HW-101A-4T

Shipped in packet-tape reel(3,000pcs per reel)

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	℃

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	168		320	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	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

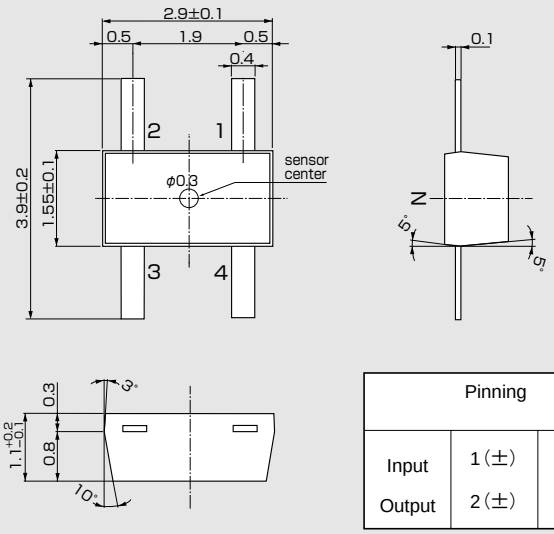
Notes : 1. $V_H = VHM - V_{os}(Vu)$ (VHM:meter indication)

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

●Dimensional Drawing(Unit : mm)



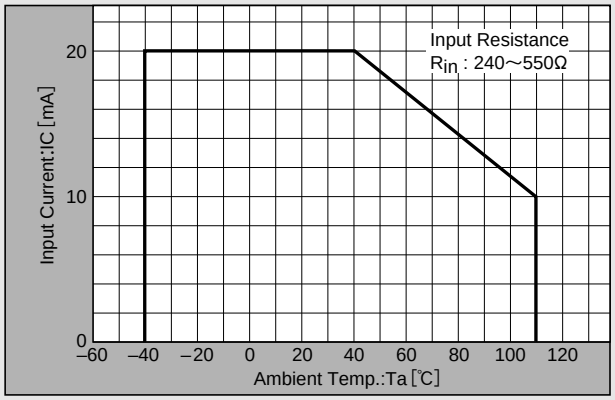
Pinning		
Input	1 (±)	3 (∓)
Output	2 (±)	4 (∓)

●Classification of Output Hall Voltage (V_H)

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

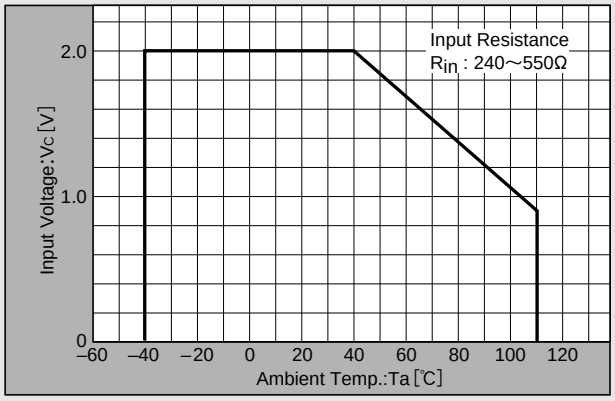
Note : When ordering, specify 3-rank or wider range(e·g·,C,D,E).

●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

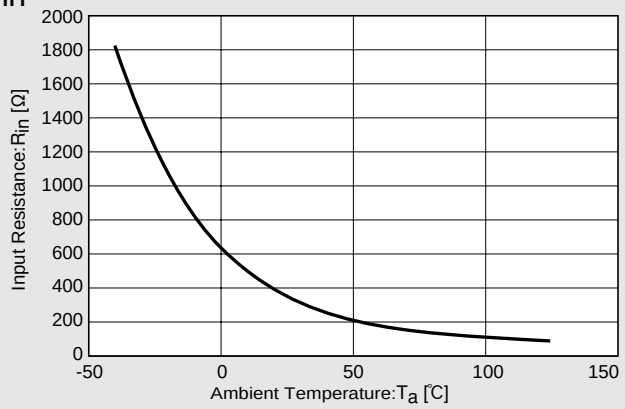


Note : For constant-voltage drive, stay within this input voltage derating curve envelope.

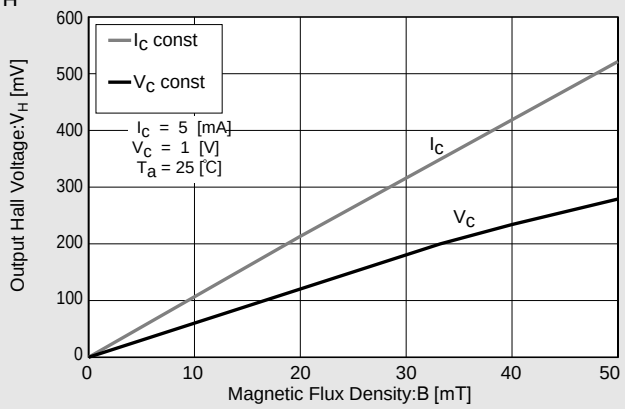
•Please be aware that our products are not intended for use in life support equipment, devices, or systems. Use of our products in such applications requires the advance written approval of our sales staff.
Certain applications using semiconductor devices may involve potential risks of personal injury, property damage, or loss of life. In order to minimize these risks, adequate design and operating safeguards should be provided by the customer to minimize inherent or procedural hazards. Inclusion of our products in such applications is understood to be fully at the risk of the customer using our devices or systems.

●Characteristic Curves

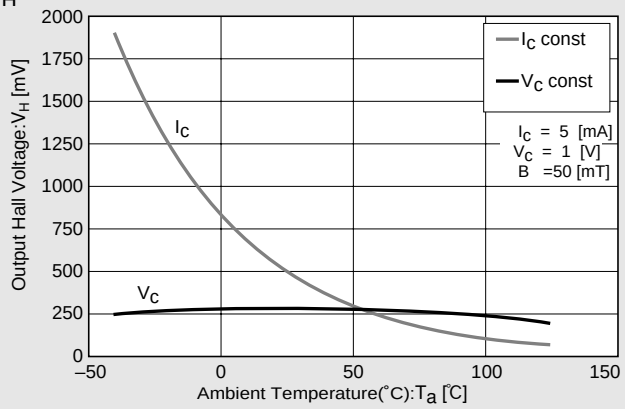
R_{in}-T



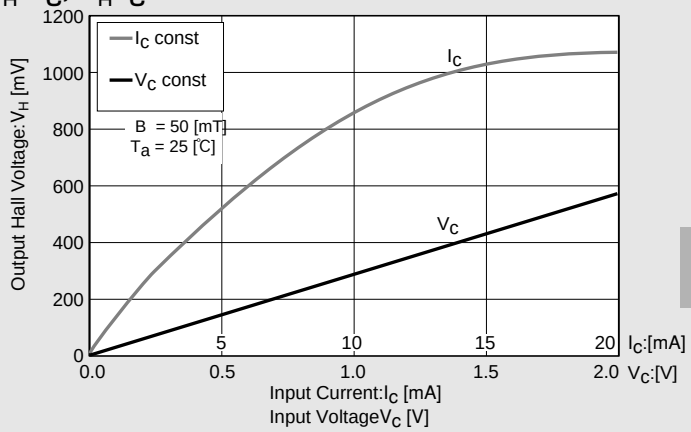
V_H-B



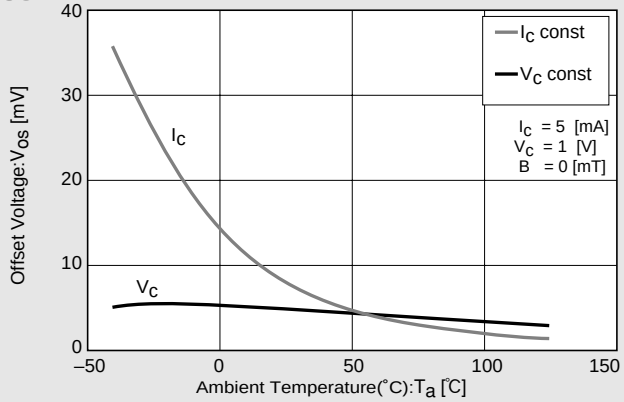
V_H-T



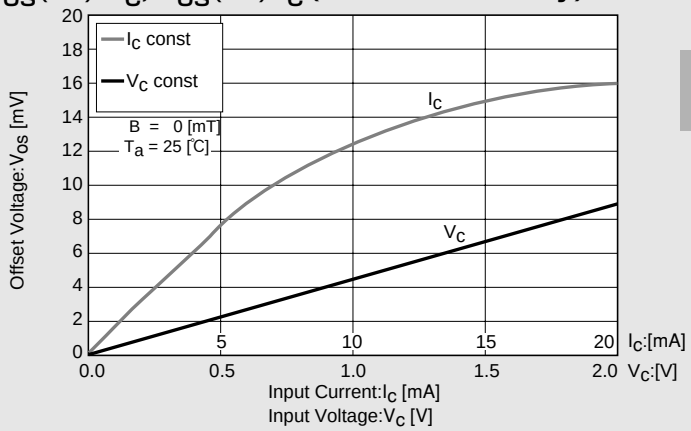
V_H-V_C, V_H-I_C



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



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



※Magnetic Flux Density
1[mT]=10[G]

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