

Monolithic Digital IC

<b>SANYO</b>	No.1367B	<b>LB1247</b>
	Active-Low Input, 8-Unit, High-Current, Low-Saturation Driver	

The LB1247 is a low active input type 8-unit driver array with high current, low saturation output.

**Applications**

- . 4-phase stepping motor driver of 2 channels.
- . Especially suited for X-Y axis plotter printer driver.
- . High current, low saturation voltage general-purpose 8-unit driver (relay, LED, lamp solenoid, etc.)

**Features**

- . Low active input type.
- . Input protecting diodes.
- . High current capacity (400mA) and low saturation voltage (0.5Vmax).
- . With spark killer diodes.

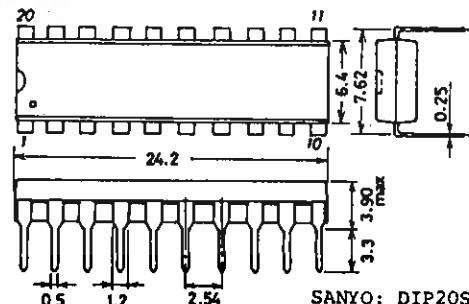
**Absolute Maximum Ratings at Ta=25°C**

			unit
Maximum Supply Voltage	V <sub>CC1,2max</sub>	-0.3 to +7.0	V
Output Supply Voltage	V <sub>OUT</sub>	-0.3 to +10.0	V
Input Supply Voltage	V <sub>IN</sub> GND ≤ V <sub>IN</sub>	V <sub>DD</sub> -7.0 to V <sub>DD</sub> +15	V
Output Current	I <sub>OUT</sub> Per unit	400	mA
Spark Killer Diode	I <sub>FSM</sub> Pulse width ≤ 35ms	400	mA
Forward Current	duty 5%		
GND Pin Current	I <sub>GND</sub> Pulse width ≤ 35ms	3000	mA
Instantaneous Current	I <sub>CCP</sub> Pulse width ≤ 35ms	3000	mA
Dissipation	duty 5%		
Allowable Power Dissipation	P <sub>dmax</sub>	1130	mW
Operating Temperature	T <sub>opr</sub>	-20 to +75	°C
Storage Temperature	T <sub>stg</sub>	-40 to +125	°C

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

			unit
Supply Voltage	V <sub>CC1</sub>	2.3 to 6.0	V
	V <sub>DD</sub>	2.3 to 6.0	V
"H" Level Input Voltage	V <sub>IH</sub> GND ≤ V <sub>IN</sub> , I <sub>OUT</sub> =200mA	V <sub>DD</sub> -6.0 to V <sub>DD</sub> -2.3	V
"L" Level Input Voltage	V <sub>IL</sub> I <sub>OUT</sub> ≤ 100μA	V <sub>DD</sub> -0.7 to V <sub>DD</sub> +15	V

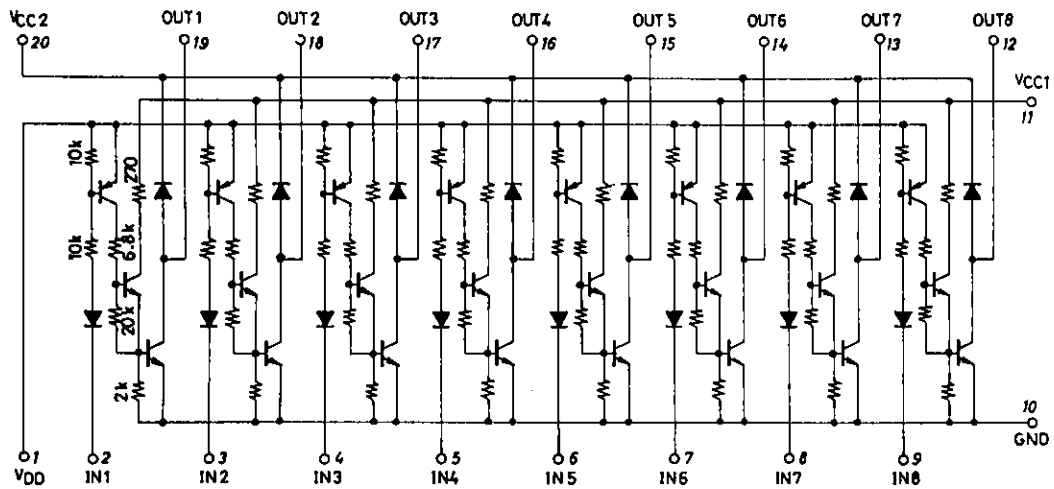
Package Dimensions 3021B-D20SIC (unit : mm)



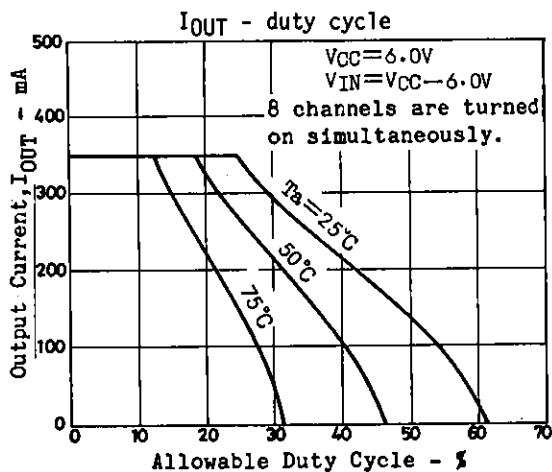
## LB1247

Electrical Characteristics at $T_a=25^{\circ}\text{C}$ , $V_{DD}=V_{CC1}=V_{CC}$			min	typ	max	unit
Output Voltage	$V_{OUT1}$	$V_{CC}=2.3\text{V}, V_{IN}=V_{CC}-2.3\text{V},$ $I_{OUT}=200\text{mA}$			0.4	V
Output Voltage	$V_{OUT2}$	$V_{CC}=3.5\text{V}, V_{IN}=V_{CC}-3.0\text{V},$ $I_{OUT}=200\text{mA}$			0.25	V
Output Voltage	$V_{OUT3}$	$V_{CC}=6.0\text{V}, V_{IN}=V_{CC}-5.5\text{V},$ $I_{OUT}=400\text{mA}$			0.5	V
Output Sustain Voltage	$V_{O(sus)}$	$I_{OUT}=400\text{mA}, t \leq 10\text{usec}$	10			V
Input Current	$I_{IN}$	$V_{IN}=V_{CC}-6.0\text{V}, I_{OUT}=0$	-1.0			mA
Supply Leakage Current	$I_{CC(OFF)}$	$V_{CC}=6.0\text{V}, V_{IN}=V_{CC}$			20	$\mu\text{A}$
Output Leakage Current	$I_{OFF}$	$V_{OUT}=V_{CC}=6.0\text{V}, V_{IN}=V_{CC}-0.7\text{V}$			100	$\mu\text{A}$
Spark Killer Diode Forward Voltage	$V_{F(S)}$	$I_{F(S)}=400\text{mA}$			3.0	V
Spark Killer Diode Reverse Current	$I_{R(S)}$	$V_{OUT}=0\text{V}, V_{CC2}=6.0\text{V}$			30	$\mu\text{A}$

### Equivalent Circuit



Unit (resistance:  $\Omega$ )



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