



# LB1273R

## 6-Unit, Darlington Transistor Array

### Overview

The circuit construction of this IC is a Darlington transistor array with six units, most suitable for printer hammer drive, lamp, and relay drive. With built-in protective diodes against negative inputs, it is advantageous in designing drive circuits for printer calculators and cash registers.

### Features

- Since six units are included, it is suitable for 18-digit printers.
- The load current is considerably large i. e., 230mA and is, thus, suitable for thermal printers.

### Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Output supply voltage	$V_{\text{OUT}}$		-0.3 to +20	V
Input supply voltage	$V_{\text{IN}}$		-40 to +20	V
Output inflow current	$I_{\text{OUT}}$	per unit	150	mA
Instantaneous output inflow current	$i_{\text{op}}$	per unit duty=60%, pulse width<2ms	230	mA
GND pin inflow current	$I_7$		-700	mA
GND pin instantaneous outflow current	$I_{7p}$	duty=60%, pulse width<2ms	1.4	A
Allowable power dissipation	$P_d \text{ max}$		1.15	W
Instantaneous allowable power dissipation		Pulse width must be less than 2ms. The percentage of all of 6 units being ON must be less than 50% for 100ms.	2.3	W
Junction temperature	$T_j$		125	$^\circ\text{C}$
Operating temperature	$T_{\text{opr}}$		-20 to +70	$^\circ\text{C}$
Storage temperature	$T_{\text{stg}}$		-40 to +125	$^\circ\text{C}$

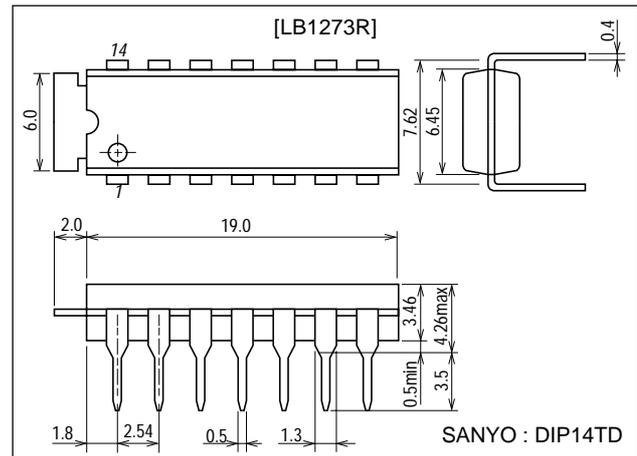
#### Allowable Operating Ranges at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Output supply voltage	$V_{\text{OUT}}$		20	V
Input high-level voltage	$V_{\text{IH}}$	output terminal current=150mA	15 to 20	V
Input low-level voltage	$V_{\text{IL}}$	output terminal current=100 $\mu\text{A}$	-35 to +1	V
Load resistance	$R_L$	No inductance components should be included.	80	$\Omega(\text{min})$

### Package Dimensions

unit:mm

3004A-DIP14TD



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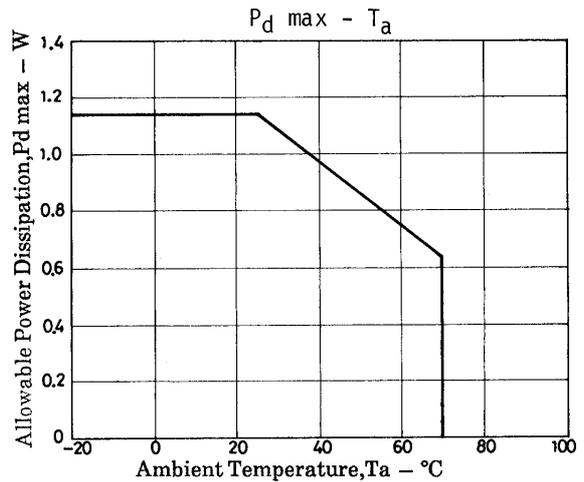
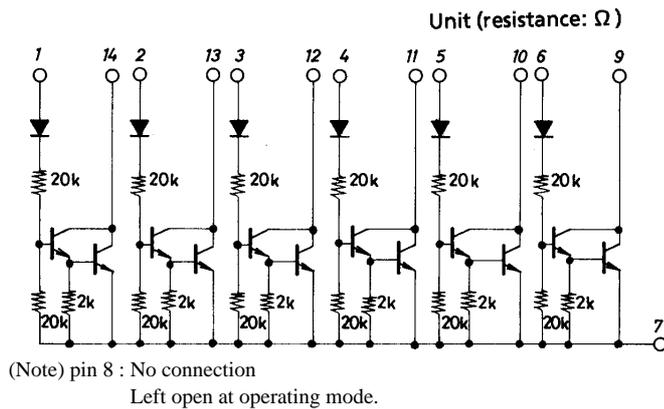
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## Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Output voltage	$V_{OUT1}$	$V_{IN}=15\text{V}, I_{OUT}=230\text{mA}$			1.7	V
Output voltage	$V_{OUT2}$	$V_{IN}=15\text{V}, I_{OUT}=150\text{mA}$			1.5	V
Output leakage current	$I_{off}$	$V_{IN}=1.0\text{V}, V_{OUT}=20\text{V}$			100	$\mu\text{A}$
Input current	$I_{IN}$	$V_{IN}=18\text{V}$			1.8	mA
Output current	$I_{OUT}$	$I_{IN}=0.5\text{mA}, V_{OUT}=1.5\text{V}$	150			mA
Input leakage current	$I_{leak}$	$V_{IN}=-35\text{V}$	-10			$\mu\text{A}$

## Equivalent Circuit



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