

OH3141L /OH44L Unipolar Hall-effect IC

1. General Description

These Hall-effect switches are monolithic integrated circuits with tighter magnetic specifications, designed to operate continuously over extended temperatures to +150°C, and are more stable with both temperature and supply voltage changes. Each device includes a voltage regulator for operation with supply voltages of 4.5 to 24 volts, reverse battery protection diode, quadratic Hall-voltage generator, temperature compensation circuitry, small-signal amplifier, Schmitt trigger, and an open-collector output to sink up to 50 mA.

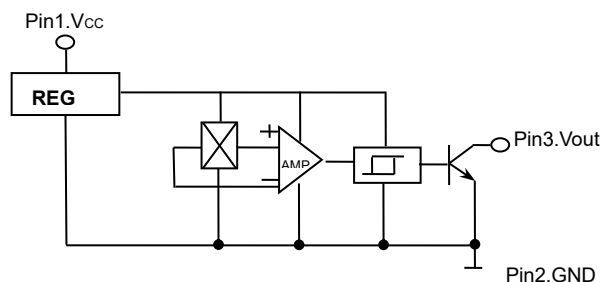
2. Features

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

3. Applications

- 4.5V to 24V DC operation voltage
- Responding to a single-pole
- Open-Collector sinking type
- 50mA maximum sinking output current
- Reverse Polarity Protection
- Good temperature performance
- Higher sensitivity
- Compatible with Digital Logic

4. Functional Block Diagram



Nanjing Ouzhuo Technology Co., Ltd

Tel: 86-25-52312738, 83247886

Fax: 86-25-52312738

Website: www.zbling.com

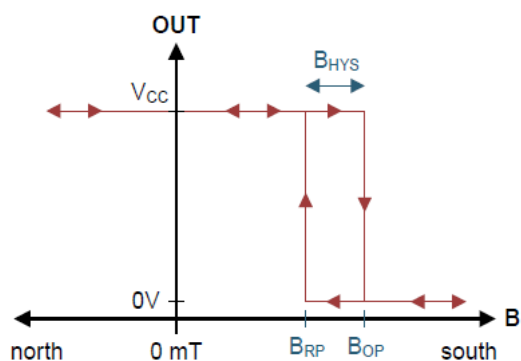
E-mail: ouzhuo@zbling.com

www.ohhallsensor.com

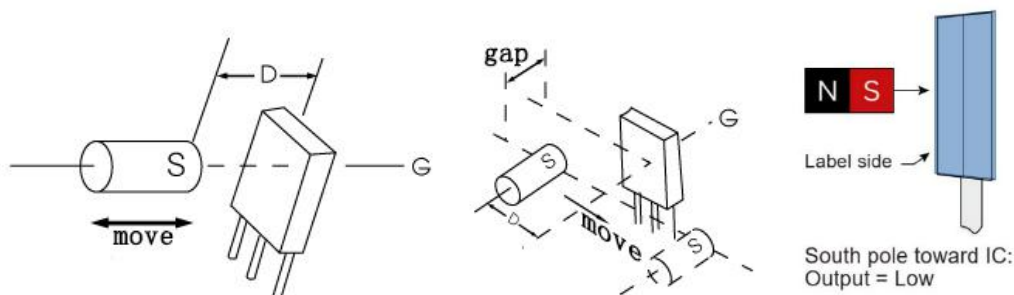
sale@ohhallsensor.com



5. Magnetic-electrical Transfer Characteristics



6. Typical Working Mode



7. Order information

Part number	Package type	Quantity/Package	Operating temperature
OH3141L	TO-92S	Bulk, 1000 pcs/bag	-40 to 150°C
OH44L	TO-92S	Bulk, 1000 pcs/bag	-40 to 150°C



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

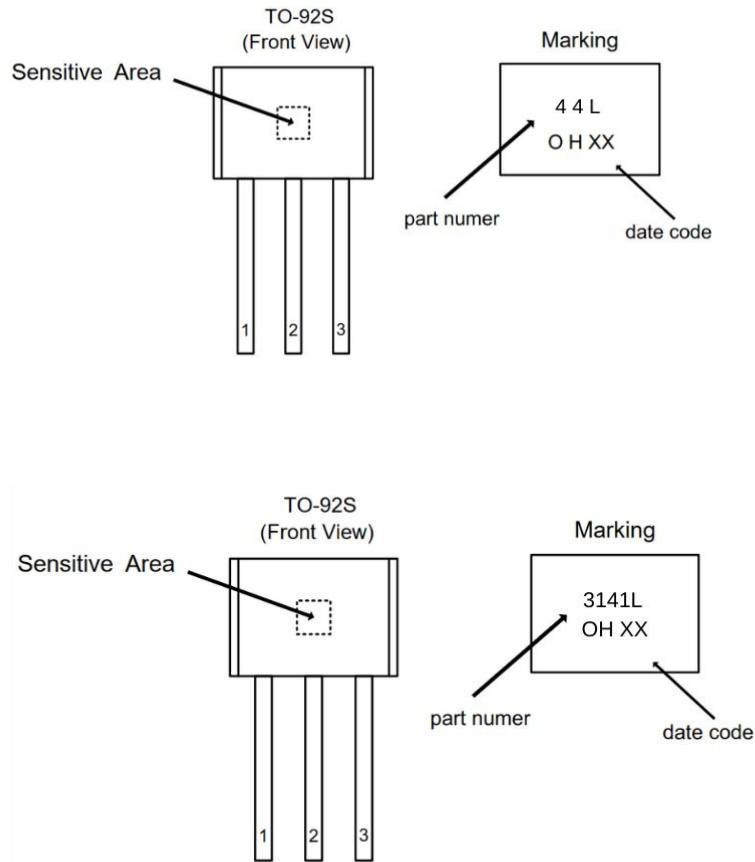
Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Supply Voltage	V _{CC}		4	-	30	V
Output Saturation Voltage	V _{OL}	V _{CC} =5V, R _L =1KΩ, B≥B _{OP}	-	200	400	mV
Output Leakage Current	I _{OH}	V _O =V _{CCmax} , B≤B _{RP}	-	0.1	10	μA
Supply Current	I _{CC}	V _O =V _{CCmax} , B≤B _{RP}	-	5	-	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 (Ta= 25°C) (1mT = 10 Gauss)

Parameter	symbol	OH3141L			OH44L			Unit
		Min	Typ	Max	Min	Typ	Max	
Operate Point	B _{OP}	-	-	11	-	-	15	mT
Release Point	B _{RP}	3	-	-	3	-	-	mT
Hysteresis	B _H	-	5	-	-	5	-	mT



11. Pin configuration

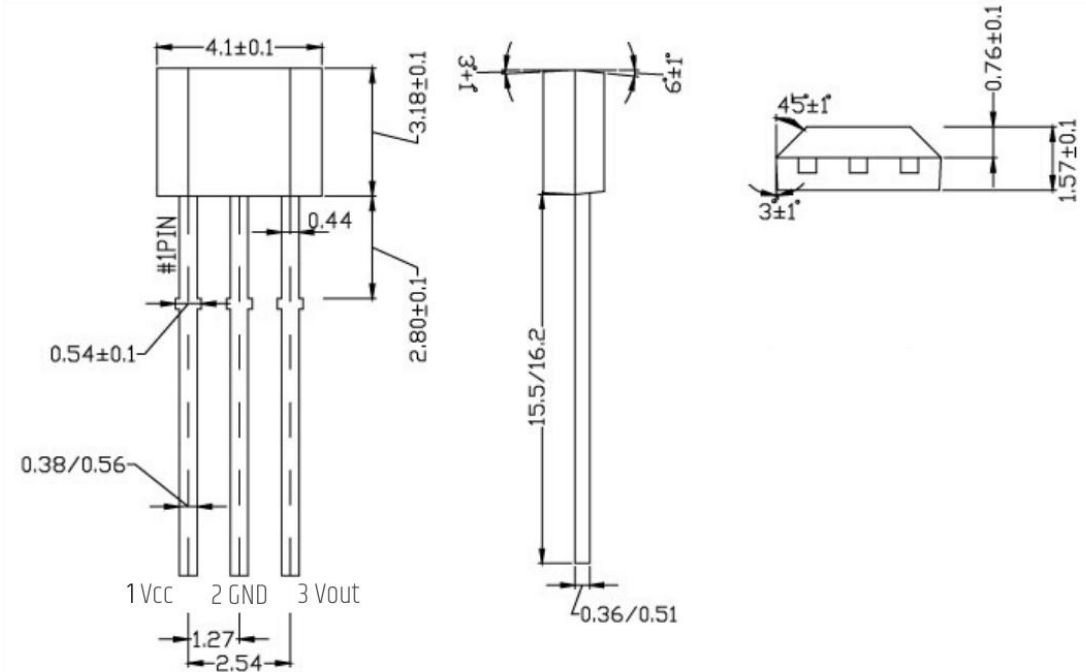


Pin Name	PIN	Function description
Vcc	1	Supply Voltage
GND	2	Ground
Vout	3	Output

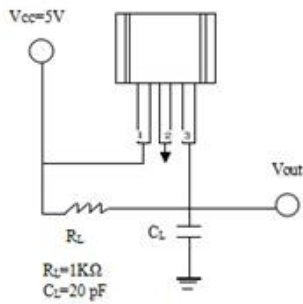


12. Dimension (Unit: mm)

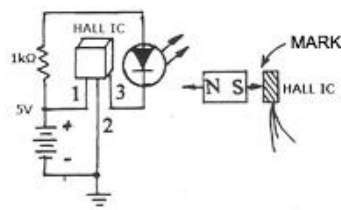
T0-92S



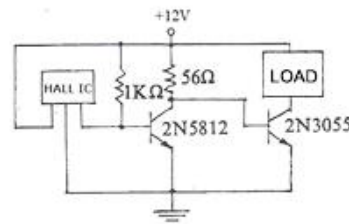
13. Typical Application Circuits



Typical Circuits



Driving LED



Driving 4ADC load



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!

www.ohhallsensor.com

sale@ohhallsensor.com

China headquarters: 86-25-52312738

Canada Office: 1-514-995-5788

NOTICE:

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

