# 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℃ Const. Current Drive | 20 | mA |
| Operating Temp. Range | Topr. | | −40 ～ +110 | ℃ |
| Storage Temp. Range | Tstg. | | −40 ～ +125 | ℃ |

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

## ●Electrical Characteristics($T_a$=25℃)

| Item | Symbol | Conditions | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| Output Hall Voltage | $V_H$ ※ | Const. Voltage Drive B=50mT, $V_c$=1V | 228 | | 370 | mV |
| Input Resistance | $R_{in}$ | B=0mT, $I_c$=0.1mA | 240 | | 550 | Ω |
| Output Resistance | $R_{out}$ | B=0mT, $I_c$=0.1mA | 240 | | 550 | Ω |
| Offset Voltage | $V_{OS}$(Vu) | B=0mT, $V_c$=1V | −7 | | +7 | mV |
| Temp. Coefficient of $V_H$ | $\alpha V_H$ ※ | Average on 0～40℃ B=50mT, $I_c$=5mA | | −1.8 | | %/℃ |
| Temp. Coefficient of $R_{in}$ | $\alpha R_{in}$ ※ | Average on 0～40℃ B=0mT, $I_c$=0.1mA | | −1.8 | | %/℃ |
| Dielectric Strength | | 100V D.C | 1.0 | | | MΩ |

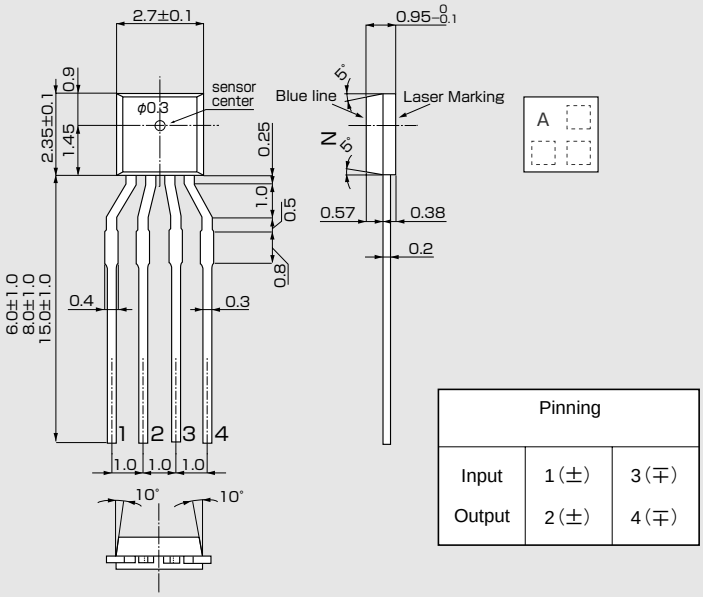
Notes : 1. $V_H = VHM - V_{os}(Vu)$ (VHM:meter indication)

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˚C, $T_2$ = 0˚C, $T_3$ = 40˚C

## ●Dimensional Drawing (Unit : mm)

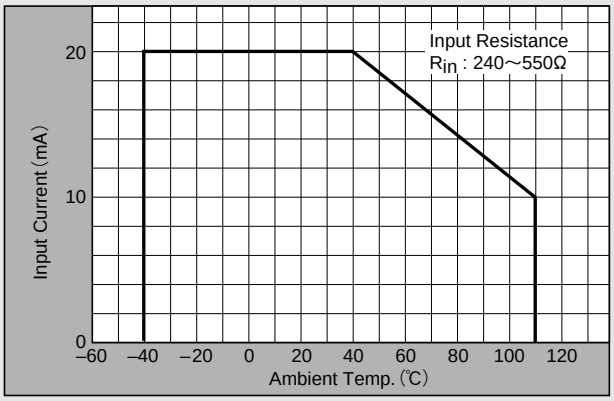



| Pinning | | |
|---|---|---|
| Input | 1(±) | 3(∓) |
| Output | 2(±) | 4(∓) |

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

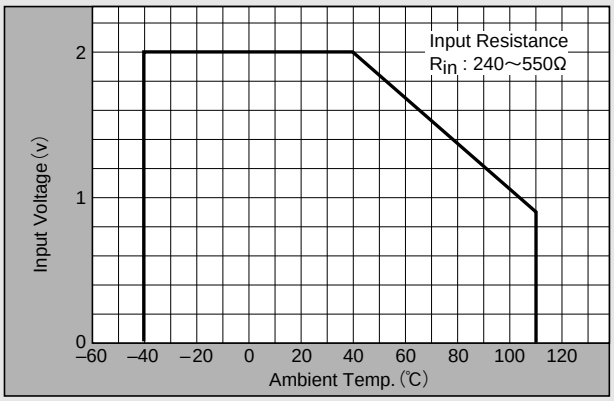
| Rank | $V_H$ [ mV ] | Conditions |
|---|---|---|
| E | 228 ～ 274 | B=50mT, $V_c$=1V Constant Voltage Drive |
| F | 266 ～ 320 | |
| G | 310 ～ 370 | |

## ●Input Current Derating Curve 240～550 (Ω)




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 (Ω)




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

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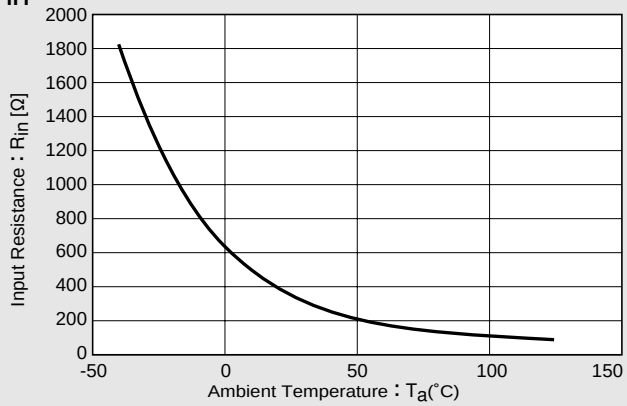
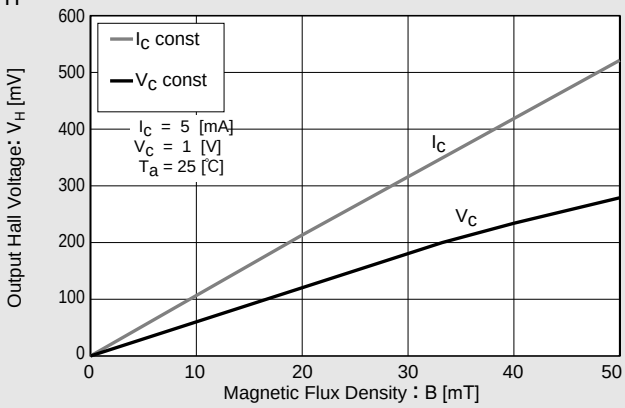
## ●Characteristic Curves

$R_{in}$-T

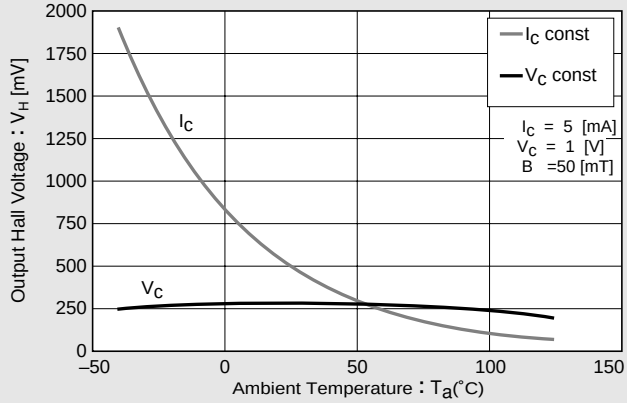



$V_H$-B

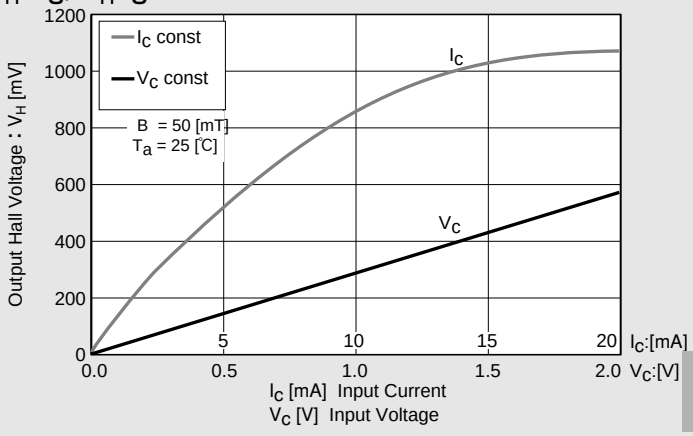





$V_H$-T

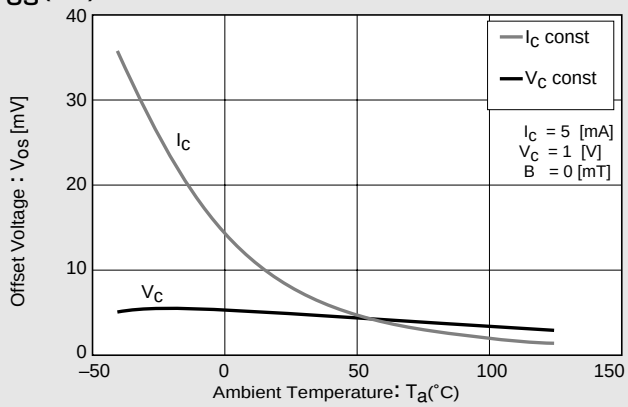



$V_H$-$V_C$, $V_H$-$I_C$

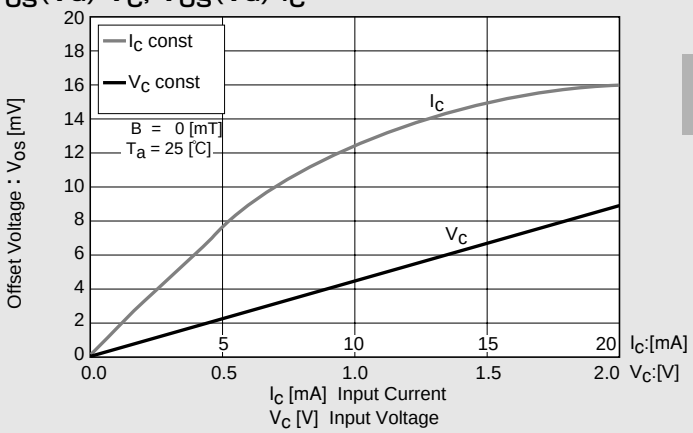





$V_{OS}$(Vu)-T




$V_{OS}$(Vu)-$V_C$, $V_{OS}$(Vu)-$I_C$






※Magnetic Flux Density
1[mT]=10[G]

In This Example : $R_{in}$=350〔Ω〕, $V_{OS}$=4.7〔mV〕, [$V_C$=1〔V〕]

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