

**LB1235**

## High-Voltage, High-Current Darlington Driver

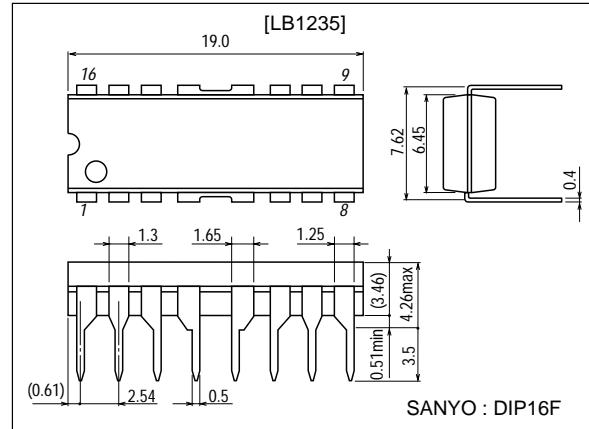
### Functions and Features

- 4-channel, high-voltage (65V), high-current (1.5A) Darlington driver.
- On-chip spark killer diodes.
- Capable of being direct driven with 5V-operated TTL.
- NPN input high-active type.

### Package Dimensions

unit:mm

3054B-DIP16F



### Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC\text{ max}}$		65	V
Output supply voltage	$V_{OUT}$		65	V
Input supply voltage	$V_{IN}$		15	V
Output current	$I_{OUT}$		1.5	A
Spark killer diode forward current	$I_{F(S)}$		1.5	A
Allowable power dissipation	$P_d\text{ max}$		1.9*	W
Operating temperature	$T_{opr}$		-20 to +75	$^\circ\text{C}$
Storage temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

\* : Mounted on the recommended printed circuit board : 2.6W

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

Parameter	Symbol	Conditions	Ratings	Unit
Output supply voltage	$V_{OUT}$		65	V
Input H-level voltage	$V_{IH}$	$I_{OUT}=1.0\text{A}$	2.0 to 15	V
Input L-level voltage	$V_{IL}$	$I_{OUT}\leq 30\mu\text{A}$	-0.3 to +0.3	V

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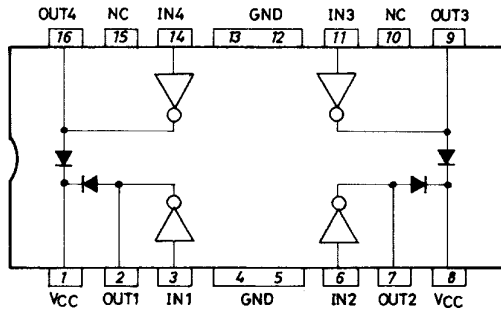
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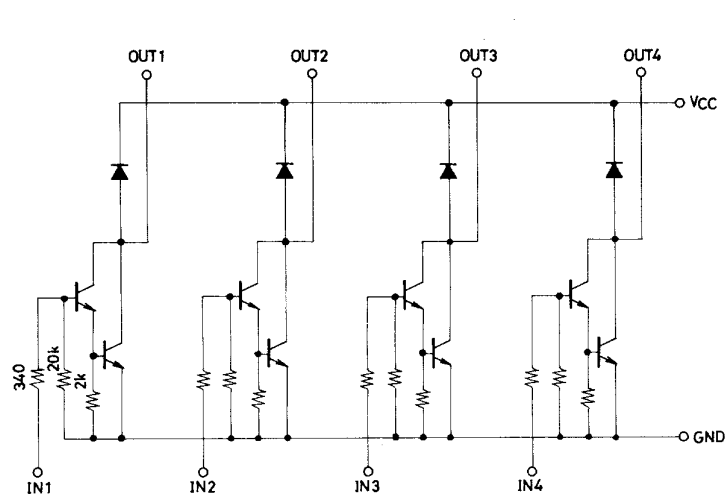
## Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Output saturation voltage	$V_{O(sat1)}$	$V_{IN}=5.0\text{V}, I_{OUT}=0.5\text{A}$			1.2	V
	$V_{O(sat2)}$	$V_{IN}=5.0\text{V}, I_{OUT}=1.0\text{A}$			1.5	V
	$V_{O(sat3)}$	$V_{IN}=5.0\text{V}, I_{OUT}=1.5\text{A}$			2.0	V
Output sustain voltage	$V_{O(sus)}$	$I_{OUT}=100\text{mA}$	65			V
Input current	$I_{IN}$	$V_{IN}=5.0\text{V}$		11	15	mA
Spark killer diode forward voltage	$V_{F(S)}$	$I_{F(S)}=1.5\text{A}$			3.0	V
Spark killer diode reverse current	$I_{R(S)}$	$V_{CC}=65\text{V}, V_{OUT}=0\text{V}$			30	$\mu\text{A}$

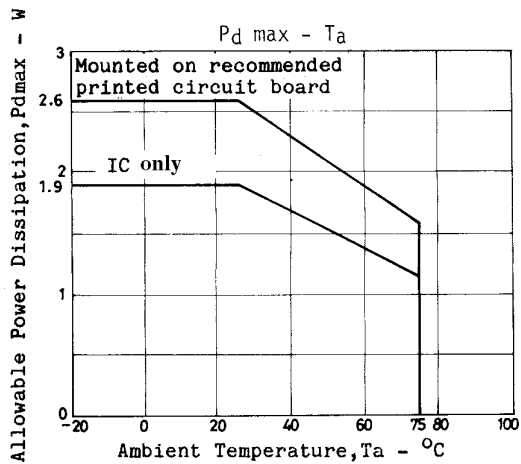
## Pin Assignment



## Equivalent Circuit



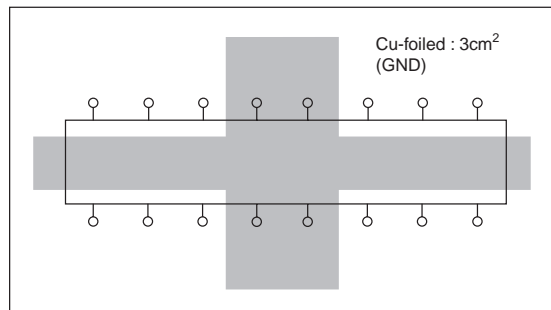
Unit (resistance:  $\Omega$ )



## Recommended Printed Circuit Pattern

(Bottom view)

Board (80x60mm)<sup>2</sup>



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