General Description

The OCH169 Omnipolar Hall effect sensor IC is fabricated from mixed signal CMOS technology. It is comprised of two Hall plates and a CMOS output driver, mainly designed for battery-operation, hand-held equipment (such as Cellular and Cordless Phone, PDA). The total power consumption in normal operation is typically 24μW with a 3V power source. Either north or south poles of sufficient strength will turn the output on. The output will be turned off under no magnetic field. While the magnetic flux density (B) is larger than operating point (BOP), the output will be turned on (low), the output is held until B is lower than release point (BRP), and then turned off.

The OCH169 is available in many flexible packaging options, such as SIP-3L, TSOT23-3L, and DFN2020-6L,DFN2020-3L,Operating temperature range of the OCH169 is from -40°C to 85°C.

To minimize the BOM cost, capacitors of the MLCC type are supported, and only one external component are needed to complete the application circuit.

Features

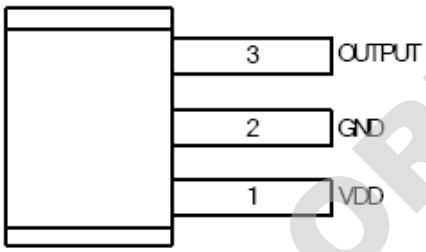
- Micro power consumption ideal for battery-powered applications
- Omnipolar (operation with magnetic field of either north or south pole), easy to use as output switches with both North and South pole
- Input Voltage Range: 2.4V to 5.5V
- Very High Sensitivity Hall Sensor
- Chopper stabilized amplifier stage
- Good RF noise immunity
- SIP-3L/TSOT23-3L/Low profile DFN2020-6L /DFN2020-3Lpackage
- ESD (HBM) ＞ 4KV
- Not need the push-high resistance

Applications

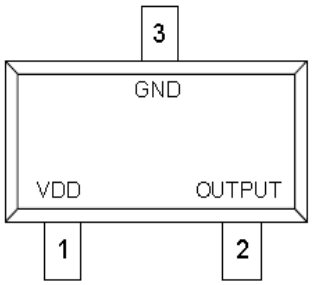
- Cover switch in clam-shell cellular phones
- Cover switch in Notebook PC/PDA
- Contact-less switch in consumer products
- Solid State Switch
- Handheld Wireless Handset Awake Switch
- Lid close sensor for battery-powered devise
- Magnet proximity sensor for reed switch replacement in low duty cycle applications

Pin Configuration

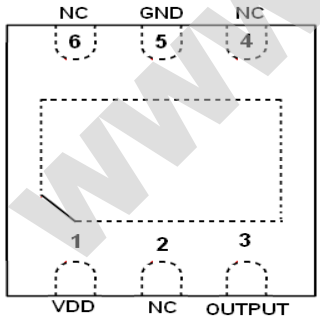
(1) SIP-3L (Top View)



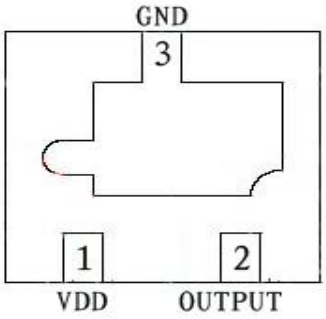
(2) TSOT23-3L (Top View)



(3) DFN2020-6L (Top View)

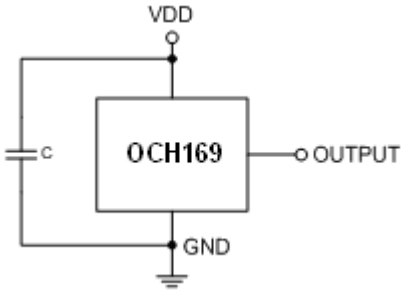


(4) DFN2020-3L (Top View)



Pin Name	Pin No.				Pin Function
	SIP-3L	TSOT23-3L	DFN2020-6L	DFN2020-3L	
VDD	1	1	1	1	Power Supply Input
GND	2	3	5	3	Ground
OUTPUT	3	2	3	2	Output Pin
N.C	-	-	2,4,6		Not connected

■ Typical Application Circuit



Note: C is for power stabilization and to strengthen the noise immunity, the recommended capacitance is 10nF~100nF.

■ Ordering Information

OCH169XXX

Package：
M:SIP-3L
TW:TSOT23-3L
V:DFN2020-6L
V3:DFN2020-3L

Packing：
Blank:Tube or Bulk or Box
A:Tape&Reel

Temperature Grade：
D: -40°C~85°C

Part Number	Package Type	Package Qty	Brp (Gauss)	Bop (Gauss)	Temperature	Eco Plan	Lead
OCH169MD	SIP-3L	Bulk 1000pcs/bulk	±10 ~ ±50	±20 ~ ±60	-40～85℃	Green	Cu
OCH169TWAD	TSOT23-3L	7-in reel 3000pcs/reel	±10 ~ ±50	±20 ~ ±60	-40～85℃	Green	Cu
OCH169VAD	DFN2020-6L	7-in reel 3000pcs/reel	±10 ~ ±50	±20 ~ ±60	-40～85℃	Green	Cu
OCH169V3AD	DFN2020-3L	7-in reel 3000pcs/reel	±10 ~ ±50	±20 ~ ±60	-40～85℃	Green	Cu

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