

3-Channel High-Current Low-Saturation Driver

FEATURES

- 3-Channel Magnet Driver.
- High Current (2.0A Max.) and Low Saturation Voltage (1.5V).
- Parallel Operation Capability (Channel 1+2).
- On-Chip Spark Killer Diodes.

APPLICATIONS

- Stepping Motor Driver
- Relay Driver.
- LED Driver.
- Solenoid Driver.

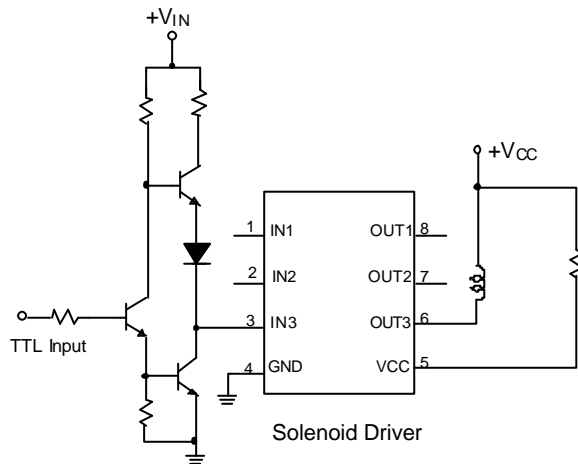
DESCRIPTION

The LB1268 is a 3-channel, low saturation voltage and high current source driver ideally for switching high-power loads from logical level TTL, or CMOS.

Both ch1 and ch2 can manage loads up to 1.0A to ch1 and ch2, ch3 can switch up to 2.0A respectively.

The LB1268 is fully compatible with LB1268 from Sanyo Company and available in the 8-pin DIP package.

TYPICAL APPLICATION CIRCUIT



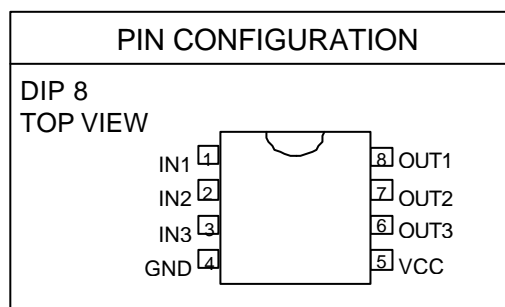
ORDERING INFORMATION

LB1268CXXX

- PACKING TYPE
TB: TUBE
- PACKAGE TYPE
N: PLASTIC DIP

Example: LB1268CNTB

→ in DIP-8 Package & Taping & Reel Packing Type



■ ALLOWABLE OPERATING CONDITIONS (T_A=25°C)

Supply Voltage	V _{CC}		3.0 ~ 7.0V
Input "H" Level Voltage	V _{IH}	I _{OUT} =300mA	3.0 ~ 11.0V
Input "L" Level Voltage	V _{IL}	I _{OUT} ≤100μA	-0.3 ~ +0.7V

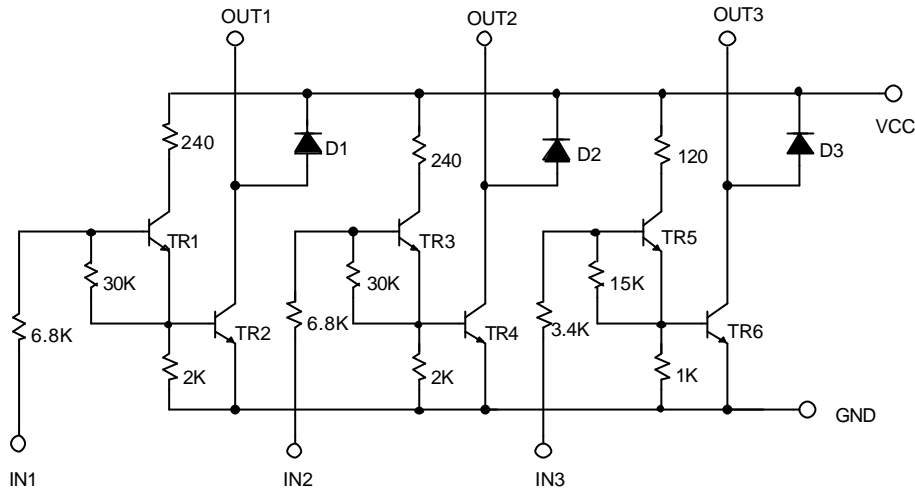
■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C)

PARAMETER	TEST CONDITIONS	UNIT
Maximum Supply Voltage	V _{CC} max	8.0 V
Output Supply Voltage	V _{OUT}	10.0V
Input Supply Voltage	V _{IN}	12.0V
Output Current	I _{OUT1} T _{ON} ≤50mS, Duty=20% Solenoid Drive Channel (ch1,2)	1.0A
	I _{OUT2} T _{ON} ≤50mS, Duty=5% Motor Drive Channel (ch3)	2.5A
Spark Killer Diode Forward Current	I _{FSM1} T≤5mS, Duty=5%, Solenoid Drive Channel (ch1,2)	1.0A
	I _{FSM2} T≤5mS, Duty=5%, Motor Drive Channel (ch3)	2.5A
V _{CC} Instantaneous Flow-out Current	I _{CCP} T≤5mS, Duty=5%	3.0A
GND Flow-out Current	I _{GND} T≤50mS, Duty=20%	3.0A
Allowable Power Dissipation	P _{DMAX}	785mW
Operating Temperature	T _{OPG}	-20 ~ +75°C
Storage Temperature	T _{STG}	-65 ~ +150°C

ELECTRICAL CHARACTERISTICS (T_A=25°C)

PARAMETER	TEST CONDITIONS	SYMBOL	MIN.	TYP.	MAX.	UNIT
Output Voltage	V _{IN} =4.5V, V _{CC} =5.0V, I _{OUT} =500mA (ch1,2)	V _{OH1}		0.44	0.65	V
	V _{IN} =6.0V, V _{CC} =7.0V, I _{OUT} =1000mA (ch1,2)	V _{OH2}		0.88	1.4	V
	V _{IN} =6.0V, V _{CC} =7.0V, I _{OUT} =1600mA (ch1,2 paral- lel)	V _{OH3}			1.4	V
	V _{IN} =3.0V, V _{CC} =3.0V, I _{OUT} =300mA (ch3)	V _{OH4}		0.19	0.25	V
	V _{IN} =4.5V, V _{CC} =5.0V, I _{OUT} =1000mA (ch3)	V _{OH5}		0.5	0.7	V
	V _{IN} =6.0V, V _{CC} =7.0V, I _{OUT} =2000mA (ch3)	V _{OH6}		1.0	1.5	V
Input Current	V _{IN} =6.0V (ch1,2)	I _{IN1}			1.0	mA
	V _{IN} =6.0V (ch3)	I _{IN2}			2.0	mA
Power Source + Output Leak- age Current	V _{IN} =0.5V, V _{OUT} =V _{CC} =6.0V	I _{OFF}			30	μA
Spark Killer Diode Forward Voltage	I _F =1000mA (ch1,2)	V _{F1}			3.0	V
	I _F =2000mA (ch3)	V _{F2}			3.0	V
Output Sustain Voltage	I _{OUT} =400mA	V _{O(SUS)}	10			V

■ EQUIVALENT CIRCUIT



■ PIN DESCRIPTIONS

- PIN 1~3: IN1~IN3 - Control signal input pin.
- PIN 4: GND - Power ground.
- PIN 5: VCC - The output pin (Cathode) of freewheeling diode.
- PIN 6~8: OUT1~3 - Each of the pins may individually sink load current from some controlled circuits.

■ ALLOWABLE AVERAGE POWER DISSIPATION

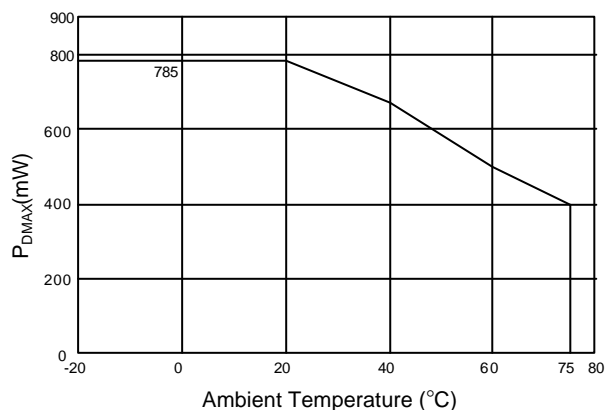
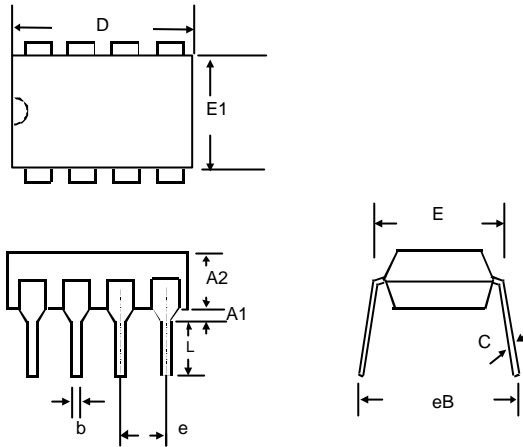


Fig. 1 Allowable Power Dissipation vs Temperature

■ PHYSICAL DIMENSIONS

- 8 LEAD PLASTIC DIP (unit: mm)



SYMBOL	MIN	MAX
A1	0.381	—
A2	2.92	4.96
b	0.35	0.56
C	0.20	0.36
D	9.01	10.16
E	7.62	8.26
E1	6.09	7.12
e	2.54 (TYP)	
eB	—	10.92
L	2.92	3.81