

SANYO

NO.993C

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 $T_a=25^\circ\text{C}$

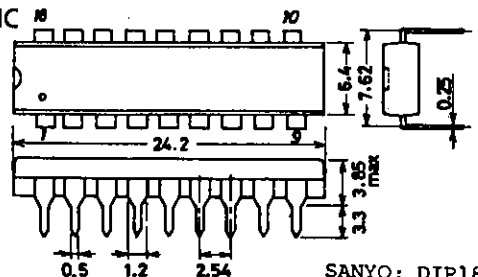
			unit
Maximum Supply Voltage	V_{CCmax}	-0.3 to +7.0	V
Output Supply Voltage	V_{OUT}	-0.3 to +10.0	V
Input Supply Voltage	V_{IN}	-0.3 to +7.0	V
Maximum Output Current	I_{OUT}	Per unit	400 mA
Maximum Forward Current	I_{FSM}	Spark killer diode Pulse width $\leq 35\text{ms}$, duty 5%	400 mA
GND Pin Flow-out Current	I_{GND}	Pulse width $\leq 35\text{ms}$	3000 mA
Instantaneous Current Dissipation	I_{ccp}	Pulse width $\leq 35\text{ms}$, duty 5%	3000 mA
Allowable Power Dissipation	P_{dmax}		1.13 W
Operating Temperature	T_{opr}		-20 to +75 $^\circ\text{C}$
Storage Temperature	T_{stg}		-40 to +125 $^\circ\text{C}$

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

			unit
Supply Voltage	V_{CC}	2.3 to 6.0	V
Input "H" Level Voltage	V_{IH}	$I_{OUT}=200\text{mA}$ 2.3 to 7.0	V
Input "L" Level Voltage	V_{IL}	$I_{OUT}\leq 100\mu\text{A}$ -0.3 to +0.7	V

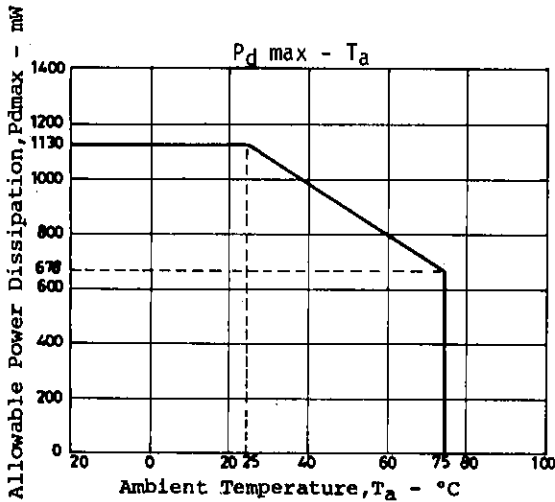
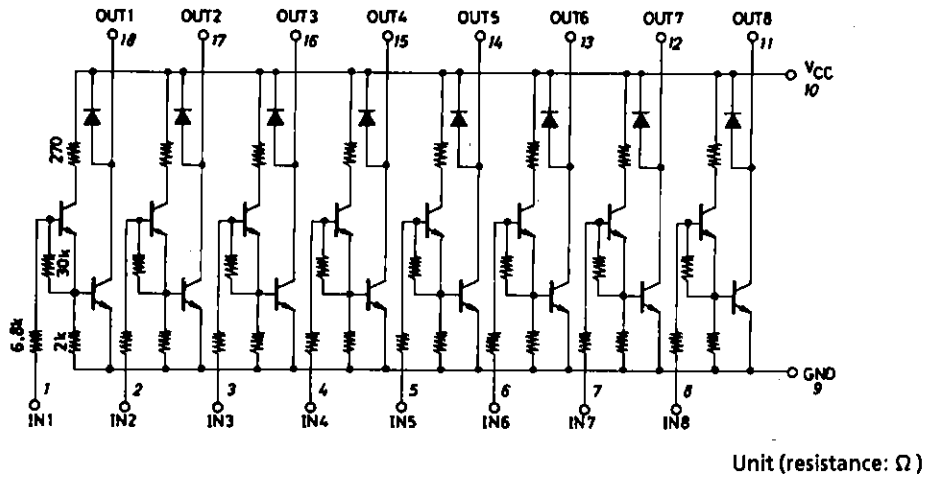
Electrical Characteristics at $T_a=25^\circ\text{C}$

			min	typ	max	unit
Output Voltage	V_{OUT1}	$V_{IN}=V_{CC}=2.3\text{V}, I_{OUT}=200\text{mA}$		0.4		V
	V_{OUT2}	$V_{IN}=3.0\text{V}, V_{CC}=3.5\text{V}, I_{OUT}=200\text{mA}$		0.25		V
	V_{OUT3}	$V_{IN}=5.5\text{V}, V_{CC}=6.0\text{V}, V_{OUT}=400\text{mA}$		0.5		V
Output Sustain Voltage	$V_O(\text{sus})$	V_{IN} : open, $I_{OUT}=400\text{mA}, t\leq 10\mu\text{s}$		10		V
Output Leak Current	I_{off}	$V_{IN}=0.7\text{V}, V_{CC}=6.0\text{V}, V_{OUT}=6.0\text{V}$		100		μA
Input Current	I_{IN}	$V_{IN}=6.0\text{V}, I_{OUT}=0$		1.0		mA
Spark Killer Diode Reverse Current	$I_{leak}(s)$	$V_{OUT}=0, V_{CC}=6.0\text{V}$		30		μA
Spark Killer Diode Forward Voltage	$V_F(s)$	$I_F(s)=400\text{mA}$		3.0		V

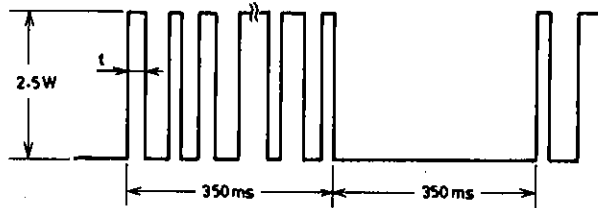
Package Dimensions 3007A-D18IC
(unit: mm)

SANYO: DIP18

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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