

Monolithic Digital IC

	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 _{DD} max		7.0	V
	V _{CC} max		82	V
Applied Output Voltage	V _O max		85	V
Applied Input Voltage	V _{IN} max	V _{IN} ≥ GND	V _{DD} - 7.0 to V _{DD} + 10.0	V
Output Current	I _O max		1.5	A
Clamp Diode Forward Current	I _{FS}		1.5	A
Allowable Power Dissipation	Pd max	Package only	1.9	W
		With recommended circuit board pattern: 2.6W		
Operating Temperature	T _{opr}		-20 to +75	°C
Storage Temperature	T _{stg}		-55 to +150	°C

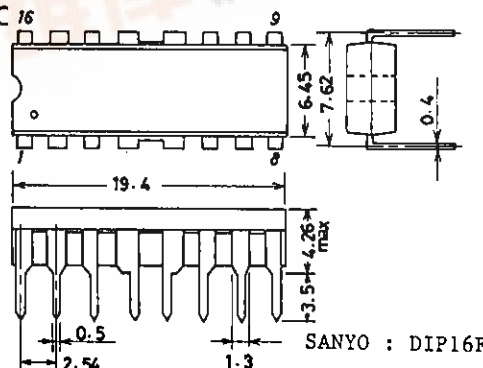
Allowable Operating Conditions at Ta = 25°C

				unit
Power Supply Voltage Range	V _{DD}		3.5 to 7.0	V
Input ON-level Voltage	V _{IN on}	V _{IN} ≥ GND, I _O = 1.0A	V _{DD} - 7.0 to V _{DD} - 2.6	V
Input OFF-level Voltage	V _{IN off}	I _O ≤ 30μA	V _{DD} - 0.3 to V _{DD} + 10.0	V

Electrical Characteristics at Ta = 25°C, V_{DD} = 5.0V

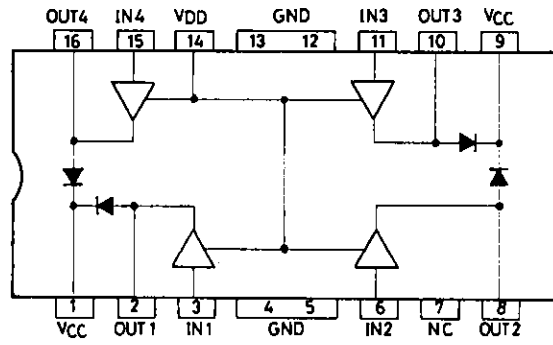
			min	typ	max	unit
Output Saturation Voltage	V _{O sat1}	V _{IN} = V _{DD} - 5.0V, I _O = 0.5A			1.2	V
	V _{O sat2}	V _{IN} = V _{DD} - 5.0V, I _O = 1.0A			1.5	V
	V _{O sat3}	V _{IN} = V _{DD} - 5.0V, I _O = 1.5A			2.0	V
Output Sustain Voltage	V _{O sus}	I _O = 100mA	85			V
Input Current	I _{IN}	V _{DD}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

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



SANYO : DIP16F

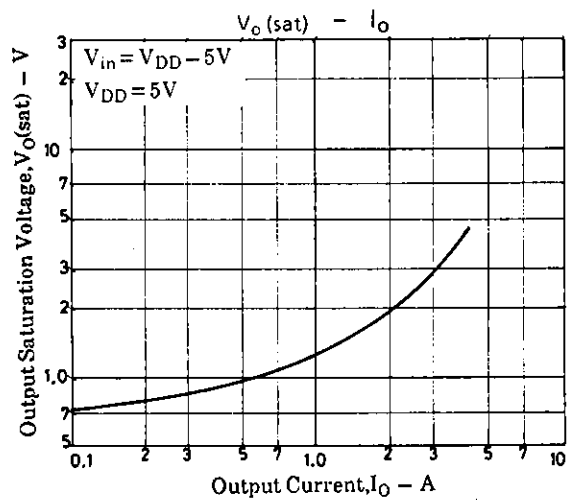
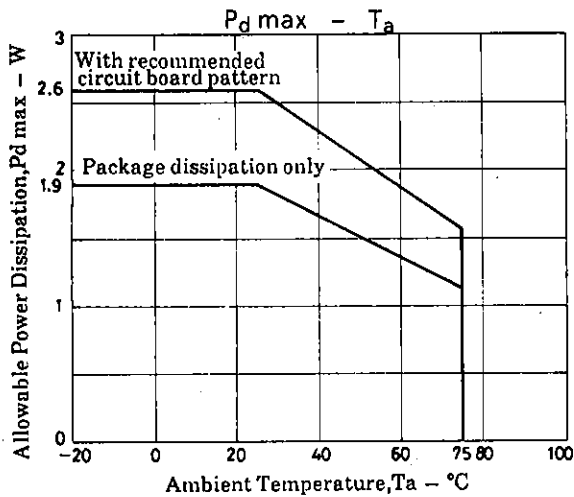
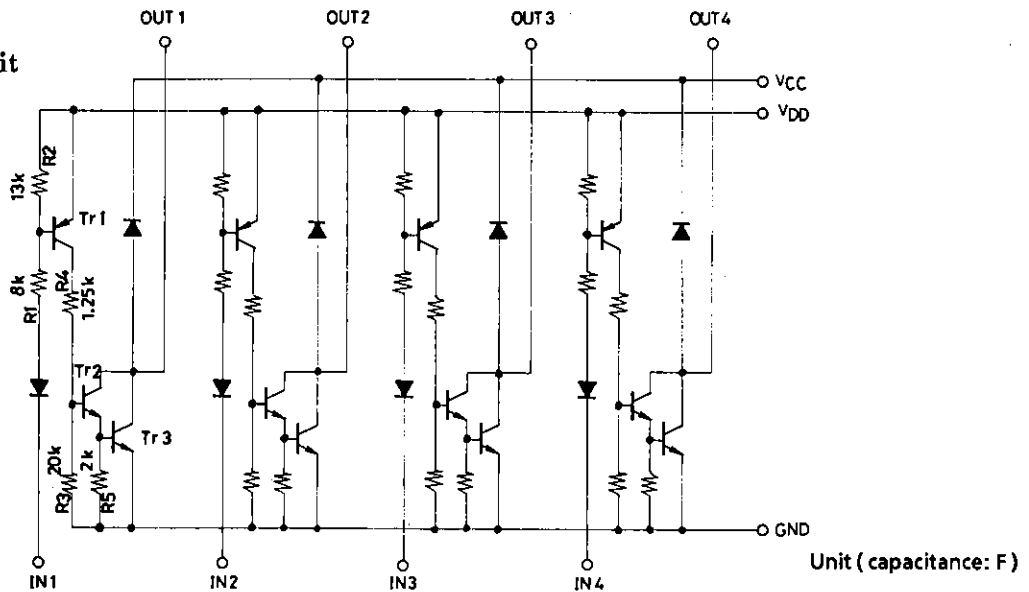
LB1731



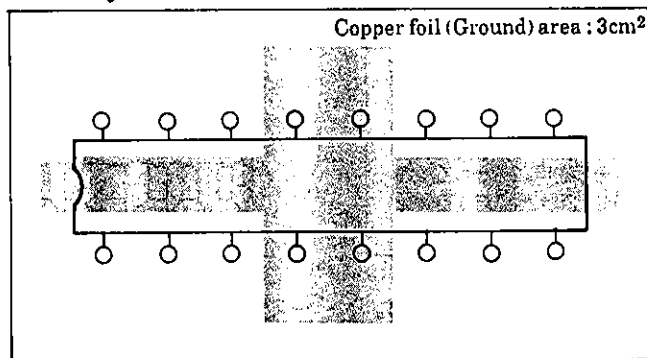
Do not use no-connection (NC) pins.

Pins 1 and 9 are shorted internally.

Equivalent Circuit



Recommended Circuit Board Layout



Circuit board (80 × 60mm)

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