

Magnetic Sensor IC

Latch Detection High Performance Hall-Effect Sensor IC



AS1692S/3S/4S

● General Description

Using BiCMOS process, the AS1692S/3S/4S is designed for high performance latch detection hall-effect application, such as automotive, industrial, electric tools, 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, hall sensor with dynamic offset cancellation system, an open drain output, and a Schmitt trigger to provide switching hysteresis for noise rejection, and a voltage regulator for operation with supply voltage of 2.5V to 24V.

AS1692S/3S/4S 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 SIP-3L and SOT23-3L Package and is rated over the -40°C to 150°C . the package is RoHS compliant.

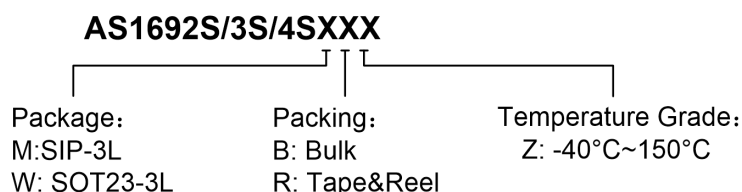
● Features

- High Performance BiCMOS Process Tech.
- Input Voltage Range : 2.5V to 24V
- Resistant to physical stress
- Bipolar Latch Operation
- High Sensitivity Hall Sensor
- High Chopping Frequency
- Magnetic Sensitivity (typical)
 - ✓ AS1692S: $B_{OP}=20\text{Gauss}$, $B_{RP}=-20\text{Gauss}$
 - ✓ AS1693S: $B_{OP}=30\text{Gauss}$, $B_{RP}=-30\text{Gauss}$
 - ✓ AS1694S: $B_{OP}=40\text{Gauss}$, $B_{RP}=-40\text{Gauss}$
- Open Drain Output
- Small Solution Size
- RoHS Compliant
- SIP-3L and SOT23-3L Packages
- -40°C to $+150^{\circ}\text{C}$ Temperature Range

● Applications

- Electric Tools
- Automotive, Home appliances, Industrial
- Rotor Position Sensing and Flow Meters
- Brushless DC Motor/Fan
- Speed Measurement
- Revolution Counting
- Valve and Solenoid Status
- Proximity Sensing
- Tachometers
- Magnetic Encoder

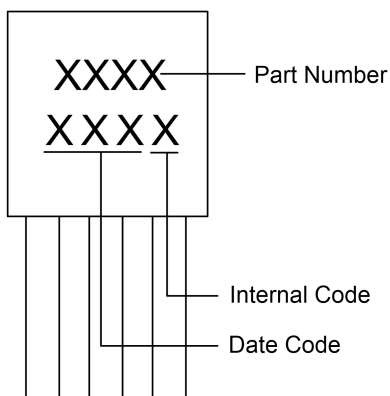
■ Ordering Information



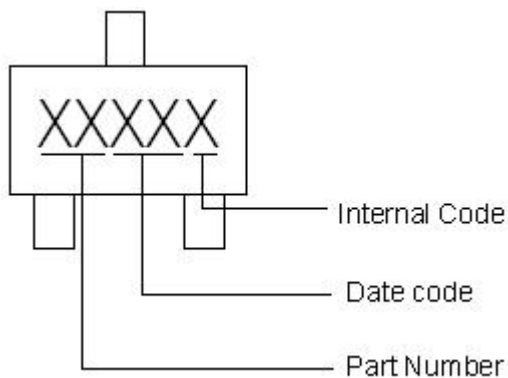
Part Number	B_{OP}/B_{RP} (Gauss)	Package Type	Package Qty	Temperature	Eco Plan
AS1692SMBZ	± 20	SIP-3L	1K/Package	$-40\sim 150^{\circ}\text{C}$	RoHS
AS1692SWRZ	± 20	SOT23-3L	7-in reel 3000pcs/reel	$-40\sim 150^{\circ}\text{C}$	RoHS
AS1693SMBZ	± 30	SIP-3L	1K/Package	$-40\sim 150^{\circ}\text{C}$	RoHS
AS1693SWRZ	± 30	SOT23-3L	7-in reel 3000pcs/reel	$-40\sim 150^{\circ}\text{C}$	RoHS
AS1694SMBZ	± 40	SIP-3L	1K/Package	$-40\sim 150^{\circ}\text{C}$	RoHS
AS1694SWRZ	± 40	SOT23-3L	7-in reel 3000pcs/reel	$-40\sim 150^{\circ}\text{C}$	RoHS

■ **Marking Information**

SIP-3L:



SOT23-3L



■ **Typical Application Circuit**

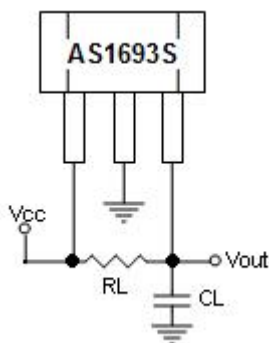
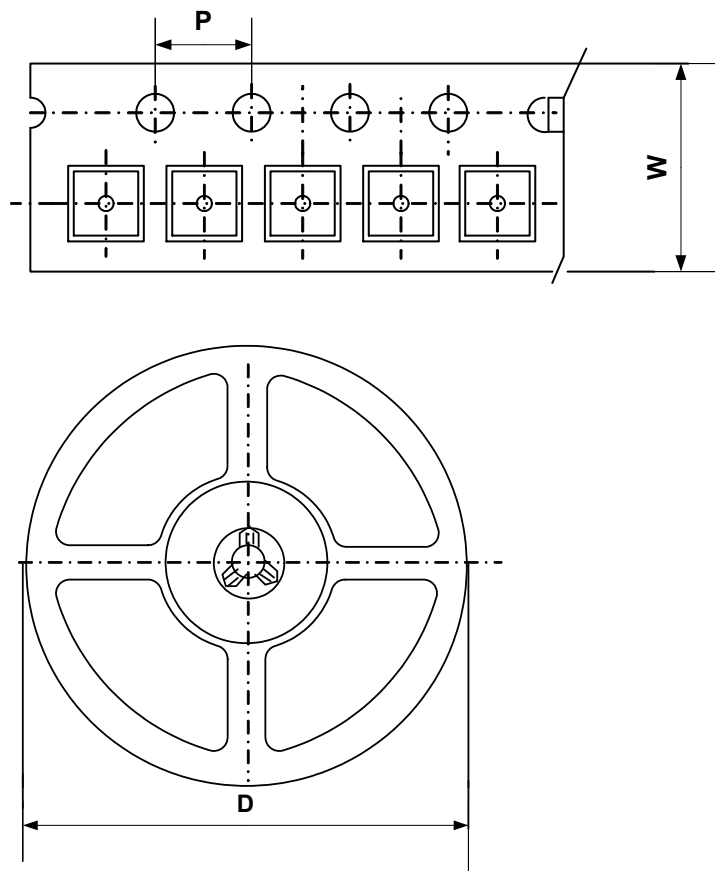


Figure 1, Typical Application Circuit of AS1693S

■ **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