



# LB1290 — Monolithic Digital IC 8-Channel Driver Array

## Overview

The LB1290 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-circuit independent Darlington driver.
- On-chip sink current circuit for pull-down.
- Capable of driving digits or segments.
- 55V/30mA rating.

## Specifications

### Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V <sub>CC</sub> max		-0.3 to +55.0	V
Output supply voltage	V <sub>OUT</sub>		-0.3 to V <sub>CC</sub>	V
Input supply voltage	V <sub>IN</sub>		-0.3 to +20.0	V
Maximum output current	I <sub>OUT</sub>		30	mA
Allowable power dissipation	P <sub>d</sub> max		1.13	W
Operating temperature	T <sub>opr</sub>		-20 to +75	°C
Storage temperature	T <sub>stg</sub>		-40 to +150	°C

### Allowable Operating Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Supply voltage	V <sub>CC</sub>		4.75 to 55.0	V
Input H-level voltage	V <sub>IH</sub>	I <sub>OUT</sub> = -30mA	2.6 to 20.0	V
Input L-level voltage	V <sub>IL</sub>	I <sub>OUT</sub> ≤ -30μA	-0.3 to +0.3	V

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# LB1290

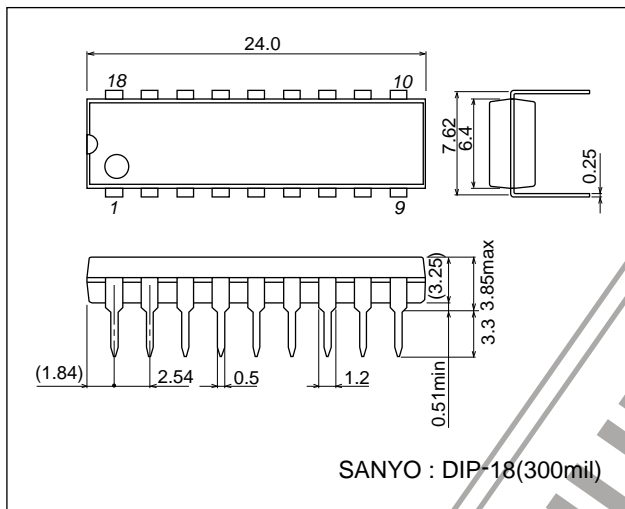
**Electrical Characteristics** at  $T_a = 25^{\circ}\text{C}$ ,  $V_{CC} = 55\text{V}$

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	$I_{IN1}$	$V_{IN} = 10\text{V}$	0.6	0.9	1.3	mA
	$I_{IN2}$	$V_{IN} = 5\text{V}$	0.2	0.4	0.6	mA
	$I_{INL}$	$V_{IN} = 0\text{V}$	-30			$\mu\text{A}$

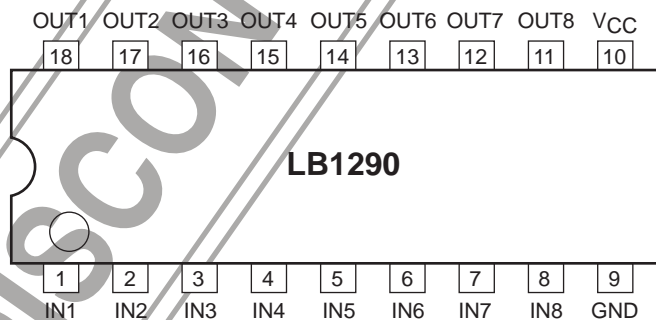
## Package Dimensions

unit : mm (typ)

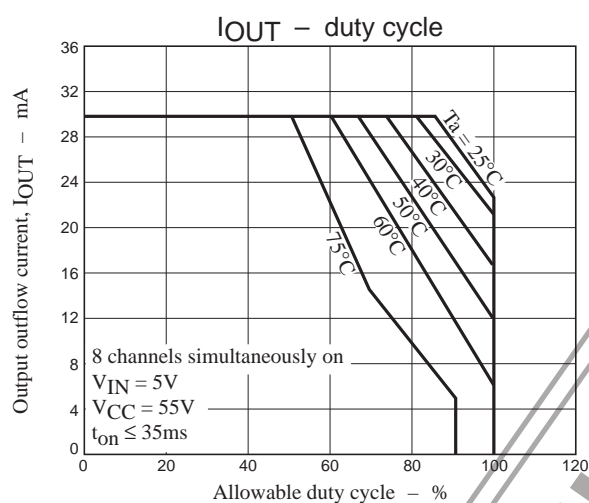
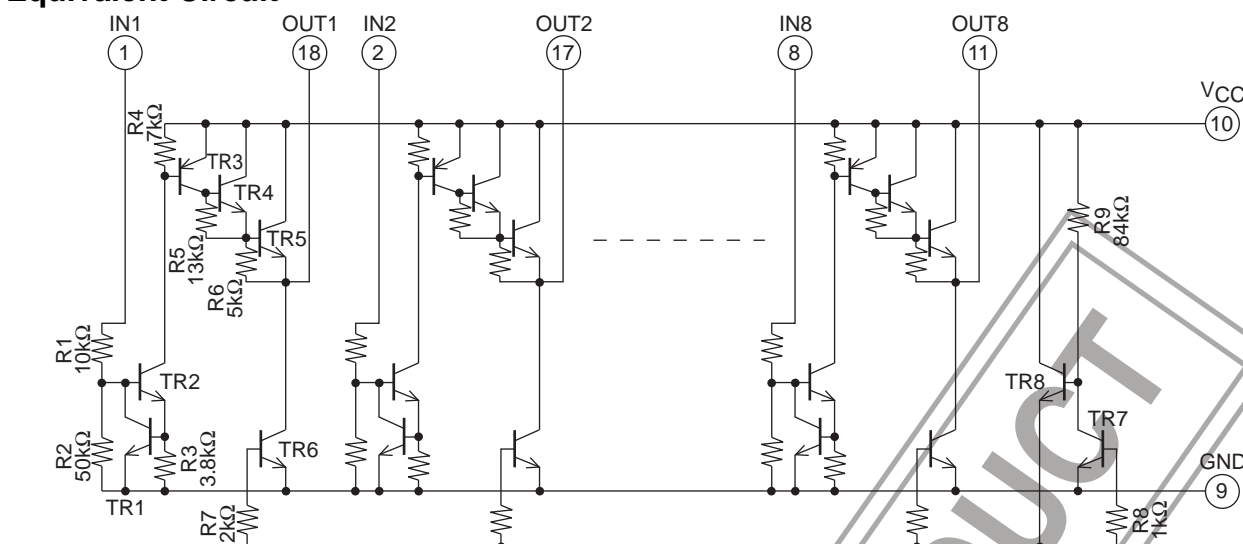
3007B



## Pin Assignment



## Equivalent Circuit



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