

OH44E

Unipolar Hall Effect Switch IC

Order Information

| | | | | | |
|----|-------|---------------------|----------|---------|-------------|
| PN | OH44E | Operate temperature | -40~150℃ | Package | 1000pcs/bag |
|----|-------|---------------------|----------|---------|-------------|

General Description: OH44E is a switched Hall-Effect IC which is for contactless switching applications. The 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 an open-collector output.



Features

- High reliability
- good temperature performance
- anti-environmental stress
- Reverse Polarity Protection

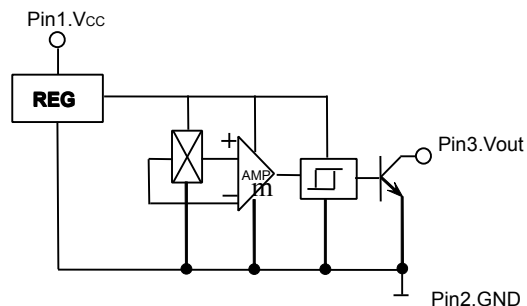
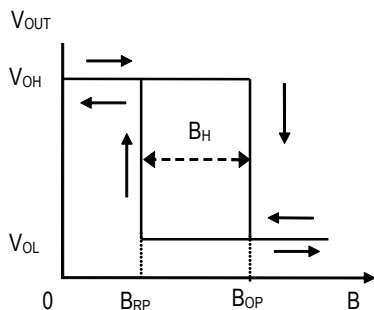
Applications

- Speed measurement
- Home appliances
- Position detection
- Flow measurement

Absolute Maximum Ratings (TA=25℃)

Supply Voltage V_{CC}4-30V Operating Temperature Range T_A -40 ~ 150℃
 Output Current I_O50mA Storage Temperature Range T_S -65~150℃

Magnetic-electrical Transfer Characteristics Functional Block Diagram:



Electrical Characteristics (Ta= 25℃)

| Parameter | Symbol | Conditions | Value | | | Unit |
|---------------------------|----------|--|-------|------|-----|---------|
| | | | Min | Typ | Max | |
| Supply Voltage | V_{CC} | | 4 | - | 30 | V |
| Output Saturation Voltage | V_{OL} | $V_{CC}=4.5V, I_{out}=20mA, B \geq B_{OP}$ | - | 200 | 400 | mV |
| Output Leakage Current | I_{OH} | $V_{out}=24V, B \leq B_{RP}$ | - | 1.0 | 10 | μA |
| Supply Current | I_{CC} | $V_{CC}=V_{CCmax}$ OC output | - | 5 | - | mA |
| Output Rise Time | t_r | $V_{CC}=12V, R_L=820\Omega, C_L=20pF$ | - | 0.2 | 2.0 | μS |
| Output Falling Time | t_f | | - | 0.18 | 2.0 | μS |

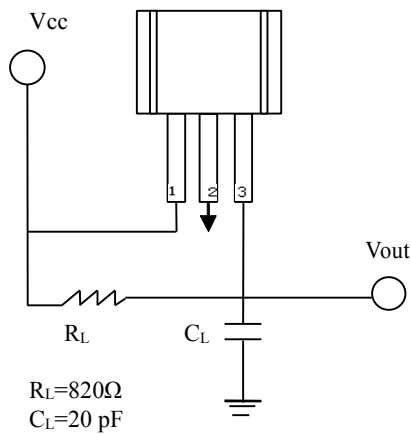
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Magnetic Characteristics (Ta= 25°C) (1mT = 10 Gauss)

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

Test Circuit for Reference:



Pin Descriptions: 1.Vcc 2. GND 3.Vout

Caution:

- 1) when installing, please minimize mechanical stress on the IC shell and leads.
- 2) Welding temperature should be lower than 260 °C, less than 3 seconds.
- 3) IC is OC output, so a pull-up resistor connected pin 1 (power) and pin 3 (output) is necessary.

Dimension (unit:mm)

