

SANYO	NO.993C	Monolithic Digital IC
		LB1257
8-Unit, Low-Saturation Driver		

Applications

- . 4-phase stepping motor driver of 2 channels.
- . Especially suited for X-Y plotter driver (Meeting the requirements for Alps DPG plotter).
- . General-purpose 8-unit large current & low saturation voltage driver (Relay, LED, lamp, solenoid, etc.).

Features

- . Large current capacity (400mA) and low saturation voltage (0.5V max.).
- . With spark killer diode provided.

Absolute Maximum Ratings at Ta=25°C

			unit
Maximum Supply Voltage	V _{CCmax}	-0.3 to +7.0	V
Output Supply Voltage	V _{OUT}	-0.3 to +10.0	V
Input Supply Voltage	V _{IN}	-0.3 to +7.0	V
Maximum Output Current	I _{OUT}	Per unit 400	mA
Maximum Forward Current	I _{FSM}	Spark killer diode 400	mA
		Pulse width ≤ 35ms, duty 5%	
GND Pin Flow-out Current	I _{GND}	Pulse width ≤ 35ms 3000	mA
Instantaneous Current Dissipation	I _{CCP}	Pulse width ≤ 35ms, duty 5% 3000	mA
Allowable Power Dissipation	P _{dmax}	1.13	W
Operating Temperature	T _{opr}	-20 to +75	°C
Storage Temperature	T _{stg}	-40 to +125	°C

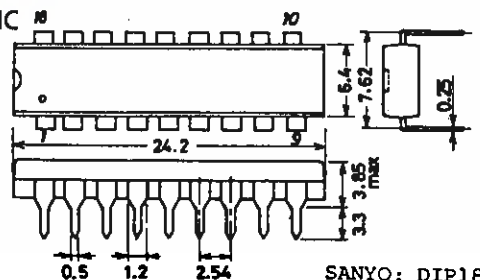
Allowable Operating Conditions at Ta=25°C

			unit
Supply Voltage	V _{CC}	2.3 to 6.0	V
Input "H" Level Voltage	V _{IH}	I _{OUT} =200mA 2.3 to 7.0	V
Input "L" Level Voltage	V _{IL}	I _{OUT} ≤ 100µA -0.3 to +0.7	V

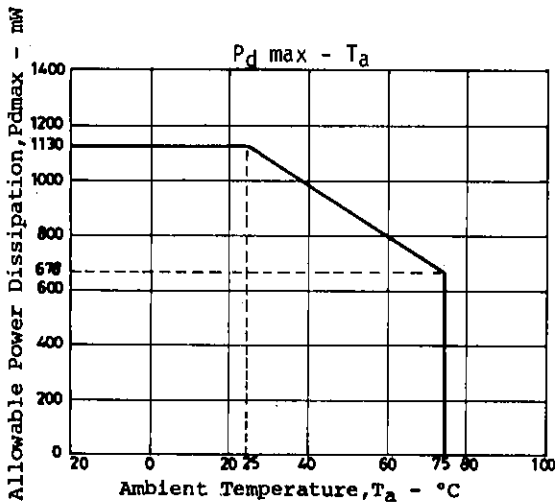
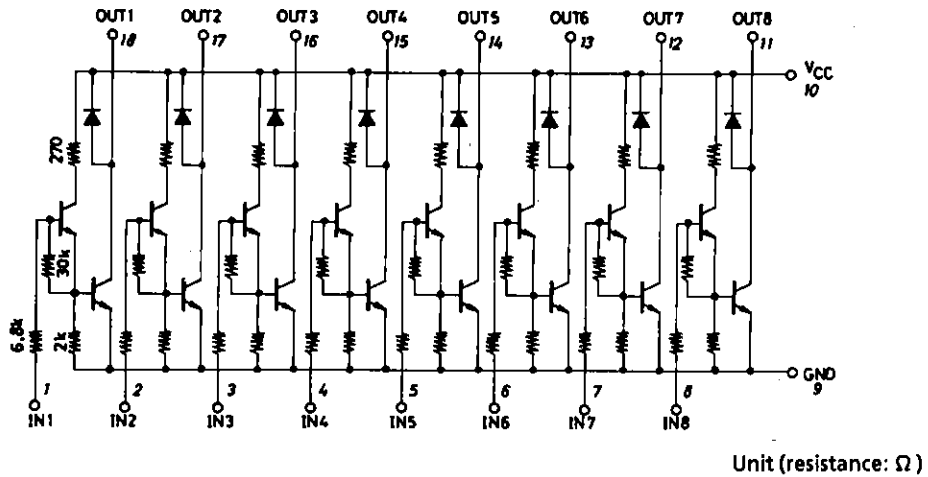
Electrical Characteristics at Ta=25°C

			min	typ	max	unit
Output Voltage	V _{OUT1}	V _{IN} =V _{CC} =2.3V, I _{OUT} =200mA			0.4	V
	V _{OUT2}	V _{IN} =3.0V, V _{CC} =3.5V, I _{OUT} =200mA			0.25	V
	V _{OUT3}	V _{IN} =5.5V, V _{CC} =6.0V, V _{OUT} =400mA			0.5	V
Output Sustain Voltage	V _{O(sus)}	V _{IN} : open, I _{OUT} =400mA, t ≤ 10µs	10			V
Output Leak Current	I _{off}	V _{IN} =0.7V, V _{CC} =6.0V, V _{OUT} =6.0V			100	µA
Input Current	I _{IN}	V _{IN} =6.0V, I _{OUT} =0			1.0	mA
Spark Killer Diode Reverse Current	I _{leak(s)}	V _{OUT} =0, V _{CC} =6.0V			30	µA
Spark Killer Diode Forward Voltage	V _{F(s)}	I _{F(s)} =400mA			3.0	V

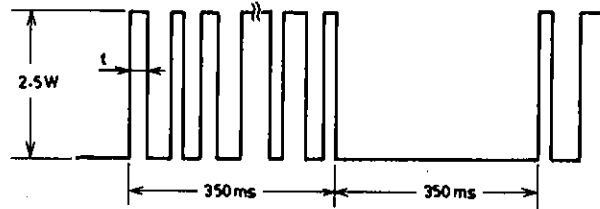
Package Dimensions 3007A-D18IC (unit : mm)



Equivalent Circuit



The loss of the following waveform is allowed at $T_a=60^{\circ}\text{C}$.



$t(35\text{ms and } 40\% \text{ duty of } 350\text{ms } (P_d=0.5\text{W}))$

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