

**SANYO**

NO.2846A

**LB1731****High-Voltage, Current-Sink  
Output Driver****Overview**

The LB1731 is a 4-channel high-voltage current sink output driver. Inputs are active-low CMOS/TTL logic-level, and outputs are high-voltage open-collector NPN Darlington pairs.

Each driver in the LB1731 sinks up to 1.5A and withstands collector voltages of up to 85V.

The LB1731 is available in a 16-pin DIP package.

**Features**

- Four independent high-voltage high-current drivers
- Output clamp diodes
- Input protection diodes
- 5V CMOS- and TTL-compatible logic-level inputs

**Absolute Maximum Rating at Ta = 25°C**

				unit
Maximum Supply Voltage	V <sub>DD</sub> max		7.0	V
	V <sub>CC</sub> max		82	V
Applied Output Voltage	V <sub>O</sub> max		85	V
Applied Input Voltage	V <sub>IN</sub> max	V <sub>IN</sub> ≥ GND	V <sub>DD</sub> - 7.0 to V <sub>DD</sub> + 10.0	V
Output Current	I <sub>O</sub> max		1.5	A
Clamp Diode Forward Current	I <sub>FS</sub>		1.5	A
Allowable Power Dissipation	P <sub>d</sub> max	Package only	1.9	W
		With recommended circuit board pattern: 2.6W		
Operating Temperature	T <sub>opr</sub>		- 20 to + 75	°C
Storage Temperature	T <sub>stg</sub>		- 55 to + 150	°C

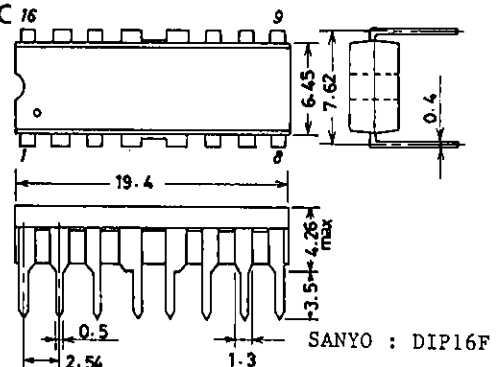
**Allowable Operating Conditions at Ta = 25°C**

				unit
Power Supply Voltage Range	V <sub>DD</sub>		3.5 to 7.0	V
Input ON-level Voltage	V <sub>IN on</sub>	V <sub>IN</sub> ≥ GND, I <sub>O</sub> = 1.0A	V <sub>DD</sub> - 7.0 to V <sub>DD</sub> - 2.6	V
Input OFF-level Voltage	V <sub>IN off</sub>	I <sub>O</sub> ≤ 30μA	V <sub>DD</sub> - 0.3 to V <sub>DD</sub> + 10.0	V

**Electrical Characteristics at Ta = 25°C, V<sub>DD</sub> = 5.0V**

			min	typ	max	unit
Output Saturation Voltage	V <sub>O sat1</sub>	V <sub>IN</sub> = V <sub>DD</sub> - 5.0V, I <sub>O</sub> = 0.5A			1.2	V
	V <sub>O sat2</sub>	V <sub>IN</sub> = V <sub>DD</sub> - 5.0V, I <sub>O</sub> = 1.0A			1.5	V
	V <sub>O sat3</sub>	V <sub>IN</sub> = V <sub>DD</sub> - 5.0V, I <sub>O</sub> = 1.5A			2.0	V
Output Sustain Voltage	V <sub>O sus</sub>	I <sub>O</sub> = 100mA	85			V
Input Current	I <sub>IN</sub>	V <sub>DD</sub> = 7.0V, V <sub>IN</sub> = V <sub>DD</sub> - 7.0V			0.5	mA
Clamp Diode Forward Voltage	V <sub>FS</sub>	I <sub>FS</sub> = 1.5A			3.0	V
Clamp Diode Reverse Current	I <sub>RS</sub>	V <sub>CC</sub> = 82V, V <sub>O</sub> = 0V			30	μA

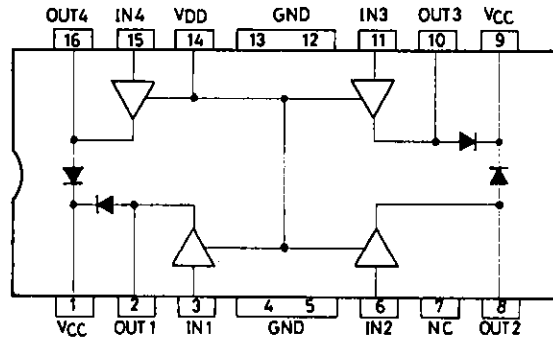
Package Dimensions 3054A-D16FNIC 16  
(unit : mm)



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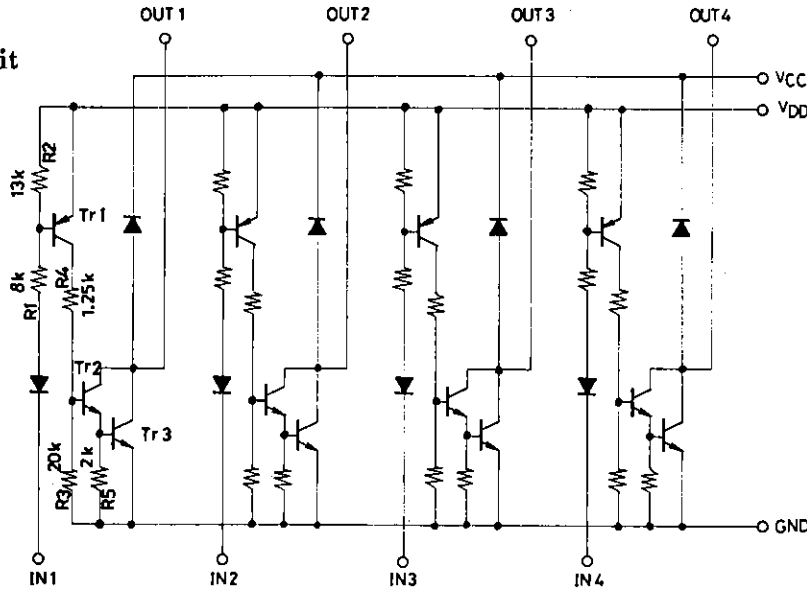
# LB1731



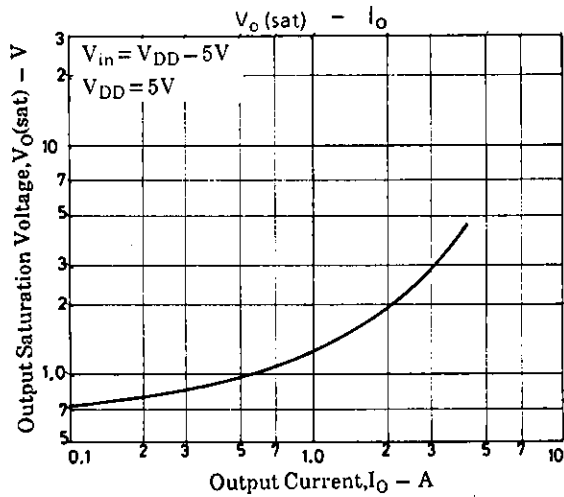
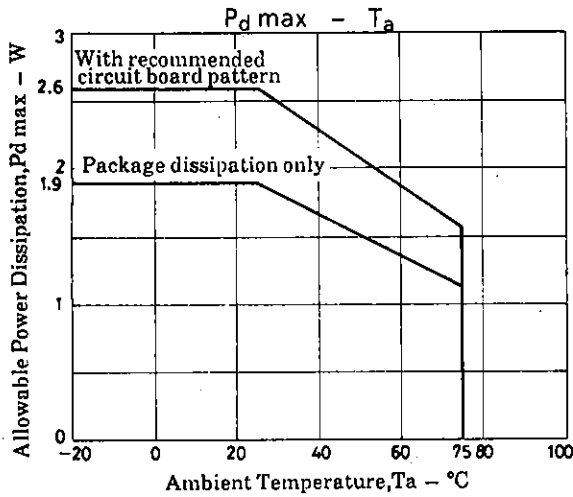
Do not use no-connection (NC) pins.

Pins 1 and 9 are shorted internally.

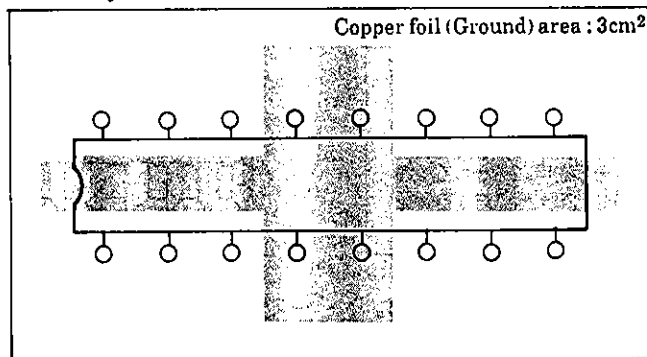
## Equivalent Circuit



Unit (capacitance: F)



## Recommended Circuit Board Layout



Circuit board (80 × 60mm)

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