

## Linear Hall Effect Sensor IC

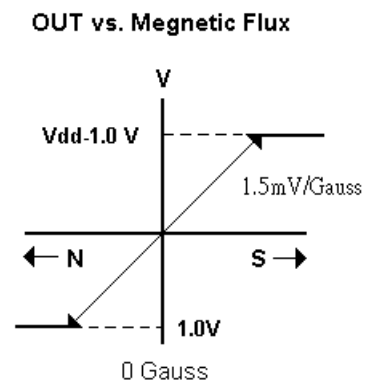
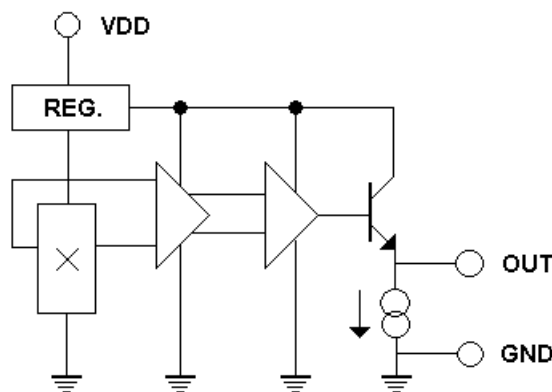
### Features:

- Wide operating range 3.0~12V, -40°C~125°C
- Flat Response to 23kHz
- Low Null Gauss output drift, typical  $\pm 0.3\text{mV}/^\circ\text{C}$
- Wide sensible magnetic field range on different supplied voltage  
 $\pm 1,000$  Gauss on 5V supplied voltage  
 $\pm 2,500$  Gauss on 12V supplied voltage. Low operating current 3mA
- Two package styles TO-92S/SOT-23 available.

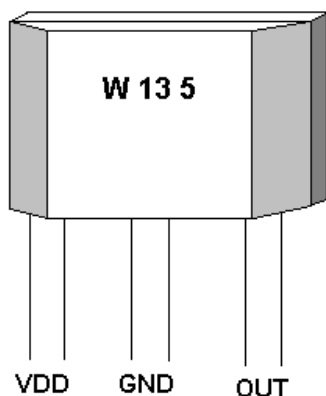
### Functional Description :

The W135 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.

W135 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.

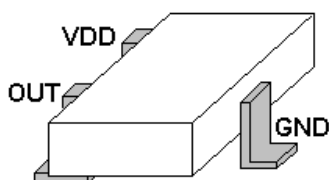


Winson reserves the right to make changes to improve reliability or manufacturability.



### ABSOLUTE MAXIMUM RATING

Supply Voltage, Vdd	14V
Magnetic Flux Density, B	Unlimited
Output Driving Current, Iout	5mA
Operating Temperature Range	
Ta	-40°C to +125°C
Storage Temperature Range	
Ts	-65°C to +150°C
Power Dissipation Pd	
TO-92S	450mW
SOT-23	350mW



### ORDER INFORMATION

WSH135-XPAN □ (TO-92 )	1: A Grade 2: B Grade
WSH135-XPCN □ (SOT23)	
↑ Grade	

### Electrical Characteristics:

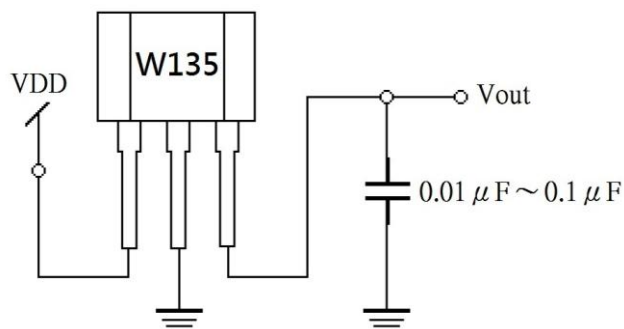
(T=+25°C, Vdd=5.0V)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Units
Supply Voltage	Vcc	—	3.0	—	12	V
Supply Current	Isupply	B=0 Gauss	—	3.5	6.0	mA
Quiescent Vout	V0G	B=0 G (Grade A)	2.45	2.5	2.55	V
		B=0 G (Grade B)	2.35	2.5	2.65	V
Sensitivity	$\Delta V_{out}$	B= 0 to $\pm 1000$ G	1.3	1.5	1.7	mV/G
Bandwidth	BW	—	—	23	—	kHz
Measurable Gauss Range	MGR	Vdd=5V	—	$\pm 1000$	—	Gauss
		Vdd=12V	—	$\pm 2500$	—	
Temperature Drift	$\Delta V_{out}$	B=0 Gauss	—	$\pm 0.3$	—	mV/°C
Output Noise	V <sub>Np-p</sub>	—	—	2.5	—	mV

1. All output-voltage measurements are made with a voltmeter having an input impedance of at least 100k $\Omega$

2. Do not apply any 'resistor load' on output pin, it will degrade IC's performance.

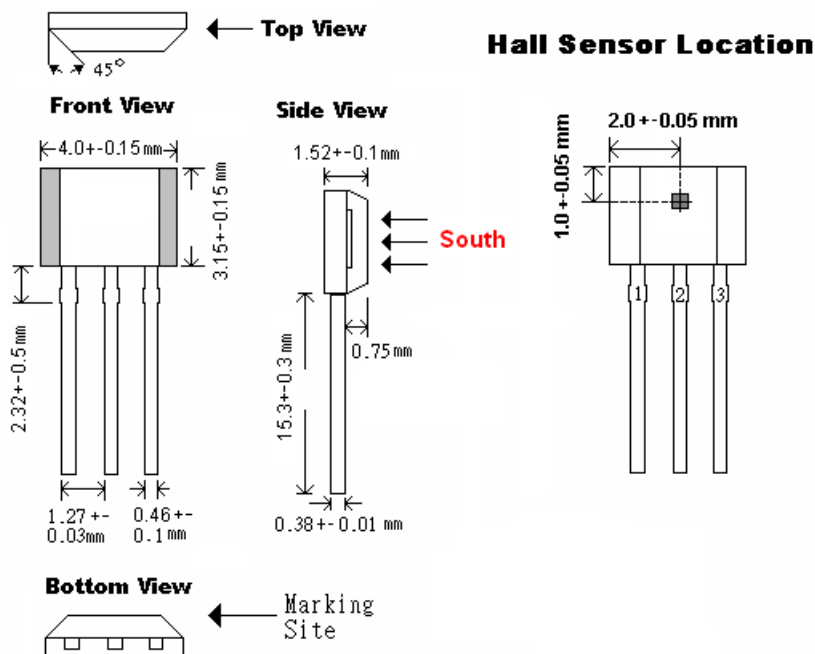
### Application circuit:



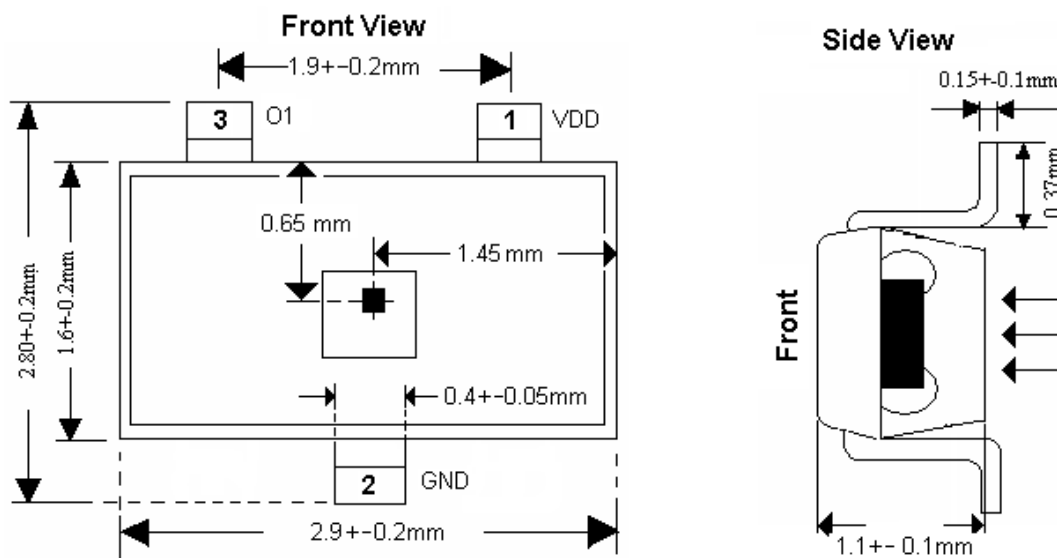
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**Package Information:**

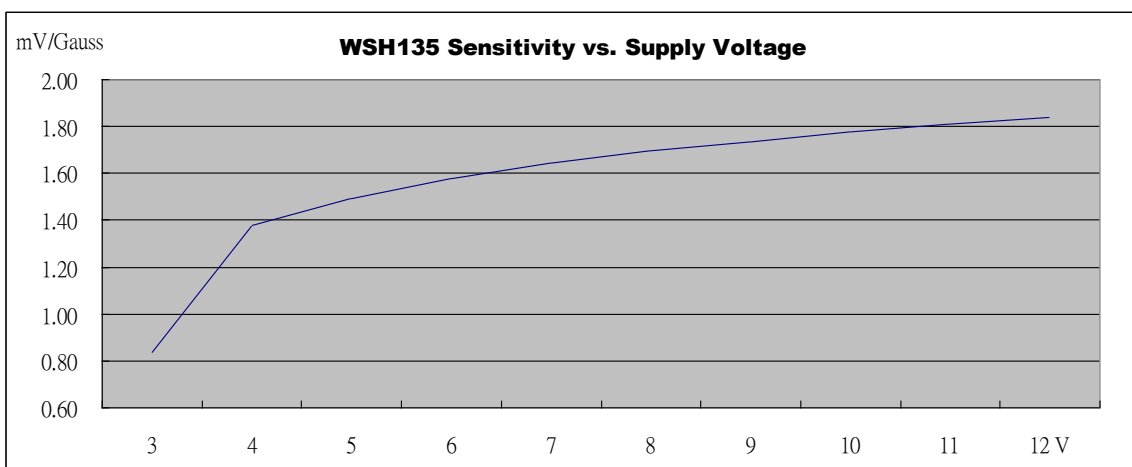
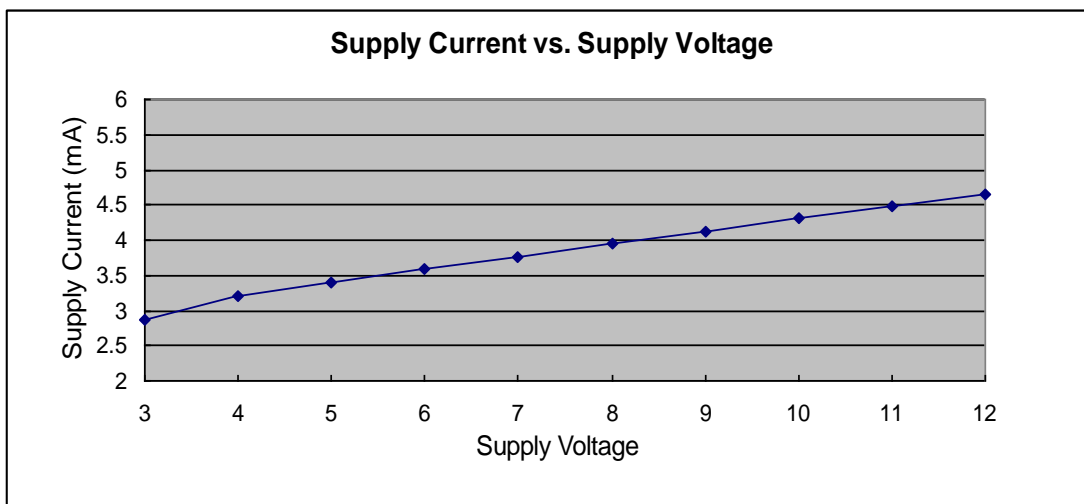
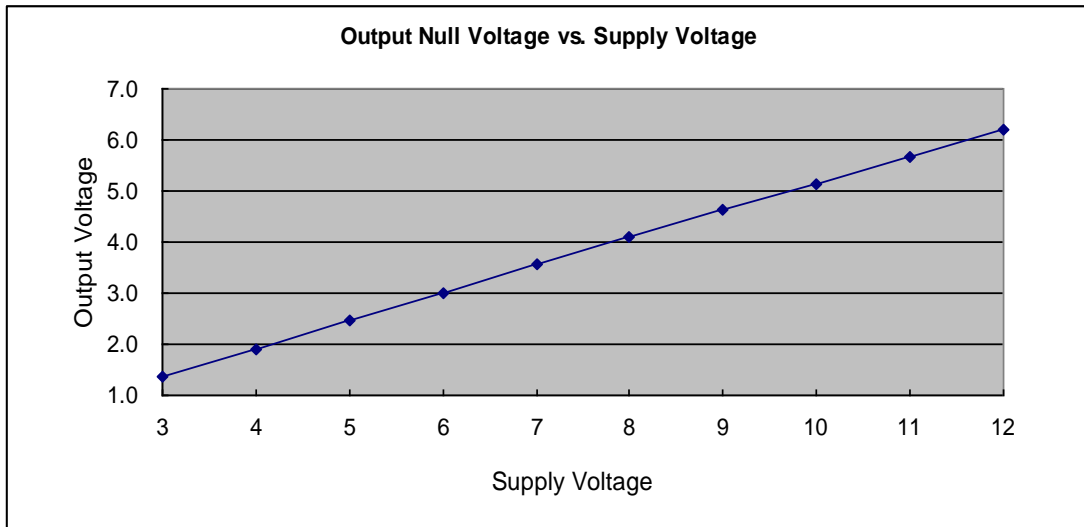
**TO92S:**



**SOT23:**



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