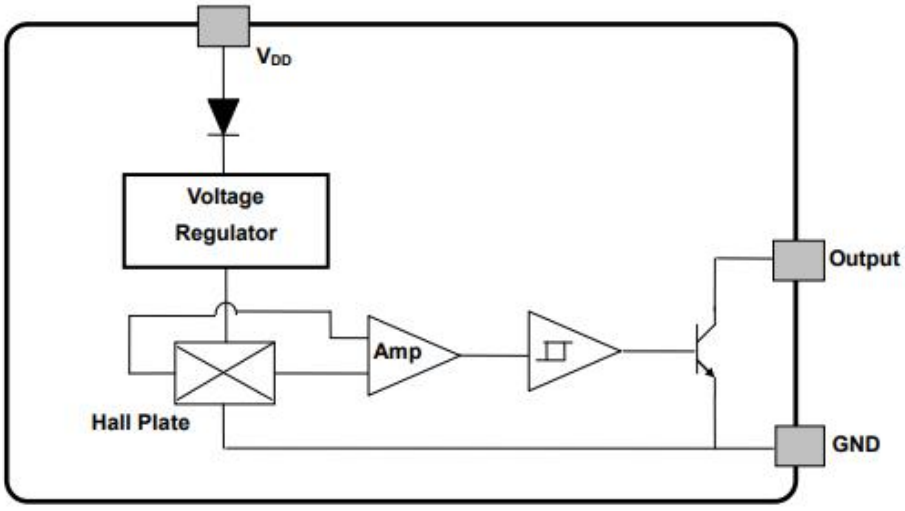
Features

- Reverse voltage protector in-built
- Wide operating voltage range from 3.5V to 24V
- Low sensitivity, fast reaction
- Wide operating temperature range from -40℃ to 85℃
- High reliability, miniature, ultrathin package

Applications

- Limit switch
- Current limit
- Rotation rate measurement
- Current sensor
- Magnetic location proximity switch

Functional Block Diagram



Absolute Maximum Ratings

Parameter	Symbol	Value	Units
Supply Voltage	V_{DD}	28	V
Supply Current	I_{DD}	50	mA
Output Voltage	V_{OUT}	28	V
Output Current	I_{OUT}	50	mA
Storage Temperature Range	TS	-65 to 170	℃

General Electrical Specifications

DC Operating Parameters TA= 25℃, VDD= 4.5V to 24V (unless otherwise specified)

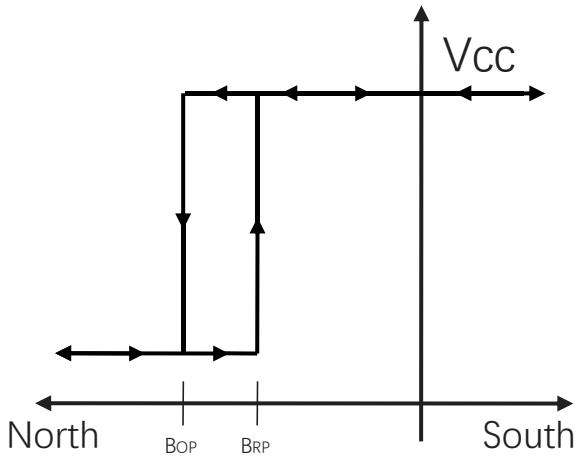
Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
Supply Voltage	V_{DD}	Operating	3.5		24	V
Supply Current	I_{DD}	B < BRP	4	5	7	mA
Output Saturation Voltage	$V_{DS(on)}$	IOUT = 20mA, B > BOP		0.3	0.5	V
Output Leakage Current	I_{OFF}	B < BRP VOUT = 24V		0.1	10	μA
Output Rise Time	TR	RL = 820Ω, CL = 20pF		0.04	2.0	μs
Output Fall Time	TF	RL =820Ω, CL = 20pF		0.18	2.0	μs

Magnetic Characteristics

Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
Operating Point	B_{OP}	Ta=25℃,Vdd=12V DC	150	170	180	G
Release Point	B_{RP}		100	125	130	G
Hysteresis	B_{HYS}			45		G

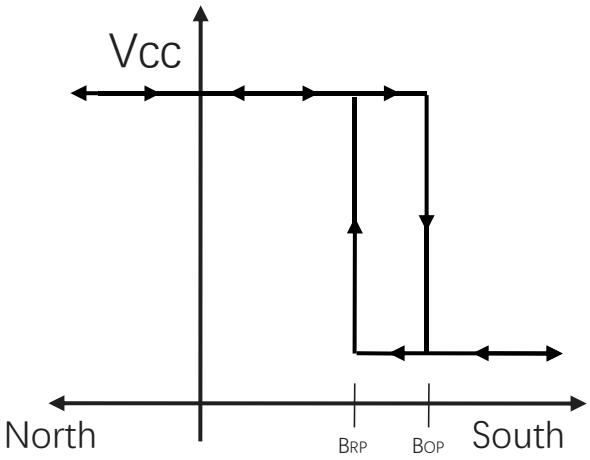
Switching Function Uni-polar (North)

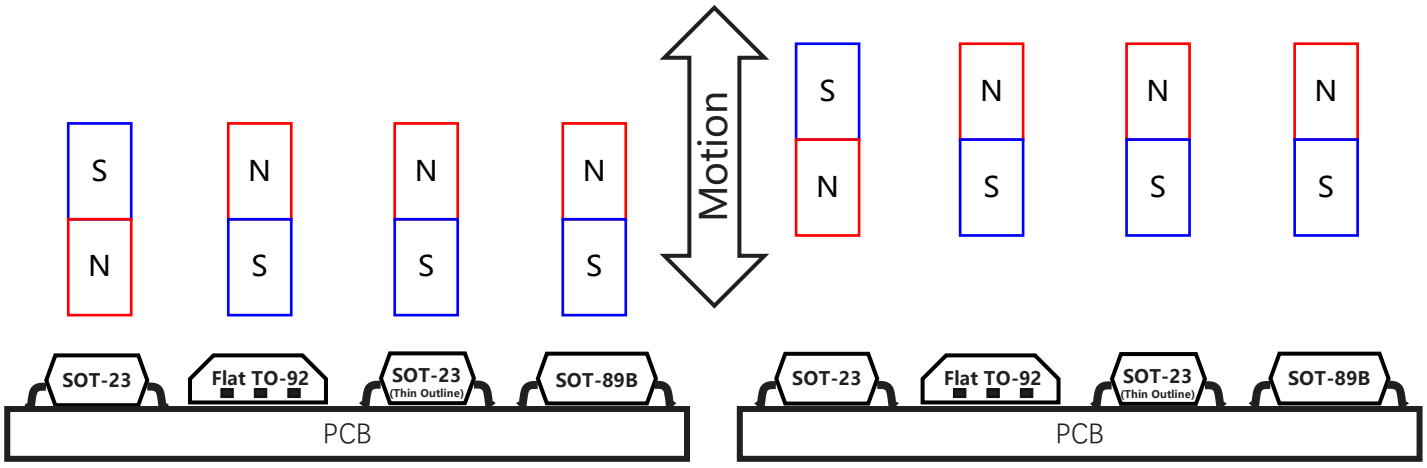
SOT-23



Switching Function Uni-polar (South)

SOT-23 (Thin Outline) / Flat TO-92 / SOT-89B



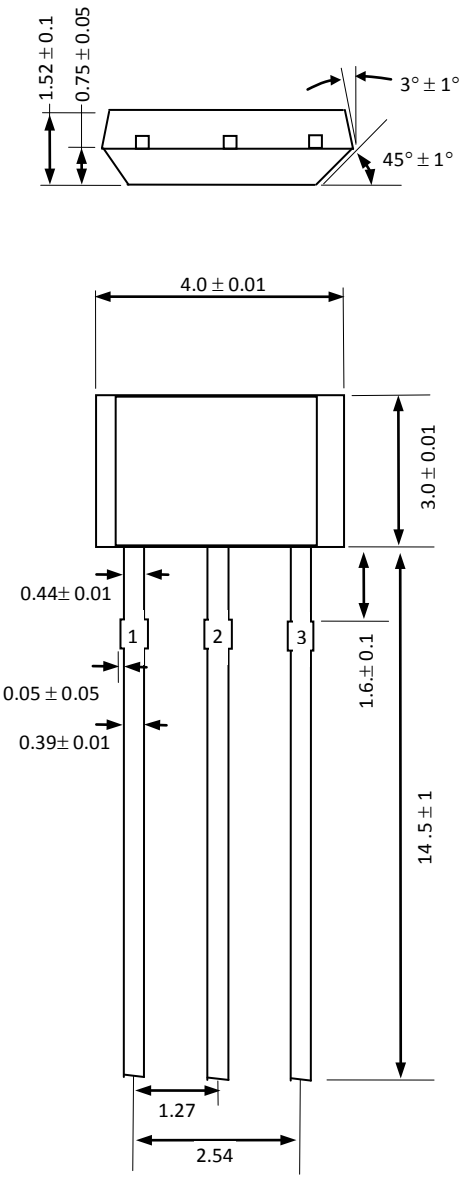


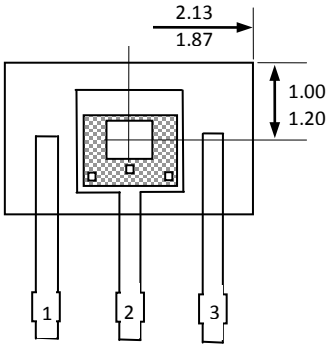
VOUT = Low

VOUT= High

Package Information

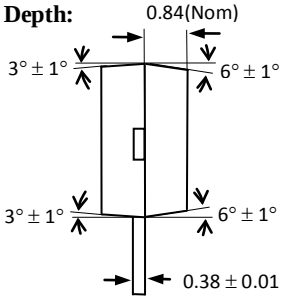
Package UA, 3-Pin SIP:





Sensor Location

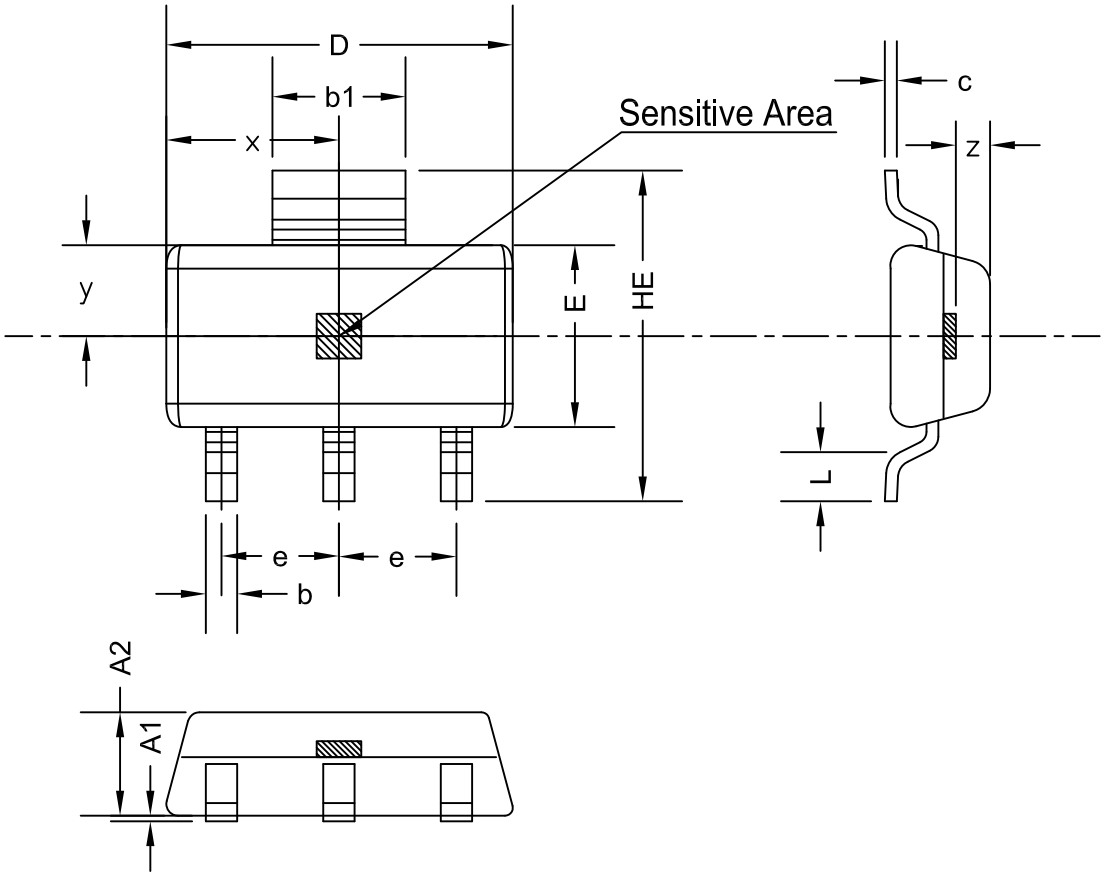
Active Area Depth:



Notes:

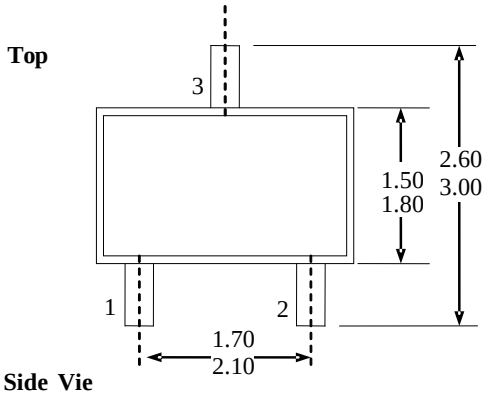
1). Controlling dimension : mm ;
2). Leads must be free of flash and plating voids ;
3). Do not bend leads within 1 mm of lead to package interface ;
4). PINOUT: Pin 1 V_{DD}
Pin 2 GND
Pin 3 Output

Package SF , 3-Pin SOT-89:

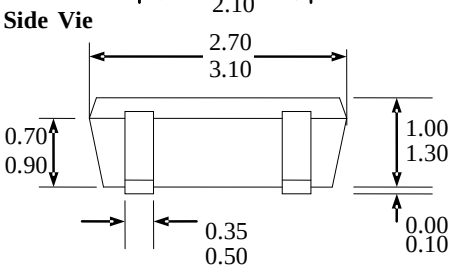


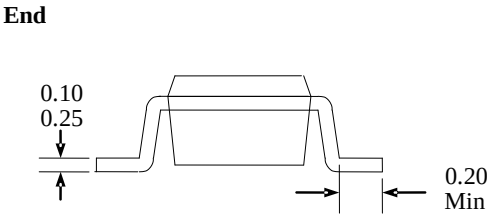
Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A1	0.000	0.100	0.000	0.004
A2	1.220	1.420	0.048	0.056
b	0.300	0.500	0.012	0.020
b1	1.600	1.800	0.063	0.070
D	4.400	4.600	0.173	0.181
c	1.152 REF		0.045 REF	
E	2.400	2.600	0.094	0.102
HE	4.000	4.400	0.157	0.173
e	1.500 TYP		0.060 TYP	
L	0.350	0.550	0.014	0.022
x	2.250TYP		0.089TYP	
y	1.250TYP		0.049TYP	
z	0.300TYP		0.012TYP	

Package SO, 3-Pin SOT-23:

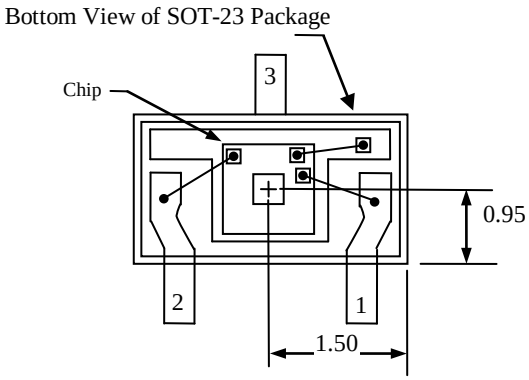


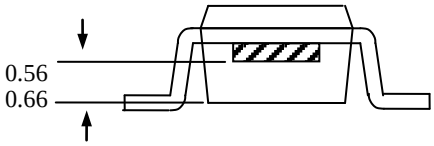
Notes
1). PINOUT: **Pin 1 V_{DD}**
Pin 2 Output
Pin 3 GND
2). All dimensions are in millimeters;





Hall plate location





Ordering Information

Part No.	Package Code
ME144E	UA (TO-92)
	SF (SOT-89)
	SO (SOT-23)