

## WS832 Latch-type Hall-Effect IC

### ● General description

WS832 is an InSb sensor + Si ASIC hybrid Latch-type Hall IC with ultra high sensitivity and low temperature drift in wide operating voltage range.

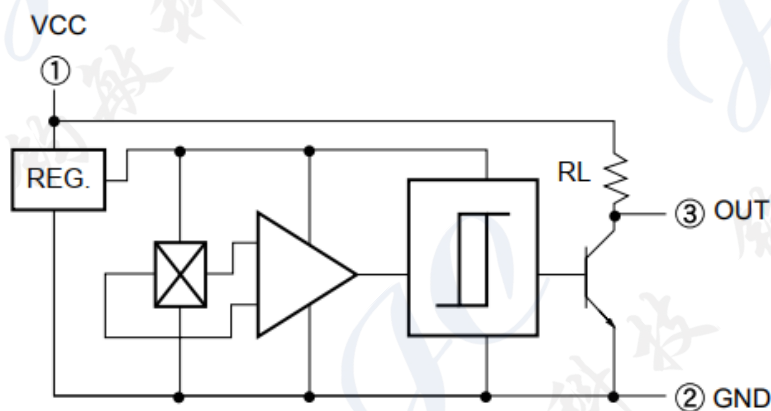
### ● Features

- Ultra high sensitivity with typically Bop 15Gs
- Low temperature drift of operating points in the temp. range of  $-25^{\circ}\text{C} \sim 120^{\circ}\text{C}$
- Wide operating voltage range of 2.5V ~ 30V
- Built-in Pull-up Resistor

### ● Applications

- Flow-rate sensing
- Position sensing of rotor in BLDC motor
- Angle and Speed sensing
- Stroke sensing

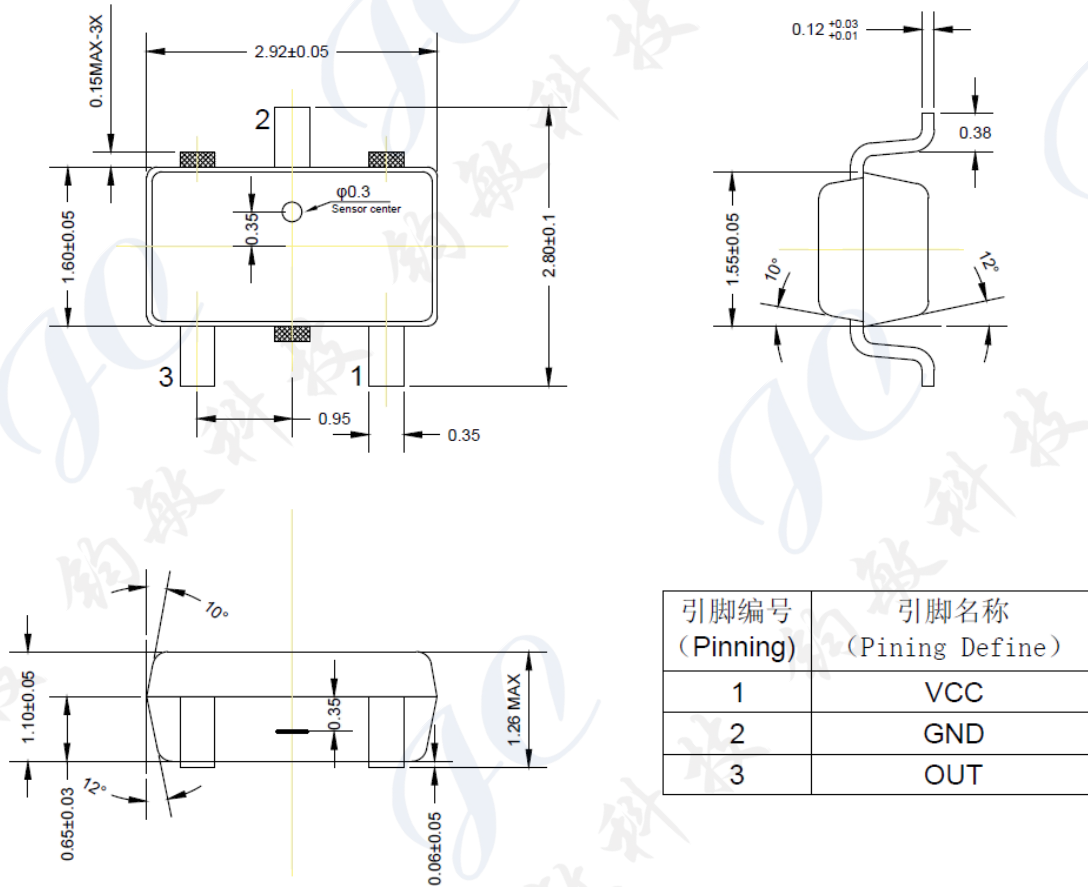
### ● Functional Block Diagram



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● Dimensional Drawing and Pin Configuration (Unit MM)



● Absolute Maximum Ratings

Parameter	Symbol	Limit	Unit
Power Supply Voltage	VCC	-0.3~30	V
Operating Temperature	Topr	-30~120	°C
Storage Temperature	Tstg	-40~150	°C

**Note :** Stresses beyond the limits listed in "Absolute Maximum Ratings" may cause permanent damage to the device.

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● Recommended Operating Conditions

Parameter	Symbol	Min	Max	Unit
Power Supply Voltage	VCC	2.5	24	V
Operation Temperature	T <sub>opr</sub>	-25	110	°C

● Electrical Characteristics

VCC=12V, T<sub>opr</sub> =25°C, unless otherwise specified.

Parameter	Symbol	Conditions	Min	Type	Max	Unit
Power Supply Voltage	VCC	Operating	2.5	12	24	V
Supply Current	ICC	VCC=12V,Output=High	-	4	8	mA
Output Leakage Current	I <sub>LEAKAGE</sub>		-	0.1	10	μA
Output Saturation	V <sub>SAT</sub>	VCC=12V,Output=Low			0.4	V
Built-in Pull-Up	R <sub>L</sub>		7		13	KΩ

● Magnetic Characteristics

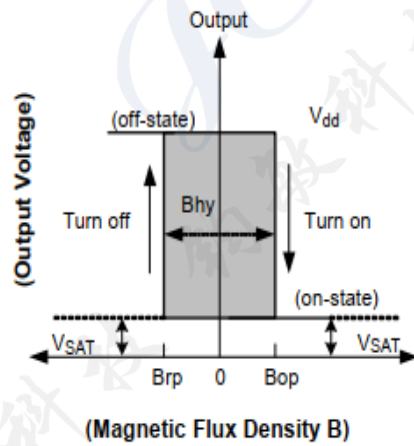
VCC=12V, T<sub>opr</sub> =25°C, unless otherwise specified.

Parameter	Symbol	Min	Type	Max	Unit
Operating Point	BOP	10	-	40	Gs
Releasing Point	BRP	-40	-	-10	Gs
Hysteresis	BHYS	20	-	-	Gs

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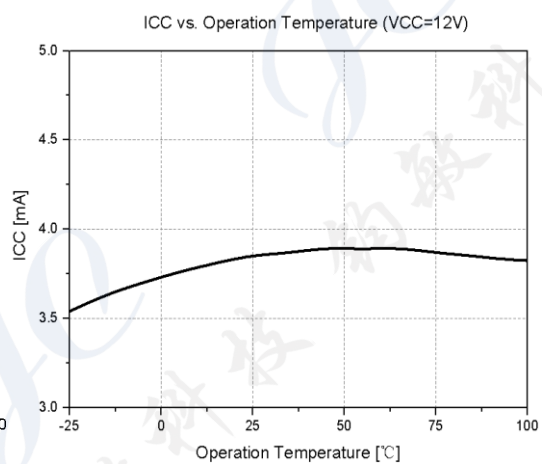
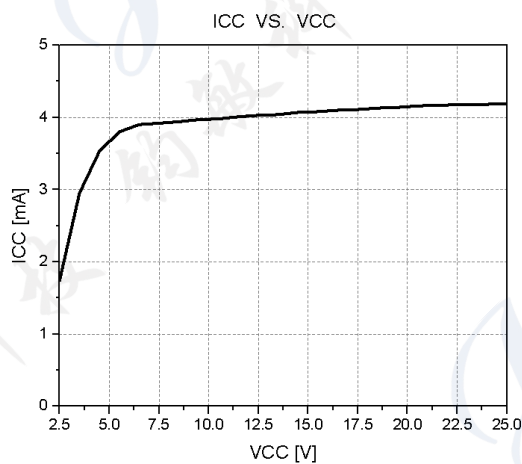
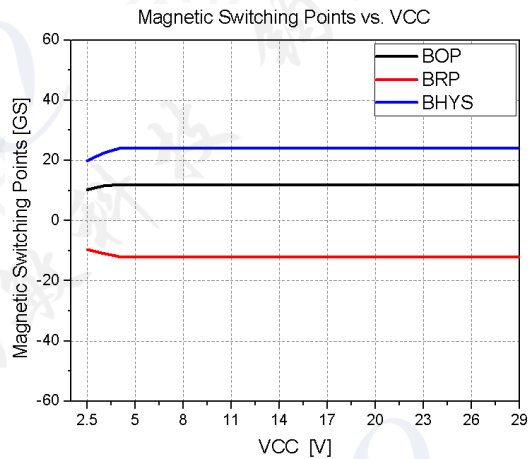
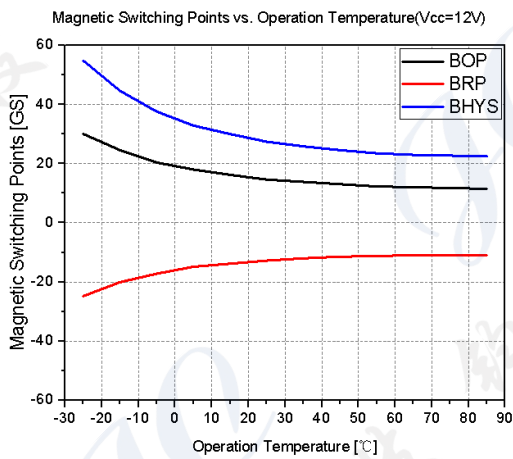
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● Latch-Type Output Characteristics



● Typical Characteristics

$V_{CC}=12V$ ,  $T_{opr}=25^{\circ}C$ , unless otherwise specified.



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● Ordering Information

Product	Package	Marking ID	Packing Type	Quantity
WS832	SOT23-3	Wafer ID	Pack	3000 pcs

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