

OH413

Hall Effect Latch IC For High Temperature

Order Information

Part number	OH413	Operate temperature	-40~150℃	Package	TO-92S	1000pcs/bag
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General Description

OH413 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

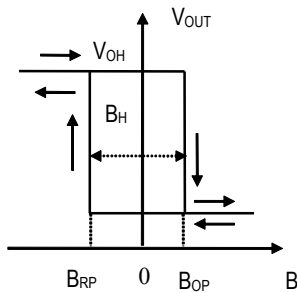
Applications

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

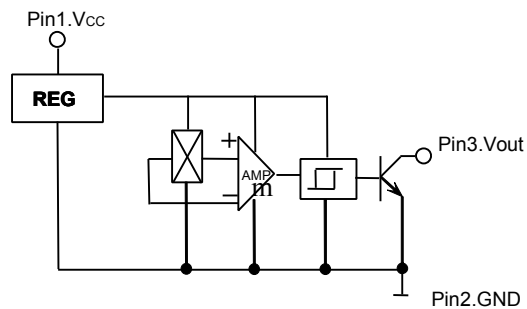
Absolute Maximum Ratings (T_A=25℃)

Supply Voltage V_{CC}.....4-30V Operating Temperature Range T_A-40 ~ 150℃
 Output Current I_O.....50mA Storage Temperature Range T_S-55 ~ 150℃

Magnetic-electrical Transfer Characteristics



Functional Block Diagram:



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≥B _{OP}	-	200	400	mV
Output Leakage Current	I _{OH}	V _{out} =24V, B≤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 =820Ω, C _L =20pF	-	0.12	-	μS
Output Falling Time	t _f		-	0.18	-	μS

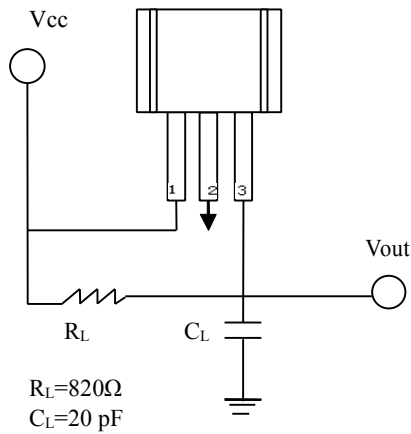
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Magnetic Characteristics ($V_{CC}=4\sim 30V$ $T_a= 25^\circ C$) (1mT = 10 Gauss)

Parameter	symbol	Value			Unit
		Min	Typ	Max	
Operate Point	B_{OP}	-	-	8	mT
Release Point	B_{RP}	-8	-	-	mT
Hysteresis	B_H	-	10	-	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)

