

Magnetic Sensor IC

Latch Detection High Performance Hall-Effect Sensor IC



AS1601

● General Description

Using bipolar process, the AS1601 is designed for high performance latch detection hall effect application, such as E-bike, 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 3.5V to 60V.

The integrated filter and protection block can keep the output voltage at safety level and avoid the damage of the sensors.

AC1601 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 Package and is rated over the -40°C to 150°C . the package is RoHS compliant.

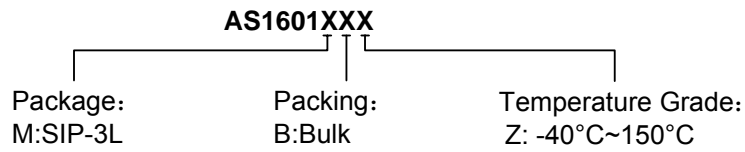
● Features

- Input Voltage Range : 3.8V to 60V
- Bipolar Latch Operation
- High Performance Bipolar Process Tech.
- Integrated output filter and protection
- Magnetic Sensitivity (typical)
 $B_{OP}=40\text{Gauss}$, $B_{RP}=-40\text{Gauss}$
- Open Collector Output
- Small Solution Size
- RoHS Compliant
- SIP-3L Packages
- -40°C to $+150^{\circ}\text{C}$ Temperature Range

● Applications

- BLDC Communication for E-bike
- BLDC Communication for E-Motorcycle
- Automotive, Home appliances, Industrial
- Rotor Position Sensing
- Brushless DC Motor/Fan
- Speed Measurement
- Revolution Counting
- Magnetic Encoder

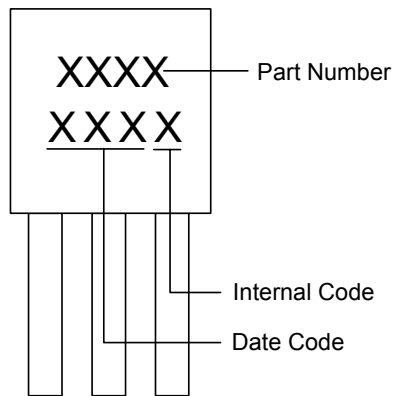
● **Ordering Information**



| Part Number | B _{OP} /B _{RP} (Gauss) | Package Type | Package Qty | Temperature | Eco Plan | Lead |
|-------------|---|--------------|-------------|-------------|----------|------|
| AS1601MBZ | ±40 | SIP-3L | 1K/Package | -40~150°C | RoHS | Cu |

● **Marking Information**

SIP-3L



● **Typical Application Circuit**

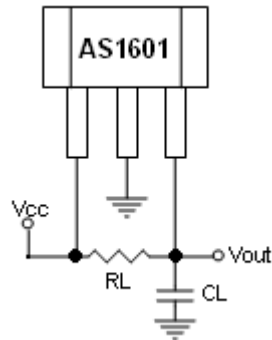


Figure 1, Typical Application Circuit of AS1601