		Monolithic Digital IC	
		NO.2845A	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 LB1745 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

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

			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}	-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	$^\circ\text{C}$

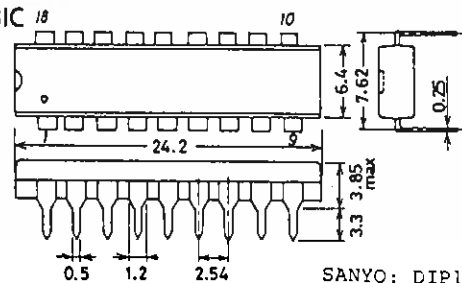
Allowable Operating Conditions at $T_a = 25^\circ\text{C}$

			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

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

			min	typ	max	unit
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			

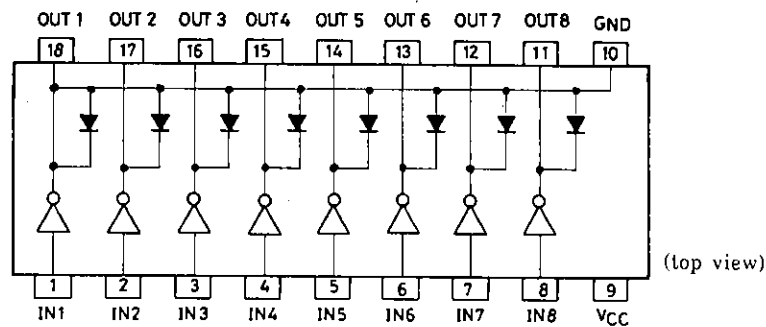
Package Dimensions 3007A-D18IC 18
(unit : mm)



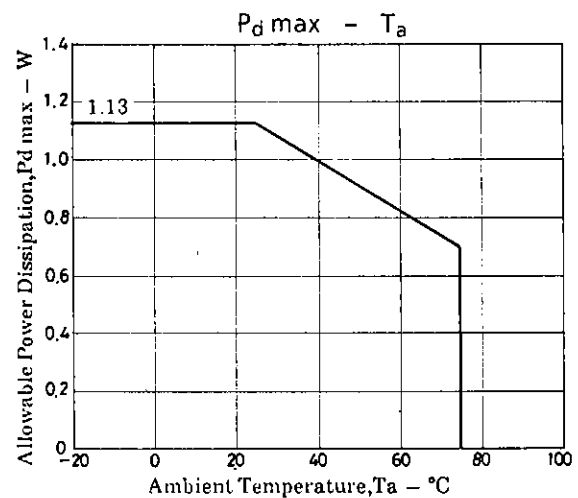
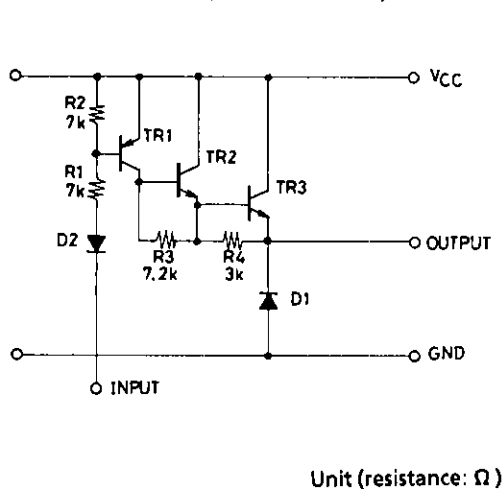
SANYO: DIP18

LB1745

Pin Assignment



Equivalent Circuit (For 1 channel)



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