

# HG-0812

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(T<sub>a</sub>=25°C)

Item	Symbol	Limit	Unit
Max. Input Voltage	V <sub>C</sub>	8	V
Max.Input Power	P <sub>D</sub>	150	mW
Operating Temp. Range	Topr.	-40 ~ +125	°C
Storage Temp. Range	Tstg.	-40 ~ +150	°C



### ●Electrical Characteristics(T<sub>a</sub>=25°C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Output Hall Voltage	V <sub>H</sub> **	B=50mT, V <sub>C</sub> =6V	75		95	mV
Input Resistance	R <sub>in</sub>	B=0mT, I <sub>C</sub> =0.1mA	450		750	Ω
Output Resistance	R <sub>out</sub>	B=0mT, I <sub>C</sub> =0.1mA	1,000		2,000	Ω
Offset Voltage	V <sub>os</sub> (V <sub>u</sub> )	B=0mT, V <sub>C</sub> =6V	-16		+16	mV
Temp. Coefficient of V <sub>H</sub>	αV <sub>H</sub> **	B=50mT, I <sub>C</sub> =5mA Ta=25~125°C			-0.06	%/°C
Temp. Coefficient of R <sub>in</sub>	αR <sub>in</sub> **	B=0mT, I <sub>C</sub> =0.1mA Ta=25~125°C			0.3	%/°C
Linearity	ΔK**	B=0.1/0.5T, I <sub>C</sub> =5mA			2	%

Notes : 1. V<sub>H</sub> = VHM - V<sub>os</sub>(V<sub>u</sub>) (VHM: meter indication)

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

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

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

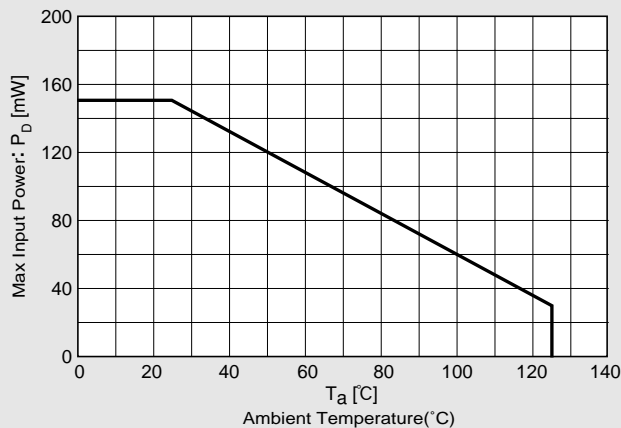
$$T_1 = 25^\circ\text{C}, T_2 = 125^\circ\text{C}$$

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

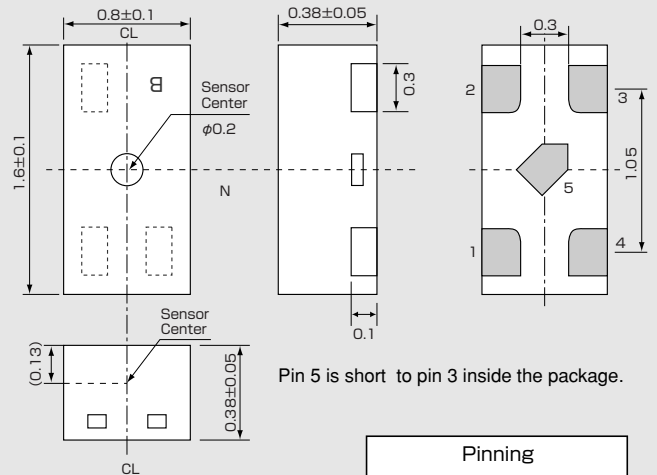
$$B_1 = 0.5\text{T}, B_2 = 0.1\text{T}$$

### ●Characteristic Curves

Allowable Package Power Dissipation



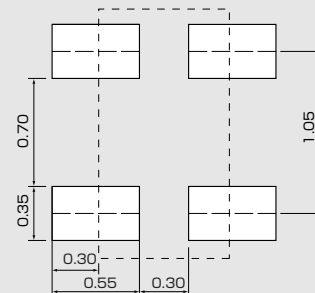
### ●Dimensional Drawing (Unit : mm)



Pin 5 is short to pin 3 inside the package.

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

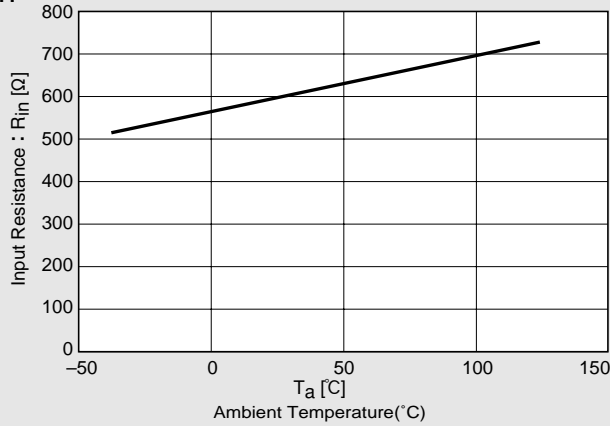
### ●Land pattern (for reference only) (Unit : mm)



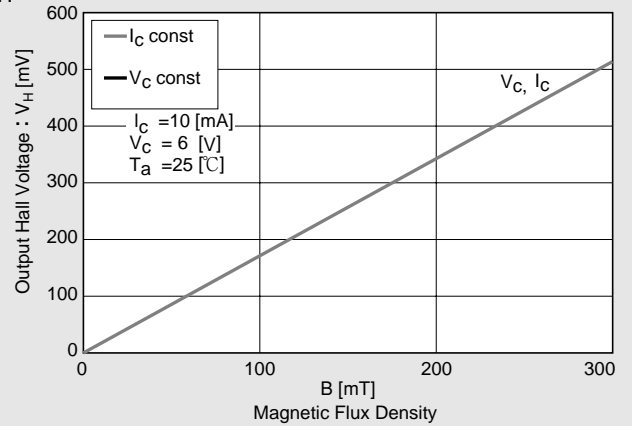
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- Handling precautions required for preventing electrostatic discharge.
- This product contains gallium arsenide (GaAs). Handling and discarding precautions required.

●Characteristic Curves

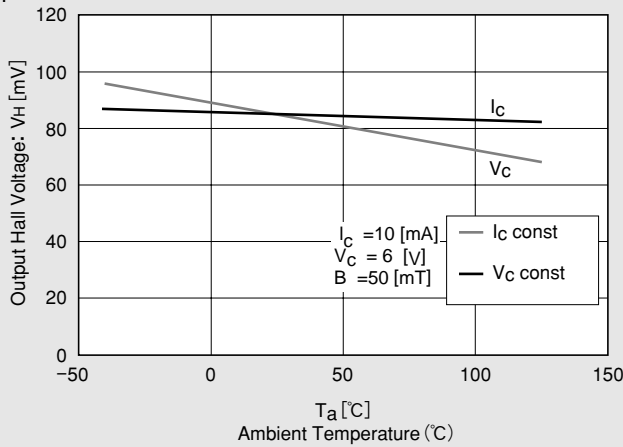
$R_{in}-T$



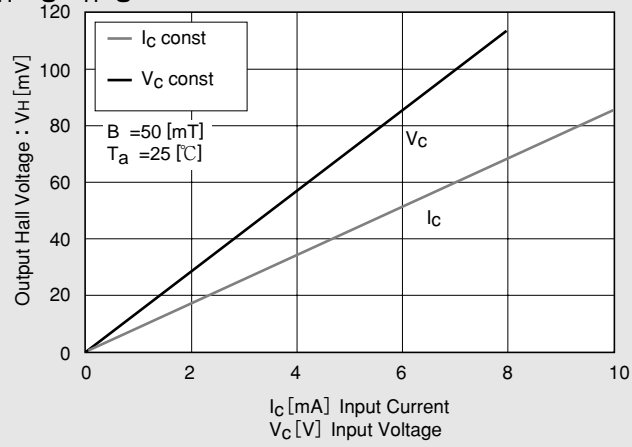
$V_H-B$



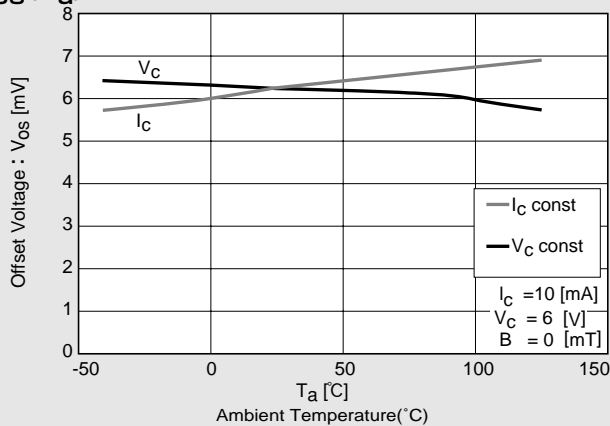
$V_H-T$



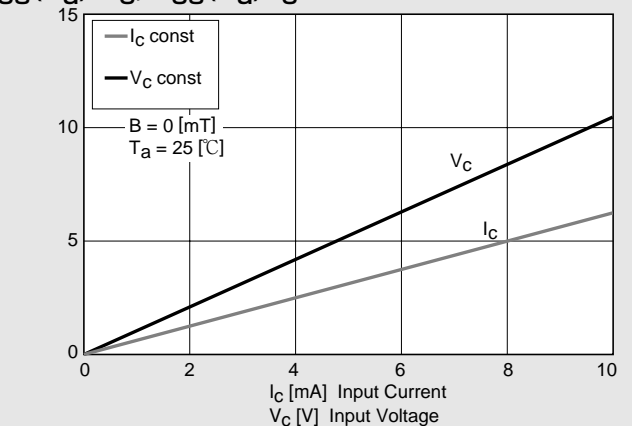
$V_H-V_C, V_H-I_C$



$V_{OS}(V_U)-T$



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



※Magnetic Flux Density  
1[mT]=10[G]

$R_{in}=600[\Omega]$ 、 $V_{OS}=6.3[mV]$  [ $V_C=6[V]$ ]  
In This Example :  $R_{in}=600[\Omega]$ 、 $V_{OS}=6.3[mV]$ 、 $[V_C=6[V]]$

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June 2, 2010