

OH137

Unipolar Hall Effect Switch IC

Order Information

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

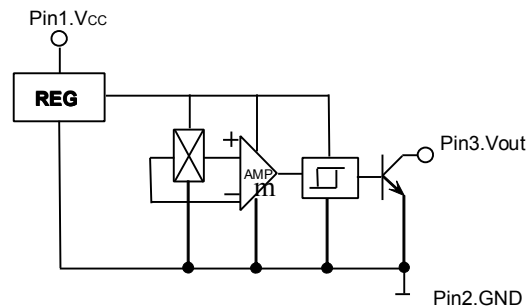
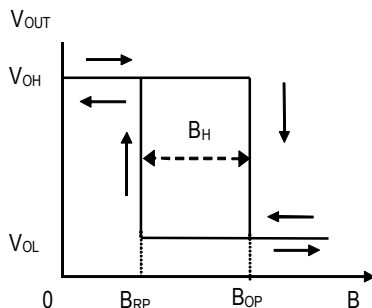
Applications

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

Absolute Maximum Ratings (T_A=25°C)

Supply Voltage V _{CC}	4.5-24V	Operating Temperature Range T _A	-40~85°C
Output Current I _O	25mA	Storage Temperature Range T _S	-55~150°C

Magnetic-electrical Transfer Characteristics Functional Block Diagram:



Electrical Characteristics (T_a = 25°C)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Supply Voltage	V _{CC}		4.5	-	24	V
Output Saturation Voltage	V _{OL}	V _{CC} =4.5V, R _L =2KΩ, B≥B _{OP}	-	200	400	mV
Output Leakage Current	I _{OH}	V _{out} =V _{CC} max, B≤B _{RP}	-	1.0	10	μA
Supply Current	I _{CC}	V _{CC} =V _{CC} max OC output	-	3	5	mA
Output Rise Time	t _r	V _{CC} =12V, R _L =820Ω, C _L =20pF	-	0.12	1.20	μS
Output Falling Time	t _f		-	0.14	1.40	μS

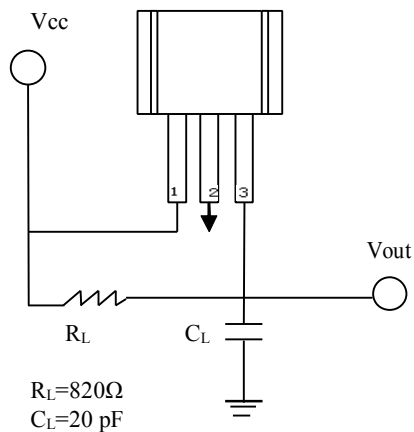
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Magnetic Characteristics ($T_a = 25^\circ\text{C}$) (1mT = 10 Gauss)

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°C , 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:

