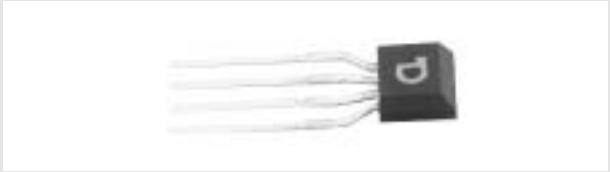
HW-300B

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



●Classification of Output Hall Voltage (V_H)

Rank	V_H [mV]	Conditions
B	144 ～ 174	B=50mT, V_C=1V Constant Voltage Drive
C	168 ～ 204	
D	196 ～ 236	
E	228 ～ 274	
F	266 ～ 320	

Note : When ordering, specify 3-rank or wider range(e·g·,C,D,E).

●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	168		320	mV
Input Resistance	R_{in}	B=0mT, I_C=0.1mA	240		550	Ω
Output Resistanc	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	αV_H ※	Average on 0～40℃ B=50mT, I_C=5mA		−1.8		%/℃
Temp. Coefficient of R_{in}	αR_{in} ※	Average on 0～40℃ B=0mT, I_C=0.1mA		−1.8		%/℃
Dielectric Strength		100V D.C	1.0			MΩ

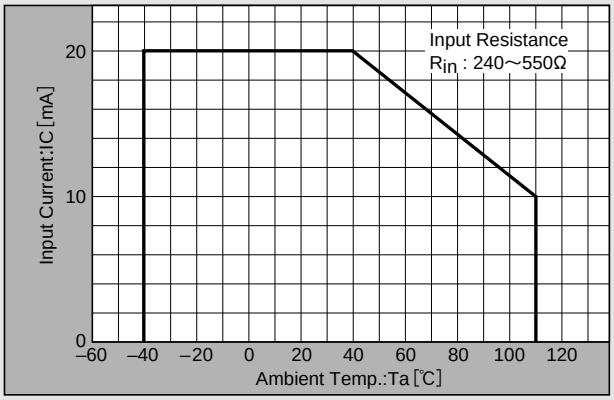
Notes : 1. $V_H = VHM - V_{os}(Vu)$ (VHM:meter indication)

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

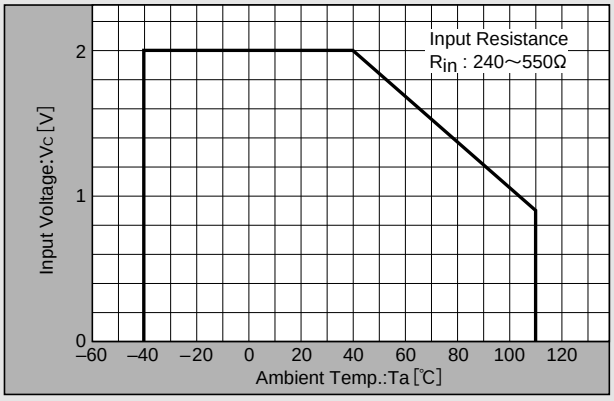
T_1 = 20˚C, T_2 = 0˚C, T_3 = 40˚C

●Input Current Derating Curve



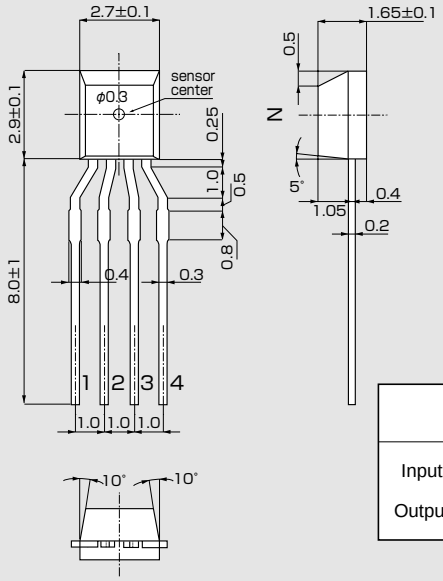
Note : R_{in} of Hall element decreases rapidly as ambient temperature increases. Ensure compliance with input current derating curve envelope, throughout the operating temperature range.

●Input Voltage Derating Curve



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

●Dimensional Drawing(Unit : mm)



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

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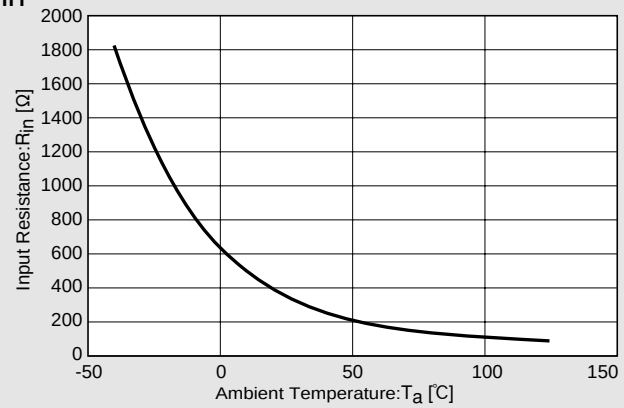
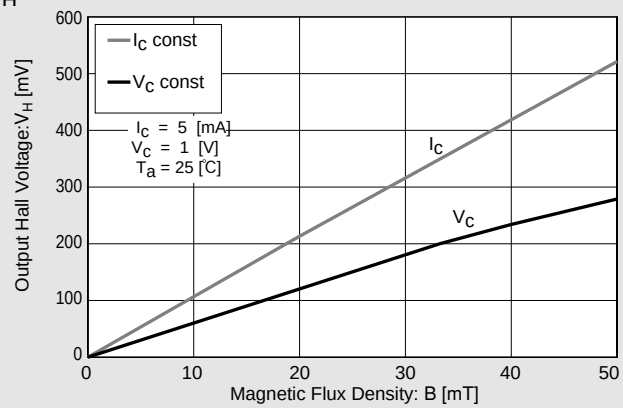
●Characteristic Curves

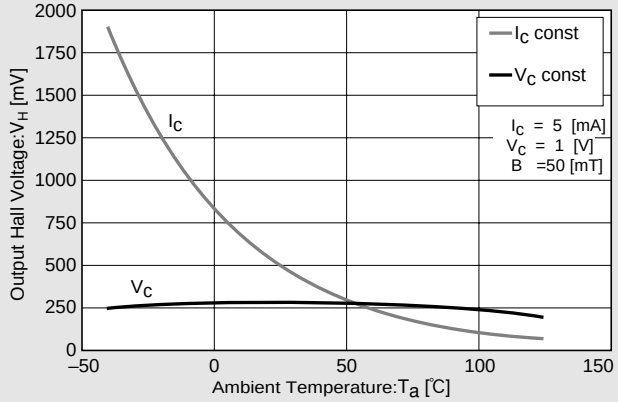
R_{in}-T



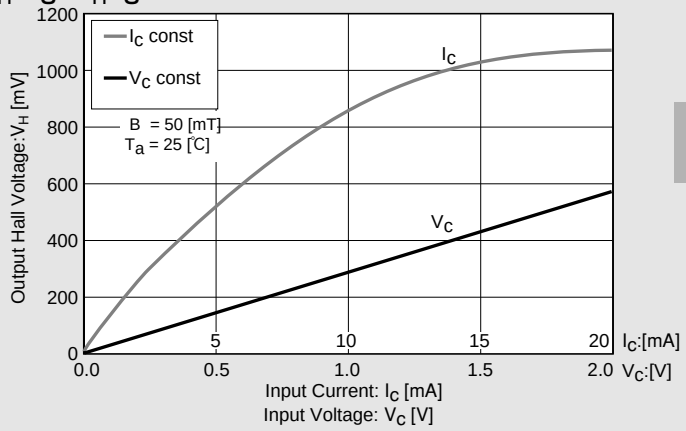
V_H-B



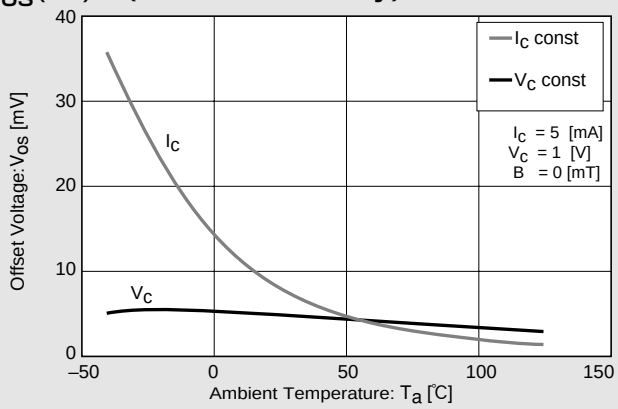
V_H-T



V_H-V_C, V_H-I_C

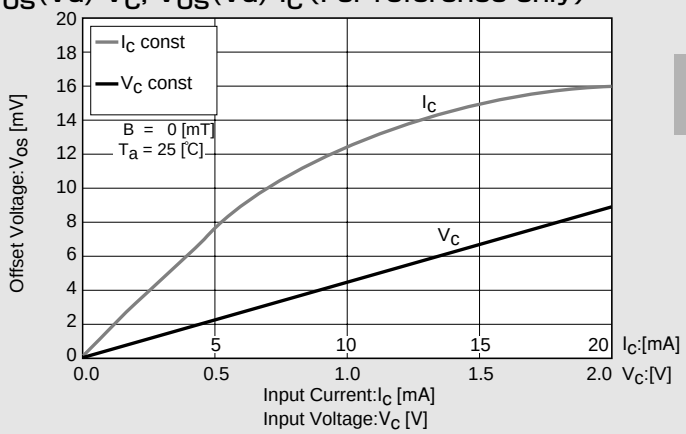


V_{OS}(Vu)-T (For reference only)



※Magnetic Flux Density
1[mT]=10[G]

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



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

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June 2, 2010