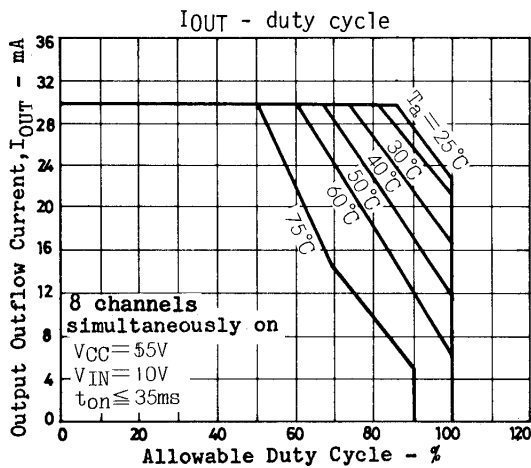
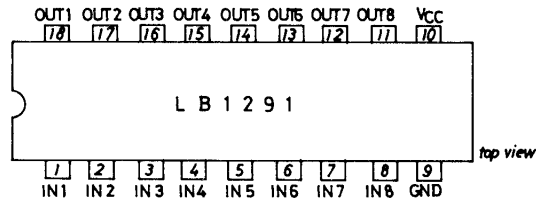
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Current drain	$I_{CCH}$	All inputs, $V_{IN} = 10\text{V}$		6.0	10.0	mA
	$I_{CCL}$	All inputs open	0.3	1.0	1.6	mA
Output voltage	$V_{OH}$	$V_{IN} = 10\text{V}$ , $I_{OUT} = -30\text{mA}$	$V_{CC} - 2.0$	$V_{CC} - 1.6$		V
	$V_{OL}$	$V_{IN} = 0.3\text{V}$ , $I_{OUT} = 0\text{mA}$			200	mV
Output leakage current	$I_{OL}$	$V_{IN} = 0.3\text{V}$ , $V_{OUT} = 0.5\text{V}$	-30			$\mu\text{A}$
Pull-down current	$I_{OPL}$	$V_{OUT} = V_{CC}$	0.2	0.4	1.0	mA
Input current	$I_{IN1}$	$V_{IN} = 20\text{V}$	0.6	1.0	1.4	mA
	$I_{IN2}$	$V_{IN} = 10\text{V}$	0.3	0.5	0.7	mA
	$I_{INL}$	$V_{IN} = 0\text{V}$	-30			$\mu\text{A}$

## Equivalent Circuit

Unit (resistance:  $\Omega$ )



## Pin Assignment



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