



■ **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 amplifies 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.

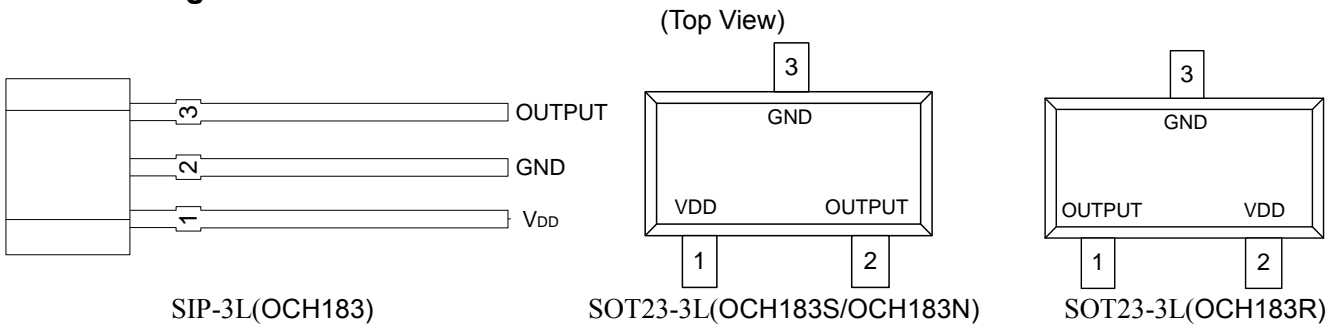
■ **Features**

- 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**



Pin Name	Pin Number			Description
	OCH183/OCH183S/OCH183N		OCH183R	
	SIP-3L	SOT23-3L	SOT23-3L	
V _{DD}	1	1	2	IC Power Supply
GND	2	3	3	IC Ground
OUTPUT	3	2	1	OCH183/OCH183S: It is low state during the S magnetic field OCH183N: It is low state during the N magnetic field

■ **Application Circuit**

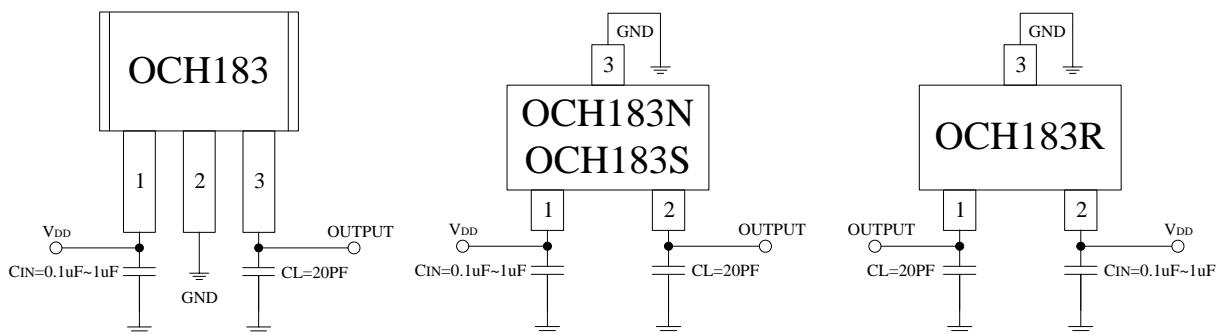


Figure 1, application circuit

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

Ordering Information

Part Number	Package Type	Packing Qty	BOP (Gauss)	BRP(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
OCH183RWAE	SOT23-3L	3000pcs	25(Typ.)	-25(Typ.)	-40~ 125□	ROHS	Cu

Block Diagram

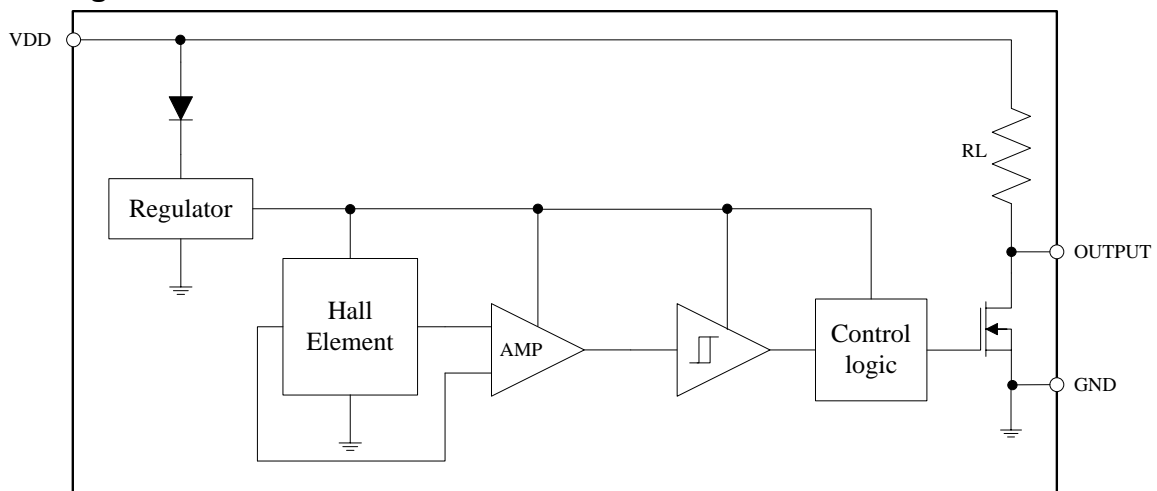


Figure 2, Block Diagram Of OCH183

Absolute Maximum Ratings

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

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

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 $V_{DD}:2.7V\sim 26V$, OUTPUT "H"	-	2.2	5	mA
Output Saturation Voltage	V_{SAT}	$V_{DD}=5V$, OUT "L"	-	-	0.4	V
Output drop voltage	V_d	$V_{DD}=5V$, OUT "H"			20	mV
pull-up resistor	R_L		6	10	14	KΩ