

**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	$^\circ\text{C}$

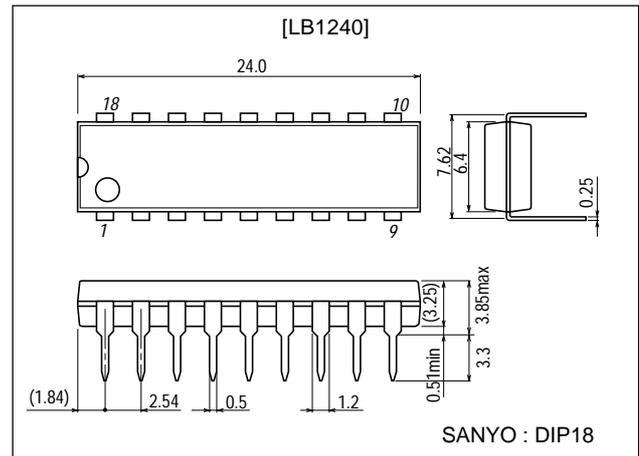
**Allowable Operating Ranges** at  $T_a = 25^\circ\text{C}$ 

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

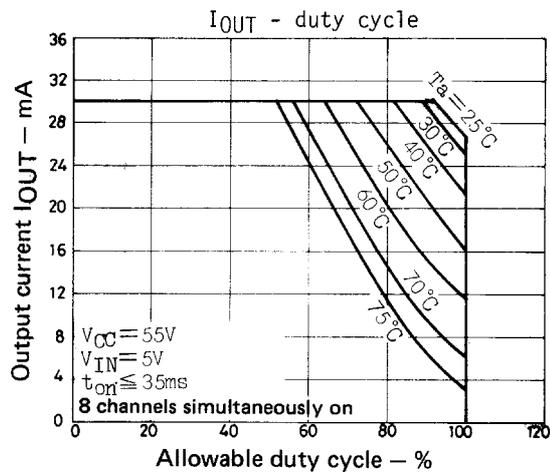
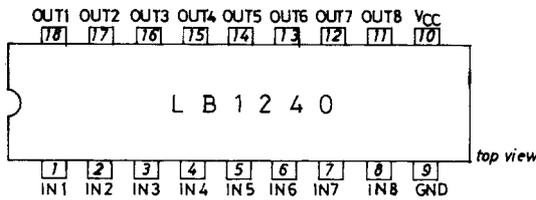
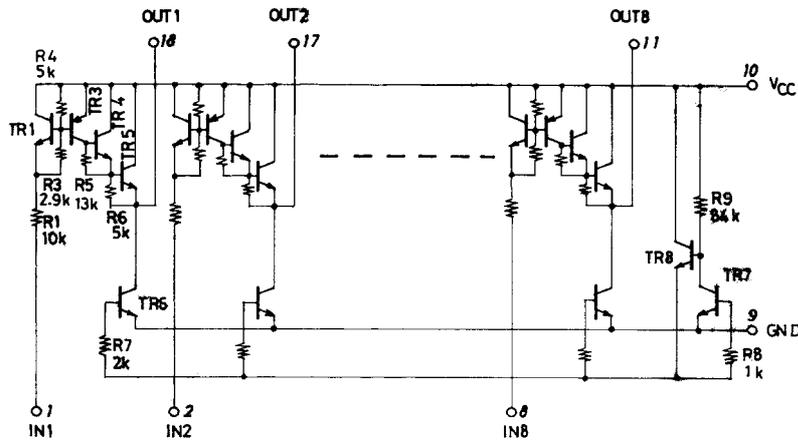
# LB1240

## 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			$\mu\text{A}$
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:  $\Omega$ )



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