

## Magnetic Sensor ICs

# Omnipolar Detection High Performance Hall-Effect Sensor IC



### ● General Description

Using CMOS process, the AS1805OD is designed for high performance omnipolar detection hall-effect application, such as cover switch, contactless switch, solid state switch and lid close sensor etc battery operation. The hall IC integrated an on-chip hall voltage generator for magnetic sensing, a comparator that amplifiers the hall voltage, a Chopper amplifier, a Schmitt trigger to provide switching hysteresis for noise rejection, and a complementary output.

AS1805OD is designed to respond to alternating North and South poles. When the magnetic flux density (B) is larger than operate point (B<sub>OP</sub>), the output will be turned on (low), the output is held until the magnetic flux density (B) is lower than release point (B<sub>RP</sub>), then turn off (high).

The device is available in SOT23-3L & SIP-3L Package and is rated over the -40°C to 125°C. The all packages are RoHS and Green compliant.

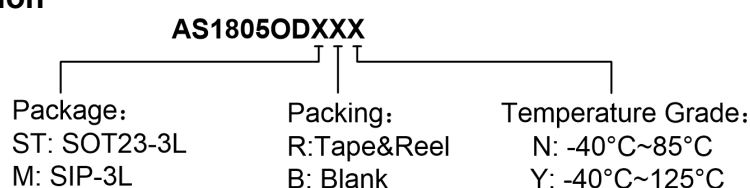
### ● Features

- Input Voltage Range : 2.5V to 5.5V
- Micro-power consumption ideal for battery power applications
- Omnipolar Operation, easy to use as output
- Very high sensitivity hall sensor
- CMOS process technology
- Chopper stabilization amplifier stage
- Magnetic Sensitivity (typical)  
B<sub>OP</sub>= ±35Gauss, B<sub>RP</sub>= ±32Gauss
- Good RF noise immunity
- OD Output (need pull-up resistor)
- Small Solution Size
- RoHS & Green Compliant
- SOT23-3L & SIP-3L Packages
- -40°C to +125 °C Temperature Range

### ● Applications

- Smart Meter
- Cover switch
- Contact-less switch

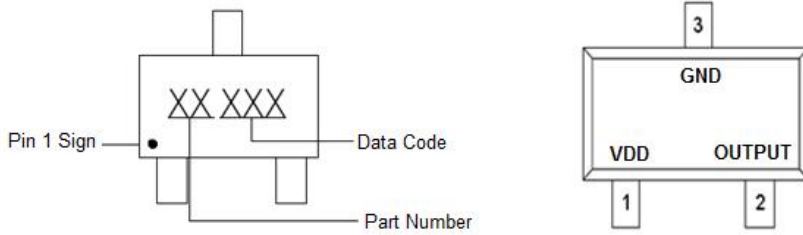
### ■ Ordering Information



Part Number	B <sub>OP</sub> (Gauss)	B <sub>RP</sub> Gauss)	Package Type	Package Qty	Temperature	Eco Plan
AS1805ODSTRN	±35Gauss	±32Gauss	SOT23-3L	7-in reel 3000pcs/reel	-40~85°C	Green
AS1805ODMBN	±35Gauss	±32Gauss	SIP-3L	1000pcs/Package	-40~85°C	Green
AS1805ODSTRY	±35Gauss	±32Gauss	SOT23-3L	7-in reel 3000pcs/reel	-40~125°C	Green
AS1805ODMBY	±35Gauss	±32Gauss	SIP-3L	1000pcs/Package	-40~125°C	Green

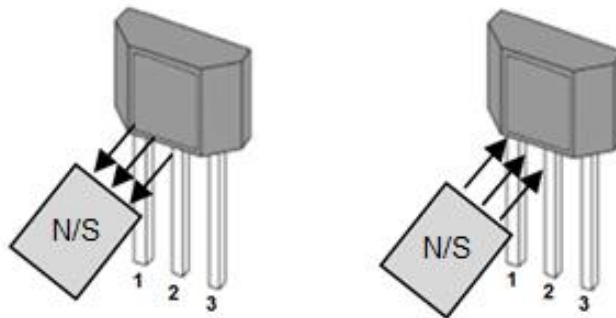
■ **Marking & Pin Assignment**

**SOT23-3L**



Pin Name	Pin No.	I/O	Pin Function
	SOT23-3L		
VDD	1	P	Input Power Supply
GND	3	P	Ground
OUTPUT	2	O	Output Pin

**SIP-3L**



Pin Name	Pin No.	I/O	Pin Function
	SIP-3L		
VCC	1	P	Input Power Supply
GND	2	P	Ground
OUTPUT	3	O	Output Pin.

■ **Typical Application Circuit**

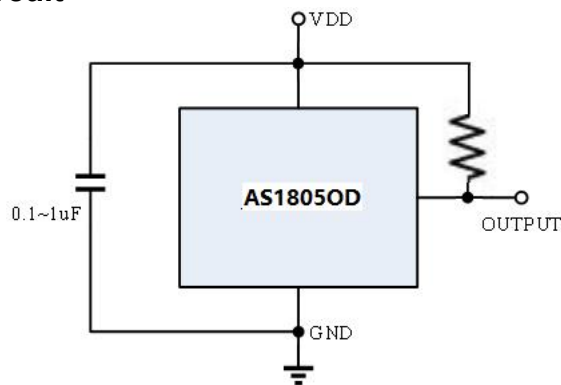
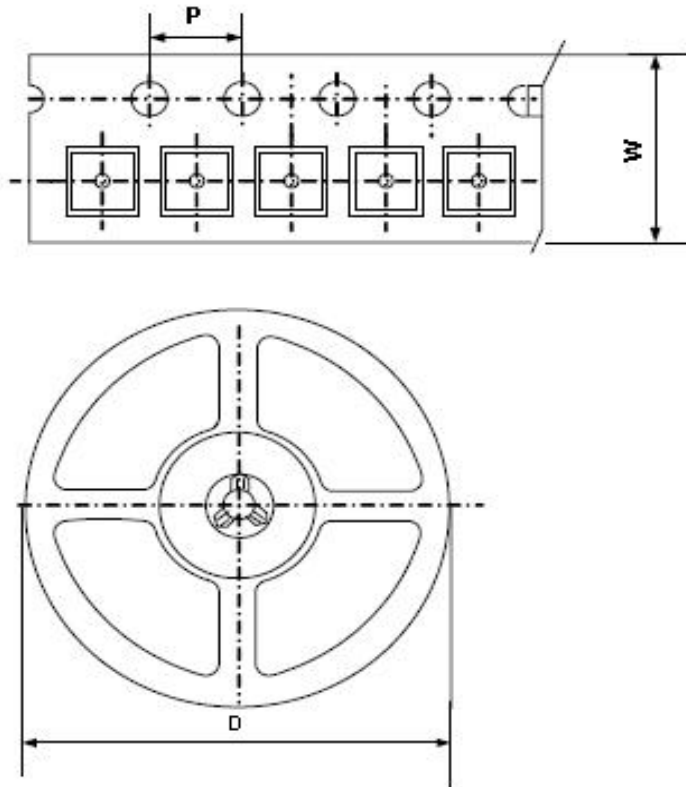


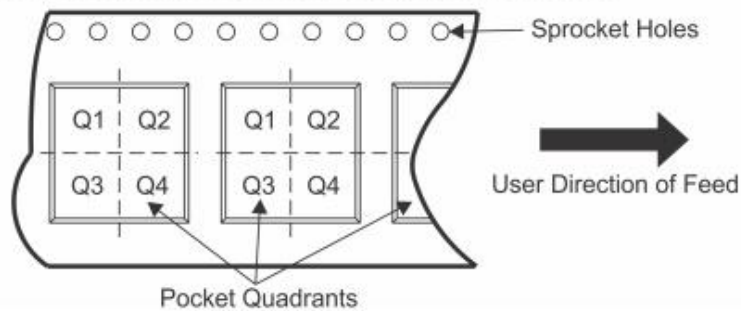
Figure 1, Typical Application Circuit of AS1805OD

■ **Packing Information**

SOT23-3L:



**QUADRANT ASSIGNMENTS FOR PIN 1 ORIENTATION IN TAPE**



Device	Package Type	SPQ	Carrier Width (W)	Pitch(P)	Reel Size(D)	Pin1 Quadrant
AS1805ODSTRN(Y)	SOT23-3L	3000pcs	8.0±0.1 mm	4.0±0.1 mm	180±1 mm	Q3

Note: Carrier Tape Dimension, Reel Size and Packing Minimum

■ **Packing Information**

**SIP-3L**

1. Packing type: Bulk
2. Packing minimum: 1000pcs