

OH177

Bipolar Hall Effect Switch IC

Order Information

PN	OH177	Operate temperature	-40~85°C	Package	1000pcs/bag
----	-------	---------------------	----------	---------	-------------

General Description: OH177 bipolar Ic 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

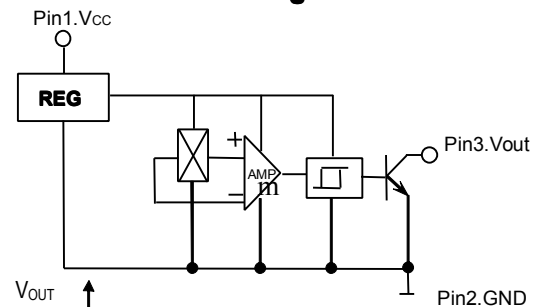
Applications

- Position detection
- Flow measurement
- CPU FAN

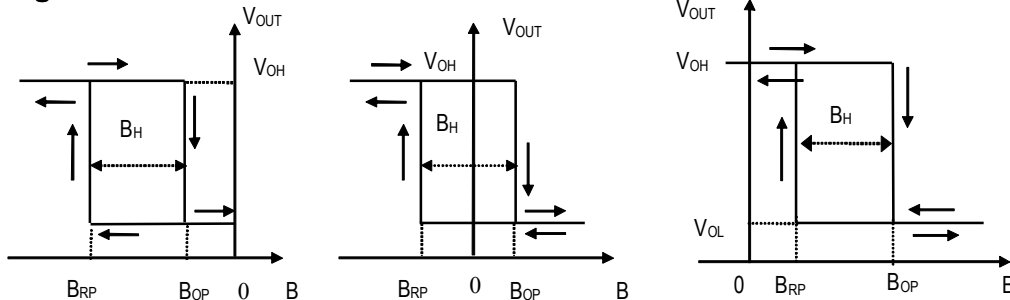
Absolute Maximum Ratings (TA=25°C)

Supply Voltage V_{CC} 4.5-24V
 Output Current I_O 20mA
 Operating Temperature Range T_A -40~85°C
 Storage Temperature Range T_S -55~150°C

Functional Block Diagram:



Magnetic-electrical Transfer Characteristics



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}	$V_{CC}=4.5V, R_L=2K\Omega, B \geq B_{OP}$	-	200	400	mV
Output Leakage Current	I_{OH}	$V_{out}=V_{CCmax}, B \leq B_{RP}$	-	1.0	10	μA
Supply Current	I_{CC}	$V_{CC}=V_{CCmax}$ OC output	-	3	5	mA
Output Rise Time	t_r	$V_{CC}=12V, R_L=820\Omega, C_L=20pF$	-	0.12	1.20	μS
Output Falling Time	t_f		-	0.14	1.40	μS

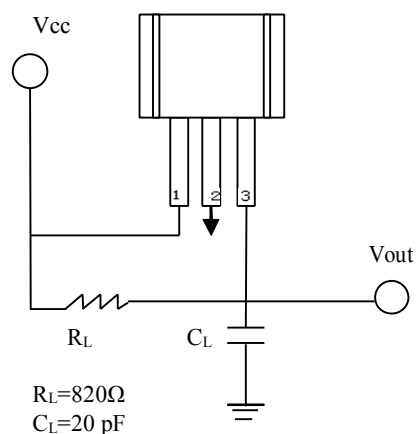
OH177

Bipolar Hall Effect Switch IC

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

Parameter	symbol	Value			Unit
		Min	Typ	Max	
Operate Point	B_{OP}	5	-	10	mT
Release Point	B_{RP}	-1	-	4	mT
Hysteresis	B_H	-	6	-	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 (unit:mm)

