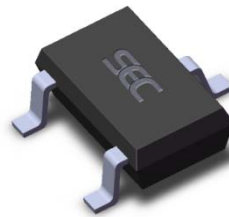
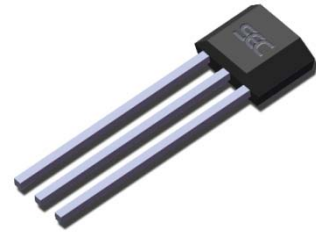


Features

- Miniature construction
- Low-Noise Output
- 2.7 V to 6.5 V Operation
- High stability
- High sensitivity
- Low power consumption
- Temperature range of -40 °C to 150 °C



3 pin SOT23 (suffix SO)



3 pin SIP (suffix UA)

Description

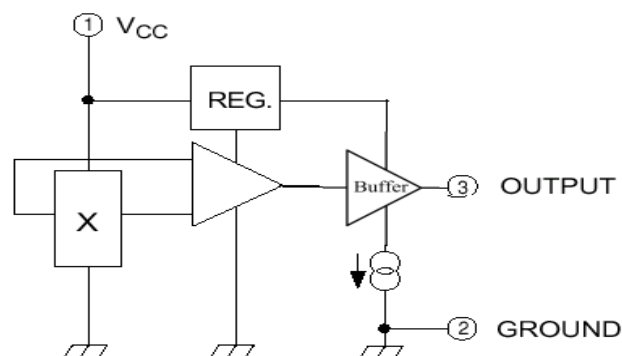
SS4825-A Linear Hall-effect sensor is small, versatile linear Hall-effect device that is operated by the magnetic field from a permanent magnet or an electromagnet. The linear sourcing output voltage is set by the supply voltage and varies in proportion to the strength of the magnetic field. The integrated 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 150 °C appropriate for commercial, consumer and industrial environments.

Typical Applications

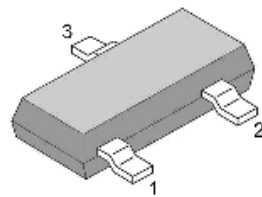
- Proximity detector
- Rotary encoder
- Motion Sensor
- Current sensor
- Position sensor

Functional Block Diagram

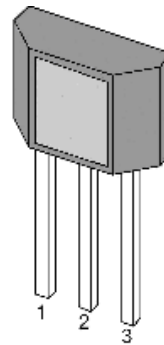


Pin Definitions and Descriptions

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

Absolute Maximum Ratings

Parameter	Symbol	Value	Units
Supply Voltage (operating)	V _{CC}	8.0	V
Output Current	I _{OUT}	20	mA
Operating Temperature Range	T _A	-40~150	°C
Storage Temperature Rang	T _S	-65~150	°C

Electrical Characteristics

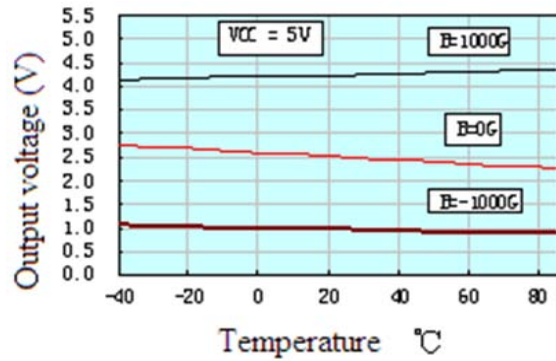
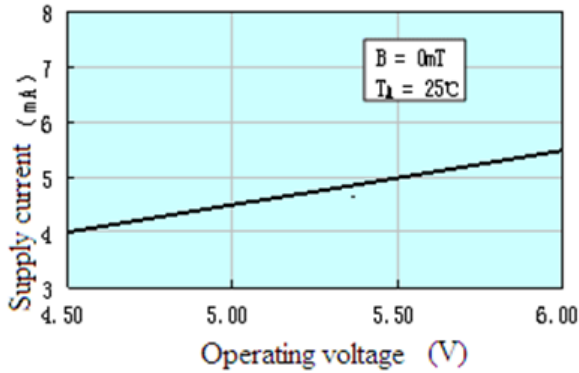
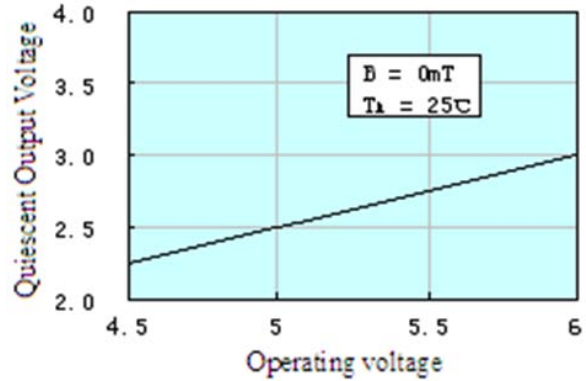
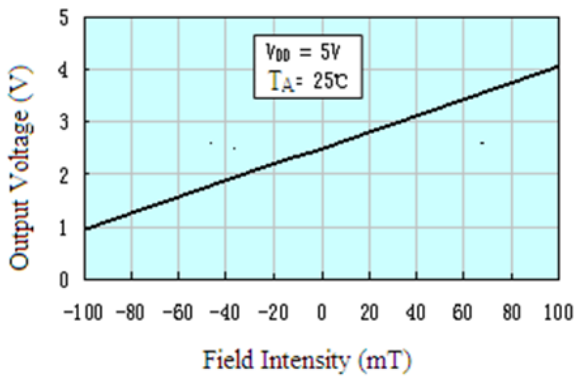
Operating Parameters T_A =25°C, V_{CC} =5.0 V

Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
Operating voltage	V _{CC}	Operating	2.7		6.5	V
Supply current	I _{CC}	Average		3	5	mA
Output Resistor	R _O			40	100	Ω
Response Time	Tack			3		uS
Quiescent Output Voltage	V _o	B = 0G	2.35	2.5	2.65	V
Noise	V _{no}	B _w =10Hz-10KHz		90		uV
Min Output Voltage			0		0.1	V
Max Output Voltage			4.9		5	V

Magnetic Characteristics

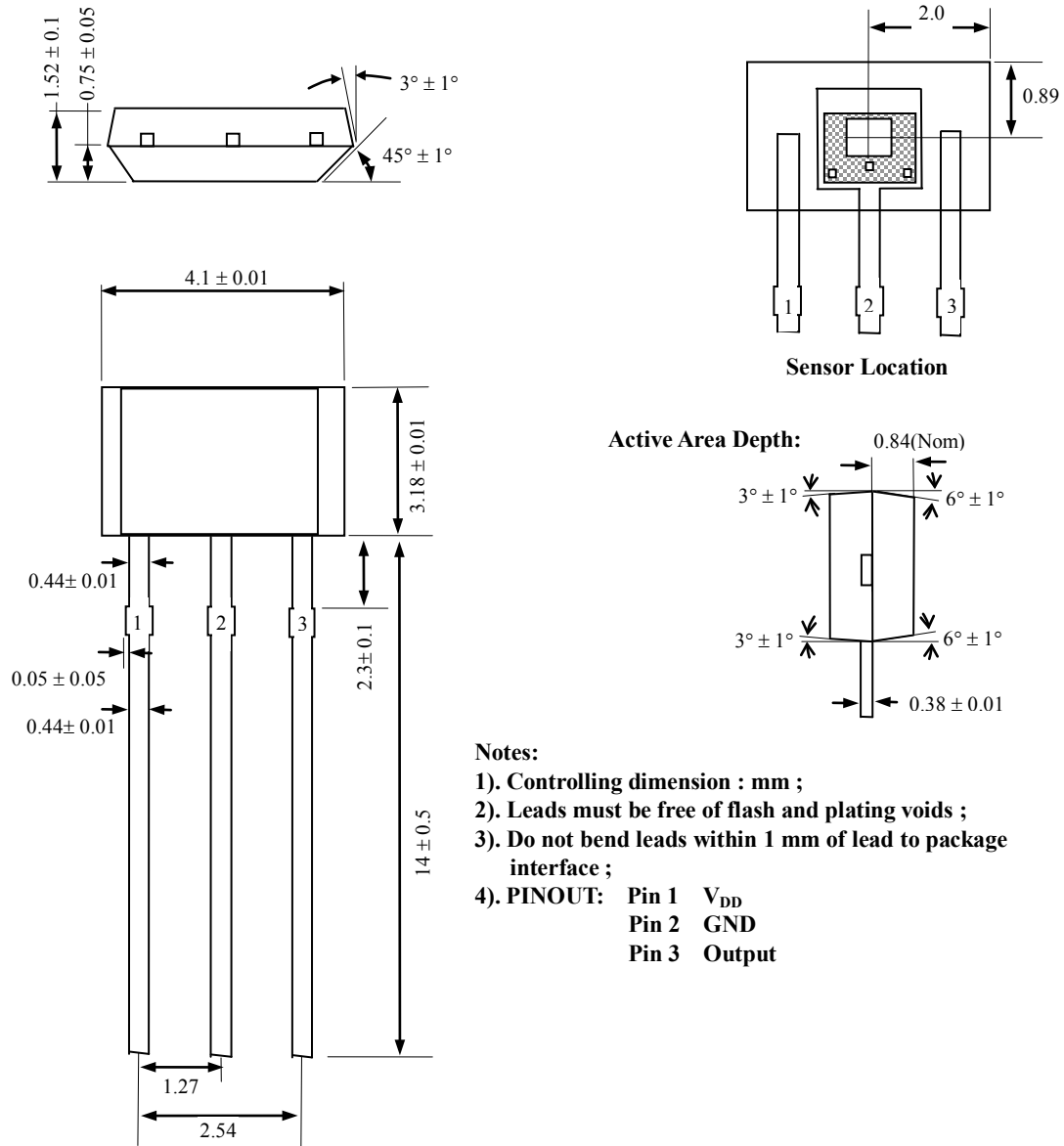
Parameter	Test Conditions	Min	Typ	Max	Units
Sensitivity	$T_A = 25^\circ\text{C}$	1.5	2.0	2.5	mV/Gs
Magnetic field strength range		± 650	± 1000		Gs
Linearity			- 0.007		Range%
Zero drift		- 0.10		0.10	$\% / ^\circ\text{C}$
Sensitivity temperature drift	$T_A \geq 25^\circ\text{C}$	- 0.15		0.05	$\% / ^\circ\text{C}$
	$T_A < 25^\circ\text{C}$	- 0.04		0.185	

Performance Characteristics



Package Information

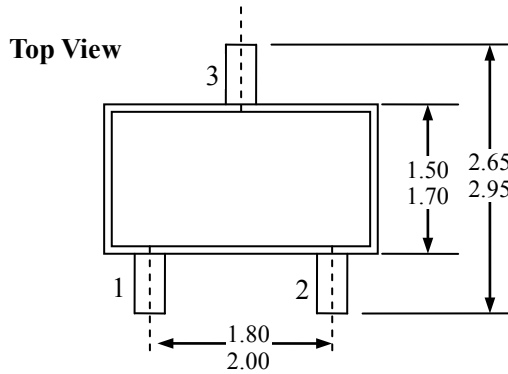
Package UA, 3-Pin SIP:



Notes:

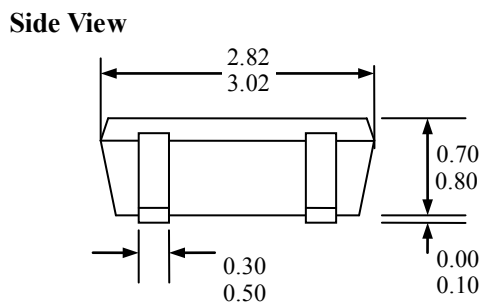
- 1). Controlling dimension : mm ;
- 2). Leads must be free of flash and plating voids ;
- 3). Do not bend leads within 1 mm of lead to package interface ;
- 4). PINOUT: **Pin 1** V_{DD}
Pin 2 GND
Pin 3 Output

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 ;

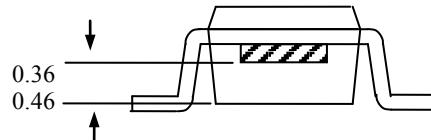
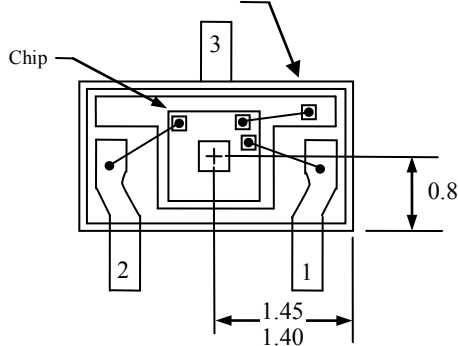


End View



SOT-23 Hall plate location

Bottom View of SOT-23 Package



Ordering Information

Part No.	Pb-free	Temperature Code	Package Code	Packing
SS4825-AEUA	YES	-40°C to 85°C	TO-92	Bulk, 1000 pieces/bag
SS4825-AESOT	YES	-40°C to 85°C	SOT-23	7-in. reel, 4000 pieces/ reel
SS4825-AKUA	YES	-40°C to 125°C	TO-92	Bulk, 1000 pieces/bag
SS4825-AKSOT	YES	-40°C to 125°C	SOT-23	7-in. reel, 4000 pieces/ reel
SS4825-ALUA	YES	-40°C to 150°C	TO-92	Bulk, 1000 pieces/bag
SS4825-ALSOT	YES	-40°C to 150°C	SOT-23	7-in. reel, 4000 pieces/ reel