**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

**Maximum Ratings at Ta = 25°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	$I_{OUT}$ 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	°C
Storage Temperature	$T_{stg}$	-40 to +150	°C

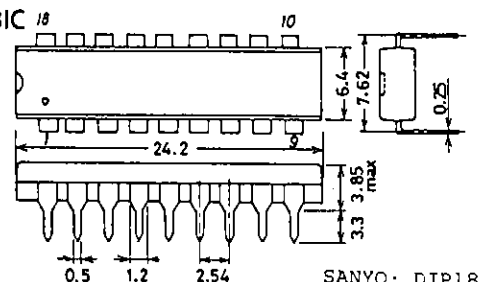
**Allowable Operating Conditions at Ta = 25°C**

			unit
Power Supply Voltage Range	$V_{CC}$	4 to 50	V
Input ON-level Voltage	$V_{ION}$ $I_{OUT} = -350$ mA	0 to $V_{CC} - 2.5$	V
Input OFF-level Voltage	$V_{IOFF}$ $I_{OUT} \geq -50$ μA	$V_{DD} - 0.7$ to $V_{CC}$	V

**Electrical Characteristics at Ta = 25°C,  $V_{CC} = 5.0$ V**

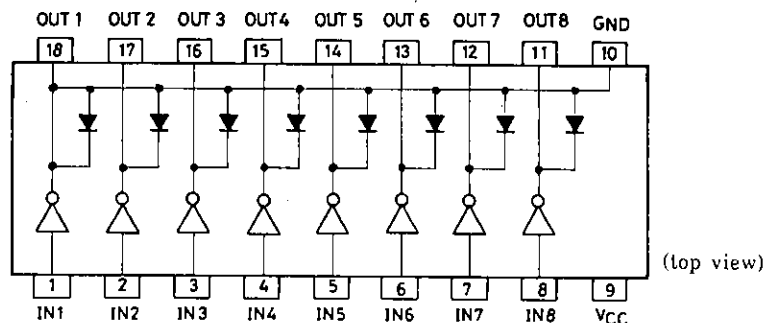
		min	typ	max	unit
Power Supply Current	$I_{CCH}$ All inputs with $V_{IN} = V_{CC} - 3.6$ V		3.8	6	mA
Output Voltage	$I_{CCL}$ All inputs open			100	μA
	$V_{OH1}$ $V_{IN} = V_{CC} - 2.5$ V, $I_{OUT} = -100$ mA	$V_{CC} - 2.0$	$V_{CC} - 1.45$		V
Input Current	$V_{OH2}$ $V_{IN} = V_{CC} - 2.5$ V, $I_{OUT} = -350$ mA	$V_{CC} - 2.4$	$V_{CC} - 1.6$		V
	$I_{IN1}$ $V_{IN} = V_{CC} - 3.6$ V	-0.5	-0.31		mA
Clamp Diode Forward Voltage	$I_{IN2}$ $V_{IN} = V_{CC} - 15$ V	-3.0	-1.9		mA
	$V_F$ $I_F = -350$ mA	-2.4	-1.2		V
Clamp Diode Reverse Voltage	$V_R$ $I_R = 100$ μA	50			V

Package Dimensions 3007A-D18IC  
(unit : mm)

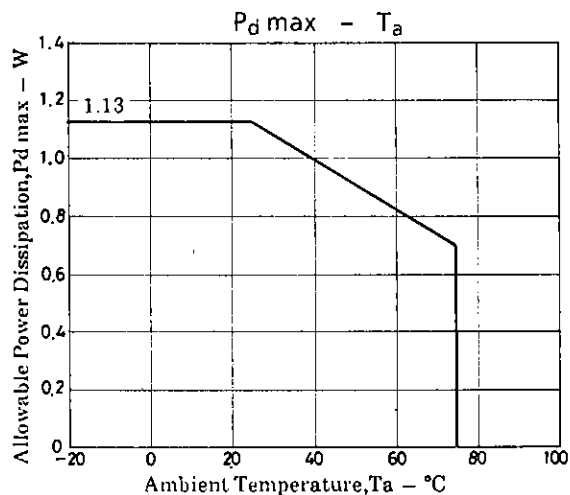
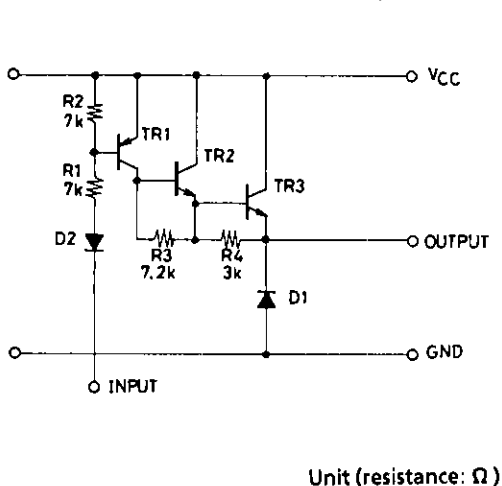


# LB1745

## Pin Assignment



## Equivalent Circuit (For 1 channel)



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