



General Description

The OCH147H is an integrated Hall effect High Sensitivity latched sensor designed for electronic commutation of brush-less DC motor applications. The device using High Voltage process includes an on-chip Hall voltage generator for magnetic sensing, a comparator that amplifies the Hall voltage, and a Schmitt trigger to provide switching hysteresis for noise rejection, and an open-Drain output . An internal band-gap regulator is used to provide temperature compensated supply voltage for internal circuits and allows a wide operating supply range.

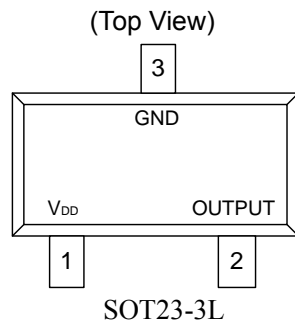
Features

- Wide operating voltage range: 2.7V~30V
- Operating temperature range: -40°C ~+ 150°C
- Temperature compensation
- Reverse polarity protection
- Open-Drain pre-driver
- Package: SOT23-3L

Applications

- Rotor Position Sensing
- Brush-less DC Motor
- Speed measurement
- Revolution counting

Pin Configuration



Name	PIN No.	Description
V _{DD}	1	IC Power Supply
OUTPUT	2	Output PIN(It is low state during the S pole magnetic field)
GND	3	IC Ground

Application Circuit

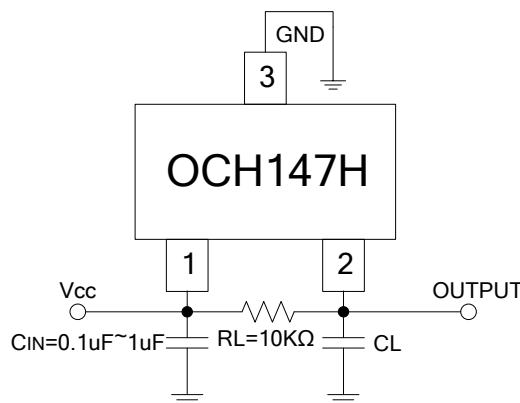


Figure 1, application circuit

Note: C_{IN} is for power stabilization and to strengthen the noise immunity, the recommended capacitance is 0.1~1uF.



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OCH147H

High Sensitivity Latch Hall Effect Position Sensor

ORIENT-CHIP

■ **Ordering Information**

Part Number	Package Type	Packing Qty	B _{OP} (Gauss)	B _{RP} (Gauss)	Temperature	Eco Plan	Lead
OCH147HWAF	SOT23-3L	3000pcs	23(Typ.)	-23(Typ.)	-40 ~ +150□	ROHS	Cu

■ **Block Diagram**

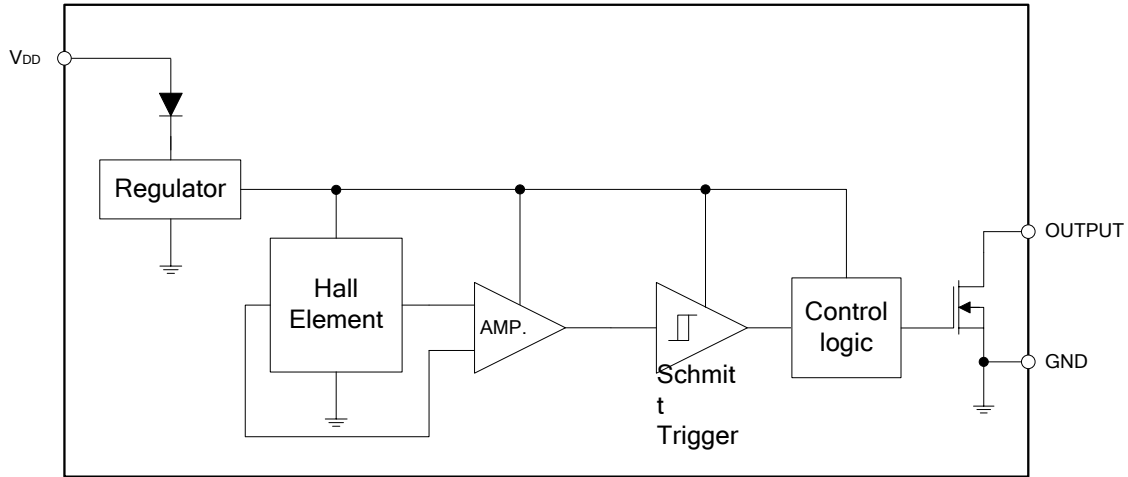


Figure 2, Block Diagram Of OCH147H

■ **Absolute Maximum Ratings**

Supply Voltage		40V
Output OFF Voltage, V _{DS}		40V
VDD Reverse Voltage		-40V
Output Maximum Sink Current (AVG)		25mA
Power Dissipation	T _a =25°C	260mW
Thermal Resistance	T _{ja}	0.52°C/mW
	T _{jc}	0.64°C/mW
Operating Temperature Range		-40°C ~ +150°C
Storage Temperature Range		-65°C ~ +150°C
Junction Temperature		+150°C
Lead Temperature(Soldering, 10 sec)		+260°C

■ **DC Electrical Characteristics**(at T_a=25°C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Operating Voltage	V _{DD}		2.7	-	30	V
Supply current	I _{DD}	No use pin is open V _{CC} :2.7V~30V, OUT“H”	0.8	2.45	5	mA
Output Saturation Voltage	V _{SAT}	V _{CC} =5V, OUT“L”, I _o =15mA	-	0.3	0.5	V
Output current limitation	I _L	Intenally limited	30	55	75	mA
Output rise time	t _r	R _L =1.5KΩ, C _L =50PF	0.01	0.5	1	uS
Output fall time	t _f	R _L =1.5KΩ, C _L =50PF	0.01	0.5	1	uS
ESD Voltage (HBM)	VESD	R= 1.5KΩ, C=100pF	4	-	-	KV

