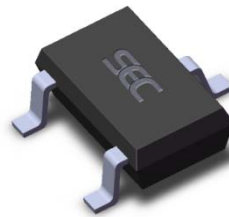


Features

- Miniature construction
- Low-Noise Output
- 2.5 V to 6.5 V Operation
- High stability
- High sensitivity
- Low power consumption
- Temperature range of -40 °C to 85 °C



3 pin SOT23 (suffix SO)



3 pin SIP (suffix UA)

Description

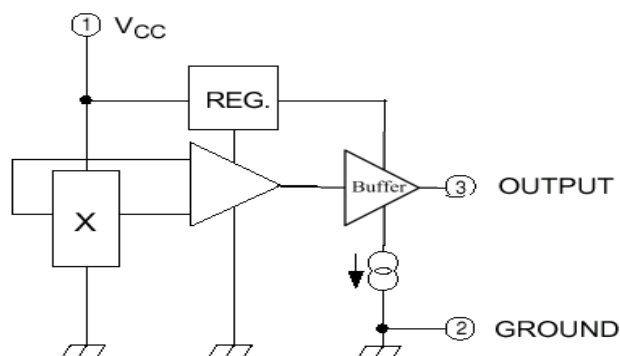
SS48150 Linear Hall-effect sensor is small, versatile linear Hall-effect device that is operated by the magnetic field from a permanent magnet or an electromagnet. The linear sourcing output voltage is set by the supply voltage and varies in proportion to the strength of the magnetic field. The integrated circuitry features

low noise output, which makes it unnecessary to use external filtering. It also includes thin film resistors to provide increased temperature stability and accuracy. The linear Hall sensor has an operating temperature range of -40 °C to 85 °C appropriate for commercial, consumer and industrial environments.

Typical Applications

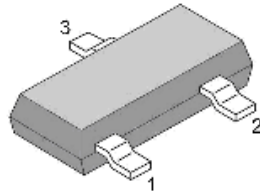
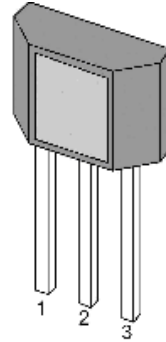
- Proximity detector
- Rotary encoder
- Motion Sensor
- Current sensor
- Position sensor

Functional Block Diagram



Pin Definitions and Descriptions

| SOT Pin № | SIP Pin № | Name | Type | Function |
|-----------|-----------|-----------------|--------|-----------------------|
| 1 | 1 | V _{DD} | Supply | Supply Voltage pin |
| 2 | 3 | OUT | Output | Open Drain Output pin |
| 3 | 2 | GND | Ground | Ground pin |

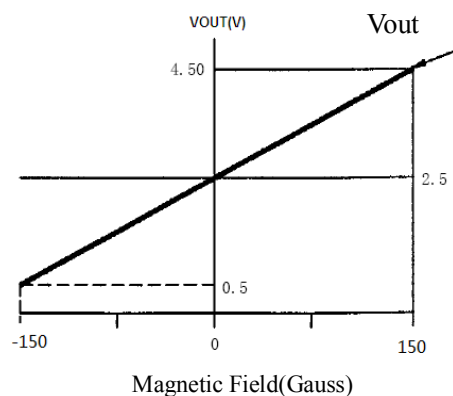

SOT-23

TO-92

Electrical Characteristics

Operating Parameters $T_A = 25^\circ\text{C}$, $V_{CC} = 5.0\text{ V}$

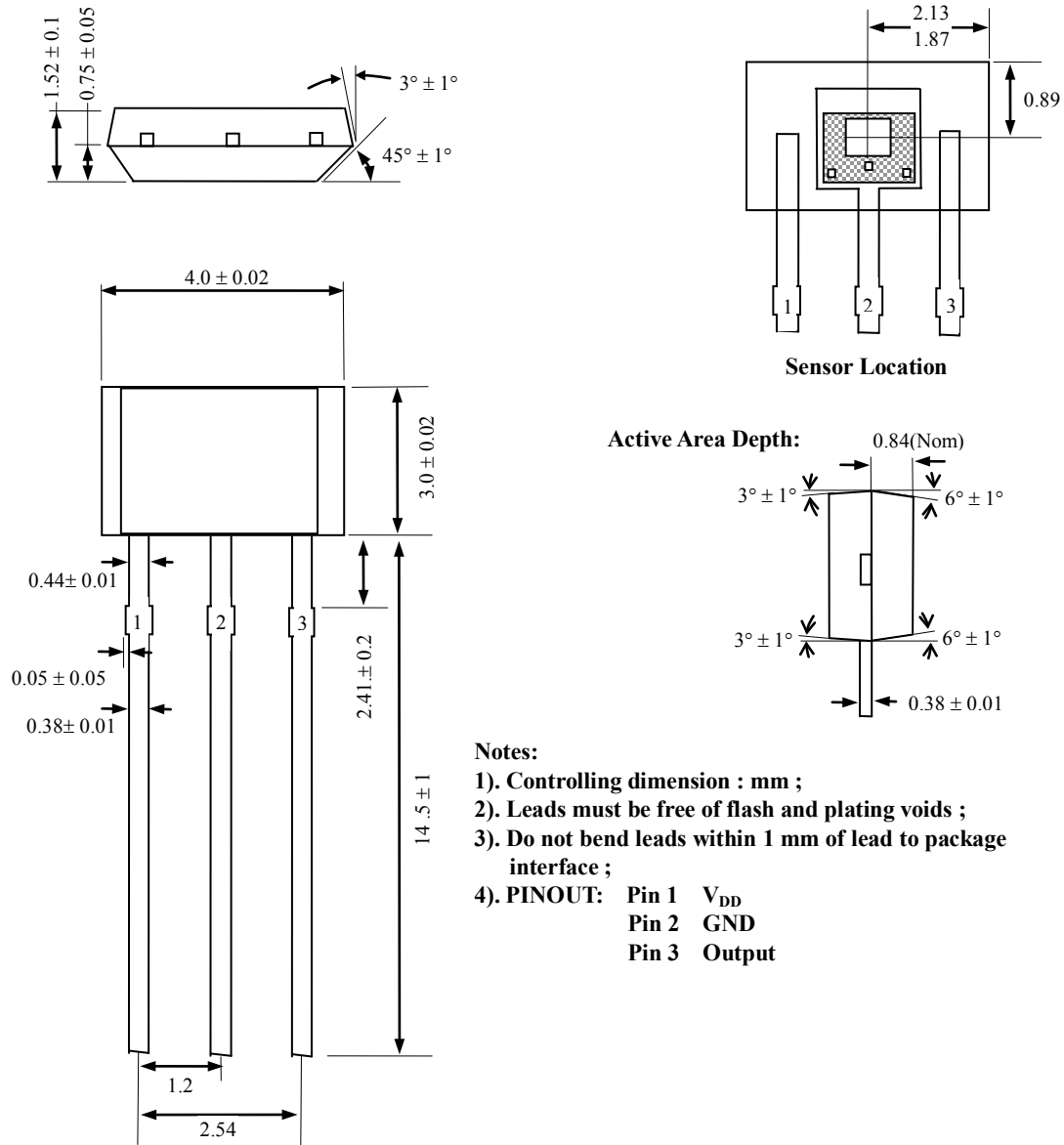
| Parameter | Symbol | Test Conditions | Min | Typ | Max | Units |
|--------------------------|------------------|---|------|-----|------|-------|
| Operating voltage | V _{CC} | Operating | 2.5 | 5 | 6.5 | V |
| Supply current | I _{CC} | Average | | 2 | 3 | mA |
| Output Resistor | R _O | | | 120 | | Ω |
| Response Time | Tack | | | 3 | | uS |
| Quiescent Output Voltage | V _o | B = 0G | 2.35 | 2.5 | 2.65 | V |
| Sensitivity | ΔV_{OUT} | T _A = 25°C, V _{CC} = 5V | 13 | 15 | 17 | mV/G |
| Min Output Voltage | | | 0 | | 0.1 | V |
| Max Output Voltage | | | 4.9 | | 5 | V |

Performance Characteristics



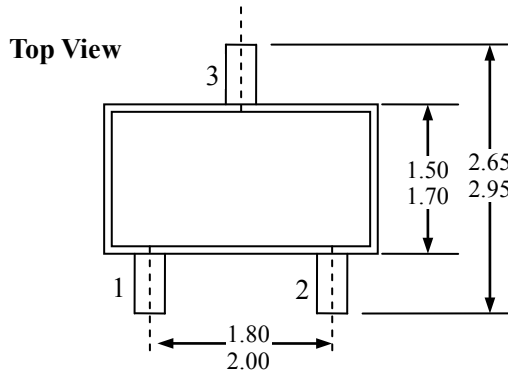
Package Information

Package UA, 3-Pin SIP:

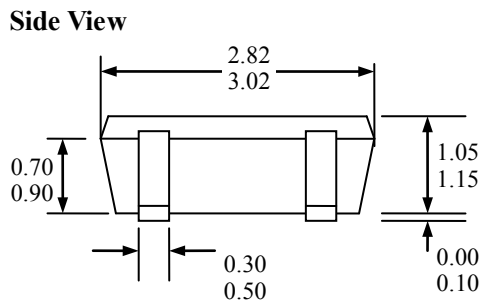
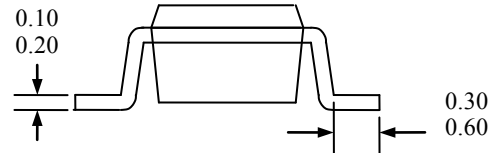
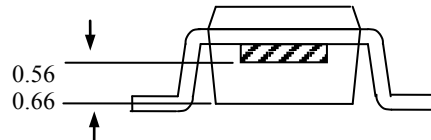
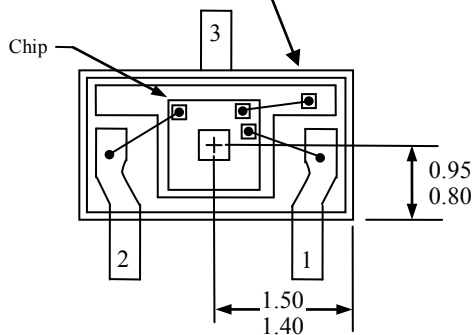


Notes:

- 1). Controlling dimension : mm ;
- 2). Leads must be free of flash and plating voids ;
- 3). Do not bend leads within 1 mm of lead to package interface ;
- 4). PINOUT: Pin 1 V_{DD}
 Pin 2 GND
 Pin 3 Output

Package SO, 3-Pin SOT-23:

Notes:

- 1). **HNOUT:** Pin 1 V_{DD}
Pin 2 Output
Pin 3 GND
- 2). All dimensions are in millimeters ;


End View

SOT-23 Hall plate location
Bottom View of SOT-23 Package


Ordering Information

| Part No. | Pb-free | Temperature Code | Package Code | Packing |
|-------------|---------|------------------|--------------|-------------------------------|
| SS48150EUA | YES | -40°C to 85°C | TO-92 | Bulk, 1000 pieces/bag |
| SS48150ESOT | YES | -40°C to 85°C | SOT-23 | 7-in. reel, 3000 pieces/ reel |