HG-166A

Shipped in packet-tape reel(4,000pcs 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 Voltage	V_C	12	V
Max.Input Power	P_D	150	mW
Operating Temp. Range	Topr.	−40 ～ +125	℃
Storage Temp. Range	Tstg.	−40 ～ +150	℃

●Electrical Characteristics(T_a=25℃)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Output Hall Voltage	V_H ※	B=50mT, V_C=6V	78		102	mV
Input Resistance	R_{in}	B=0mT, I_C=0.1mA	1,000	1,250	1,500	Ω
Output Resistance	R_{out}	B=0mT, I_C=0.1mA	1,800	2,500	3,000	Ω
Offset Voltage	$V_{OS}(V_U)$	B=0mT, V_C=6V	−8		8	mV
Temp. Coefficient of V_H	αV_H ※	B=50mT, I_C=1mA Ta=25～125℃			−0.06	%/℃
Temp. Coefficient of R_{in}	αR_{in} ※	B=0mT, I_C=0.1mA Ta=25～125℃			0.3	%/℃
Linearity	ΔK ※	B=0.1/0.5T, I_C=1mA			2	%

Notes : 1. $V_H = VHM - V_{os}(V_u)$ (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. $\alpha R_{in} = \frac{1}{R_{in}(T_1)} \times \frac{R_{in}(T_2) - R_{in}(T_1)}{(T_2 - T_1)} \times 100$

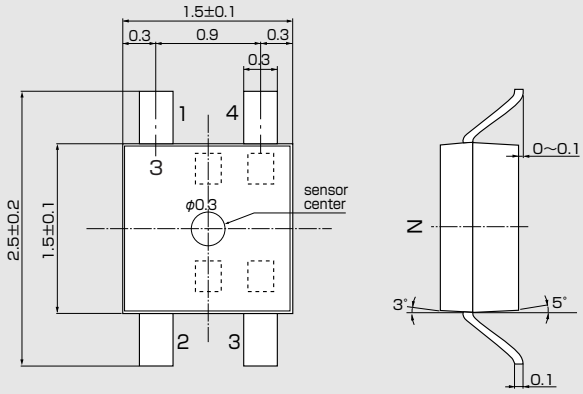
4. $\Delta K = \frac{K(B_1) - K(B_2)}{[K(B_1) + K(B_2)]/2} \times 100$

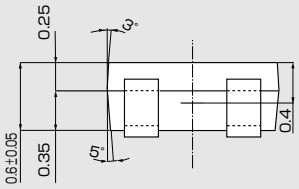
T_1 = 25°C, T_2 = 125°C

$K = \frac{V_H}{I_C \cdot B}$

B_1 = 0.5T, B_2 = 0.1T

●Dimensional Drawing(Unit : mm)

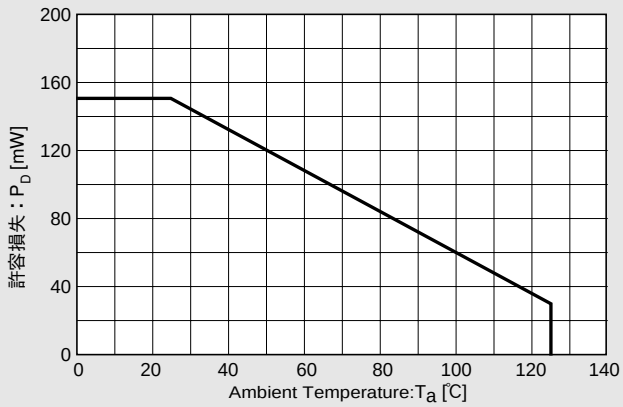




Pinning		
Input	1(±)	3(∓)
Output	2(±)	4(∓)

●Characteristic Curves

Allowable Package Power Dissipation



●Taping

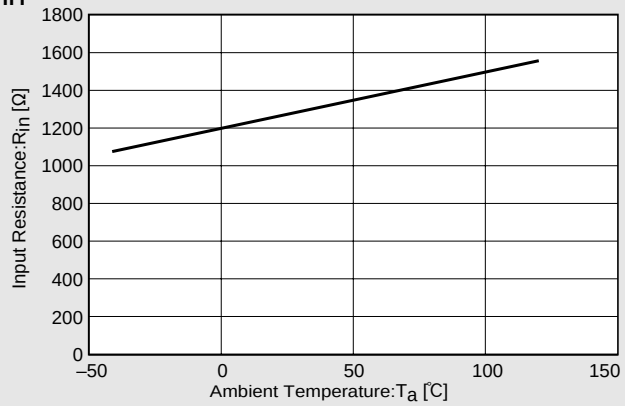
•Please be aware that AKE products are not intended for use in life support equipment, devices, or systems. Use of AKE products in such applications requires the advance written approval of the appropriate AKE officer.
Certain applications using semiconductor devices may involve potential risks of personal 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 AKE products in such applications is understood to be fully at the risk of the customer using AKE devices or systems.

•Handling precautions required for preventing electrostatic discharge.

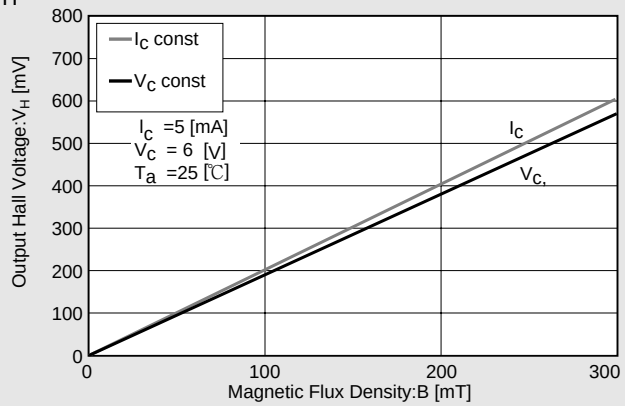
•This product contains galium arsenide（GaAs）.Handling and discarding precautions required.

●Characteristic Curves

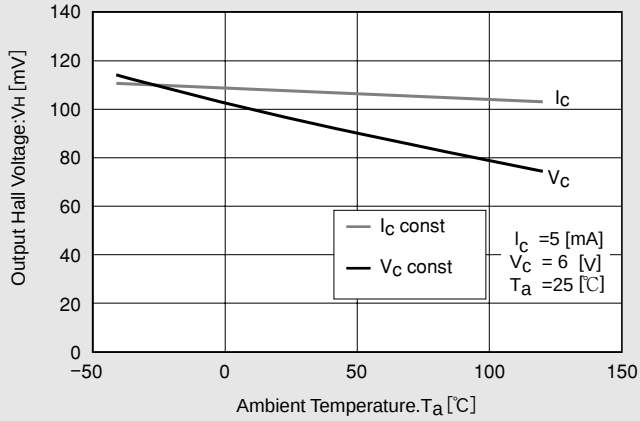
R_{in}-T



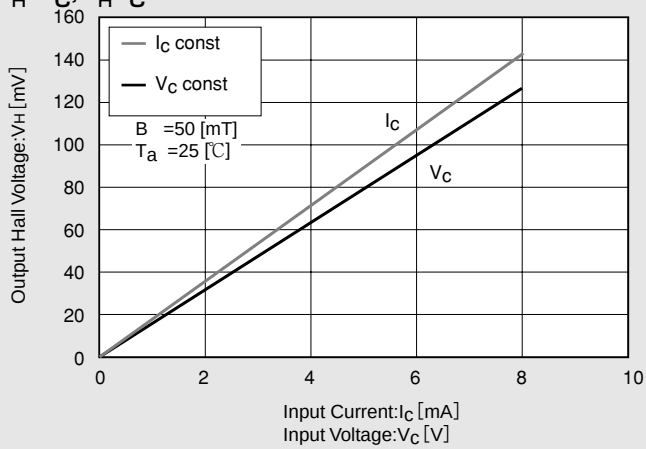
V_H-B



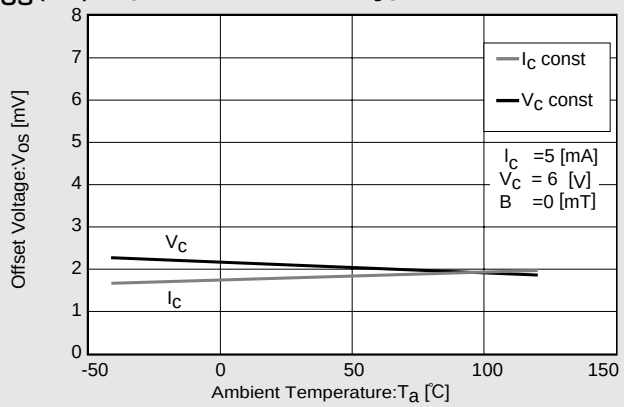
V_H-T



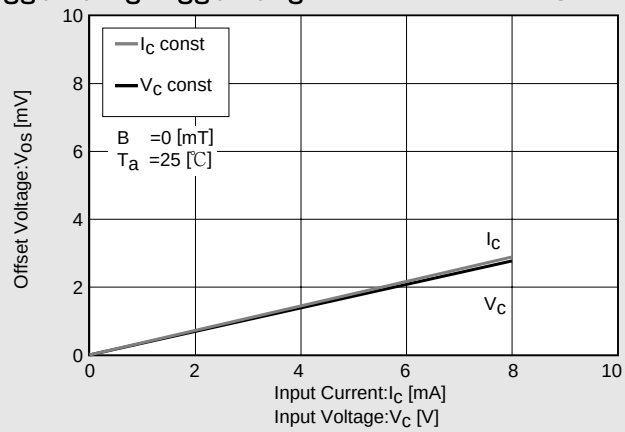
V_H-V_C,V_H-I_C



V_{OS}(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}=1270〔Ω〕, V_{OS}=2.1〔mV〕, [V_C=6〔V〕]