



ORIENT-CHIP

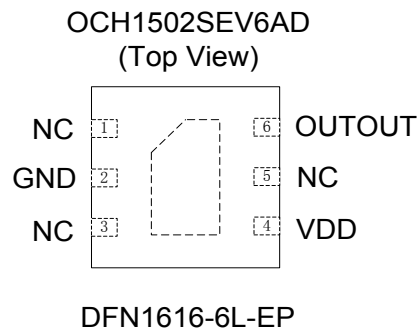
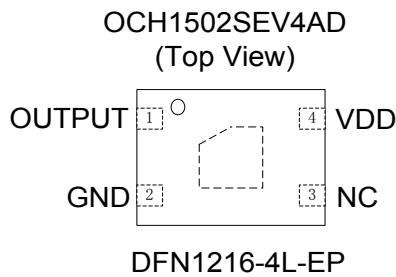
General Description

The OCH1502S 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 2.8V 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 (BOPS), the output will be turned on (low), the output is held until B is higher than release point (BRPS), and then turned off(High).

The OCH1502S is available in DFN1616-6L-EP and DFN1216-4L-EP Package. Operating temperature range of the OCH1502S 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.

Pin Configuration



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
- DFN1616-6L-EP and DFN1216-4L-EP package

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 Name	Pin No.		Pin Function
	DFN1616-6L-EP	DFN1216-4L-EP	
VDD	4	4	Power Supply Input
GND	2	2	Ground
OUTPUT	6	1	Output Pin
NC	1, 3, 5	3	Not connected



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■ **Application Circuit**

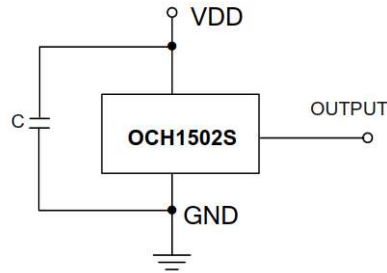


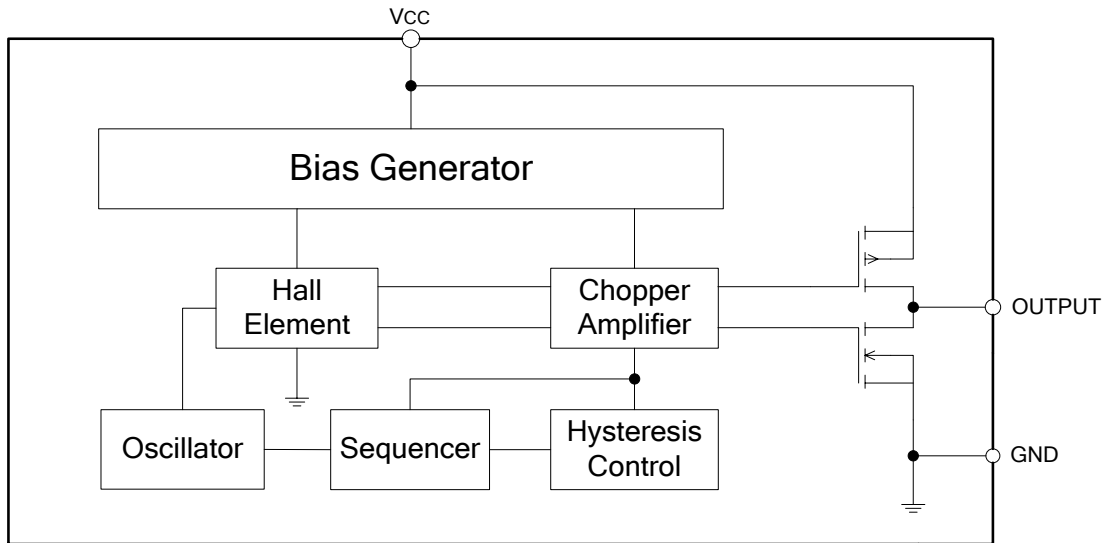
Figure 1, application circuit

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
OCH1502SEV6AD	DFN1616-6L-EP	7-in reel 3000pcs/reel	40(Typ.)	30(Typ.)	-40~85°C	Green	Cu
OCH1502SEV4AD	DFN1216-4L-EP	7-in reel 3000pcs/reel	40(Typ.)	30(Typ.)	-40~85°C	Green	Cu

■ **Block Diagram**



■ **Absolute Maximum Ratings¹** ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Rating	Unit
VDD to GND	V_{DD}	-0.3 to 6	V
Magnetic Flux Density	B	Unlimited	
Storage Temperature Range	T_S	-55 to +150	°C
Operating Junction Temperature Range	T_J	-40 to 150	°C
Package Power Dissipation	P_D	500	mW