



LB1745

Octal High-Voltage, Current-Source Output Driver

Overview

The LB1745 is an octal high-voltage current source output driver with active-low inputs. High output drive capability for low input current is achieved with NPN Darlington-pair output drivers.

The LA1745 sources up to 500mA from each driver at supply voltages of up to 50V. It is available in 18-pin plastic DIPs.

Features

- Eight independent Darlington-pair driver circuits.
- High-voltage, high-current source.
- Output clamp diodes.
- Input protection diodes.

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	$V_{CC\ max}$		-0.3 to +50	V
Applied output voltage	V_{OUT}		-0.3 to V_{CC}	V
Applied input voltage	V_{IN}		-0.3 to V_{CC}	V
Maximum output current	I_{OUT}	Per driver	-500	mA
Clamp diode forward current	I_F		-500	mA
Clamp diode reverse voltage	V_R		-0.3 to +50	V
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	$^\circ\text{C}$

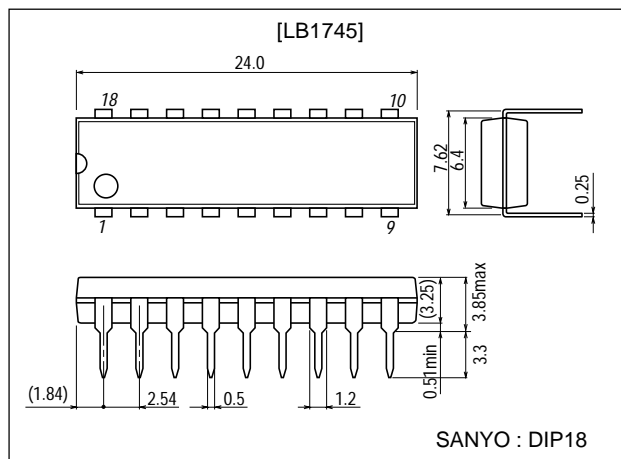
Allowable Operating Ranges at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Power supply voltage range	V_{CC}		4 to 50	V
Input ON-level voltage	V_{ION}	$I_{OUT} = -350\text{mA}$	0 to $V_{CC} - 2.5$	V
Input OFF-level voltage	V_{IOFF}	$I_{OUT} \geq -50\mu\text{A}$	$V_{DD} - 0.7$ to V_{CC}	V

Package Dimensions

unit:mm

3007B-DIP18



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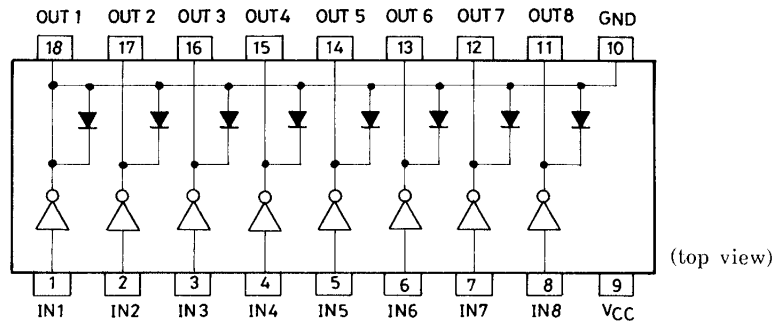
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LB1745

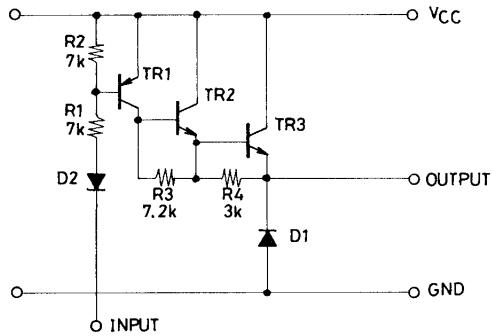
Electrical Characteristics at $T_a = 25^\circ\text{C}$, $V_{CC} = 5.0\text{V}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Power supply current	I_{CCH}	All inputs with $V_{IN} = V_{CC} - 3.6\text{V}$		3.8	6	mA
	I_{CCL}	All inputs open			100	μA
Output voltage	V_{OH1}	$V_{IN} = V_{CC} - 2.5\text{V}$, $I_{OUT} = -100\text{mA}$	$V_{CC} - 2.0$	$V_{CC} - 1.45$		V
	V_{OH2}	$V_{IN} = V_{CC} - 2.5\text{V}$, $I_{OUT} = -350\text{mA}$	$V_{CC} - 2.4$	$V_{CC} - 1.6$		V
Input current	I_{IN1}	$V_{IN} = V_{CC} - 3.6\text{V}$	-0.5	-0.31		mA
	I_{IN2}	$V_{IN} = V_{CC} - 15\text{V}$	-3.0	-1.9		mA
Clamp diode forward voltage	V_F	$I_F = -350\text{mA}$	-2.4	-1.2		V
Clamp diode reverse voltage	V_R	$I_R = 100\mu\text{A}$	50			

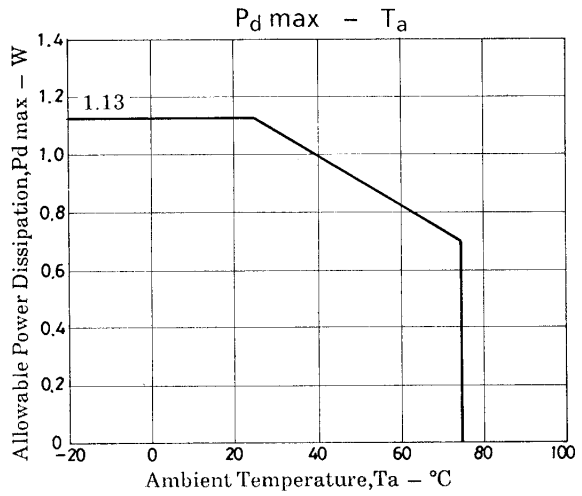
Pin Assignment



Equivalent Circuit (For 1 channel)



Unit (resistance: Ω)



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