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.

ABSOLUTE MAXIMUM RATINGS (at Ta=25°C)

		UNIT
Maximum Supply Voltage	V_{CC} max	8.0 V
Output Supply Voltage	V_{OUT}	10.0V
Input Supplly 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

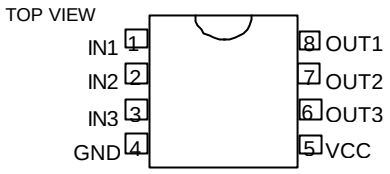
ALLOWABLE OPERATING CONDITIONS (at Ta=25°C)

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

■ ORDERING INFORMATION

LB1268 XX

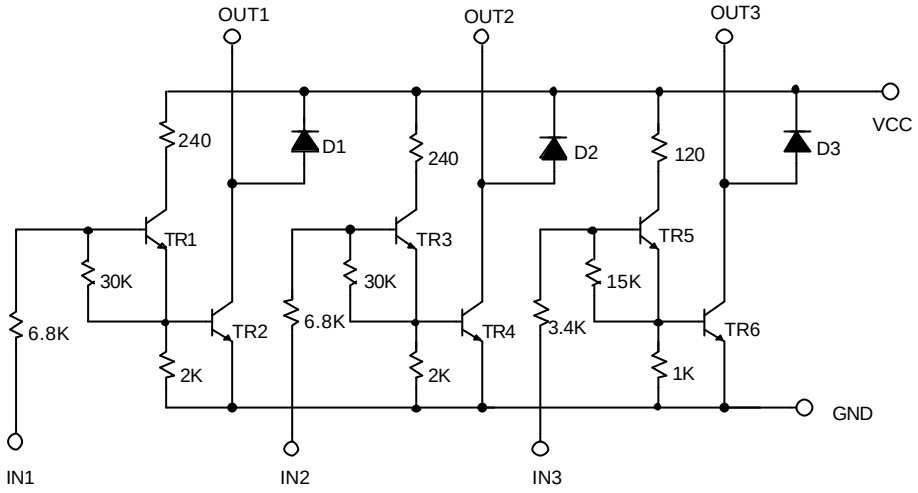
PACKAGE TYPE
N: PLASTIC DIP
TEMPERATURE
C: 0°C~+70°C

ORDER NUMBER	PIN CONFIGURATION
LB1268CN (PLASTIC DIP)	

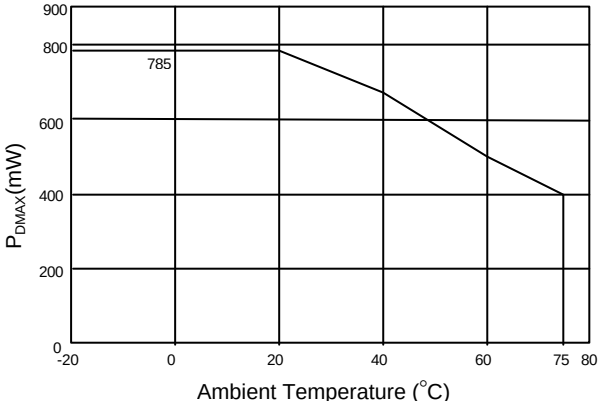
■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

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 parallel)	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 Leakage 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

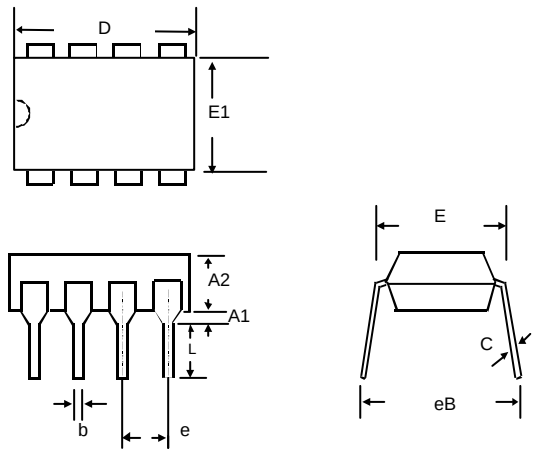


Allowable Power Dissipation vs Temperature



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