



LB1240

Fluorescent Display Tube Driver

Overview

The LB1240 has been designed for interfacing low-level digital devices to fluorescent display tubes. Its 8-circuit independent Darlington output stage is used for digit and segment drivers. Equivalent pull-down resistors are built in ; externally connected resistors to prevent ghosts are no longer required. Output is activated when input voltages are at a low level, making the IC an ideal interface for N-channel MOS devices.

Features

- 8 circuit independent Darlington driver.
- Capable of driving digits or segments.
- Built-in pull-down sink current.
- Rated at 55V/30mA

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}	$V_{IN} > GND$	$V_{CC} - 10$ to V_{CC}	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	$^\circ\text{C}$

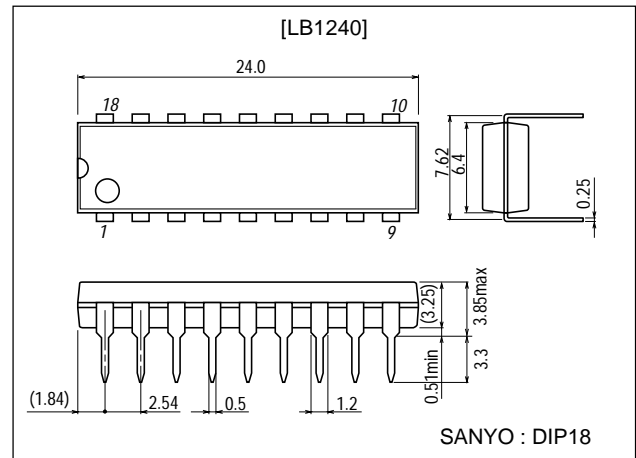
Allowable Operating Ranges at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Supply voltage	V_{CC}		4.75 to 55.0	V
Input H-level voltage	V_{IH}	$V_{IN} > GND, I_{OUT} = -30\text{mA}$	$V_{CC} - 10$ to $V_{CC} - 2.8$	V
Input L-level voltage	V_{IL}	$I_{OUT} \leq -30\mu\text{A}$	$V_{CC} - 0.45$ to V_{CC}	V

Package Dimensions

unit:mm

3007B-DIP18



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SANYO Electric Co., Ltd. Semiconductor Company

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

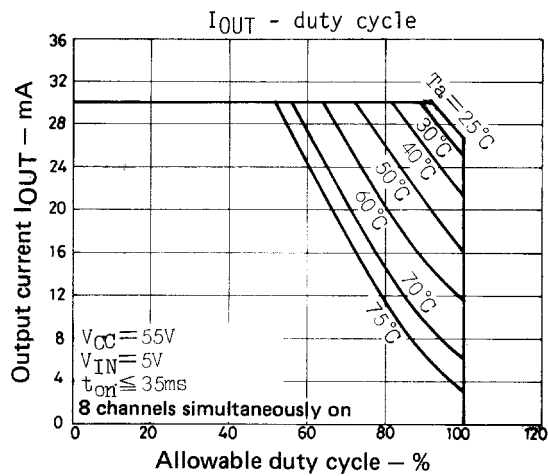
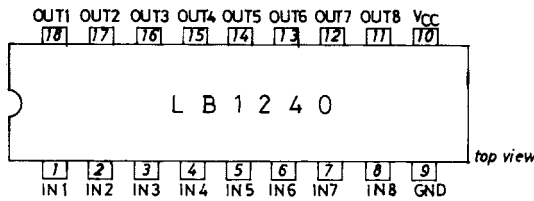
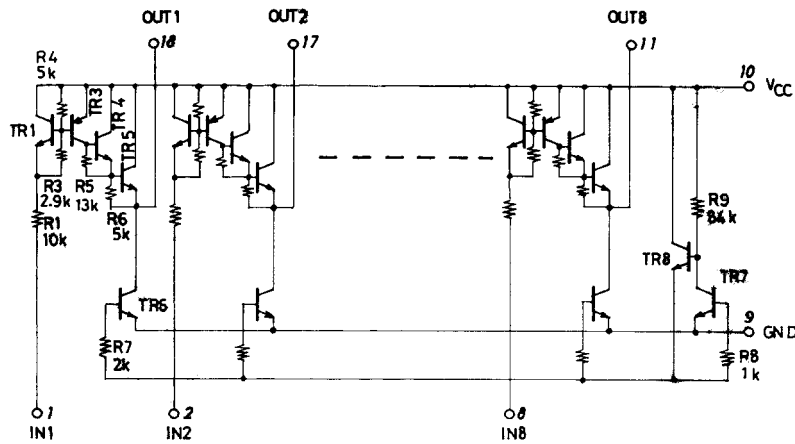
LB1240

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, $V_{IN} = V_{CC} - 10\text{V}$		5.0	8.0	mA
	I_{CCL}	All inputs open	0.3	1.0	1.6	mA
Output voltage	V_{OH}	$V_{IN} = V_{CC} - 10\text{V}$, $I_{OUT} = -30\text{mA}$	$V_{CC} - 2.0$	$V_{CC} - 1.6$		V
	V_{OL}	$V_{IN} = V_{CC} - 0.3\text{V}$, $I_{OUT} = 0\text{mA}$			200	mV
Output leakage current	I_{OL}	$V_{IN} = V_{CC} - 0.3\text{V}$, $V_{OUT} = 0.5\text{V}$	-30			μA
Pull-down current	I_{OPL}	$V_{OUT} = V_{CC}$	0.2	0.4	1.0	mA
Input current	I_{INH}	$V_{IN} = V_{CC} - 10\text{V}$	0.6	0.9	1.3	mA

Equivalent Circuit and Pin Assignment

Unit (resistance: Ω)



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