



General Description

The OCH183 is an integrated Hall effect 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 amplifiers the Hall voltage, and a Schmitt trigger to provide switching hysteresis for noise rejection, and an open-collector output. An internal band-gap regulator is used to provide temperature compensated supply voltage for internal circuits and allows a wide operating supply range.

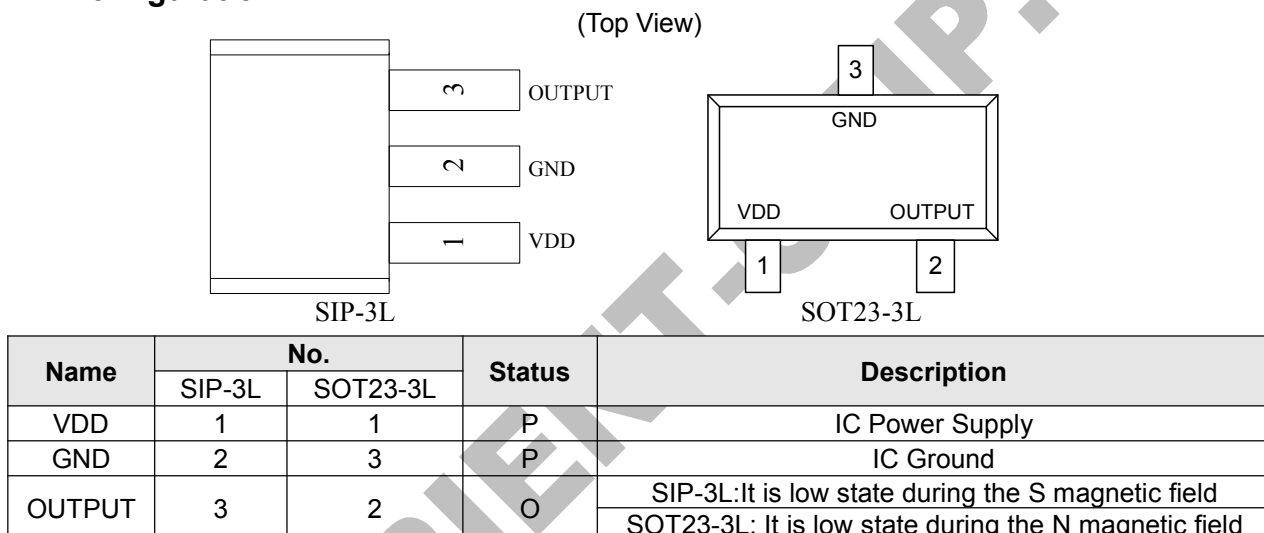
Features

- Wide operating voltage range: 2.7V~26V
- Operating temperature range: -40°C ~+125°C
- Temperature compensation
- Reverse polarity protection
- Integrated 10KΩ pull-up resistor
- Package: SIP-3L、SOT23-3L

Applications

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

Pin Configuration



Application Circuit

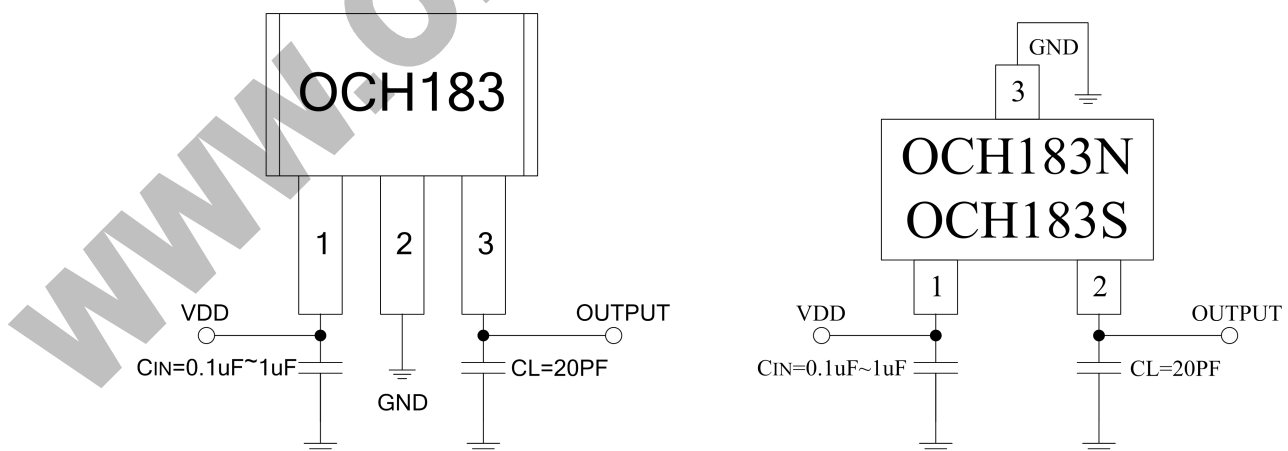


Figure 1, application circuit

Note: C_{IN} is for power stabilization and to strengthen the noise immunity, the recommended capacitance is 0.1~1uF. If the VCC power supply is clean, the C_{IN} can be cancelled.



Ordering Information

Part Number	Package Type	Packing Qty	B _{OP} (Gauss)	B _{RP} (Gauss)	Temperature	Eco Plan	Lead
OCH183ME	SIP-3L	1000pcs	25(Typ.)	-25(Typ.)	-40 ~ 125℃	ROHS	Cu
OCH183NWAE	SOT23-3L	3000pcs	-25(Typ.)	25(Typ.)	-40 ~ 125℃	ROHS	Cu
OCH183SWAE	SOT23-3L	3000pcs	25(Typ.)	-25(Typ.)	-40 ~ 125℃	ROHS	Cu

Block Diagram

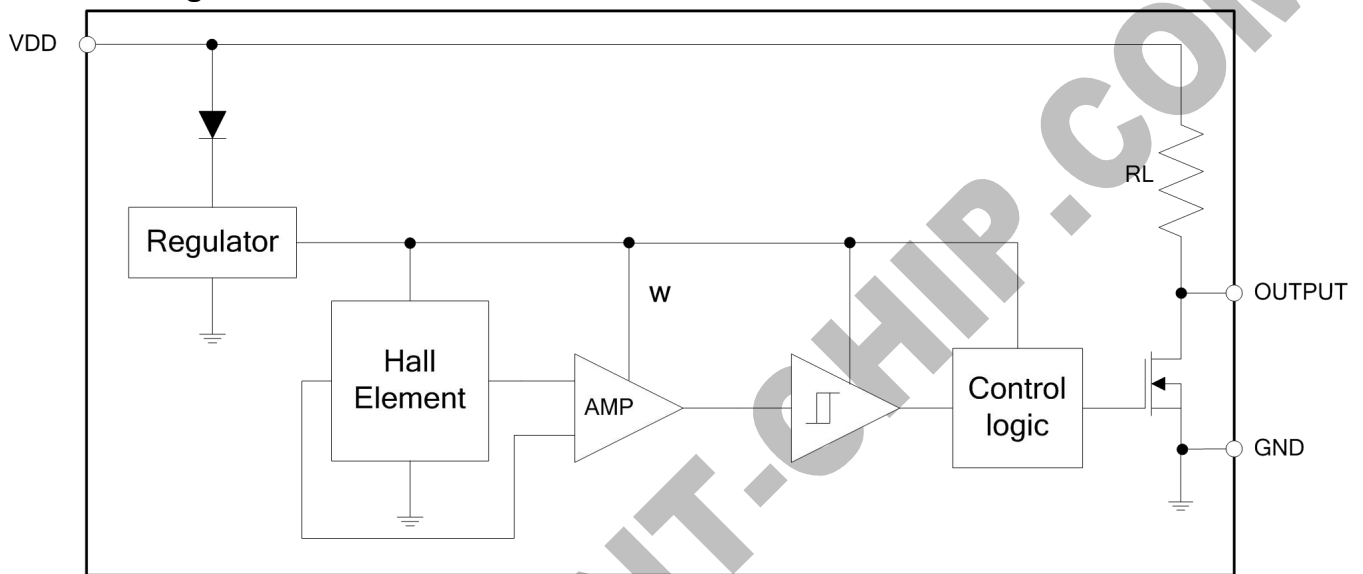


Figure 2, Block Diagram Of OCH183

Absolute Maximum Ratings

Supply Voltage		28V
Output OFF Voltage, V _{DS}		28V
Output Maximum Sink Current (AVG)		25mA
Power Dissipation (SIP-3L)	T _a =25℃	400mW
Power Dissipation (SOT23-3L)	T _a =25℃	260mW
Thermal Resistance (SIP-3L)	T _{ja}	0.34℃/mW
	T _{jc}	0.42℃/mW
Thermal Resistance (SOT23-3L)	T _{ja}	0.52℃/mW
	T _{jc}	0.64℃/mW
Operating Temperature Range		-40℃ ~ +125℃
Storage Temperature Range		-65℃ ~ +150℃
Junction Temperature		+150℃
Lead Temperature(Soldering, 10 sec)		+260℃

DC Electrical Characteristics(at T_a=25℃)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Operating Voltage	V _{DD}		2.7	-	26	V
Supply current	I _{DD}	No use pin is open V _{DD} :2.7V~26V, OUT "H"	-	2.2	5	mA
Output Saturation Voltage	V _{SAT}	V _{CC} =5V, OUT "L"	-	-	0.4	V
Output drop voltage	V _d	V _{CC} =5V, OUT "H"			20	mV
pull-up resistor	RL		6	10	14	KΩ

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