



General Description

The OCH168B Omnipolar Hall effect sensor IC is fabricated from mixed signal CMOS technology. It is comprised of two Hall plates and a OD 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 OCH168B is available in many flexible packaging options, such as SIP-3L, TSOT23-3L. Operating temperature range of the OCH168B 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

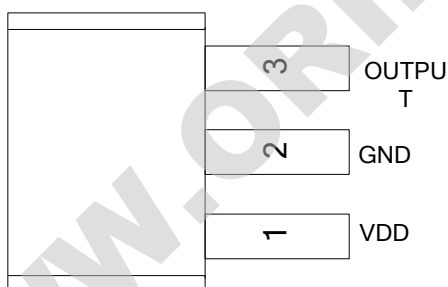
- Micro power consumption ideal for battery-powered applications
Omnipolar (operation with magnetic field of either north or south pole), easy to use as output switches with both North and South pole
Input Voltage Range: 2.4V to 5.5V
Very High Sensitivity Hall Sensor
Chopper stabilized amplifier stage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

Applications

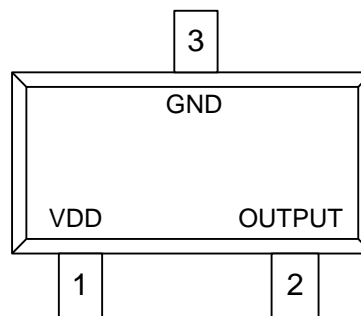
- Cover switch in clam-shell cellular phones
Cover switch in Notebook PC/PDA
Contact-less switch in consumer products
Solid State Switch
Handheld Wireless Handset Awake Switch
Lid close sensor for battery-powered device
Magnet proximity sensor for reed switch replacement in low duty cycle applications

Pin Configuration

(1) SIP-3L (Top View)



(2) TSOT23-3L (Top View)

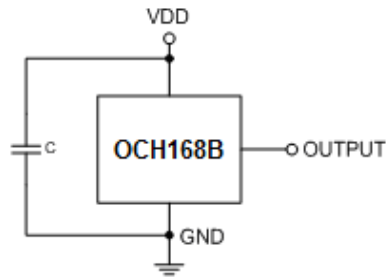


Note: NC is "No Connection" which is recommended to be tied to ground.

Table with 4 columns: Pin Name, Pin No. (SIP-3L, TSOT23-3L), Pin Function. Rows include VDD, GND, OUTPUT, and N.C.



### ■ Typical Application Circuit



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

### ■ Ordering Information

Part Number	Package Type	Packing Qty	B <sub>OP</sub> (Gauss)	B <sub>RP</sub> (Gauss)	Temperature	Eco Plan	Lead
OCH168BMD	SIP-3L	1000pcs/Box	±40(Typ.)	±30(Typ.)	-40 ~ 85°C	ROHS	Cu
OCH168BTWAD	TSOT23-3L	3000pcs/Reel	±40(Typ.)	±30(Typ.)	-40 ~ 85°C	ROHS	Cu

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