

Linear Hall Effect Sensor CYLF50

The CYLF50 Hall-effect sensors accurately track extremely small changes in magnetic flux density-changes. As motion detectors, gear tooth sensors, and proximity detectors, they are magnetically driven mirrors of mechanical events. As sensitive monitors of electromagnets, they can effectively measure a system's performance with negligible system loading while providing isolation from contaminated and electrically noisy environments.

Each Hall-effect integrated circuit includes a Hall sensing element, linear amplifier, and emitter-follower output stage. Problems associated with handling tiny analog signals are minimized by having the Hall cell and amplifier on a single chip.

Features

| | |
|---------------------------|---------------------------|
| ♦ Very high sensitive | ♦ 2.7V to 7V power supply |
| ♦ Flat response to 23 kHz | ♦ Package : SIP-3L |
| ♦ Lower low-noise output | |

Block Diagram

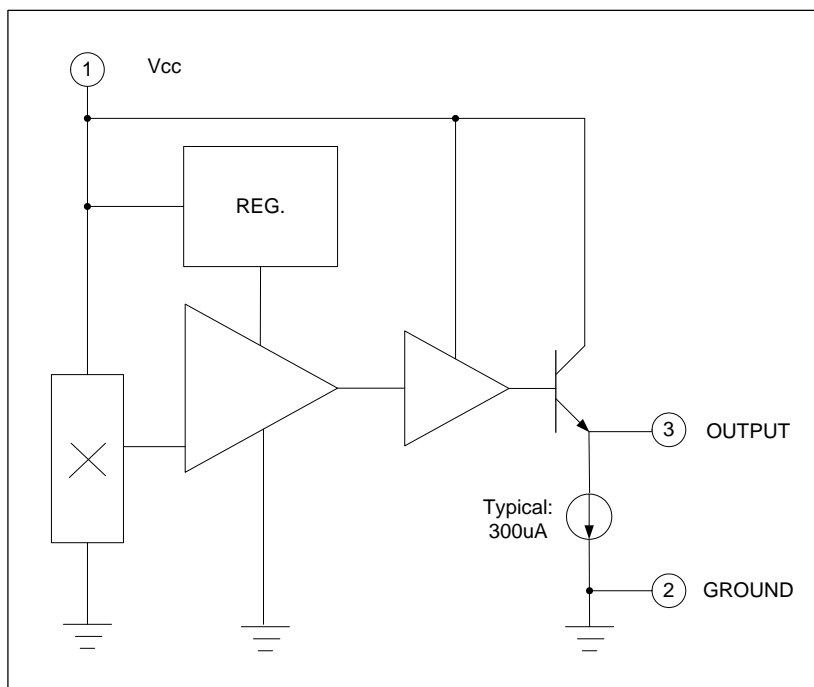
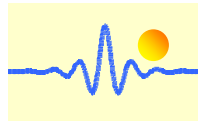


Figure.1

Recommended Operating Conditions

| Parameter | Symbol | Conditions | Values | | | Unit |
|-----------------------------|----------|------------|--------|------|------|------|
| | | | Min. | Typ. | Max. | |
| Supply Voltage | V_{DD} | - | 2.7 | | 7.0 | V |
| Operating Temperature Range | T_A | - | -20 | | 85 | °C |

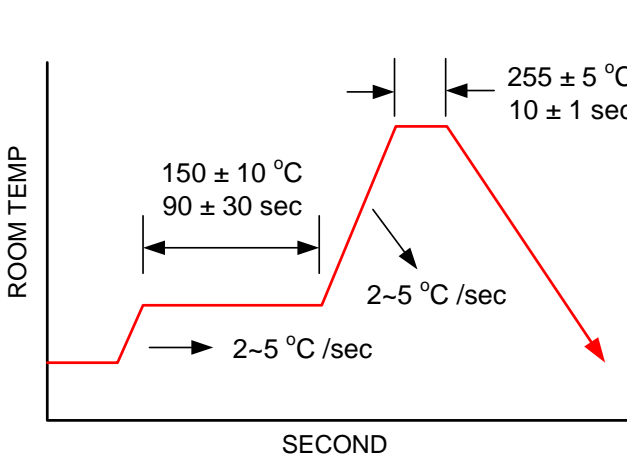


Absolute Maximum Ratings

| Parameter | Symbol | Conditions | Values | | | Unit |
|-----------------------|-----------------|------------|--------|------|-----------|------|
| | | | Min. | Typ. | Max. | |
| Operating Temperature | T _{OP} | - | -20 | | 85 | °C |
| Storage Temperature | T _{ST} | - | -55 | | 165 | °C |
| DC Supply Voltage | V _{DD} | - | 2.7 | | 7 | V |
| Supply Current | I _{DD} | - | | | 10 | mA |
| Magnetic Flux Density | B | - | | | Unlimited | G |
| Junction temperature | T _J | | | | 160 | °C |
| Lead Temperature | | 10sec | | | 260 | °C |

Electrical Characteristics V_{DD}=5.0V, T_A=25°C (unless otherwise specified)

| Parameter | Symbol | Conditions | Values | | | Unit |
|---------------------------------|-------------------|----------------|--------|------|------|------|
| | | | Min. | Typ. | Max. | |
| Average Supply Current(no load) | I _{DD} | - | | 6.0 | 10 | mA |
| Quiescent Output Voltage | V _{OUT} | B=0G | 2.35 | 2.50 | 2.65 | V |
| Sensitivity | ΔV _{OUT} | B=0 G to ±900G | 1.00 | 1.20 | 1.40 | mV/G |
| Linearity (% of Span) | | | | <0.7 | | % |



Soldering Condition

Figure 2

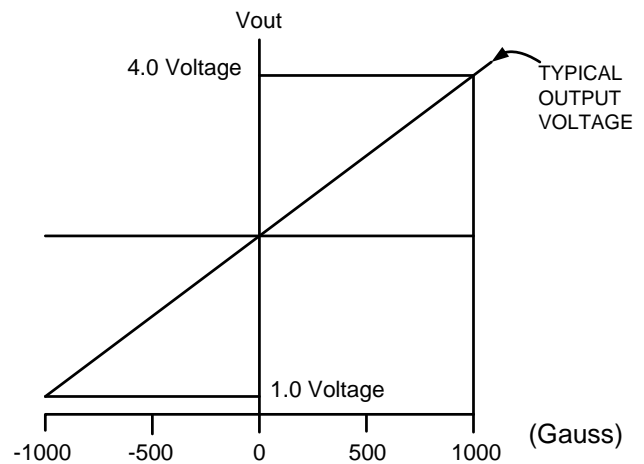


Figure 3 Transfer Characteristics (V_{DD}=5.0V)

Pin Connection

[Top View]

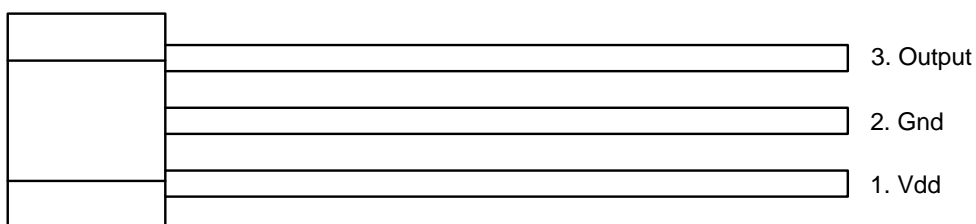
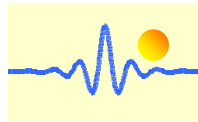


Figure.4



Pin Descriptions

| Name | I/O | Pin No. | Description |
|--------|-----|---------|-----------------------|
| Vdd | P | 1 | Positive power supply |
| Gnd | G | 2 | Ground |
| Output | O | 3 | Driver output |

Legend: I=input, O=output, I/O=input/output, P=power supply, G=ground

Marking Information

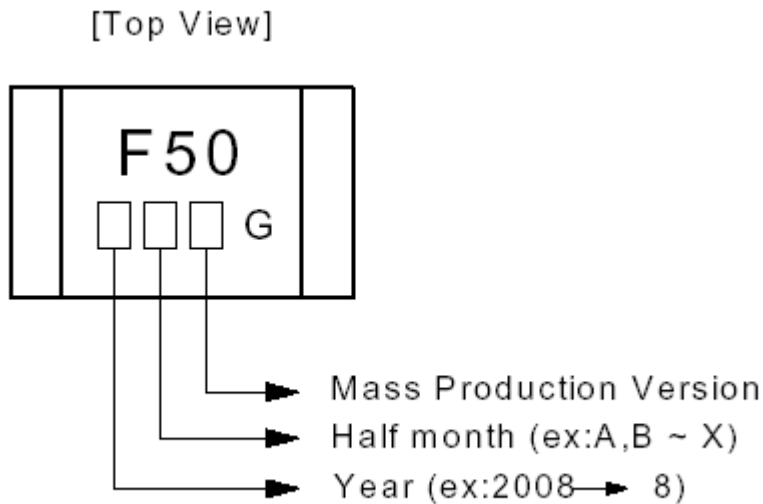
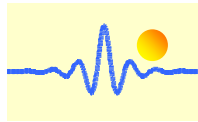


Figure 5

Order Information

| Part Number | Operating Temperature | Package | MOQ |
|-------------|-----------------------|---------|--------|
| CYLF50 | -20 °C to +85 °C | SIP-3L | 1000ea |



Package Dimension (Unit: mm)
SIP-3L(Pb Free)

