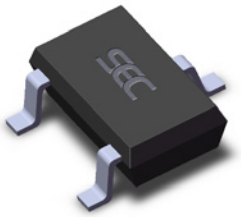
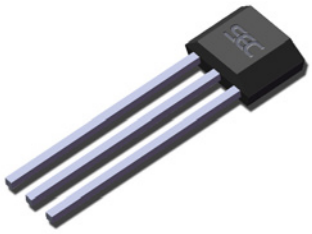
Features

- Miniature construction
- Low-Noise Output
- 4.5 V to 6 V Operation
- Magnetically Optimized Package
- Linear output for circuit design flexibility
- Temperature range of -40 °C to 150 °C



3 pin SOT23 (suffix SO)



3 pin SIP (suffix UA)

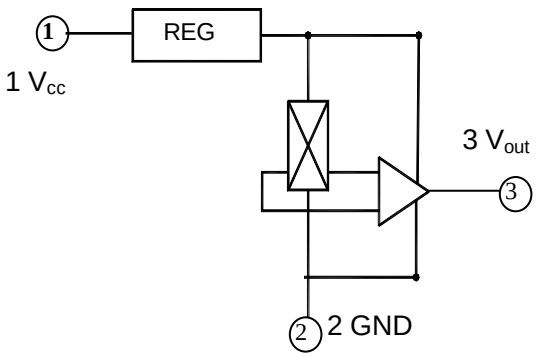
Description

SS49E 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

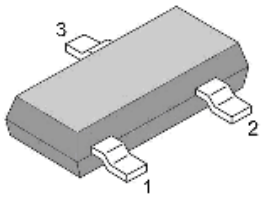
- Motor control
- Magnetic code reading
- Ferrous metal detector
- Current sensing
- Position sensing

Functional Block Diagram

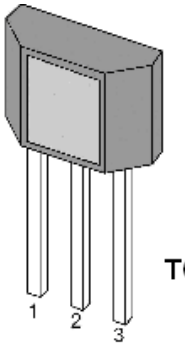


Pin Definitions and Descriptions

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

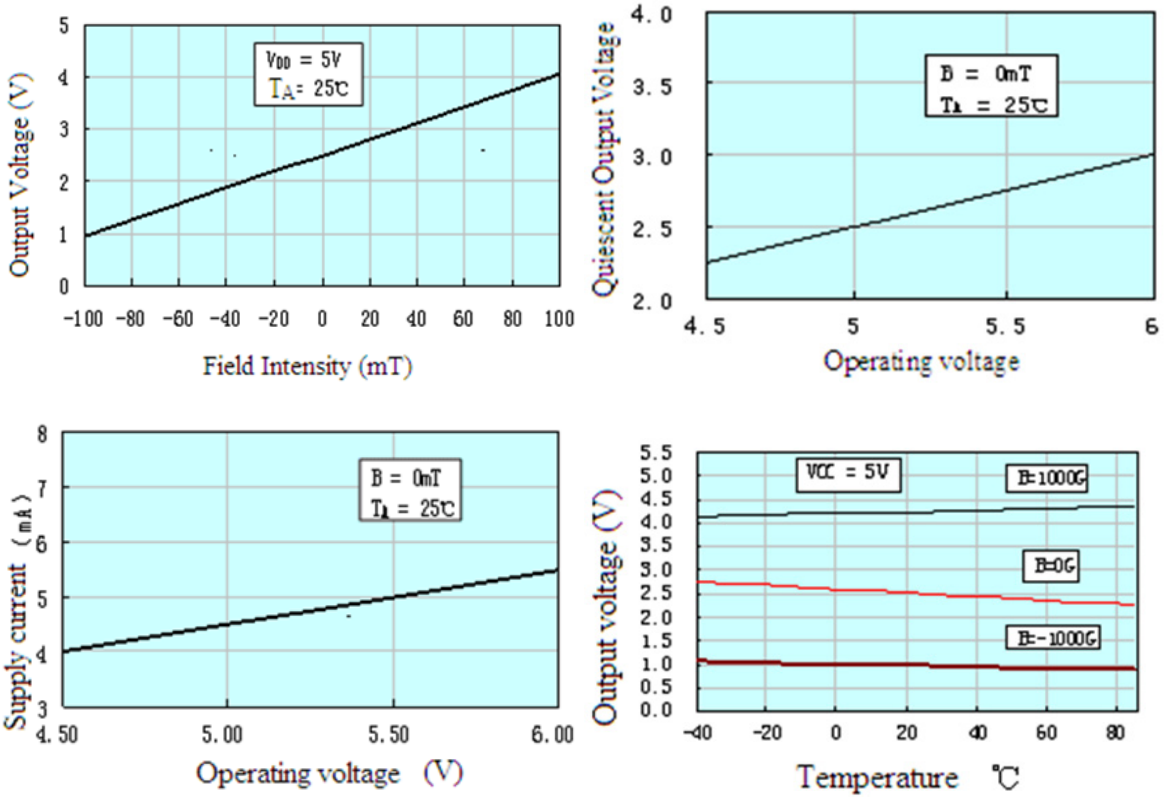
Parameter	Symbol	Value	Units
Supply Voltage (operating)	V_{CC}	8.0	V
Output Current	I_{OUT}	20	mA
Operating Temperature Range	T_A	-40~150	°C
Storage Temperature Rang	T_S	-65~150	°C

Electrical Characteristics

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

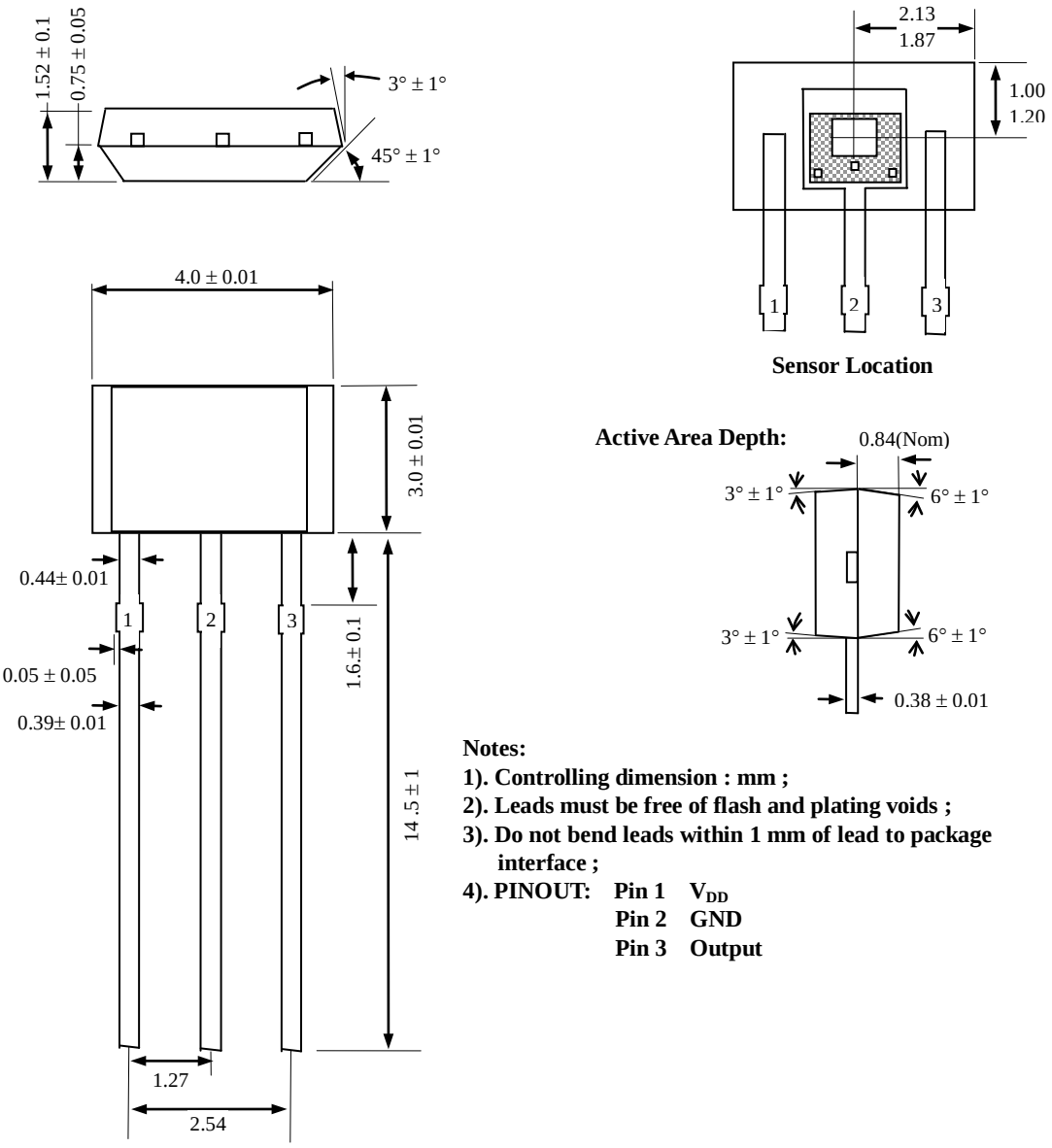
Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
Operating voltage	V_{CC}	Operating	3.0		6.5	V
Supply current	I_{CC}	Average		4.2	8.0	mA
Output Current	I_{OUT}		1.0	1.5		mA
Response Time	Tack			3		uS
Quiescent Output Voltage	Vo	B = 0G	2.25	2.5	2.75	V
Sensitivity	$\triangle V_{OUT}$	T_A = 25°C	2.0	2.5	3.0	mV/G
Min Output Voltage		B = -1500G		0.86		V
Max Output Voltage		B = 1500G		4.21		V
Linearity（% of Span)				-0.007		
Temperature Error （Null Drift）			-0.10		0.10	%/°C
Sensitivity Drift		$T_A \geq$ 25°C	-0.15		0.05	%/°C
		T_A < 25°C	-0.04		0.185	%/°C

Performance Characteristics



Package Information

Package UA, 3-Pin SIP:



Notes:

1). Controlling dimension : mm ;

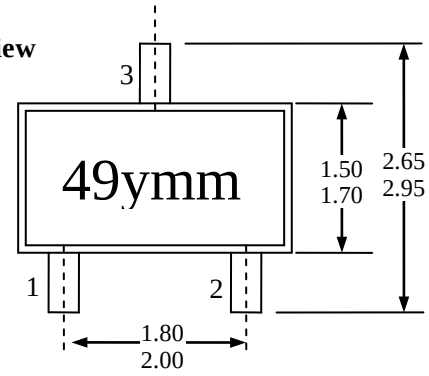
2). Leads must be free of flash and plating voids ;

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:

Top View



Notes:

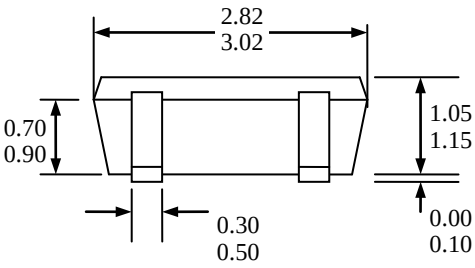
1). PINOUT: Pin 1VDD
Pin 2 Output
Pin 3 GND

2). All dimensions are in millimeters ;

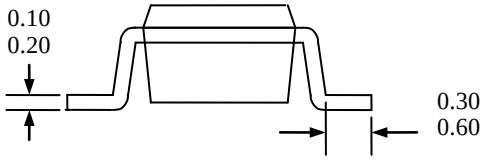
Marking:

49 -- Code of Device (49E) ;
y -- last 1 digit of year ;
mm -- Production Lot ;

Side View

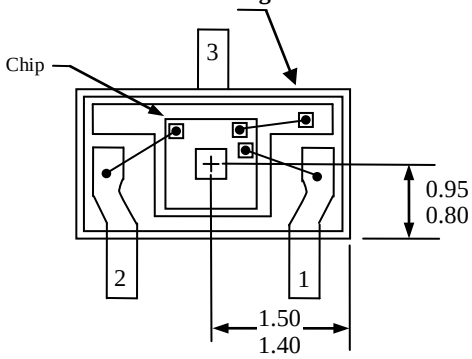


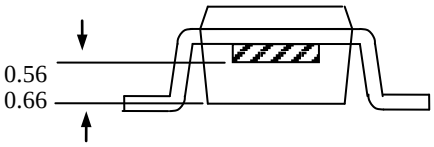
End View



SOT-23 Hall plate location

Bottom View of SOT-23 Package





Ordering Information

Part No.	Pb-free	Temperature Code	Package Code	Packing
SS49EUA	YES	-40°C to 85°C	TO-92	Bulk, 1000 pieces/bag
SS49ESOT	YES	-40°C to 85°C	SOT-23	7-in. reel, 3000 pieces/ reel
SS49KUA	YES	-40°C to 125°C	TO-92	Bulk, 1000 pieces/bag
SS49KSOT	YES	-40°C to 125°C	SOT-23	7-in. reel, 3000 pieces/ reel
SS49LUA	YES	-40°C to 150°C	TO-92	Bulk, 1000 pieces/bag
SS49LSOT	YES	-40°C to 150°C	SOT-23	7-in. reel, 3000 pieces/ reel