

OH443

Hall Effect Unipolar IC For High Temperature

Order Information

Part number	OH443	Operate temperature	-40~150℃	Package	TO-92S	1000pcs/bag
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General Description

OH443 includes an on-chip Hall voltage generator for magnetic sensing, an amplifier to amplify Hall voltage, and a comparator to provide switching hysteresis for noise rejection, and an open-collector output pre-driver. While the magnetic flux density (B) is larger than threshold B_{OP} , the OUT pin turns on (low). When $B < B_{RP}$, the OUT pin go into " off " state.



Features

- High reliability
- High sensitivity
- good temperature performance
- anti-environmental stress

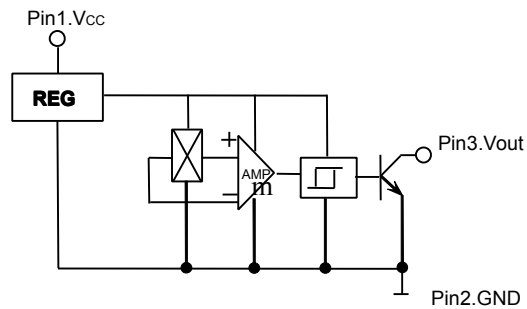
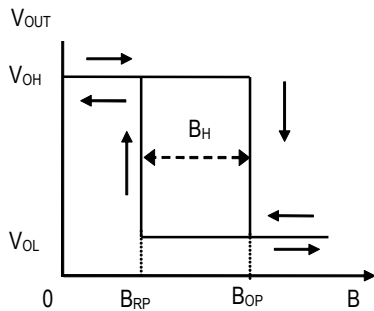
Applications

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

Absolute Maximum Ratings ($T_A=25^{\circ}C$)

Supply Voltage V_{CC}4-30V Operating Temperature Range T_A -40 ~ 150℃
 Output Current I_O50mA Storage Temperature Range T_S -55 ~ 150℃

Magnetic-electrical Transfer Characteristics Functional Block Diagram:



Electrical Characteristics ($T_a= 25^{\circ}C$)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Supply Voltage	V_{CC}		4	-	30	V
Output Saturation Voltage	V_{OL}	$V_{CC}=4.5V, I_{out}=20mA, B \geq B_{OP}$	-	200	400	mV
Output Leakage Current	I_{OH}	$V_{out}=24V, B \leq B_{RP}$	-	1.0	10	μA
Supply Current	I_{CC}	$V_{CC}=V_{CCmax}$ OC output	-	5	-	mA
Output Rise Time	t_r	$V_{CC}=12V, R_L=820\Omega, C_L=20pF$	-	0.2	2.0	μS
Output Falling Time	t_f		-	0.18	2.0	μS

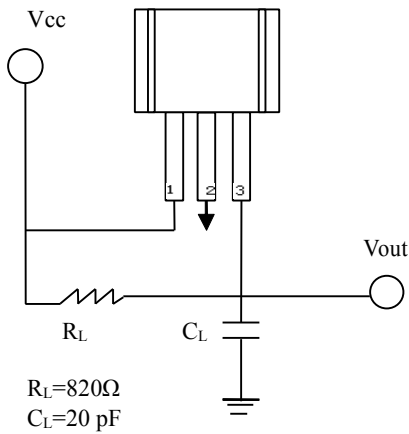
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Magnetic Characteristics ($V_{CC}=4\sim 30V$ $T_a= 25^\circ C$) (1mT = 10 Gauss)

Parameter	symbol	Value			Unit
		Min	Typ	Max	
Operate Point	B_{OP}	-	-	20	mT
Release Point	B_{RP}	2	-	-	mT
Hysteresis	B_H	3	-	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 $260^\circ C$, 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)

