

**Magnetic Sensor IC**
**High Sensitivity Bipolar Latch  
Detection Hall-Effect  
Sensor ICs**

**AS1632**
**● General Description**

Using BiCMOS process, the AS1632 is designed for high performance latch detection hall effect application, such as transportation, industrial and commercial, medical, home appliances, rotor position sensing, brushless DC motor etc. The hall IC integrated an on-chip hall voltage generator for magnetic sensing, a comparator that amplifies the hall voltage, hall sensor with dynamic offset cancellation system, an pull-up resistance, and a Schmitt trigger to provide switching hysteresis for noise rejection, reverse protection, and a voltage regulator for operation with supply voltage of 2.5V to 28V.

AS1632 is designed to respond to alternating North and South poles. While the magnetic flux density (B) is larger than operate point ( $B_{OP}$ ), the output will be turned on (low), the output is held until the magnetic flux density (B) is lower than release point ( $B_{RP}$ ), then turn off (high).

The device is available in SOT23-3L Package and is rated over the  $-40^{\circ}\text{C}$  to  $150^{\circ}\text{C}$ . the package is RoHS compliant.

**● Features**

- Input Voltage Range : 2.5V to 28V
- Reverse Protection voltage: -30V
- Over Voltage Protection: 30V
- Bipolar Latch Operation
- High Performance BiCMOS Process Tech.
- High Sensitivity Hall Sensor
- Magnetic Sensitivity (typical)  
 $B_{OP}=30\text{Gauss}$ ,  $B_{RP}=-30\text{Gauss}$
- Integrated Pull-up Resistance
- Output Pin 36V Over Voltage Protection
- Small Solution Size
- RoHS Compliant
- SOT23-3L and SIP-3L Packages
- $-40^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$  Temperature Range

**● Applications**

- Automotive, Home appliances, Industrial
- Rotor Position Sensing
- Brushless DC Motor/Fan
- Speed & RPM Sensing
- Tachometer, Counter Pickup
- Motor and Fan Control
- Electronic Window Lift
- Convertible Roof Position
- Revolution Counting
- Robotics Control
- Medical Equipment Using Electric Motors

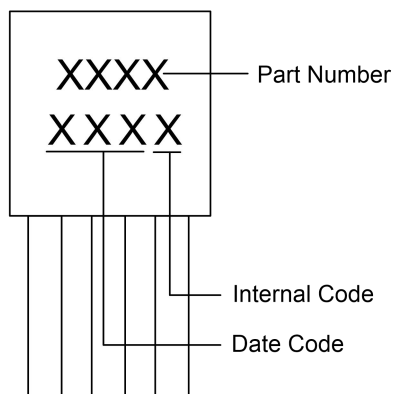
**■ Ordering Information**
**AS1632XXX**

Package:	Packing:	Temperature Grade:
M: SIP-3L	B: Bulk	Y: $-40^{\circ}\text{C}\sim 125^{\circ}\text{C}$
W: SOT23-3L	R: Tape&Reel	Z: $-40^{\circ}\text{C}\sim 150^{\circ}\text{C}$

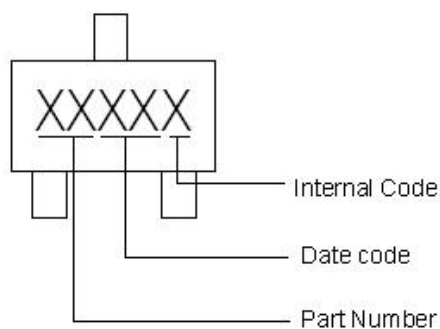
Part Number	$B_{OP}/B_{RP}$ (Gauss)	Package Type	Package Qty	Temperature	Eco Plan	Lead
AS1632MBY	30/-30	SIP-3L	1K/Package	$-40\sim 125^{\circ}\text{C}$	RoHS	Cu
AS1632WRY	30/-30	SOT23-3L	7-in reel 3000pcs/reel	$-40\sim 125^{\circ}\text{C}$	RoHS	Cu
AS1632MBZ	30/-30	SIP-3L	1K/Package	$-40\sim 150^{\circ}\text{C}$	RoHS	Cu
AS1632WRZ	30/-30	SOT23-3L	7-in reel 3000pcs/reel	$-40\sim 150^{\circ}\text{C}$	RoHS	Cu

## ■ Marking Information

### SIP-3L



### SOT23-3L



## ■ Typical Application Circuit

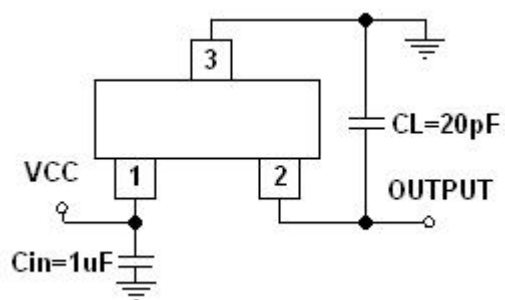
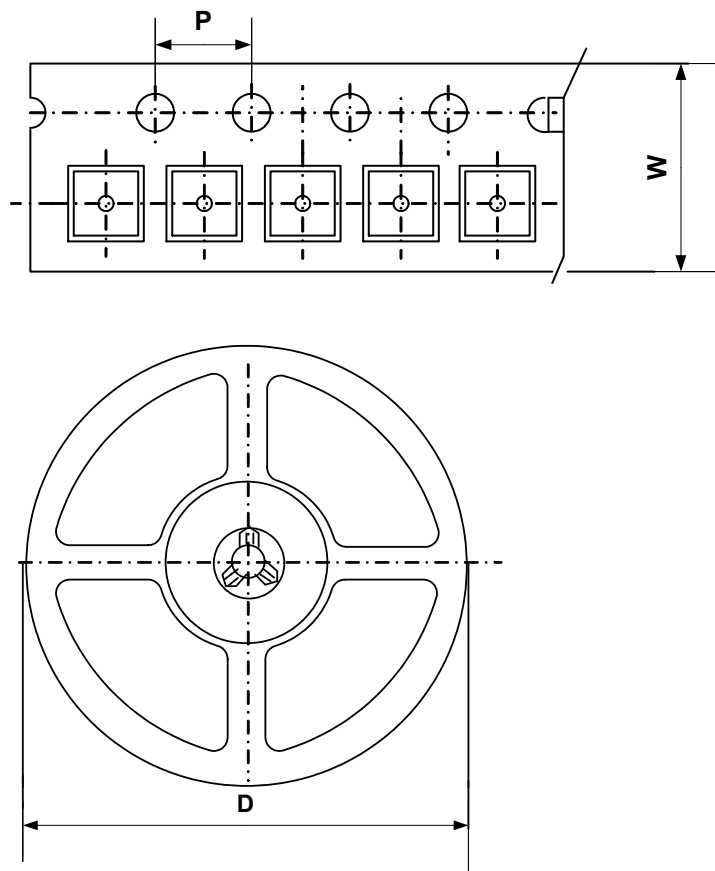


Figure 1, Typical Application Circuit of AS1632

## ■ Packing Information

SOT23-3L



Package Type	Carrier Width (W)	Pitch (P)	Reel Size(D)	Packing Minimum
SOT23-3L	8.0±0.1 mm	4.0±0.1 mm	180±1 mm	3000pcs

Note: Carrier Tape Dimension, Reel Size and Packing Minimum

## ■ Packing Information

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