

Magnetic Sensor IC

Latch Detection High Performance Hall-Effect Sensor IC



AS1940

● **General Description**

Using bipolar process, the AS1940 is designed for high performance latch detection hall effect application, such as 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 amplifiers the hall voltage, an open collector output, and a Schmitt trigger to provide switching hysteresis for noise rejection, and a voltage regulator for operation with supply voltage of 3.2V to 24V.

AS1940 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 and SIP-3L Package and is rated over the -50°C to 150°C. the package is RoHS compliant.

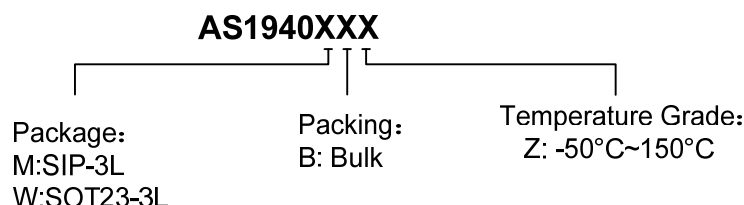
● **Features**

- Input Voltage Range : 3.2V to 24V
- Bipolar Latch Operation
- High Performance Bipolar Process Tech.
- High Sensitivity Hall Sensor
- Magnetic Sensitivity (typical)
 $B_{OP}=45\text{Gauss}$, $B_{RP}=-45\text{Gauss}$
- Open Collector Output
- Small Solution Size
- RoHS Compliant
- Small SOT23-3L and SIP-3L Packages
- -50°C to +150 °C Temperature Range

● **Applications**

- Automotive, Home appliances, Industrial
- Rotor Position Sensing
- Brushless DC Motor/Fan
- Speed Measurement
- Revolution Counting
- Magnetic Encoder

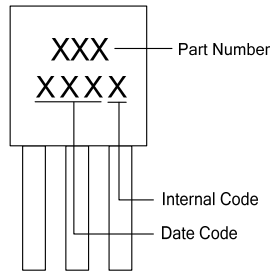
■ **Ordering Information**



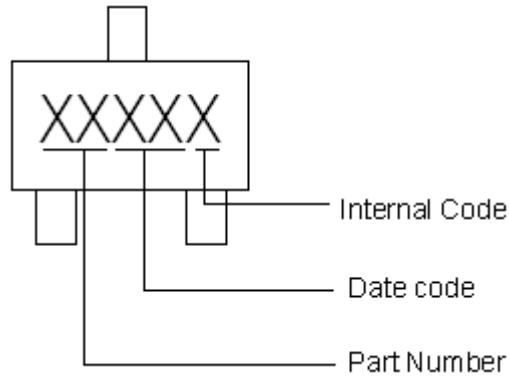
Part Number	B_{OP}/B_{RP} (Gauss)	Package Type	Package Qty	Temperature	Eco Plan
AS1940MBZ	±45	SIP-3L	1K/Package	-50~150°C	RoHS
AS1940WRZ	±45	SOT23-3L	7-in reel 3000pcs/reel	-50~150°C	RoHS

■ **Marking Information**

SIP-3L



SOT23-3L



■ **Typical Application Circuit**

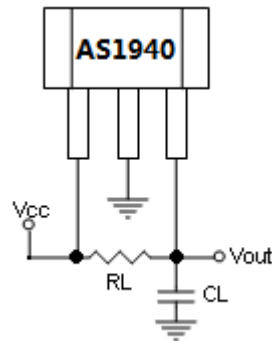
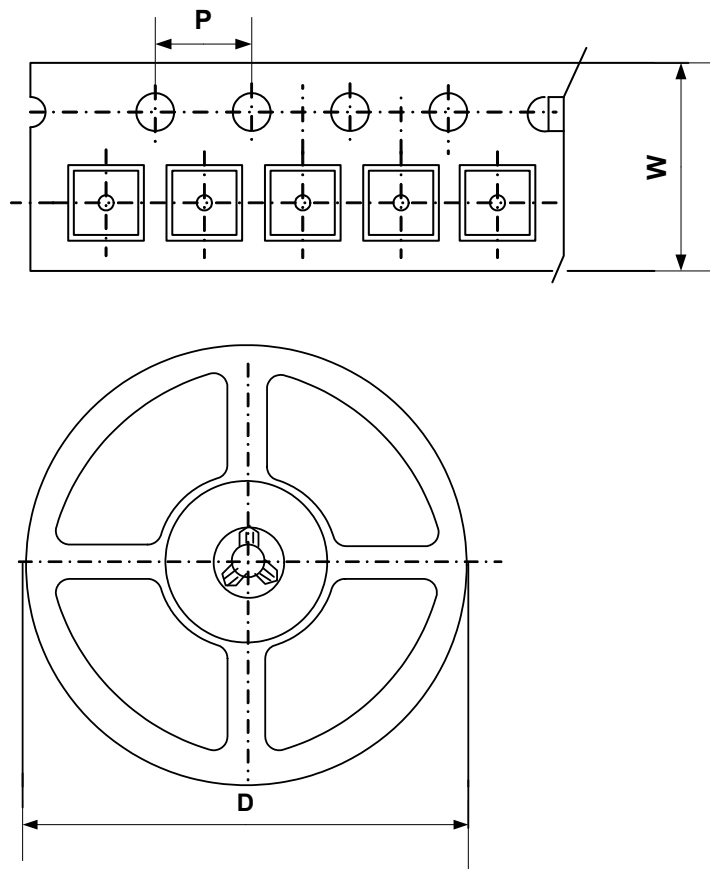


Figure 1, Typical Application Circuit of AS1940

■ 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

SIP-3L

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