

# HZ-312C

Shipped in bulk (500pcs per pack)

Notice : It is requested to read and accept "IMPORTANT NOTICE" written on the back of the front cover of this catalogue.

## ●Absolute Maximum Ratings

Item	Symbol		Limit	Unit
Max. Input Current	$I_C$	25°C Const. Current Drive	17	mA
Operating Temp. Range	Topr.		-40~125	°C
Storage Temp. Range	Tstg.		-40~150	°C

注) 制限抵抗がない場合は、最大入力電圧の範囲以内でご利用下さい。



## ●Electrical Characteristics (T<sub>a</sub>=25°C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Output Hall Voltage	$V_H$ <sup>**</sup>	Const. Current Drive B=50mT, I <sub>C</sub> =5mA	24		33	mV
Input Resistance	R <sub>in</sub>	B=0mT, I <sub>C</sub> =0.1mA	240		360	Ω
Output Resistance	R <sub>out</sub>	B=0mT, I <sub>C</sub> =0.1mA	240		360	Ω
Offset Voltage	V <sub>os</sub> (V <sub>U</sub> )	B=0mT, I <sub>C</sub> =5mA	-2.5		2.5	mV
Temp. Coefficient of V <sub>H</sub>	$\alpha V_H$ <sup>**</sup>	B=50mT, I <sub>C</sub> =5mA T <sub>a</sub> =25~125°C	-0.07		-0.11	%/°C
Temp. Coefficient of R <sub>in</sub>	$\alpha R_{in}$ <sup>**</sup>	B=0mT, I <sub>C</sub> =0.1mA T <sub>a</sub> =25~125°C	0		0.2	%/°C

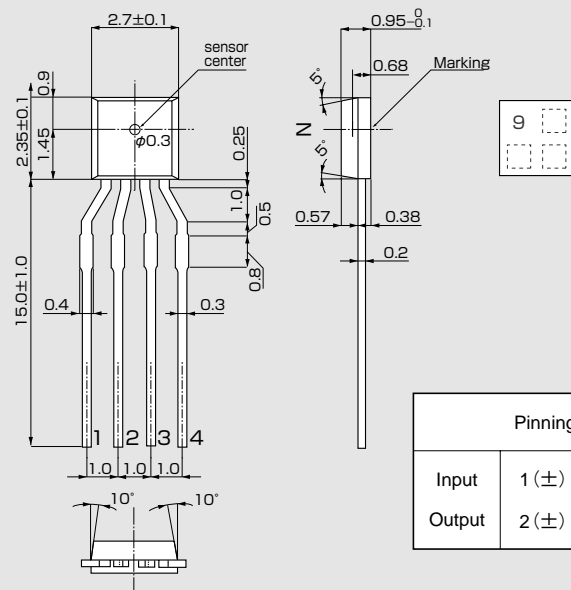
Notes : 1.  $V_H = V_{HM} - V_{os}(V_U)$  (VHM: meter indication)

$$2. \alpha V_H = \frac{1}{V_H(T_1)} \times \frac{V_H(T_2) - V_H(T_1)}{(T_2 - T_1)} \times 100$$

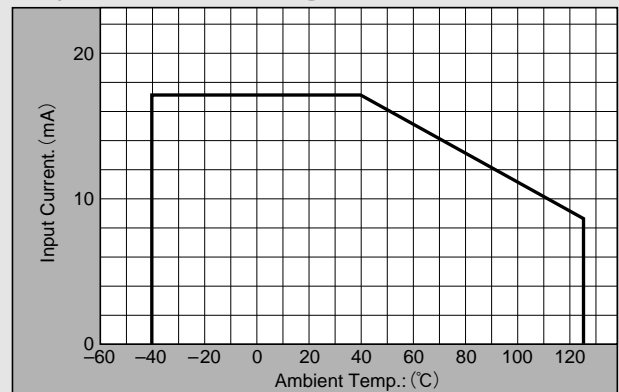
$$3. \alpha R_{in} = \frac{1}{R_{in}(T_1)} \times \frac{R_{in}(T_2) - R_{in}(T_1)}{(T_2 - T_1)} \times 100$$

$$T_1 = 25^\circ\text{C}, T_2 = 125^\circ\text{C}$$

## ●Dimensional Drawing (Unit : mm)

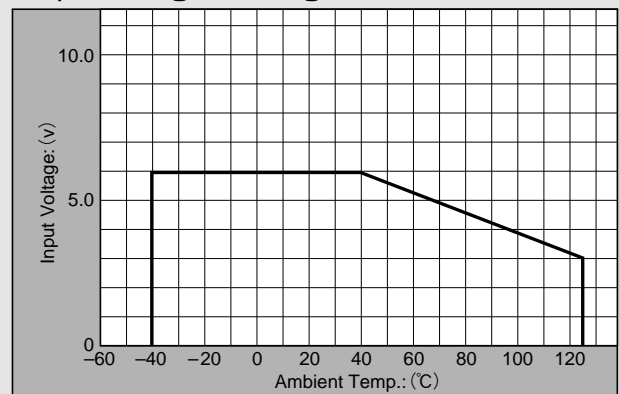


## ●Input Current Derating Curve



Note : R<sub>in</sub> of Hall element decreases rapidly as ambient temperature increases. Ensure compliance with input current derating curve envelope, throughout the operating temperature range.

## ●Input Voltage Derating Curve

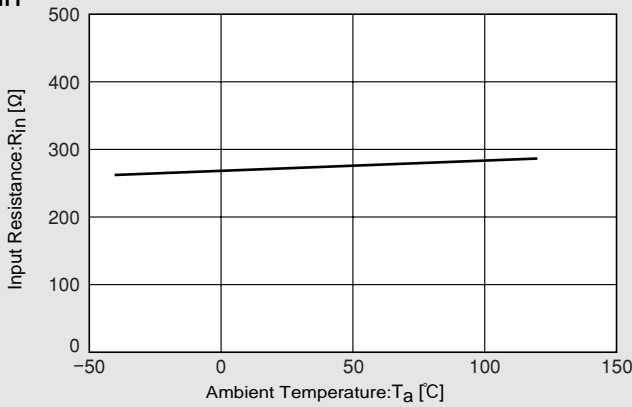


Note : For constant-voltage drive, stay within this input voltage derating curve envelope.

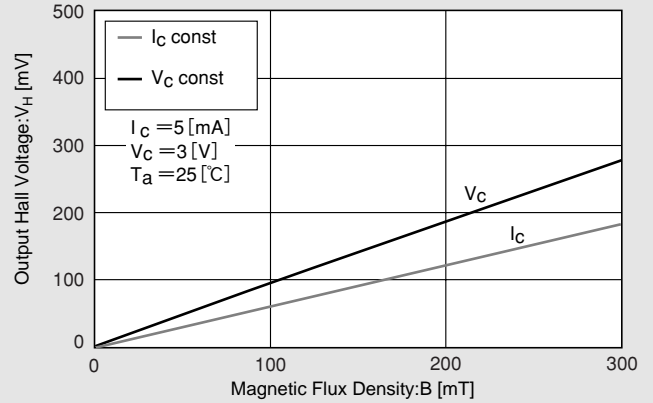
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- Handling precautions required for preventing electrostatic discharge.
- This product contains gallium arsenide (GaAs). Handling and discarding precautions required.

●Characteristic Curves

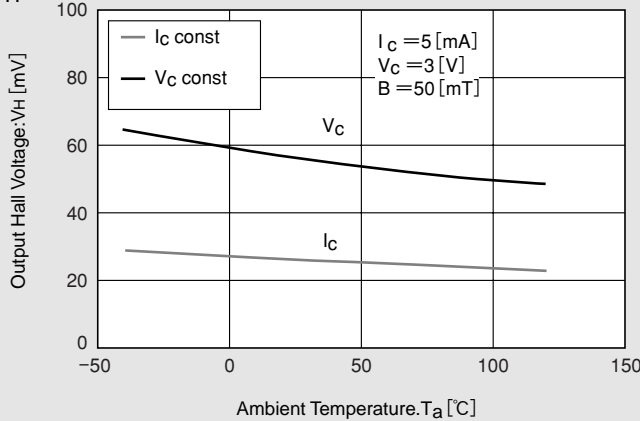
$R_{in}$ -T



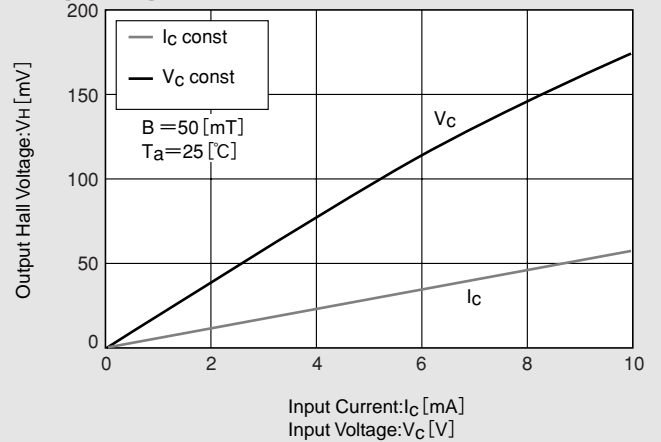
$V_H$ -B



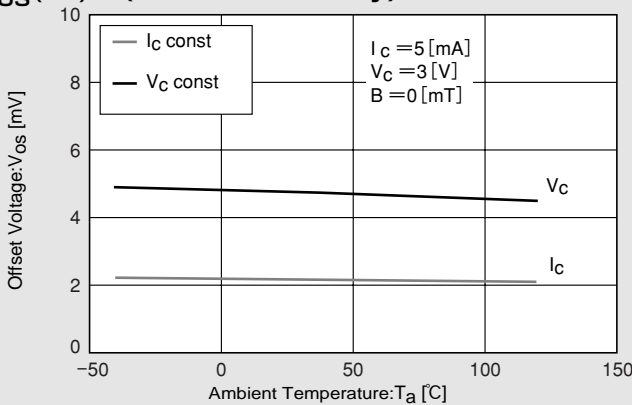
$V_H$ -T



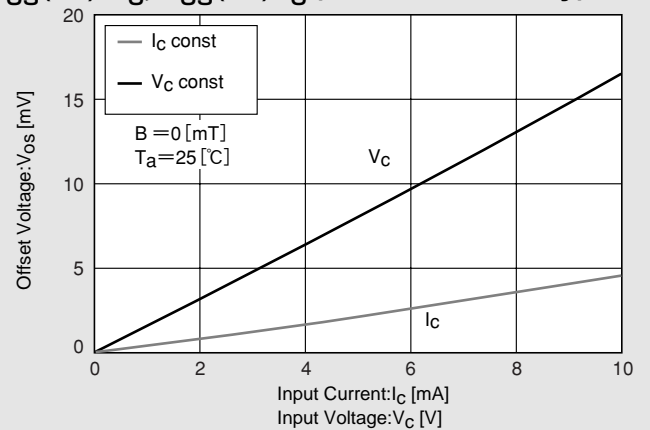
$V_H$ - $V_C$ ,  $V_H$ - $I_C$



$V_{OS}(V_u)$ -T (For reference only)



$V_{OS}(V_u)$ - $V_C$ ,  $V_{OS}(V_u)$ - $I_C$  (For reference only)



※Magnetic Flux Density  
1 [mT] = 10 [G]

in This Example:  $R_{in}=275$  [Ω],  $V_{OS}=4.7$  [mV] [ $V_C=3$  [V]]

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June 2, 2010