



LB1293

6-Channel Driver Array

Overview

The LB1293 has been designed for interfacing between low level digital devices and fluorescent display tubes. Its 6-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

- 6-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	$V_{CC\text{ max}}$		-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	$P_d\text{ max}$		960	W
Operating temperature	T_{opr}		-20 to +75	$^\circ\text{C}$
Storage temperature	T_{stg}		-40 to +150	$^\circ\text{C}$

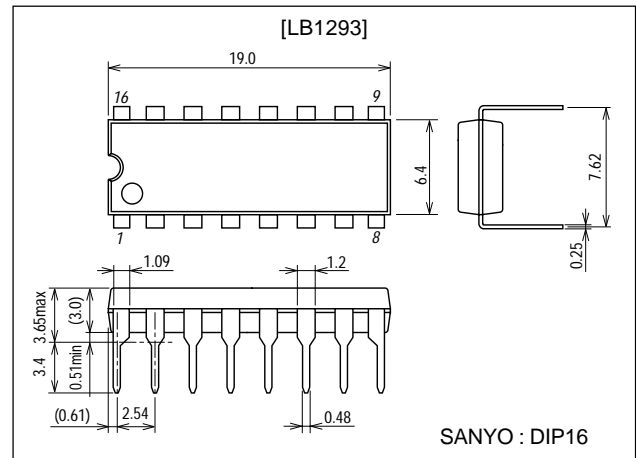
Allowable Operating Ranges at $T_a = 25^\circ\text{C}$

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

3006C-DIP16



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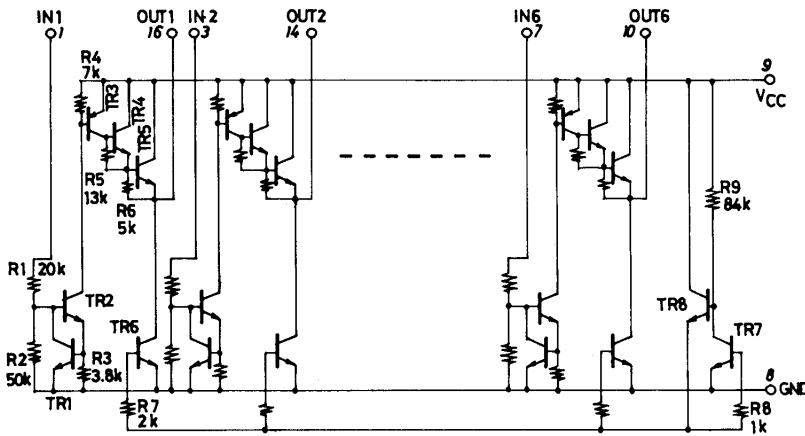
LB1293

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

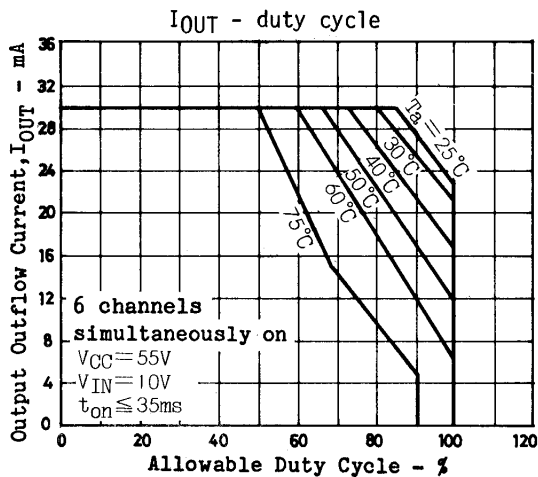
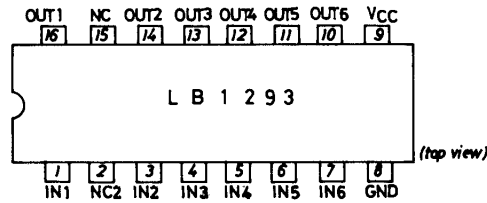
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Current drain	I_{CCH}	All inputs, $V_{IN} = 10\text{V}$		5.0	8.0	mA
	I_{CCL}	All inputs open	0.3	1.0	1.6	mA
Output voltage	V_{OH}	$V_{IN} = 10\text{V}$, $I_{OUT} = -30\text{mA}$	$V_{CC} - 2.0$	$V_{CC} - 1.6$		V
	V_{OL}	$V_{IN} = 0.3\text{V}$, $I_{OUT} = 0\text{mA}$			200	mV
Output leakage current	I_{OL}	$V_{IN} = 0.3\text{V}$, $V_{OUT} = 0.5\text{V}$	-30			μA
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			μA

Equivalent Circuit

Unit (resistance: Ω)



Pin Assignment



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