Ordering number:ENN1281D

Monolithic Digital IC

LB1268

3-Channel, High-Current, Low-Saturation Driver Array

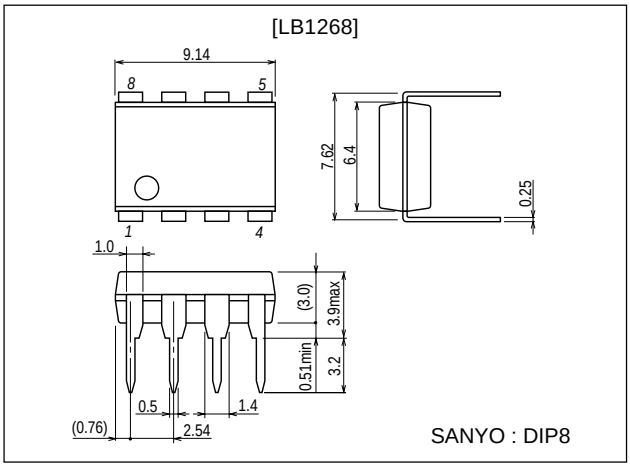
Features and Functions

- 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.

Package Dimensions

unit:mm

3001C-DIP8



Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V_{CC} max		8.0	V
Output supply voltage	V_{OUT}		10.0	V
Input supply voltage	V_{IN}		12.0	V
Output current	I_{OUT1}	ton≤50ms, duty=20%, solenoid drive stage (ch1, 2)	1.0	A
	I_{OUT2}	ton≤50ms, duty=5%, motor drive stage (ch3)	2.5	A
Spark killer diode forward current	I_{FSM1}	t≤5ms, duty=5%, solenoid drive stage (ch1, 2)	1.0	A
	I_{FSM2}	t≤5ms, duty=5%, motor drive stage (ch3)	2.5	A
V_{CC} instantaneous flow-out current	I_{CCP}	t≤5ms, duty=5%	3.0	A
GND pin flow-out current	I_{GND}	t≤5ms, duty=20%	3.0	A
Allowable power dissipation	Pd max		785	mW
Operating temperature	Topr		–20 to +75	˚C
Storage temperature	Tstg		–40 to +125	˚C

Allowable Operating Ranges at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Supply voltage	V_{CC}		3.0 to 7.0	V
Input H-level voltage	V_{IH}	I_{OUT}=300mA	3.0 to 11.0	V
Input L-level voltage	V_{IL}	I_{OUT}≤100µA	–0.3 to +0.7	V

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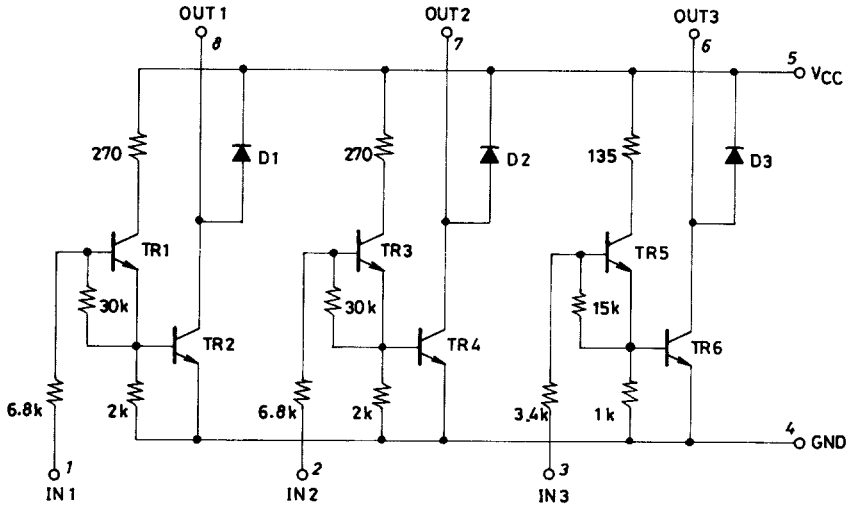
Electrical Characteristics at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Output voltage	V_{OH1}	V_{IN}=4.5V, V_{CC}=5.0V, I_{OUT}=500mA (ch1, 2)			0.65	V
	V_{OH2}	V_{IN}=6.0V, V_{CC}=7.0V, I_{OUT}=1000mA (ch1, 2)			1.4	V
	V_{OH3}	V_{IN}=6.0V, V_{CC}=7.0V, I_{OUT}=1600mA (ch1, 2 parallel)			1.4	V
	V_{OH4}	V_{IN}=3.0V, V_{CC}=3.0V, I_{OUT}=300mA (ch3)			0.25	V
	V_{OH5}	V_{IN}=4.5V, V_{CC}=5.0V, I_{OUT}=1000mA (ch3)		0.5	0.7	V
	V_{OH6}	V_{IN}=6.0V, V_{CC}=7.0V, I_{OUT}=2000mA (ch3)		1.0	1.5	V
Input current	I_{IN1}	V_{IN}=6.0V (ch1, 2)			1.0	mA
	I_{IN2}	V_{IN}=6.0V (ch3)			2.0	mA
Power source+output leakage current	$I_{(OFF)}$	V_{IN}=0.5V, V_{OUT}=V_{CC}=6.0V			30	µA
Spark killer diode forward voltage	V_{F1}	I_F=1000mA(ch1, 2)			3.0	V
	V_{F2}	I_F=2000mA(ch3)			3.0	V
Output sustain voltage	$V_{O(SUS)}$	I_{OUT}=400mA	10			V

Equivalent Circuit



Unit (resistance: Ω)