

Linear Hall Effect Sensor IC

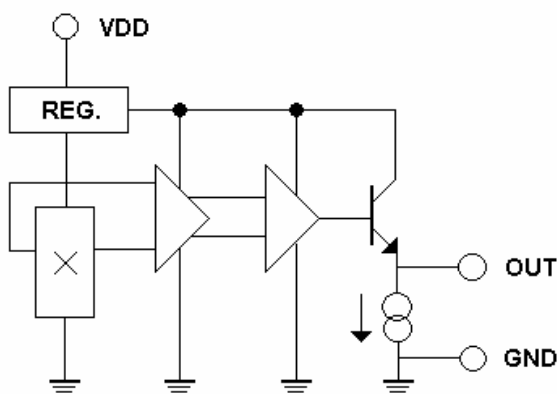
Features:

- Wide operating range 3.0~6.5V, -20°C~100°C
- Flat Response to 23kHz
- Low noise output
- Wide sensible magnetic field range on different supplied voltage
±900 Gauss on 5V supplied voltage
- Small package styles TO-92S available.

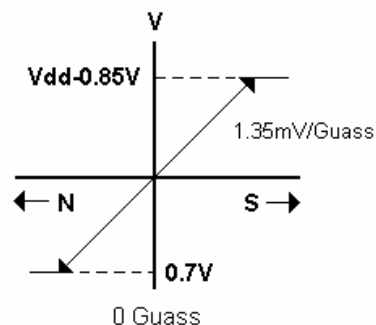
Functional Description :

The WSH49E integrates Hall sensing element, linear amplifier, sensitivity controller and emitter follower output stage. It accurately tracks extremely small change in magnetic flux density –generally too small to operate Hall effect switch.

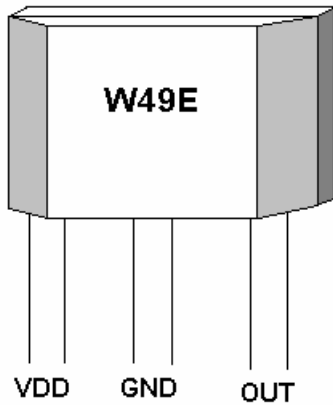
WSH49E can be applied as current sensor, tooth sensor, proximity detectors and motion detectors. As sensitive monitor of magnetic flux, it can effectively measure a system's performance with negligible system loading while providing isolation from contaminated and electrically noisy environments.



OUT vs. Megnetic Flux

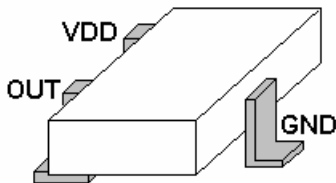


Winson reserves the right to make changes to improve reliability or manufacturability.



ABSOLUTE MAXIMUM RATING

| | | |
|------------------------------|-------|-----------------|
| Supply Voltage, Vdd | ----- | 7V |
| Magnetic Flux Density, B | ----- | Unlimited |
| Output Driving Current, Iout | ----- | 5mA |
| Operating Temperature Range | | |
| Ta | ----- | -20°C to +100°C |
| Storage Temperature Range | | |
| Ts | ----- | -65°C to +150°C |
| Power Dissipation Pd | | |
| TO-92S | ----- | 450mW |
| SOT-23 | ----- | 350mW |



ORDER INFORMATION

WSH49E-XPAN ----- TO-92S

Electrical Characteristics: (T=+25°C, Vdd=5.0V)

| Characteristic | Symbol | Test Conditions | Min | Typ | Max | Units |
|------------------------|------------------|---------------------|------|------------|------|-------|
| Supply Voltage | Vcc | — | 3.0 | — | 6.5 | V |
| Supply Current | Isupply | B=0 Guass | — | 3.5 | 6.0 | mA |
| Quiescent Vout | Vout | B=0 Guass | 2.35 | 2.5 | 2.65 | V |
| Sensitivity | ΔV_{out} | B= 0 to \pm 800 G | 1.0 | 1.45 | 1.7 | mV/G |
| Bandwidth | BW | | — | 23 | — | kHz |
| Measurable Guass Range | MGR | Vdd=5V | — | \pm 9000 | — | Guass |
| | | | — | | — | |

All output-voltage measurements are made with a voltmeter having an input impedance of at least 100k Ω

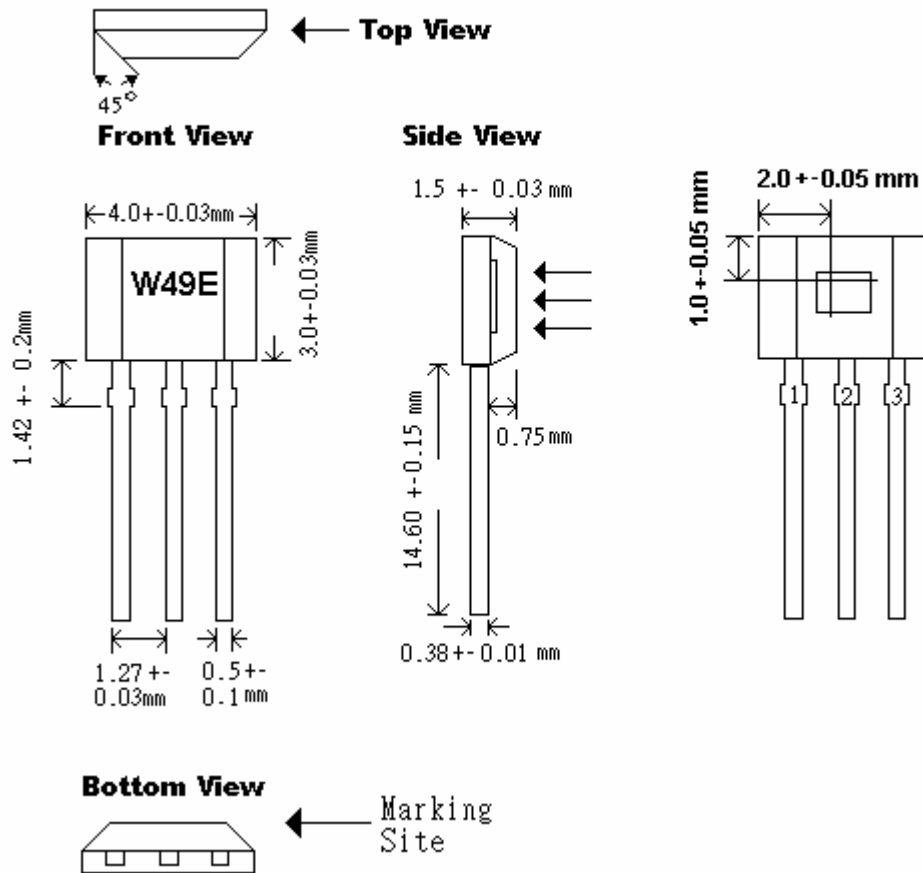
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Package Information:

TO92S:

Package Dimension

Hall Sensor Location



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