

# HG-0115

Shipped in packet-tape reel(5,000pcs 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	$V_C$	8	V
Max.Input Power	$P_D$	150	mW
Operating Temp. Range	Topr.	-40 ~ +125	°C
Storage Temp. Range	Tstg.	-40 ~ +150	°C



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

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Output Hall Voltage	$V_H^*$	$B=50\text{mT}$ , $V_C=6\text{V}$	80		110	mV
Input Resistance	$R_{in}$	$B=0\text{mT}$ , $I_C=0.1\text{mA}$	2,200	2,400	3,200	$\Omega$
Output Resistance	$R_{out}$	$B=0\text{mT}$ , $I_C=0.1\text{mA}$	4,400	4,800	6,400	$\Omega$
Offset Voltage	$V_{os}(V_o)$	$B=0\text{mT}$ , $V_C=6\text{V}$	-8		8	mV
Temp. Coefficient of $V_H$	$\alpha V_H^*$	$B=50\text{mT}$ , $I_C=1\text{mA}$ $T_a=25\sim 125^\circ\text{C}$			-0.08	%/°C
Temp. Coefficient of $R_{in}$	$\alpha R_{in}^*$	$B=0\text{mT}$ , $I_C=0.1\text{mA}$ $T_a=25\sim 125^\circ\text{C}$			0.3	%/°C
Linearity	$\Delta K^*$	$B=0.1/0.5\text{T}$ , $I_C=1\text{mA}$			2	%

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

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

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

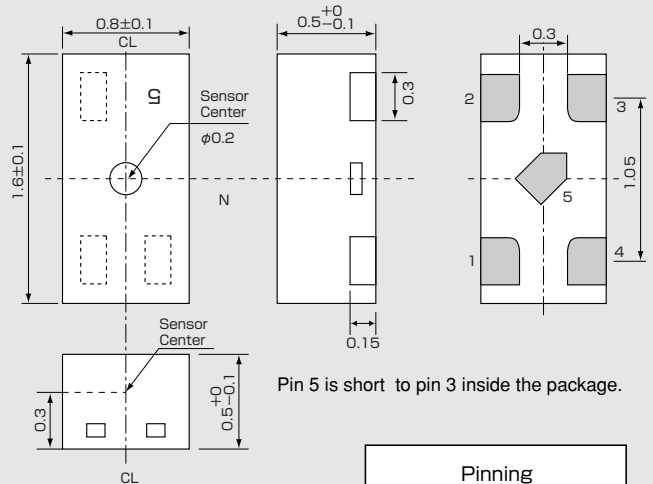
$$4. \Delta K = \frac{K(B_1) - K(B_2)}{[K(B_1) + K(B_2)]/2} \times 100$$

$$T_1 = 25^\circ\text{C}, T_2 = 125^\circ\text{C}$$

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

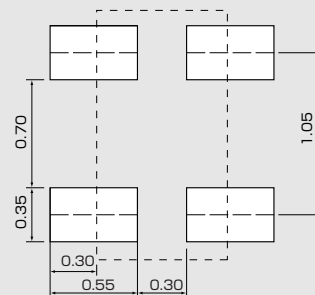
$$B_1 = 0.5\text{T}, B_2 = 0.1\text{T}$$

### ●Dimensional Drawing(Unit : mm)



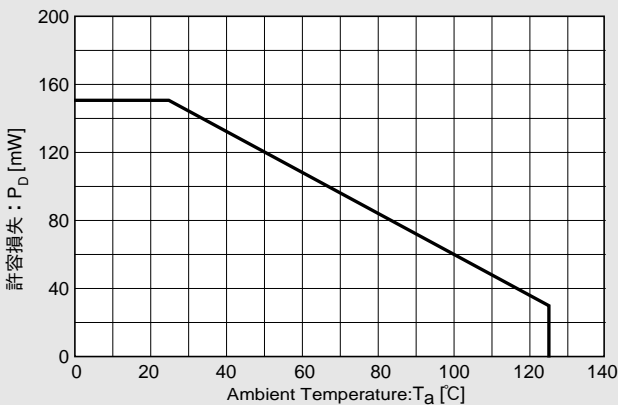
Pinning		
Input	1 (±)	3 (〒)
Output	2 (±)	4 (〒)

### ●Land pattern (for reference only)(Unit : mm)



### ●Characteristic Curves

#### Allowable Package Power Dissipation



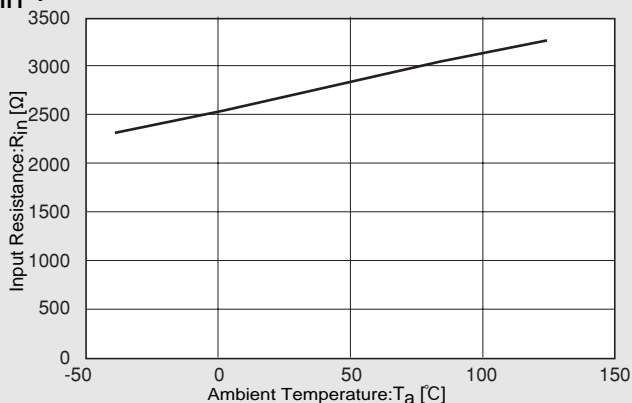
•Please be aware that AKE products are not intended for use in life support equipment, devices, or systems. Use of AKE products in such applications requires the advance written approval of the appropriate AKE officer.  
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•Handling precautions required for preventing electrostatic discharge.

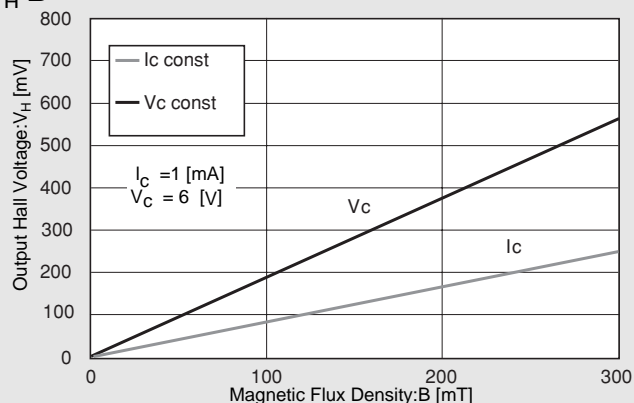
•This product contains gallium arsenide (GaAs) .Handling and discarding precautions required.

●Characteristic Curves

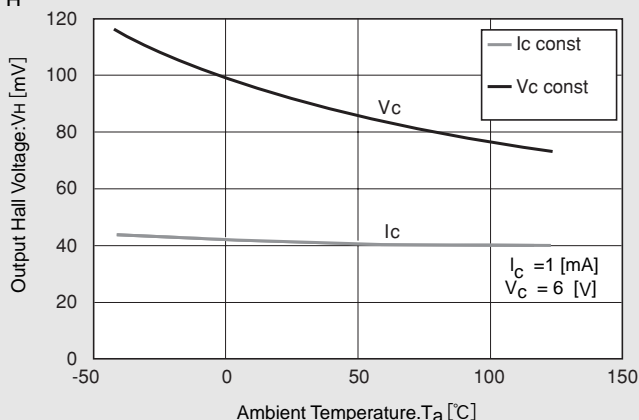
$R_{in}-T$



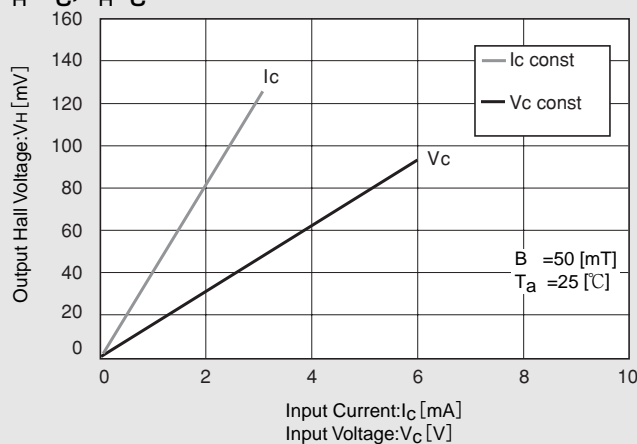
$V_H-B$



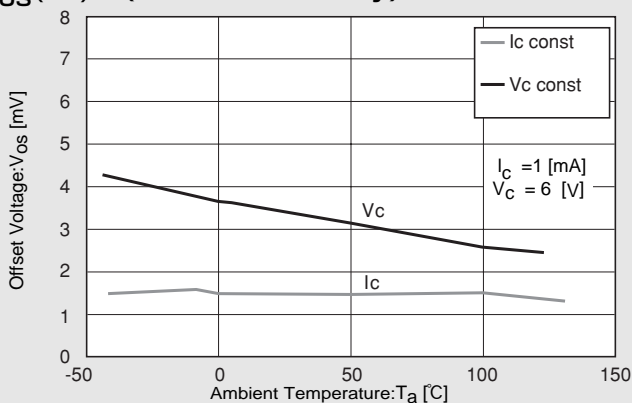
$V_H-T$



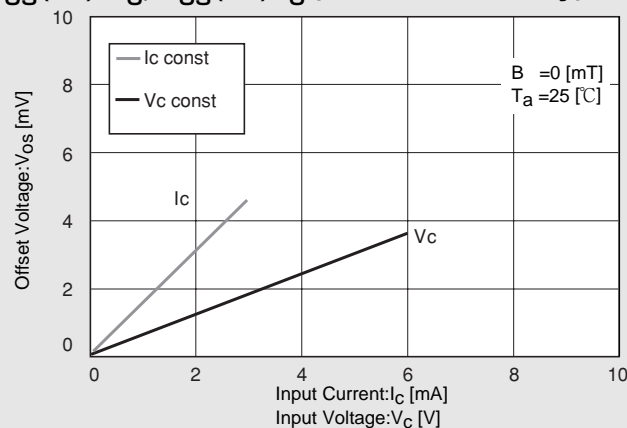
$V_H-V_C, V_H-I_C$



$V_{OS}(V_u)-T$  (For reference only)



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



※Magnetic Flux Density  
 1[mT]=10[G]

In This Example :  $R_{in}$ =2659 [Ω] ,  $V_{OS}$ =3.44 [mV] ,  $V_c$ =6 [V]

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