OH137

Unipolar Hall Effect Switch IC

Order Information

PN	OH137	Operate temperature	-40～85℃	Package	1000pcs/bag

General Description: OH137 is a switched Hall-Effect IC which is for contactless switching applications. The device includes an on-chip Hall voltage generator for magnetic sensing, an amplifier that amplifies the Hall voltage, a schmitt trigger to provide switching hysteresis for noise rejection, and an open-collector output.

Features

- 4.5V to 24V DC operation voltage
- Open-Collector pre-driver
- 25mA maximum sinking output current.
- Reverse Polarity Protection

Applications

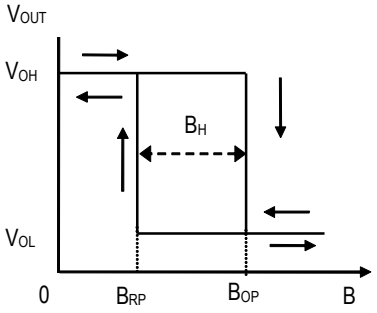
- Speed measurement
- Home appliances
- Position detection
- Flow measurement

Absolute Maximum Ratings （T_A=25℃）

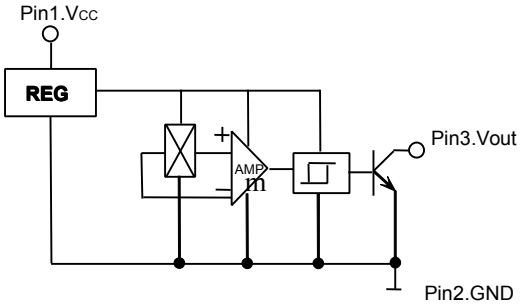
Supply VoltageV_{CC}.....4.5-24V　　Operating Temperature Range T_A .....-40～85℃

Output Current I_O.....25mA　　Storage Temperature RangeT_S .....-55～150℃

Magnetic-electrical Transfer Characteristics



Functional Block Diagram:



Electrical Characteristics (Ta= 25°C)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Supply Voltage	V_{CC}		4.5	-	24	V
Output Saturation Voltage	V_{OL}	Vcc=4.5V, RL=2KΩ, B≥B_{OP}	-	200	400	mV
Output Leakage Current	I_{OH}	Vout=Vccmax，B≤B_{RP}	-	1.0	10	μA
Supply Current	I_{CC}	V_{CC}=Vccmax OC output	-	3	5	mA
Output Rise Time	t_r	Vcc=12V, R_L=820Ω, C_L=20pF	-	0.12	1.20	μS
Output Falling Time	t_f		-	0.14	1.40	μS

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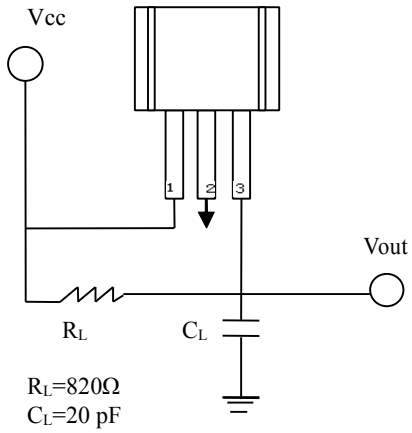
Magnetic Characteristics (Ta= 25°C) (1mT = 10 Gauss)

Parameter	symbol	Value			Unit
		Min	Typ	Max	
Operate Point	B_{OP}	-	-	18	mT
Release Point	B_{RP}	2	-	-	mT
Hysteresis	B_H	6	-	8	mT

Test Circuit for Reference:



Pin Descriptions: 1.Vcc 2. GND 3.Vout

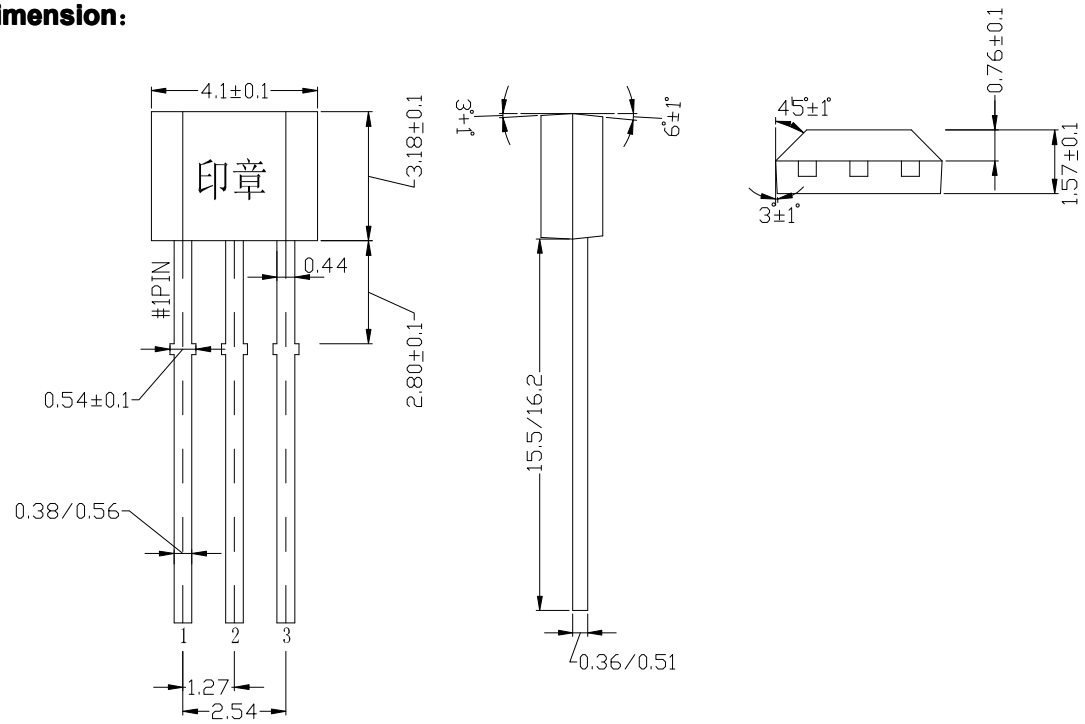
Caution:

1)when installing, please minimize mechanical stress on the IC shell and leads.

2)Welding temperature should be lower than 260 ℃, less than 3 seconds.

3)IC is OC output, so a pull-up resistor connected pin 1 (power) and pin 3 (output) is necessary.

Dimension:



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