

Linear Hall Effect Sensor IC

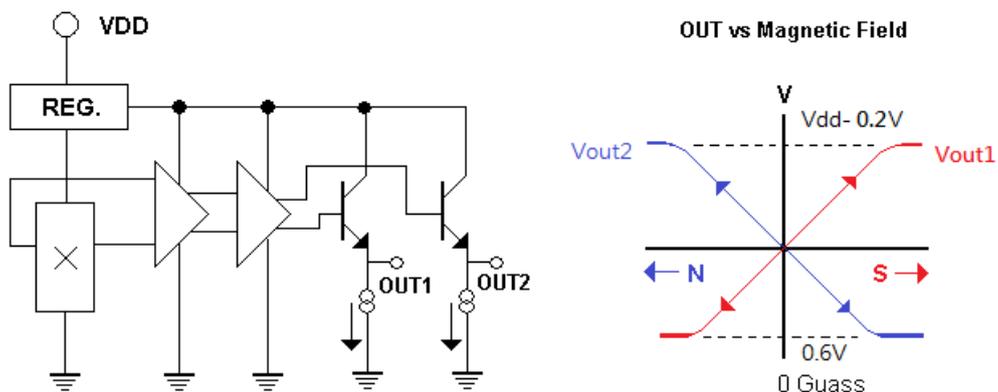
Features:

- Wide operating range 3.0~12V, -40°C~125°C
- Flat Response to 23k Hz
- Low operating current 3mA
- Wide sensible magnetic field range: ± 600 Gauss on 5V supplied voltage
- Sensitivity: 6mV/Gauss (Differential output) on 5V
- Two package styles TO-94/SOT-25 available

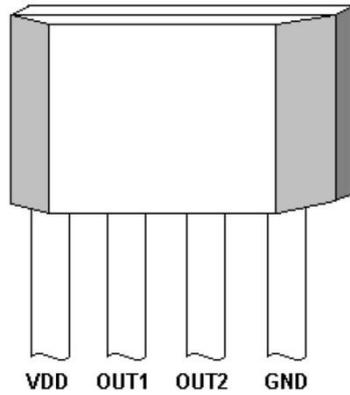
Functional Description :

The W203 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.

W203 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.

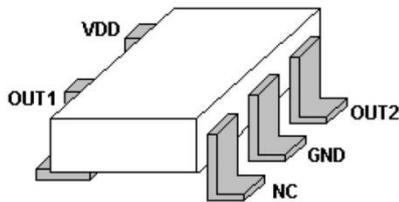


Winson reserves the right to make changes to improve reliability or manufacturability.



ABSOLUTE MAXIMUM RATING

Supply Voltage, Vdd	14 V
Magnetic Flux Density, B	Unlimited
Output Driving Current, Iout	20mA
Operating Temperature Range	
Ta	-40°C to +125°C
Storage Temperature Range	
Ts	-65°C to +150°C
Power Dissipation Pd	
TO-94	450mW
SOT-25	350mW



ORDER INFORMATION

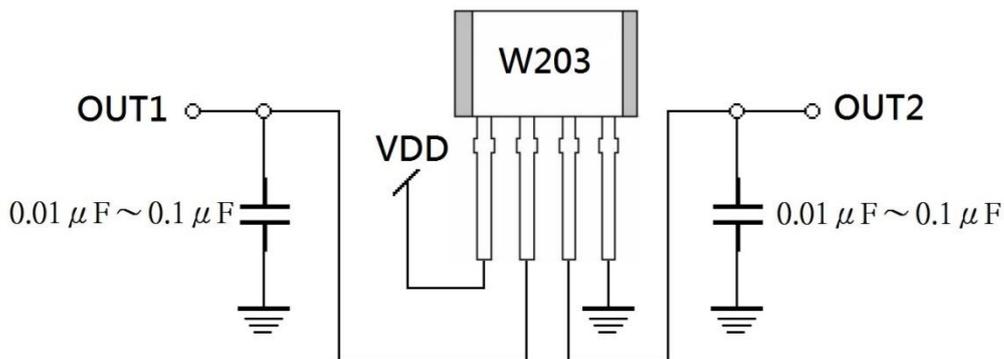
WSH203-XPAN	TO-94
WSH203-XPDN	SOT-25

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	—	3.3	5.0	mA
Quiescent Vout	Vout 1/2	B=0 Gauss	2.35	2.5	2.65	V
Differential Δ Vout	Δ Vout 1-2	B=0 G, Vout1-Vout2	-0.3		+0.3	V
Sensitivity (Single Ended)	Δ Vout1/2	B= 0 to ± 150 G	2.7	3.0	3.3	mV/G
Sensitivity (Differential)	Δ Vout12	B= 0 to ± 150 G	5.4	6.0	6.6	mV/G
Bandwidth	BW	—	—	23	—	kHz
Measurable Range	MR	Vdd=5V	—	±600	—	Gauss
Temperature Drift	Δ Vout0	B=0 Gauss	—	±0.4	—	mV/°C
Output Noise	V _{Np-p}	—	—	5	—	mV

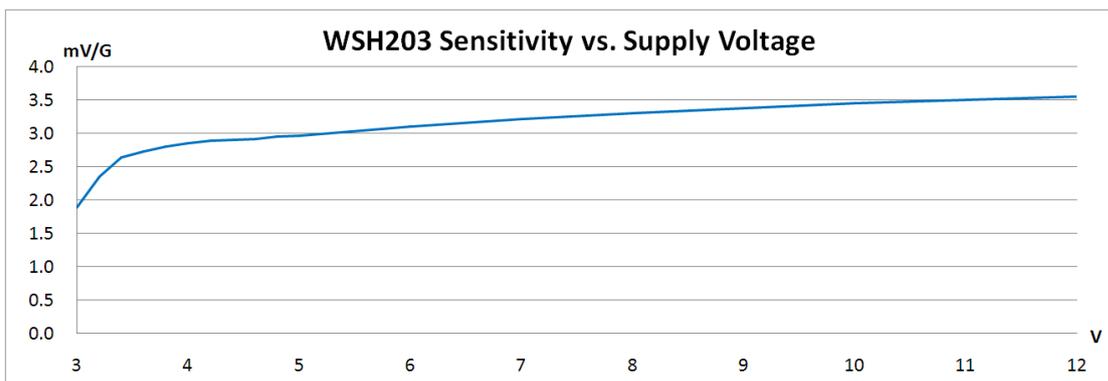
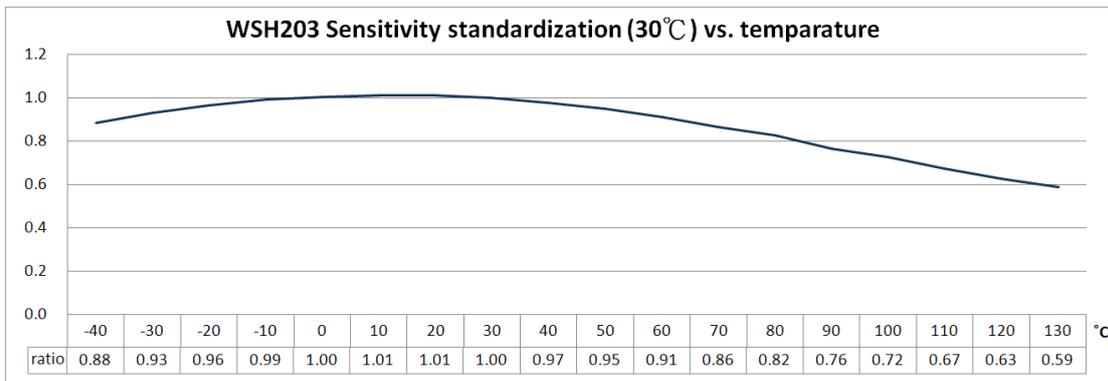
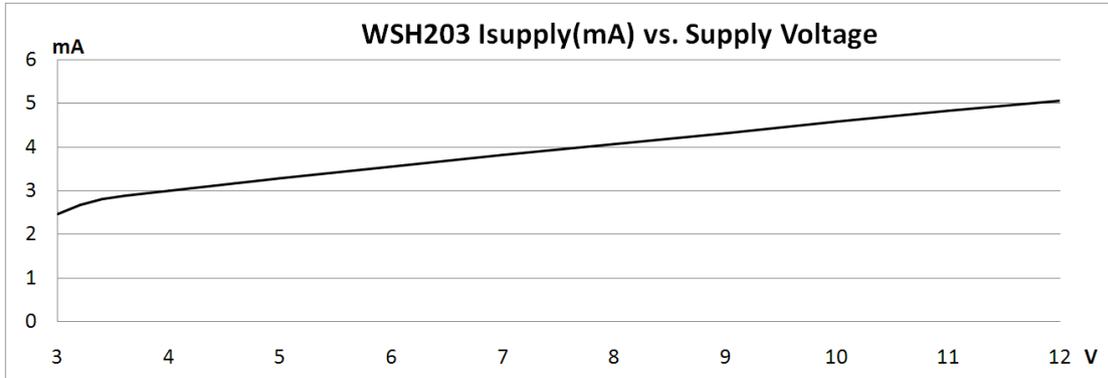
1. All output-voltage measurements are made with a voltmeter having an input impedance of at least 100kΩ
2. Do not apply any 'resistor load' on output pin, it will degrade IC performance.

Application circuit:

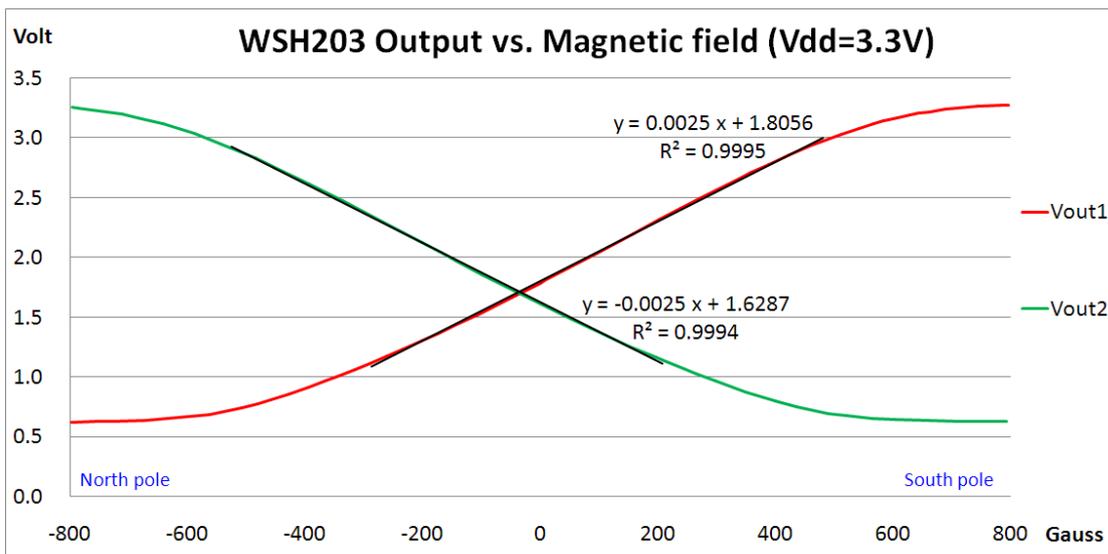
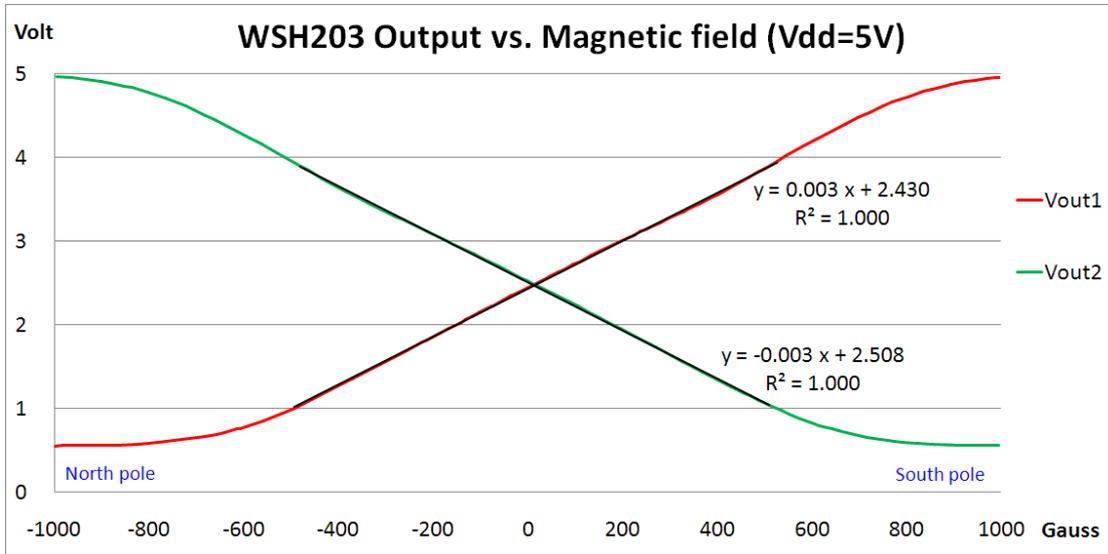


Winson reserves the right to make changes to improve reliability or manufacturability.

Electrical Diagram:



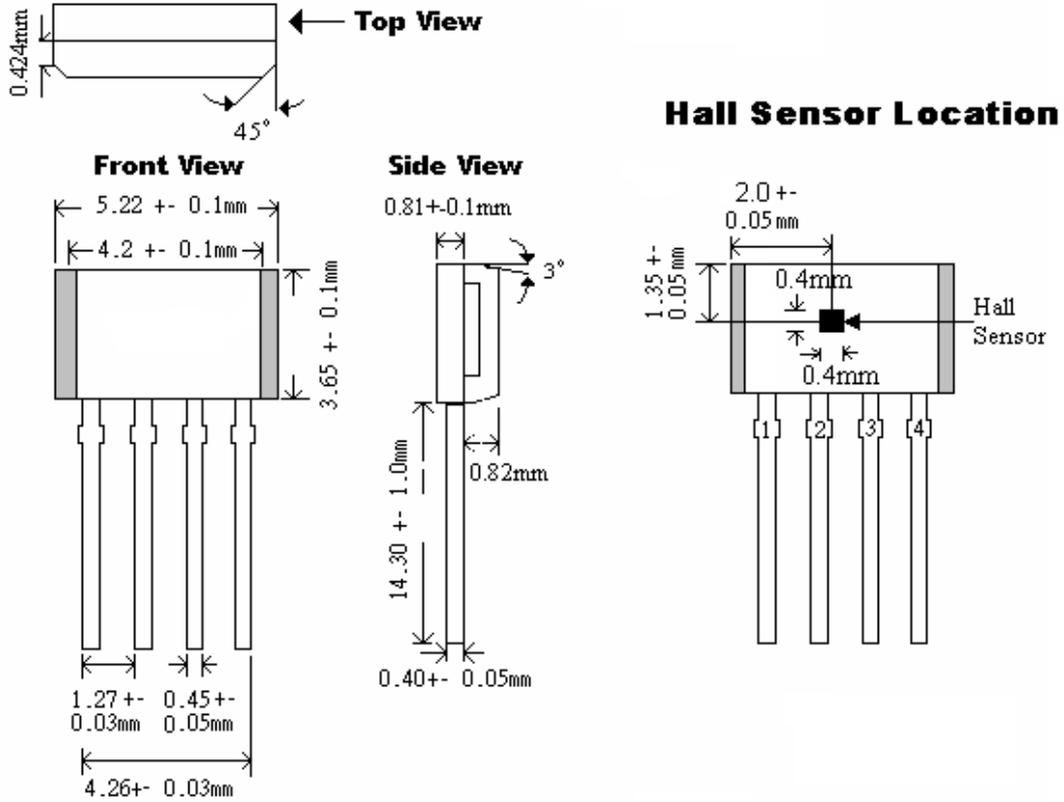
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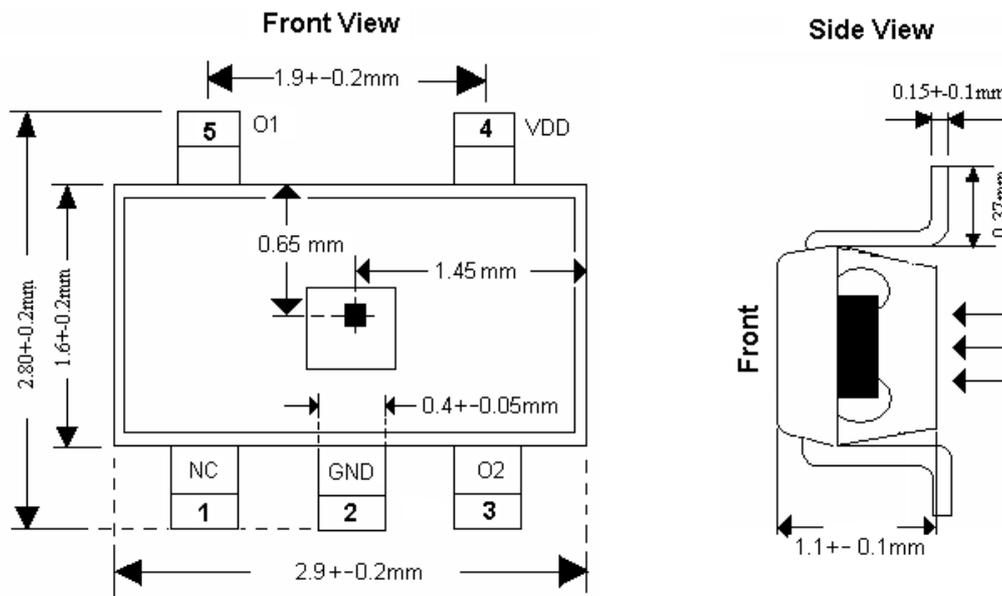
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Package Information:

TO94:



SOT-25:



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