General Description

The OCH1502N Unipolar Hall effect sensor IC is fabricated from mixed signal CMOS technology. It is comprised of one Hall plate and a CMOS output driver, mainly designed for battery-operation, hand-held equipment (such as Smart phone and PAD). The total power consumption in normal operation is typically 4.5μW with a 1.8V power source. North 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 less than operating point (BOPN), the output will be turned on (low), the output is held until B is higher than release point (BRPN), and then turned off (High).

The OCH1502N is available inSIP-3L、SOT23-3L、DFN1616-6L-EP、DFN1616-6L and SOT553 Package. Operating temperature range of the OCH1502N is from -40°C to 85°C.

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

Features

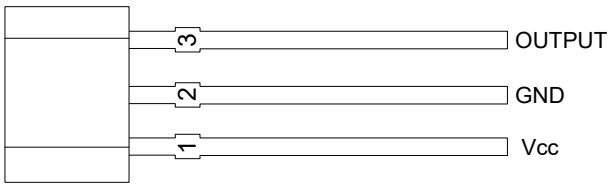
- 2.5uA Micro power consumption ideal for battery-powered applications
- Input VoltageRange:1.65V to 5.5V
- Very High Sensitivity Hall Sensor
- Chopper stabilized amplifier stage
- Good RF noise immunity
- CMOS Output
- SIP-3L、SOT23-3L、DFN1616-6L-EP DFN1616-6LandSOT553package

Applications

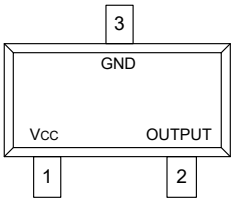
- Smart phones
- Cover switch in clam-shell cellular phones
- Cover switch in Notebook PC/PAD
- Contact-less switch in consumer products
- Solid State Switch
- Handheld Wireless Handset Awake Switch
- Lid close sensor for battery-powered devise
- Magnet proximity sensor for reed switch replacement in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

Pin Configuration

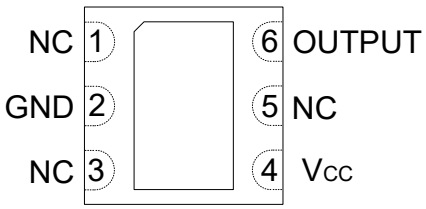
(Top View)



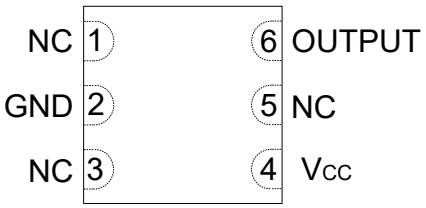
SIP-3L(TO92S)



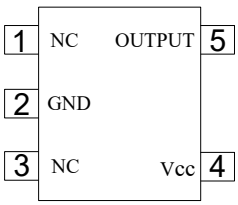
SOT23-3L



DFN1616-6L-EP



DFN1616-6L



SOT553

Pin Name	Pin Number				Description
	SOT23-3L	SOT553	SIP-3L	DFN1616-6L/-EP	
Vcc	1	4	1	4	IC Power Supply
OUTPUT	2	5	3	6	It is low state during the N magnetic field
GND	3	2	2	2	IC Ground
NC	-	1、3	-	1,3,5	Nc Pin

■ Application Circuit

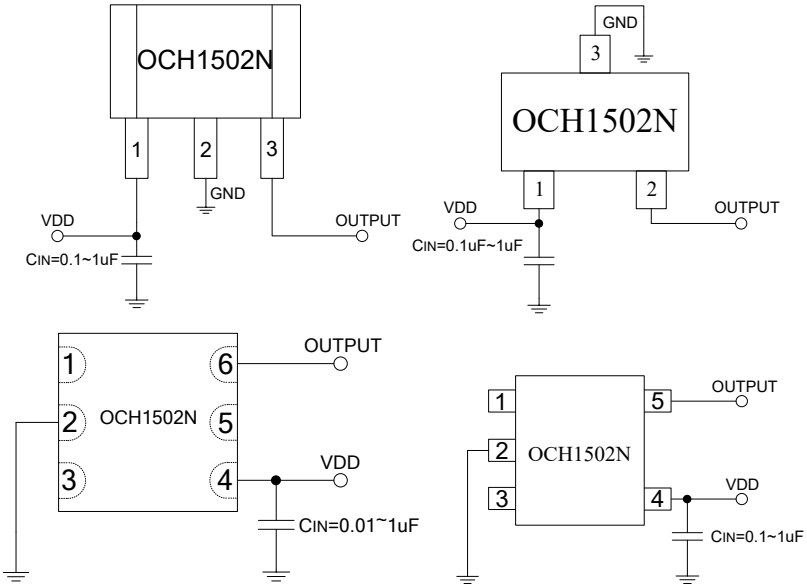


Figure 1, application circuit

Note: C_{IN} is for power stabilization and to strengthen the noise immunity, the recommended capacitance is 0.01~1uF.

■ Ordering Information

Part Number	Package Type	Packing Qty	B_{OPS} (Gauss)	B_{RPS} (Gauss)	Temperature	Eco Plan	Lead
OCH1502NMD	SIP-3L	1000pcs/Bag	-40	-30	-40～85°C	Green	Cu
OCH1502NWAD	SOT23-3L	3000pcs/Reel	-40	-30	-40～85°C	Green	Cu
OCH1502NEV6AD	DFN1616-6L-EP	7-in reel 3000pcs/reel	-40	-30	-40～85°C	Green	Cu
OCH1502NV6AD	DFN1616-6L	7-in reel 3000pcs/reel	-40	-30	-40～85°C	Green	Cu
OCH1502NSTAD	SOT553	3000pcs/Reel	-40	-30	-40～85°C	Green	Cu

■ Block Diagram