Ordering number:ENN790C

Monolithic Digital IC

LB1275

7-Unit, Darlington Transistor Array

Overview

This LB1275, 7-unit Darlington transistor array using NPN transistors, is specially designed for printer driver, lamp or relay driver.
Protector diodes against negative input are used by which it is easy to design drive circuits of a calculator with a printer using indicator or a cash register.

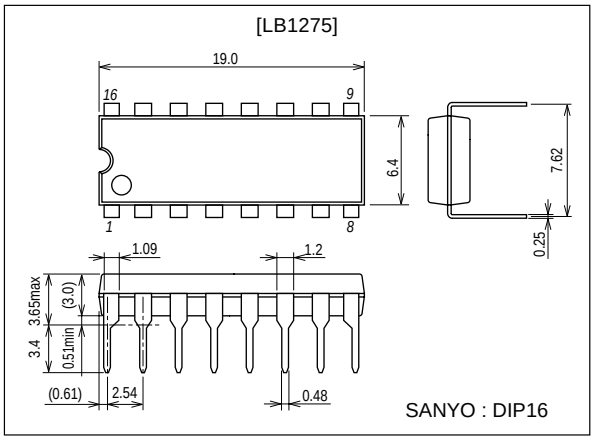
Features

- 7-unit version (DIP-16) or LB1274 (6-unit DIP-14).
- Protector diodes against negative input (V_{IN}=–40 to +20V).
- Spark killer diodes for inductive load.
- Suitable for 85mA type printer mechanism (I_{OUT} max =100mA DC).

Package Dimensions

unit:mm

3006C-DIP16



Specifications

Absolute Maximum Ratings at Ta = 25˚C, voltage at pin8=0V

Parameter	Symbol	Conditions	Ratings	Unit
Output supply voltage	V_{OUT}		–0.3 to +22	V
Input supply voltage	V_{IN}		–40 to +20	V
Pin 8 supply voltage	V_{8p}		–0.3 to +20	V
Output flow-in current	I_{OUT}	per unit	0 to 100	mA
Instantaneous output flow-in current	I_{OP}	per unit, duty=10%, pulse width<20ms	0 to 150	mA
Forward current of spark killer diode	$I_{F(s)}$	per diode, duty=10%, pulse width<20ms	150 to 0	mA
Flow-out current at GND pin	I_8		–900 to 0	mA
Instantaneous flow-out current at pin 8	I_{8p}	duty=10%, pulse width<20ms	–500 to 0	mA
Instantaneous flow-out current at pin 9	I_{9p}	duty=10%, pulse width<20ms	–900 to 0	mA
Allowable power dissipation	Pd max		900	mW
Operating temperature	Topr		–20 to +80	˚C
Storage temperature	Tstg		–40 to +125	˚C

Allowable Operating Ranges at Ta = 25˚C, voltage at pin8=0V

Parameter	Symbol	Conditions	Ratings	Unit
Output supply voltage	V_{OUT}		22V	min.
Input high-level voltage	V_{IH}	output pin current=100mA	9 to 20	V
Input low-level voltage	V_{IL}	output pin current=100μA	–35 to +1	V
Load inductance	L_L	with protector diode	100mH	min.

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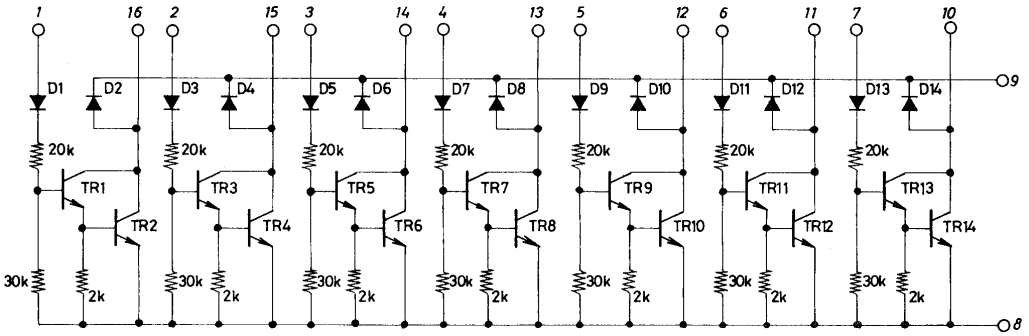
Electrical Characteristics at Ta = 25˚C, voltage at pin8=0V

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Output voltage	V_{OUT1}	V_{IN}=9.0V, I_{OUT}=150mA			1.7	V
	V_{OUT2}	V_{IN}=9.0V, I_{OUT}=100mA			1.4	V
Output sustain voltage	$V_{OUT(s)}$	V_{IN}=open, applied time<10μs, I_{OUT}=150mA	22			V
Output leak current	I_{off}	V_{IN}=1.0V, V_{OUT}=22V			100	μA
Input current	I_{IN1}	V_{IN}=18V			1.8	mA
	I_{IN2}	V_{IN}=9V			0.8	mA
Output current	I_{OUT}	I_{IN}=0.3mA, V_{OUT}=1.4V	100			mA
Input leak current	I_{leak}	V_{IN}=–35V	–10			μA
Leak current at spark killer diode	$I_{leak(s)}$	V_{OUT}=0V, pin8=20V			30	μA
Forward voltage at spark killer diode	$V_{F(s)}$	$I_{F(s)}$=150mA			1.7	V

Equivalent Circuit



Unit (resistance: Ω)