

OH137A0 /OH17 Bipolar Hall Switch

1. General Description

OH137A0, OH17 bipolar IC response to an N/S alternative magnetic field. Each device includes an on-chip Hall voltage generator for magnetic sensing, an amplifier that amplifies the Hall voltage, a Schmitt trigger to provide switching hysteresis for noise rejection, and open-collector output.

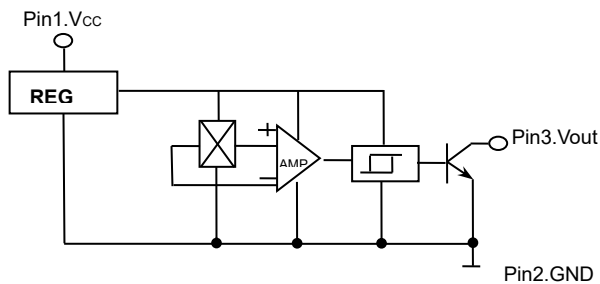
2. Features

- 4.5V to 24V DC operation voltage
- Open-Collector pre-driver
- 25mA maximum sinking output current.
- Reverse Polarity Protection

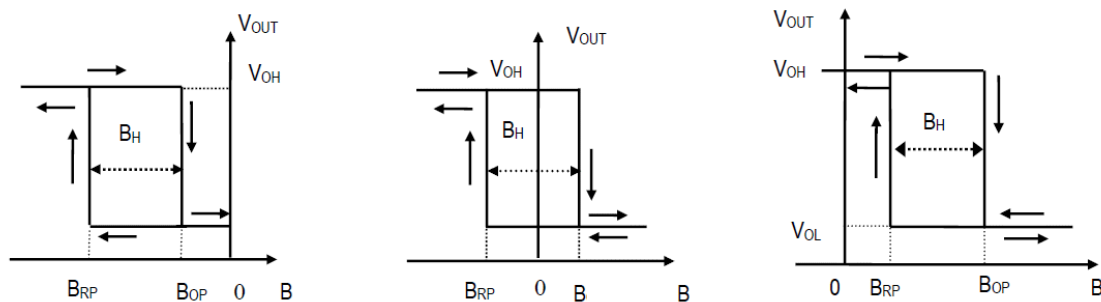
3. Applications

- Position detection
- Flow measurement
- CPU FAN

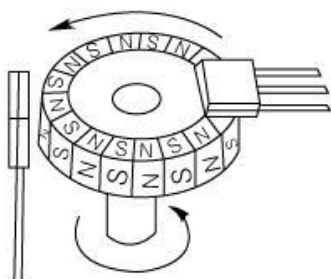
4. Functional Block Diagram



5. Magnetic-electrical Transfer Characteristics



6. Typical Working Mode



7. Order information

Part number	Package type	Quantity/Package
OH137A0	TO-92S	Bulk, 1000 pcs/bag
OH17A/B	SOT23	3000 PCS/ Reel



8. Absolute Maximum Ratings (T_A=25°C)

Parameter	Symbol	Value	Unit
Supply Voltage	V _{CC}	4.5 to 24	V
Output current	I _{out}	20	mA
Operating temperature range	T _A	-40 to 85	°C
Storage temperature range	T _{stg}	-55 to 150	°C

9. Electrical Characteristics (T_A=25°C)

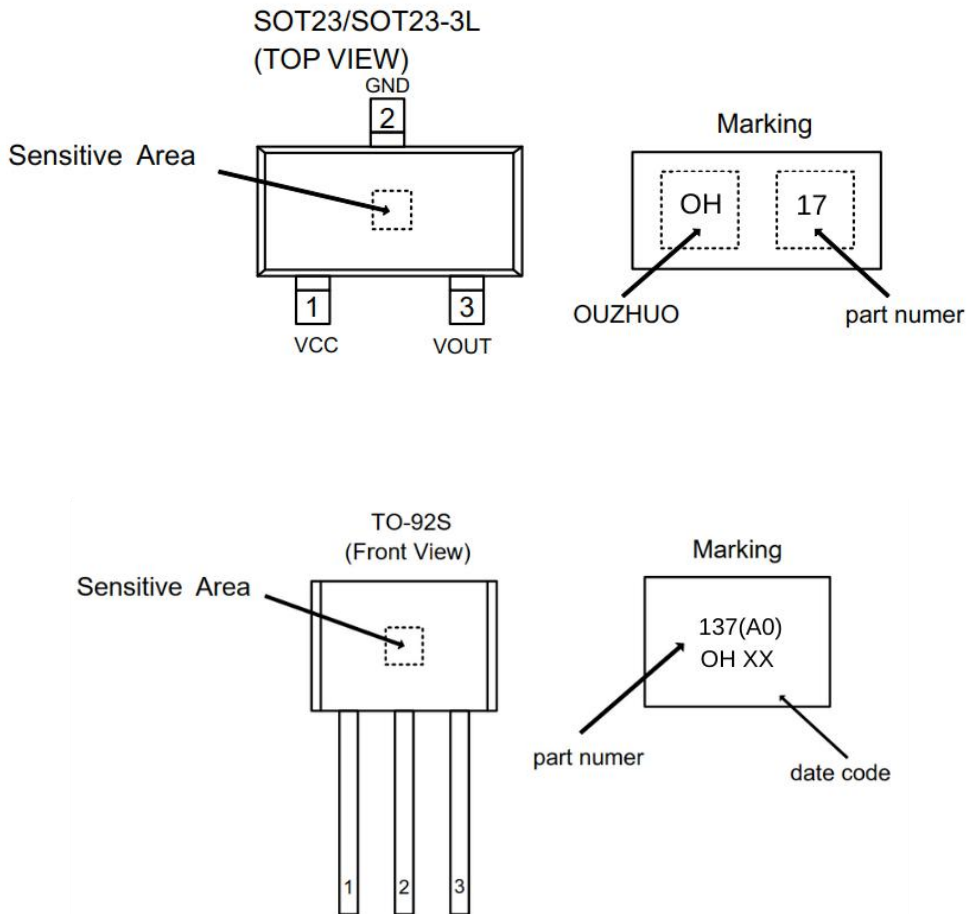
Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Supply Voltage	V _{CC}		4.5	-	24	V
Output Saturation Voltage	V _{OL}	V _{CC} =4.5V, R _L =2KΩ, B≥B _{OP}	-	200	400	mV
Output Leakage Current	I _{OH}	V _{out} =V _{CCmax} , B≤B _{RP}	-	1.0	10	μA
Supply Current	I _{CC}	V _{CC} =V _{CCmax} OC output	-	3	5	mA
Output Rise Time	t _r	V _{CC} =12V, R _L =820Ω, C _L =20pF	-	0.12	1.20	μS
Output Falling Time	t _f		-	0.14	1.40	μS

10. Magnetic Characteristics (T_A=25°C) (1mT = 10 Gauss)

Parameter	symbol	Value			Unit
		Min	Typ	Max	
Operate Point	B _{OP}	5	-	10	mT
Release Point	B _{RP}	-1	-	4	mT
Hysteresis	B _H	-	6	-	mT

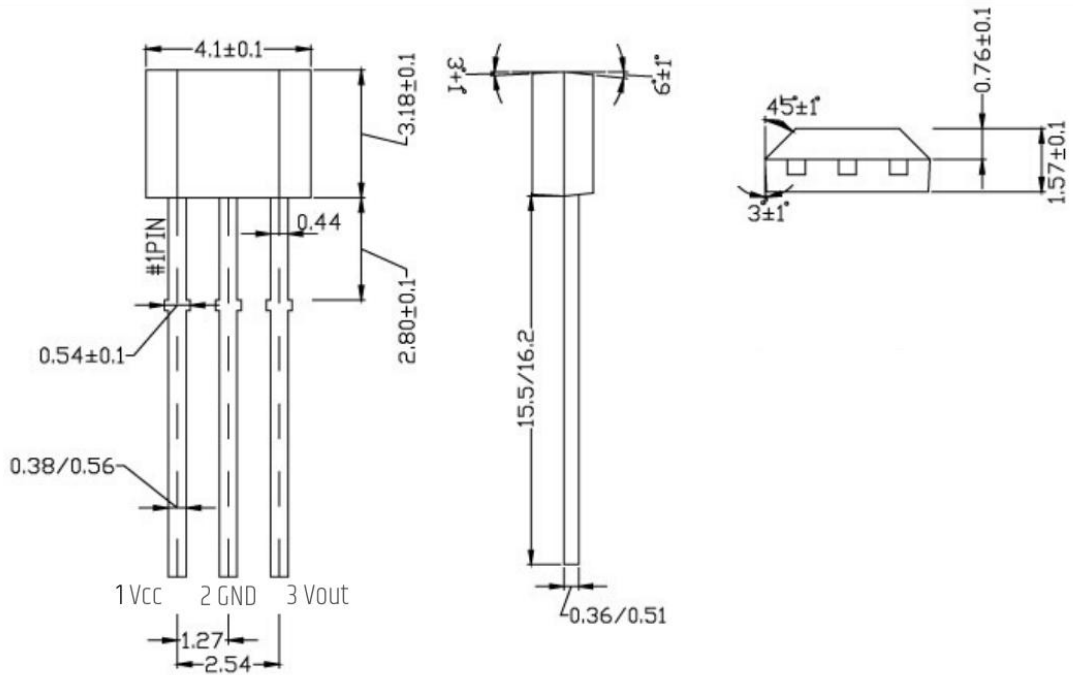
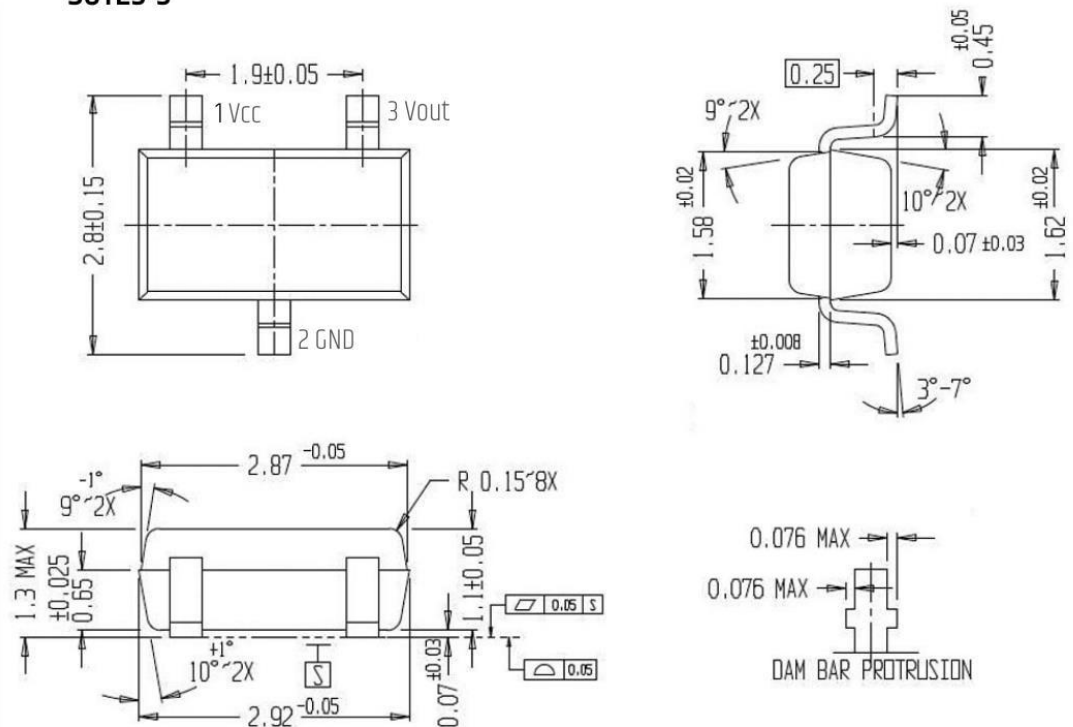


11. Pin configuration



Pin Name	PIN	Function description
Vcc	1	Supply Voltage
GND	2	Ground
Vout	3	Output



12. Dimension Unit: mm
T0-92S

SOT23-3

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Ouzhuo Technology service you through a worldwide network of sales offices and distributors. For application assistance, current specifications, pricing, or the nearest Authorized Distributor, you could reach us the way you are convenient, thank you for your support!

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NOTICE:

The information presented in this datasheet is for reference only. Specifications may change without notice.

