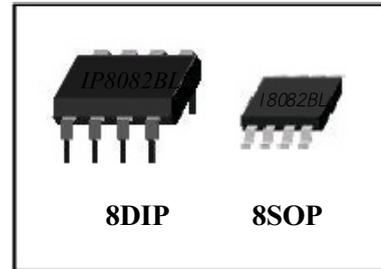


Bi-directional DC Motor Driver

DESCRIPTIONS

IP8082BL is a 1-CH forward/reverse DC motor driver with braking and speed control. It is suitable for loading motor of CD-P / VCD-P/DVD-P systems and TOYS. By adjusting the voltage of VCTL pin, The motor speed will be easily controlled.



FEATURES

- 1-CH forward/reverse controlled DC motor driver.
- Built-in TSD (thermal shut down) circuit.
- Built-in shoot through protection circuit
- Built-in speed control circuit
- Low standby current (6mA typ).
- Operating supply voltage (4.3V~13.2V).

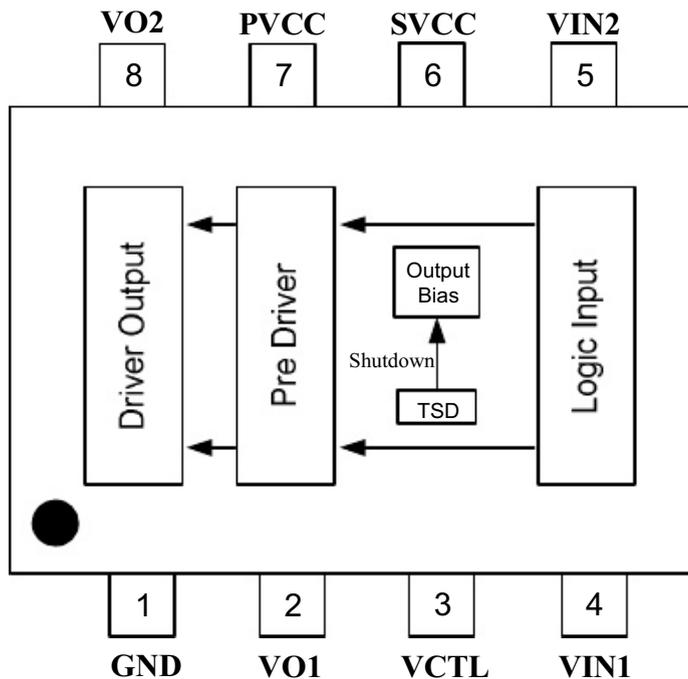
ORDER INFORMATION

Device	Package	Operating Temp
IP8082BL	8-DIP	-35°C ~ +85°C
I8082BL	8SOP (Tube)	-35°C ~ +85°C
I8082BL-TP	8SOP (Tape & reel)	-35°C ~ +85°C

* L : Lead Free

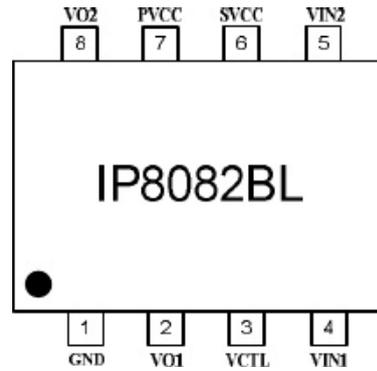
* TP : Tape & Reel packing

BLOCK DIAGRAM



Bi-directional DC Motor Driver

PIN CONNECTIONS



PIN DESCRIPTIONS

NO	SYMBOL	I/O	DESCRIPTION
1	GND	-	Ground
2	VO1	O	Output 1
3	VCTL	I	Motor speed control
4	VIN1	I	Input 1
5	VIN2	I	Input 2
6	SVCC	-	Supply voltage (Signal)
7	PVCC	-	Supply Voltage (Power)
8	VO2	O	Output 2

Bi-directional DC Motor Driver

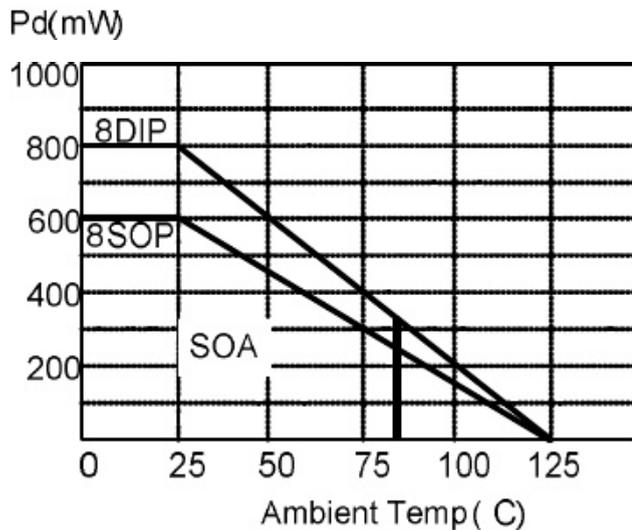
ABSOLUTE MAXIMUM RATINGS

CHARACTERISTICS	SYMBOL	VALUE	UNIT
Maximum supply voltage	VCCmax	18	V
Maximum output current	Iomax	0.8 ^{note1}	A
Power dissipation 1 (8SOP)	Pd 1	0.6 ^{note2}	W
Power dissipation 2 (8DIP)	Pd 2	0.8 ^{note3}	W
Operating temperature	Topr	-35 ~ +85	°C
Storage temperature	Tstg	-55 ~ 150	°C

Note>

1. When mounted on 76.2mm X 114mm X 1.57mm PCB (Phenolic resin material).
2. Power dissipation reduces 4.8 mW/°C for using above Ta=25°C
3. Power dissipation reduces 6.4 mW/°C for using above Ta=25°C
4. Do not exceed Pd and SOA (Safe Operating Area).

POWER DISSIPATION CURVE



RECOMMENDED OPERATING CONDITIONS

CHARACTERISTICS	SYMBOL	VALUE	UNIT
Signal supply Voltage	SVCC	4.3 ~ 13.2	V
Power supply Voltage 1	PVCC	4.3 ~ SVCC	V

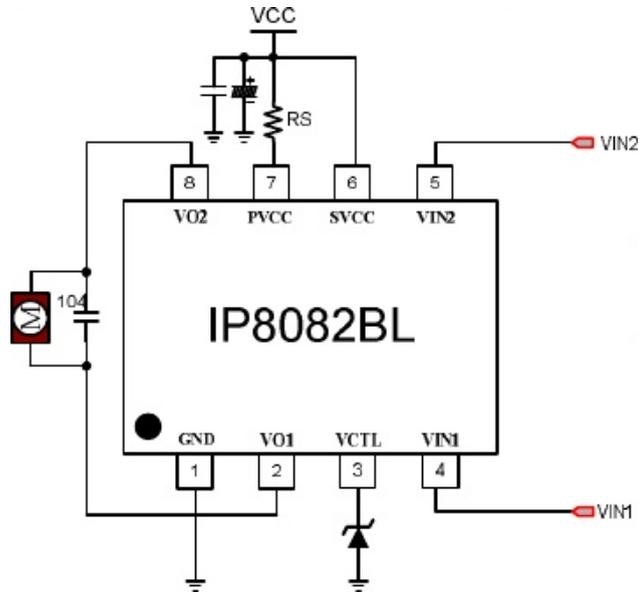
* CTL pin is connected to the VCC line with $2 \cdot V_{be} + 1V_{ce_sat}$.
So, Vcc should be over $V_{zener} + 1.7V$ to use stable area of zener diode.

ELECTRICAL CHARACTERISTICS

(SVCC=PVCC=12.0V, Ta = 25°C unless otherwise specified.)

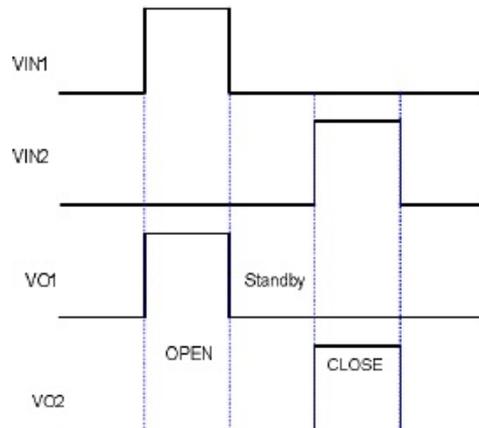
CHARACTERISTICS	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Quiescent circuit current	Icc	Pin4, Pin5= GND, No Load	4	6.5	9.5	mA
Minimum input operation current1	Imin1	RL=∞, Pin4=IN1, Pin5=L	-	10	30	uA
Minimum input operation current2	Imin2	RL=∞, Pin4=L, Pin5=IN	-	10	30	uA
Input threshold voltage 1	Vith1	RL=∞, Pin4=IN1, Pin5=L	1.0	1.3	1.6	V
Input threshold voltage 2	Vith2	RL=∞, Pin4=IN1, Pin5=L	1.0	1.3	1.6	V
Output leakage current 1	Ileak1	RL=∞, Pin4=Pin5=GND	-	0.01	1.2	mA
Output leakage current 2	Ileak2	RL=∞, Pin4=Pin5=High	-	0.01	1.2	mA
Zener current 1	IZ1	RL=∞, Pin4=H, Pin5=L	-	0.85	1.5	mA
Zener current 2	IZ2	RL=∞, Pin4=L, Pin5=H	-	0.85	1.5	mA
Output voltage 1	VO1	RL=60Ω, Pin4=H, Pin5=L	6.6	7.2	7.4	V
Output voltage 2	VO2	RL=60Ω, Pin4=L, Pin5=H	6.6	7.2	7.4	V
Saturation voltage 1(Upper)	Vsat1	IO=300mA	-	1.9	2.3	V
Saturation voltage 2(Upper)	Vsat2	IO=500mA	-	1.9	2.3	V
Saturation voltage 1(Lower)	Vsat3	IO=300mA	-	0.25	0.5	V
Saturation voltage 2(Lower)	Vsat4	IO=500mA	-	0.4	0.6	V

TYPICAL APPLICATION CIRCUIT



INPUT		OUTPUT		
VIN1(Pin4)	VIN2(Pin5)	VO1(Pin2)	VO2(Pin8)	STATUS
High	High	*Low	*Low	Brake
High	Low	High	Low	Forward
Low	High	Low	High	Reverse
Low	Low	*Low	*Low	Standby

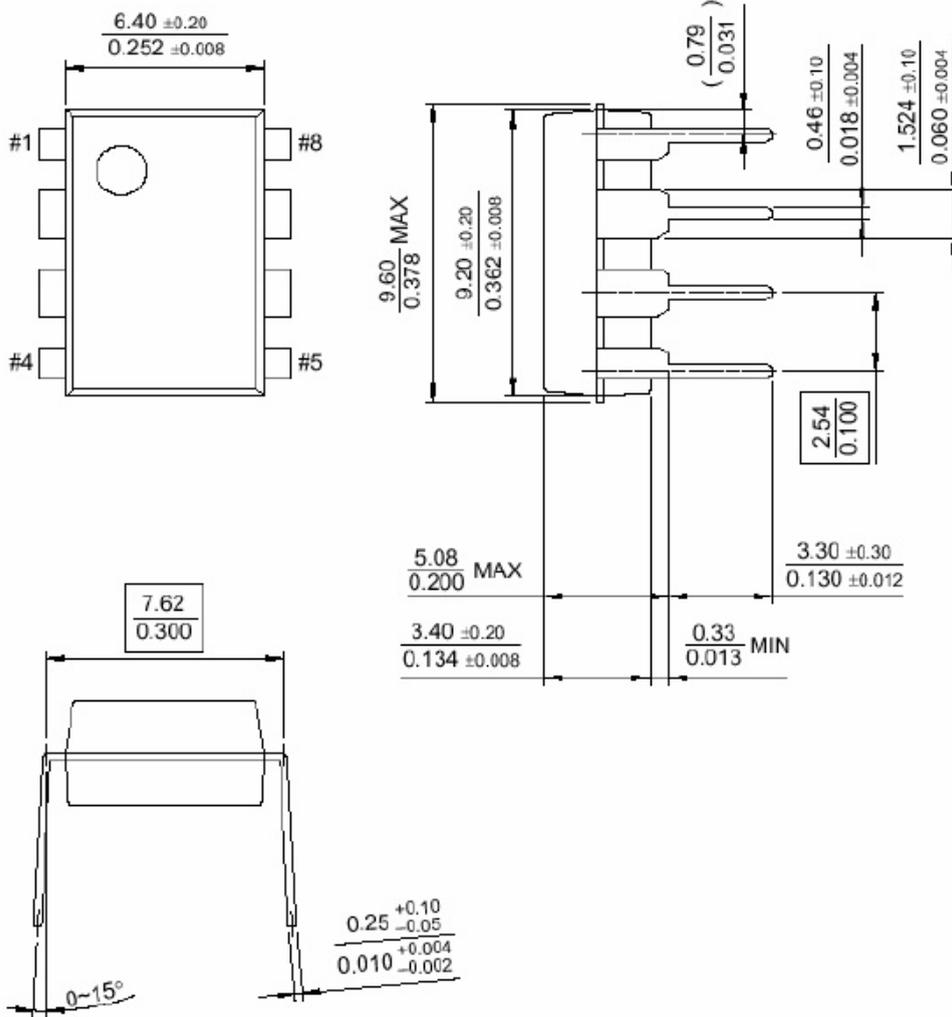
Input High is above 2.0V
 Input Low is Below 0.7V
 *Low : All power transistors are off state
 But internal bias makes output voltage
 low state



Bi-directional DC Motor Driver

PACKAGE DIMENSION(8DIP)

8-DIP



PACKAGE DIMENSION(8SOP)

8-SOP

