

OH44E / OH44EW Unipolar Hall IC

1. General Description

OH44E, OH44EW unipolar hall IC 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. It detects the changes of the Magnetic field and outputs a digital voltage signal. With the typical feature of a wide range of working voltage, operating temperature, and high load capacity, OH44E and OH44EW series perform well in many applications, such as position control, speed detection, and flow detection as a non-contact magnetic sensor.

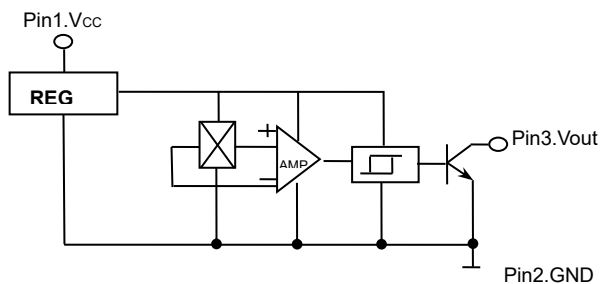
2. Features

- 4V to 30V DC operation voltage
- Open-Collector sinking type
- 50mA maximum sinking output current.
- Reverse Polarity Protection
- Good temperature performance

3. Applications

- The brushless DC motor, DC fans, DC water pump
- The home appliance control panel
- sewing equipment, textile machinery
- speed sensor, position detecting, counting and
- The flow sensor, flow meter
- The auto-ignition, safety alarm device
- other industrial control fields

4. Functional Block Diagram



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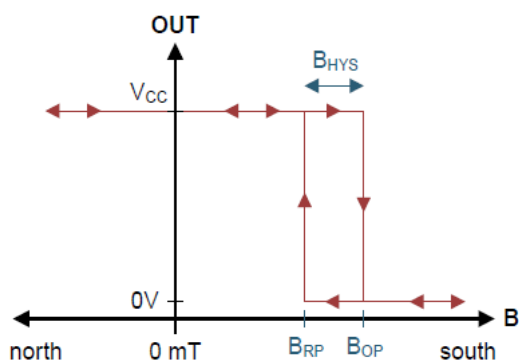
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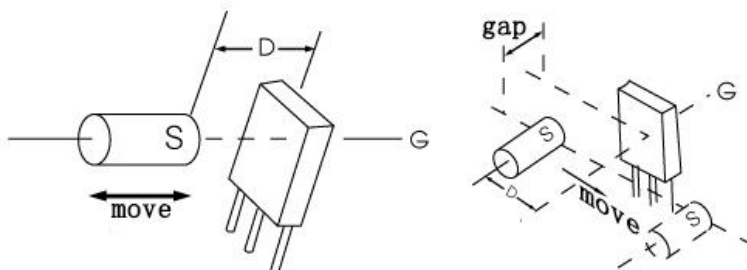
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5. Magnetic-electrical Transfer Characteristics



6. Typical Working Mode



7. Order information

Part number	Package type	Quantity/Package
OH44E	TO-92S	Bulk, 1000 pcs/bag
OH44EW	SOT89	1000 PCS/ Reel



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

Parameter	Symbol	Value	Unit
Supply Voltage	V _{CC}	4 to 30	V
Output current	I _{out}	50	mA
Operating temperature range	T _A	-40 to 150	°C
Storage temperature range	T _{stg}	-55 to 150	°C

9. Electrical Characteristics (T_A= 25°C)

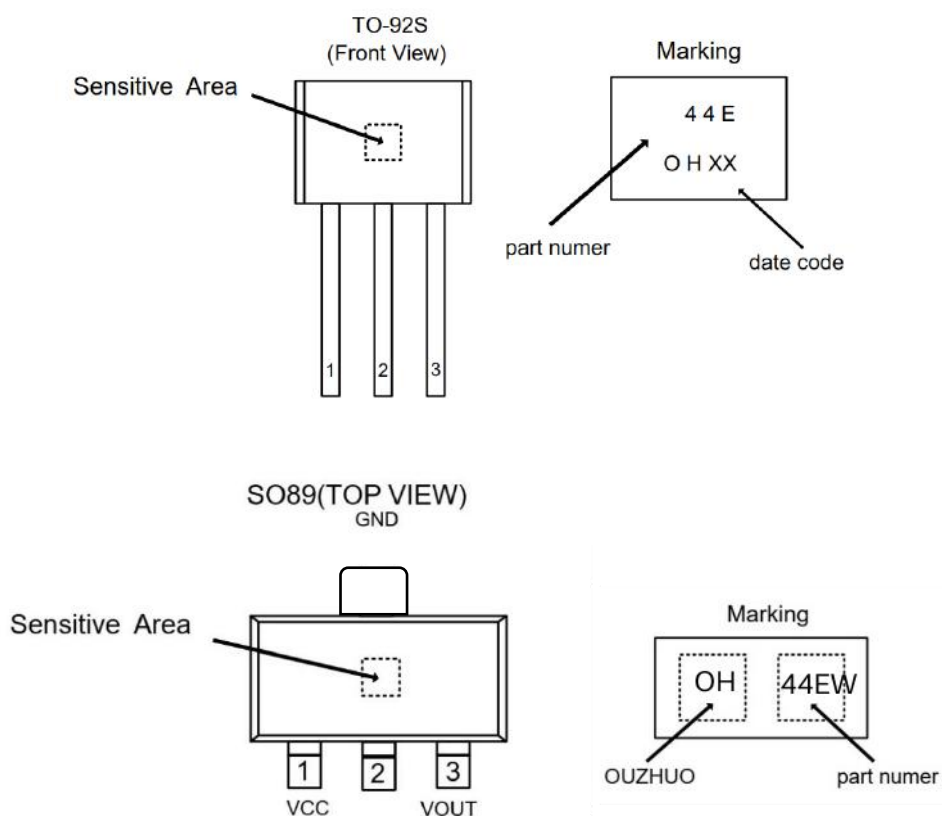
Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Supply Voltage	V _{CC}		4	-	30	V
Output Saturation Voltage	V _{OL}	V _{CC} =5V, R _L =1KΩ, B≥B _{OP}	-	200	400	mV
Output Leakage Current	I _{OH}	V _O =V _{CCmax} , B≤B _{RP}	-	0.1	10	μA
Supply Current	I _{CC}	V _O =V _{CCmax} , B≤B _{RP}	-	5	-	mA
Output Rise Time	t _r	V _{CC} =5V, R _L =1KΩ, C _L =20pF	-	0.5	-	μS
Output Falling Time	t _f		-	0.5	-	μS

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

Parameter	symbol	Value			Unit
		Min	Typ	Max	
Operate Point	B _{OP}	-	-	20	mT
Release Point	B _{RP}	3	-	-	mT
Hysteresis	B _H	-	6	-	mT

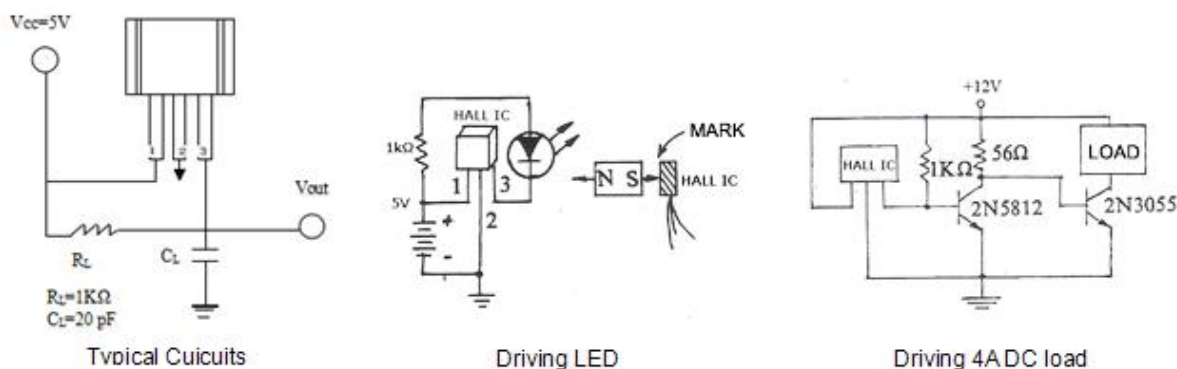


11. Pin configuration



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

12. Typical Application Circuits



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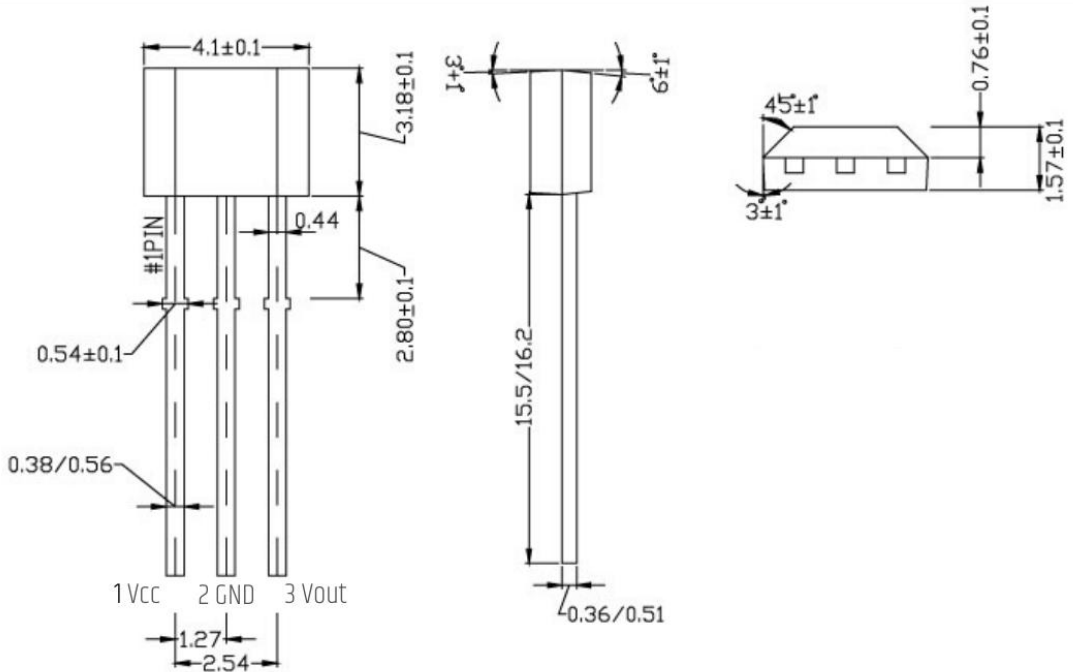
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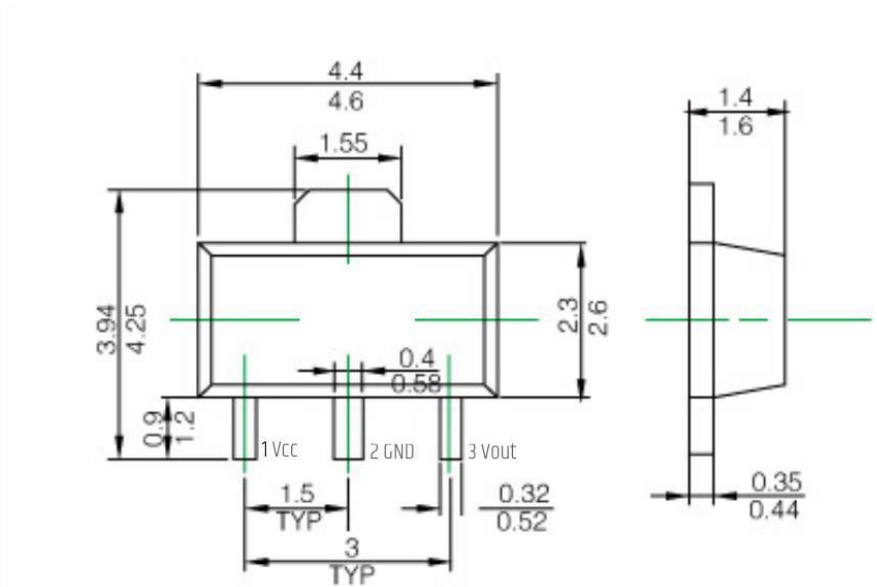


13. Dimension (Unit: mm)

T0-92S



SOT89



For more information:

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.

