

# HW-322B

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	$I_C$	40°C Const. Current Drive	20	mA
Operating Temp. Range	$T_{opr.}$		-40 ~ +110	°C
Storage Temp. Range	$T_{stg.}$		-40 ~ +125	°C

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

### ●Electrical Characteristics( $T_a=25^\circ\text{C}$ )

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Output Hall Voltage	$V_H^*$	Const. Voltage Drive B=50mT, $V_C=1\text{V}$	228		370	mV
Input Resistance	$R_{in}$	B=0mT, $I_C=0.1\text{mA}$	240		550	$\Omega$
Output Resistance	$R_{out}$	B=0mT, $I_C=0.1\text{mA}$	240		550	$\Omega$
Offset Voltage	$V_{os}(V_u)$	B=0mT, $V_C=1\text{V}$	-7		+7	mV
Temp. Coefficient of $V_H$	$\alpha V_H^*$	Average on 0~40°C B=50mT, $I_C=5\text{mA}$		-1.8		%/°C
Temp. Coefficient of $R_{in}$	$\alpha R_{in}^*$	Average on 0~40°C B=0mT, $I_C=0.1\text{mA}$		-1.8		%/°C
Dielectric Strength		100V D.C	1.0			M $\Omega$

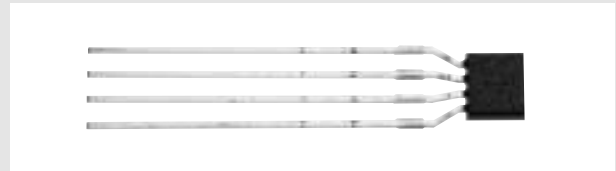
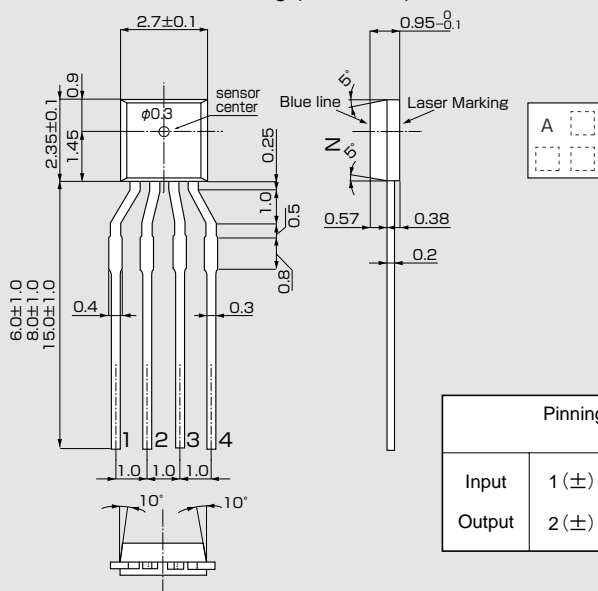
Notes : 1.  $V_H = V_{HM} - V_{os}(V_u)$  (VHM:meter indication)

$$2. \alpha V_H = \frac{1}{V_H(T_1)} \times \frac{V_H(T_3) - V_H(T_2)}{(T_3 - T_2)} \times 100$$

$$3. \alpha R_{in} = \frac{1}{R_{in}(T_1)} \times \frac{R_{in}(T_3) - R_{in}(T_2)}{(T_3 - T_2)} \times 100$$

$T_1 = 20^\circ\text{C}$ ,  $T_2 = 0^\circ\text{C}$ ,  $T_3 = 40^\circ\text{C}$

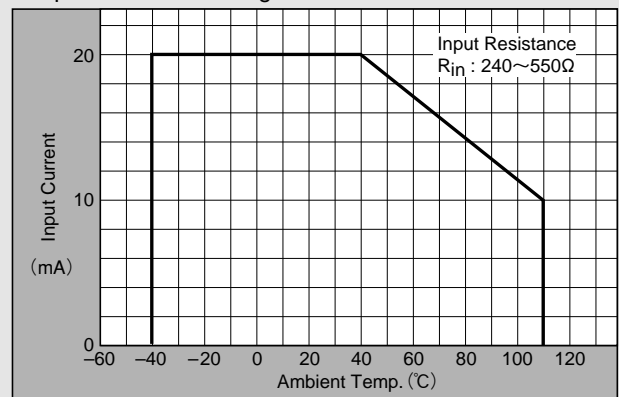
### ●Dimensional Drawing (Unit : mm)



### ●Classification of Output Hall Voltage ( $V_H$ )

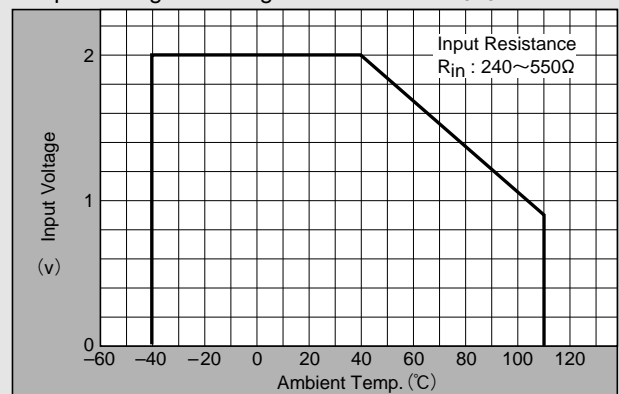
Rank	$V_H$ [ mV ]	Conditions
E	228 ~ 274	B=50mT, $V_C=1\text{V}$ Constant Voltage Drive
F	266 ~ 320	
G	310 ~ 370	

### ●Input Current Derating Curve 240~550 ( $\Omega$ )



Note :  $R_{in}$  of Hall element decreases rapidly as ambient temperature increases. Ensure compliance with input current derating curve envelope, throughout the operating temperature range.

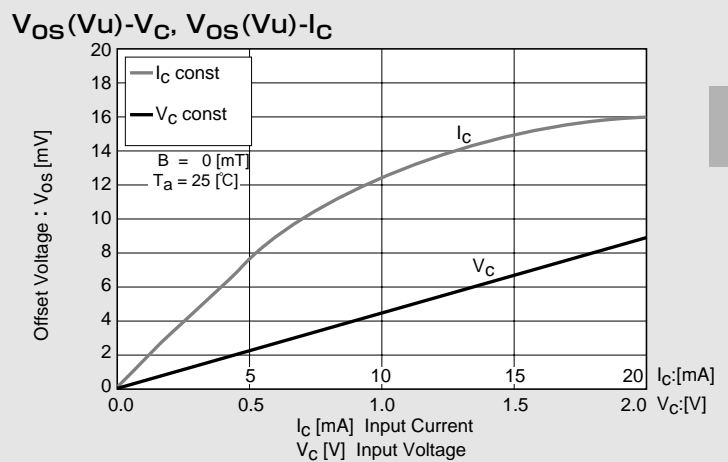
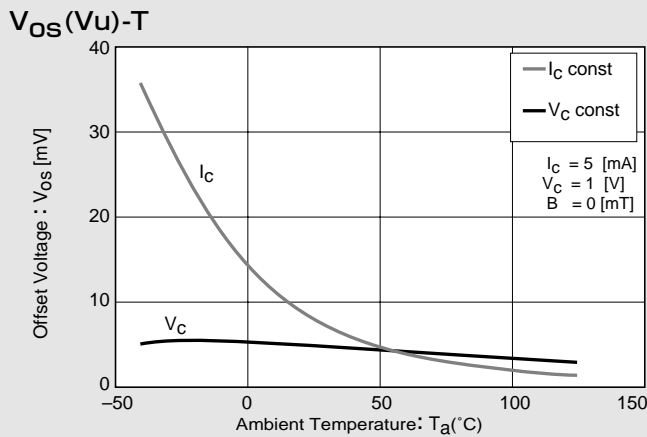
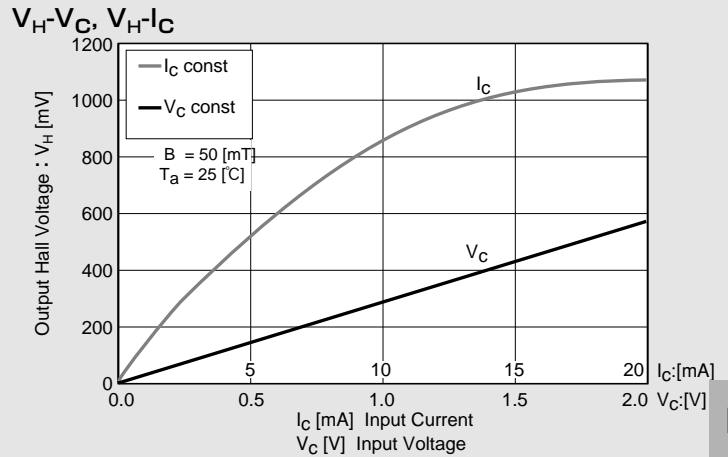
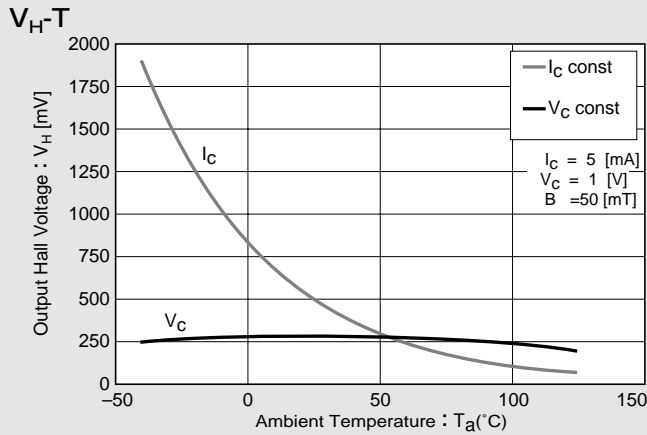
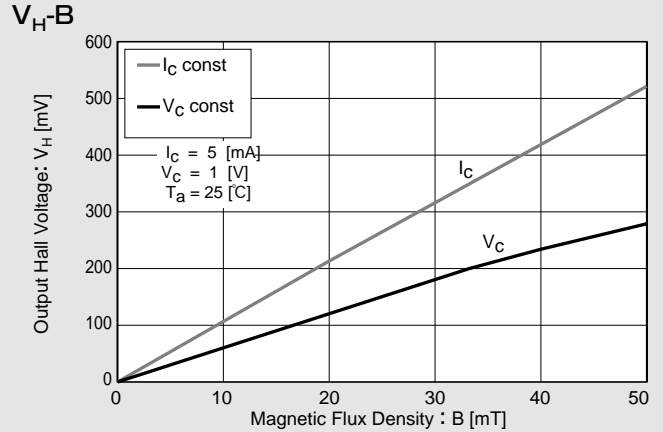
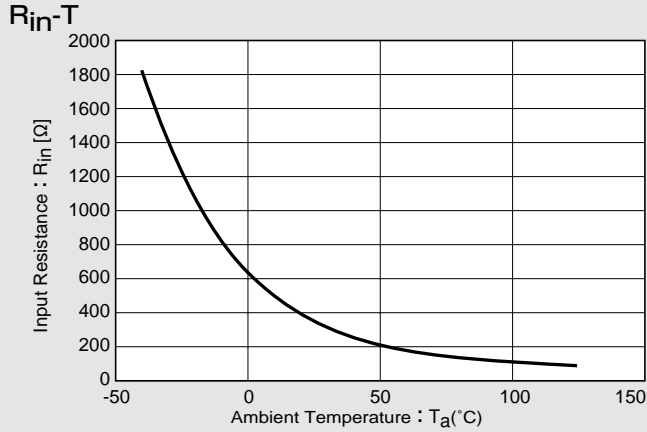
### ●Input Voltage Derating Curve 240~550 ( $\Omega$ )



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

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●Characteristic Curves



※Magnetic Flux Density  
1[mT]=10[G]

$R_{in}=350$  [ $\Omega$ ]、 $V_{OS}=4.7$  [mV] [ $V_C=1$  [V]]の例  
 In This Example :  $R_{in}=350$  [ $\Omega$ ]、 $V_{OS}=4.7$  [mV]、 $[V_C=1$  [V]]

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