

## Linear Hall Effect Sensor IC

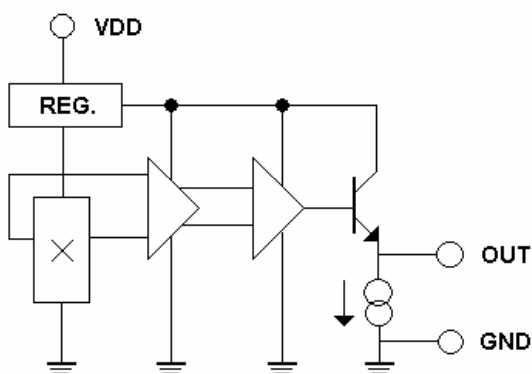
### Features:

- Wide operating range 3.0~12V, -20°C~85°C
- Flat Response to 23kHz
- Low noise output
- Wide sensible magnetic field range on different supplied voltage  
±1,500 Gauss on 5V supplied voltage  
±4,500 Gauss on 12V supplied voltage.
- Low operating current 3mA
- Two package styles TO-92S/SOT-23 available.

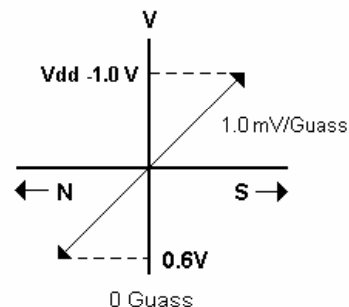
### Functional Description :

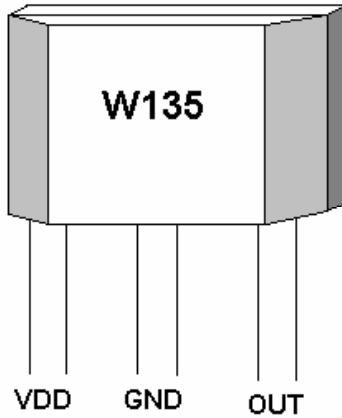
The WSH135 integrates Hall sensing element, linear amplifier, sensitivity controller and emitter follower output stage. It accurately tracks extremely small change in magnetic flux density –generally too small to operate Hall effect switch.

WSH135 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.



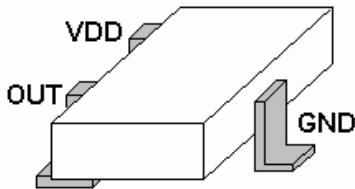
OUT vs. Magnetic Flux





**ABSOLUTE MAXIMUM RATING**

Supply Voltage, Vdd ----- **14V**  
 Magnetic Flux Density, B ----- **Unlimited**  
 Output Driving Current, Iout ----- **2 mA**  
 Operating Temperature Range  
     Ta ----- **-20°C to +85°C**  
 Storage Temperature Range  
     Ts ----- **-65°C to +150°C**  
 Power Dissipation Pd  
     TO-92S ----- **450mW**  
     SOT-23 ----- **350mW**



**ORDER INFORMATION**

WSH135-XPAN ----- **TO-92S**  
 WSH135-XPCN ----- **SOT-23**

**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 Guass	—	3.5	6.0	mA
Quiescent Vout	Vout	B=0 Guass	2.3	2.5	2.7	V
Sensitivity	$\Delta V_{out}$	B= 0 to $\pm 1200$ G	0.7	1.0	1.3	mV/G
Bandwidth	BW		—	23	—	kHz
Measurable Guass Range	MGR	Vdd=5V	—	$\pm 1500$	—	Guass
		Vdd=12V	—	$\pm 4500$	—	

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

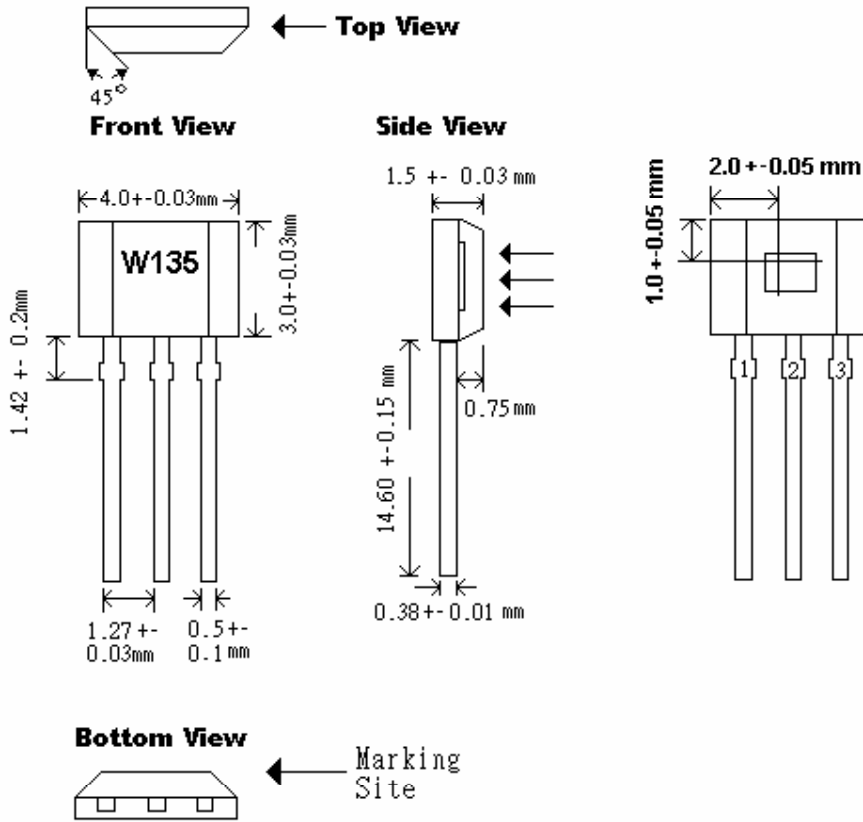
Winson reserves the right to make changes to improve reliability or manufacturability.

**Package Information:**

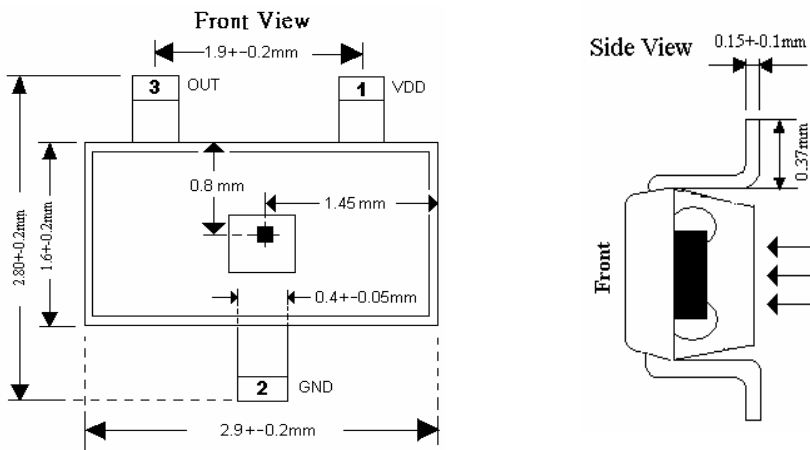
TO92S:

**Package Dimension**

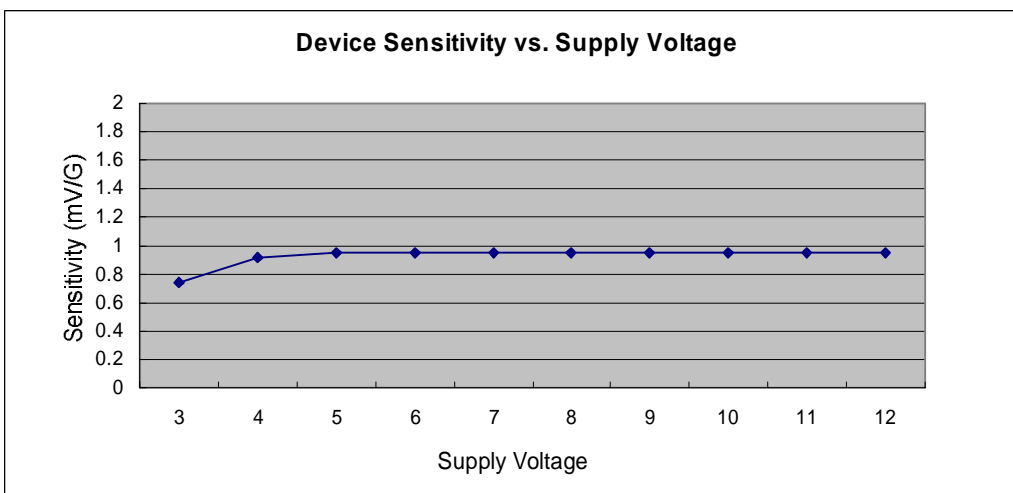
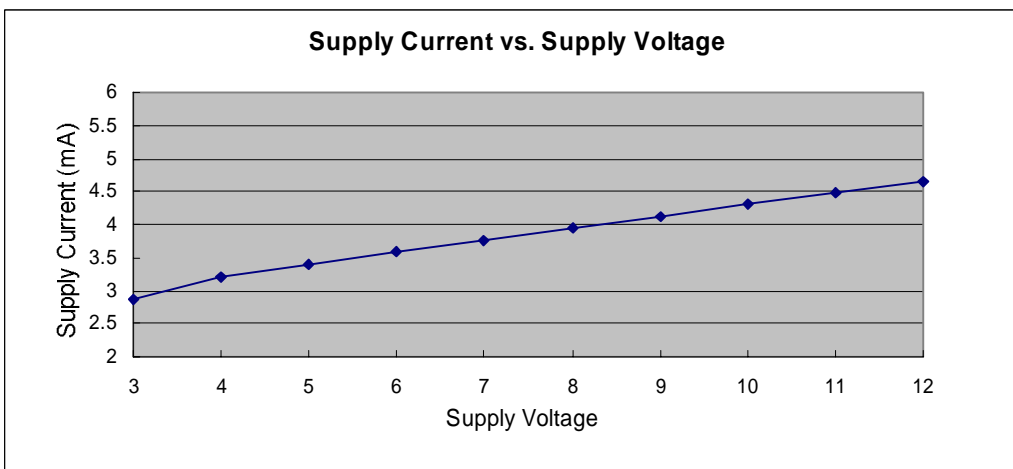
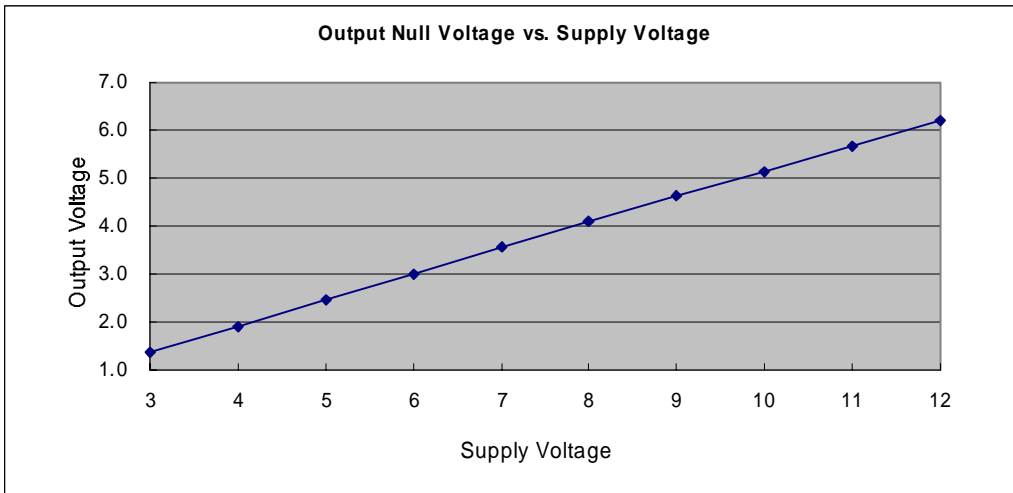
**Hall Sensor Location**



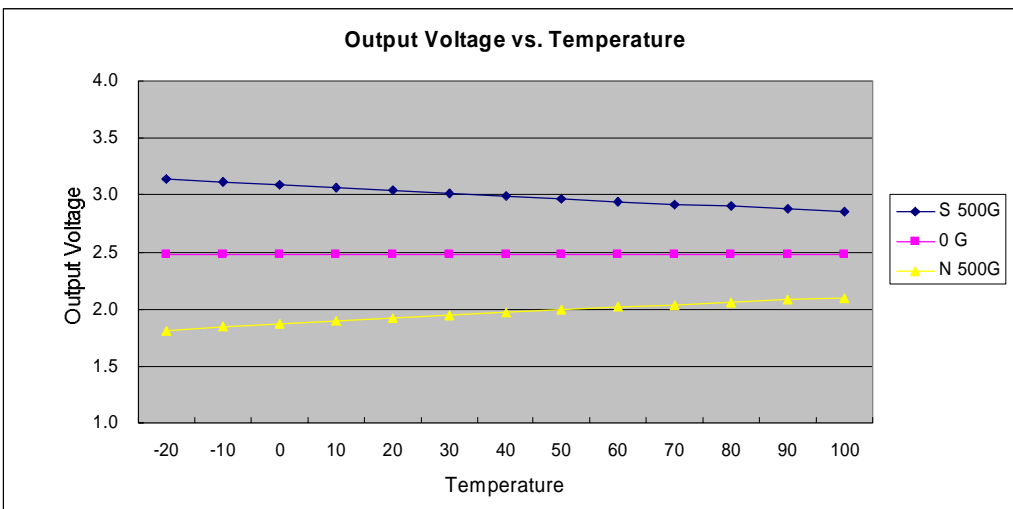
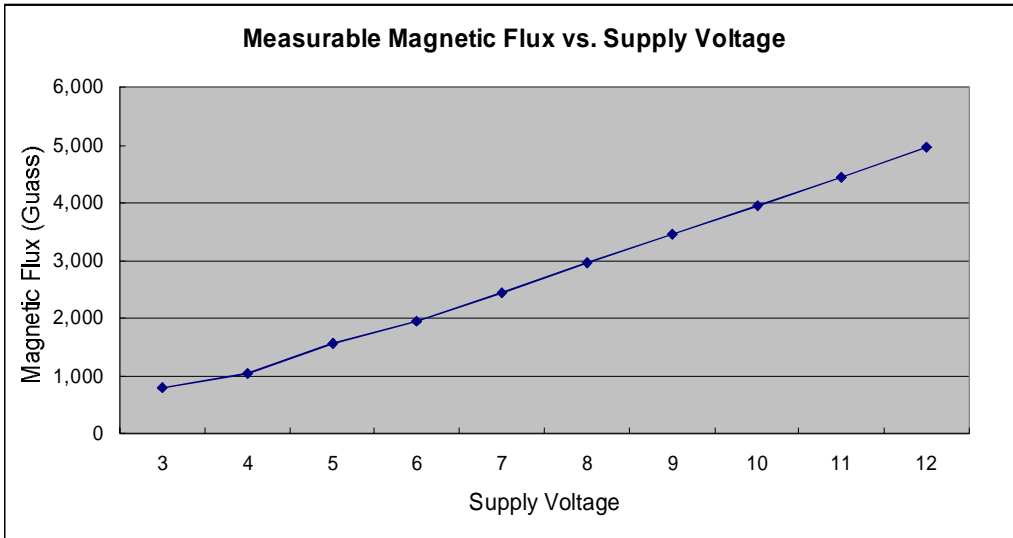
SOT23:



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