Ordering number: EN · 2845A

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 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	Pd max		1.13	W
Operating Temperature	Topr		−20 to +75	°C
Storage Temperature	Tstg		−40 to +150	°C

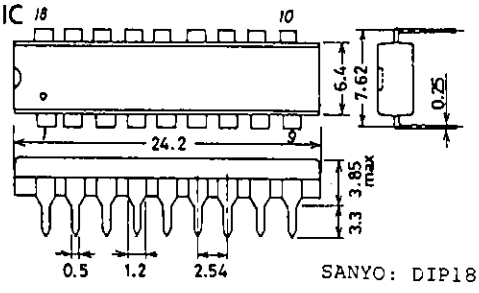
Allowable Operating Conditions at Ta = 25°C

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

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

			min	typ	max	unit
Power Supply Current	$I_{CC}H$	All inputs with $V_{IN} = V_{CC} - 3.6V$		3.8	6	mA
	$I_{CC}L$	All inputs open			100	μA
Output Voltage	$V_{OH}1$	$V_{IN} = V_{CC} - 2.5V$, I_{OUT} = −100mA	V_{CC} − 2.0	V_{CC} − 1.45		V
	$V_{OH}2$	$V_{IN} = V_{CC} - 2.5V$, I_{OUT} = −350mA	V_{CC} − 2.4	V_{CC} − 1.6		V
Input Current	$I_{IN}1$	$V_{IN} = V_{CC} - 3.6V$	−0.5	−0.31		mA
	$I_{IN}2$	$V_{IN} = V_{CC} - 15V$	−3.0	−1.9		mA
Clamp Diode Forward Voltage	V_F	I_F = −350mA	−2.4	−1.2		V
Clamp Diode Reverse Voltage	V_R	I_R = 100μA	50			

Package Dimensions 3007A-D18IC (unit : mm)



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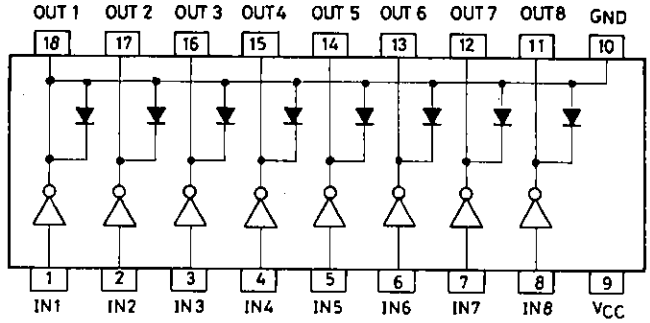
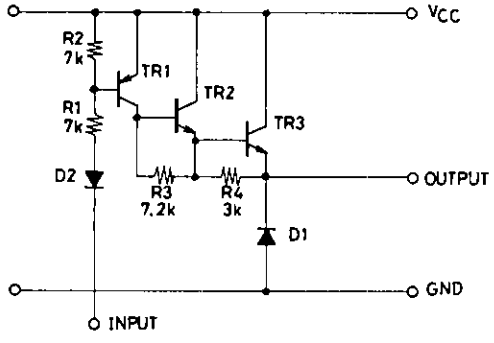
Pin Assignment



(top view)

Equivalent Circuit (For 1 channel)



Unit (resistance: Ω)