

Linear Hall Effect Sensor CYLF50

The CYLF50 Hall-effect sensors accurately track extremely small changes in magnetic flux density-changes generally too small to operate Hall-effect switches.

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

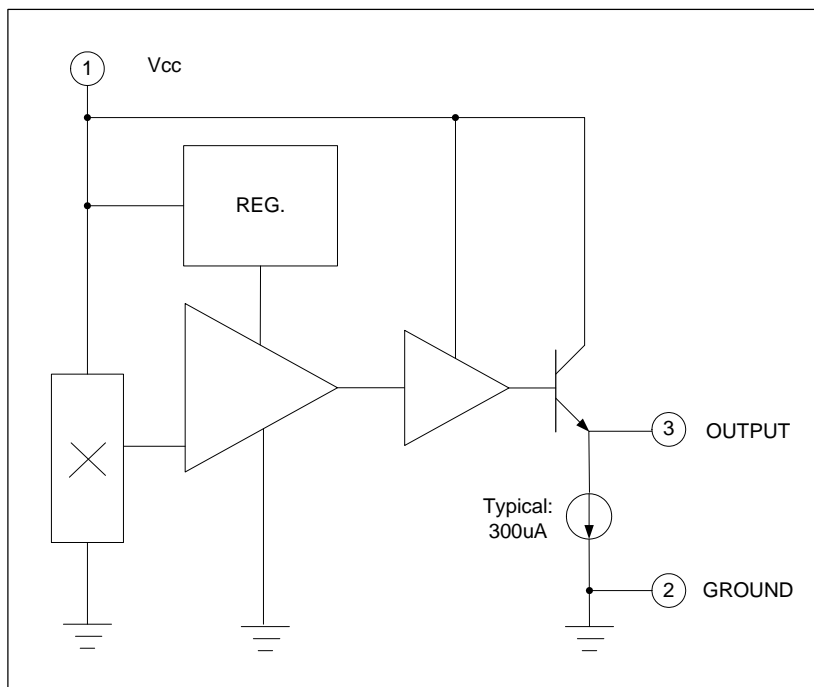
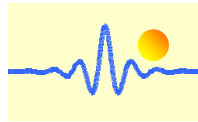


Figure.1

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

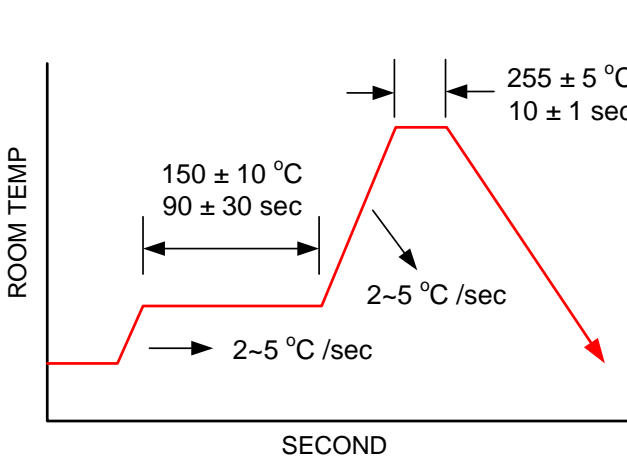


Absolute Maximum Ratings

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

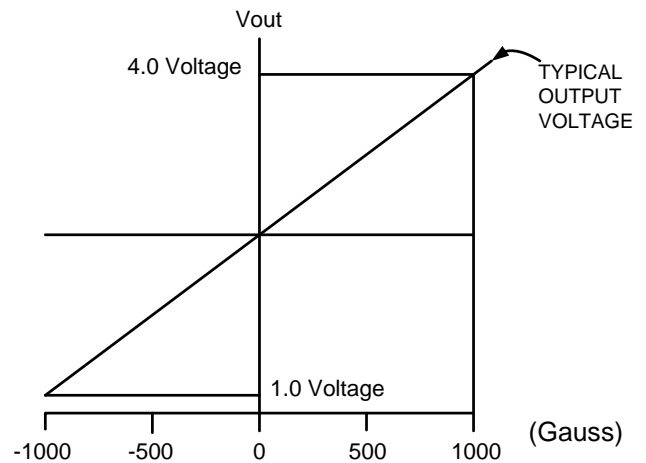


Figure 3 Transfer Characteristics (V_{DD}=5.0V)

Pin Connection

[Top View]

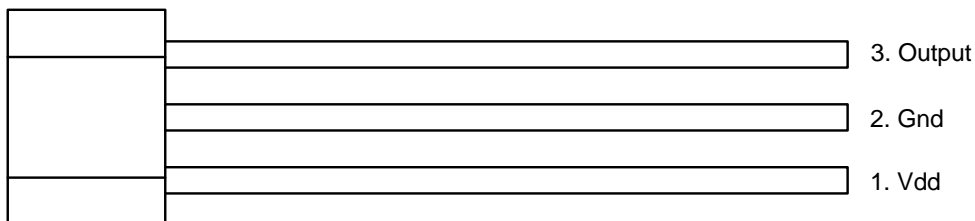
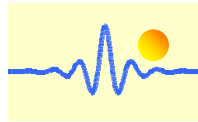


Figure.4



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

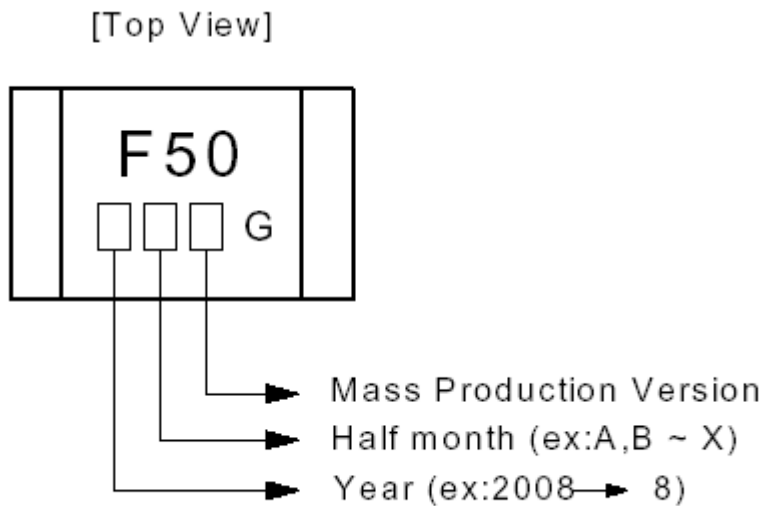
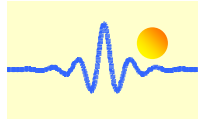


Figure 5

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)

