

HG-186A

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	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	Ω
Output Resistance	R_{out}	$B=0\text{mT}, I_C=0.1\text{mA}$	4,400	4,800	6,400	Ω
Offset Voltage	$V_{os}(V_o)$	$B=0\text{mT}, V_C=6\text{V}$	-8		8	mV
Temp. Coefficient of V_H	αV_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}	αR_{in}^*	$B=0\text{mT}, I_C=0.1\text{mA}$ $T_a=25\sim 125^\circ\text{C}$			0.3	%/°C
Linearity	ΔK^*	$B=0.1/0.5\text{T}, I_C=1\text{mA}$			2	%

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

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

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

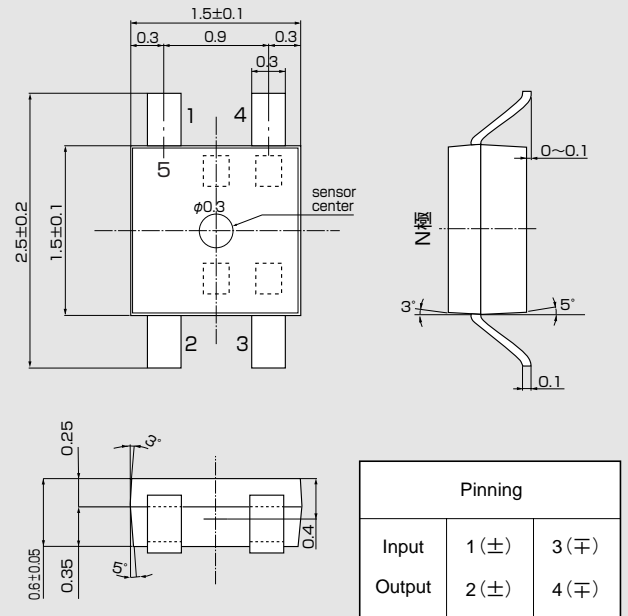
$$4. \Delta K = \frac{K(B_1) - K(B_2)}{[K(B_1) + K(B_2)]/2} \times 100$$

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

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

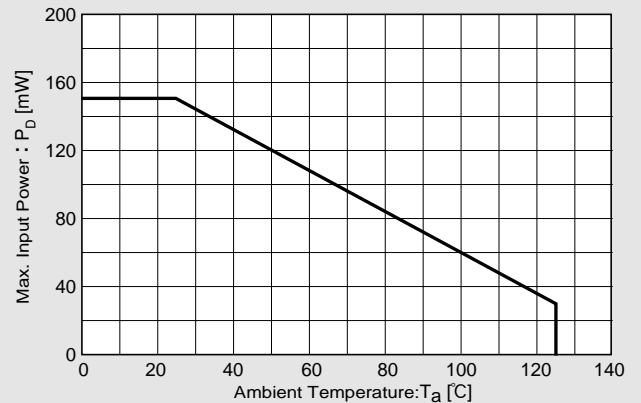
$$B_1 = 0.5\text{T}, B_2 = 0.1\text{T}$$

●Dimensional Drawing (Unit : mm)



●Characteristic Curves

Allowable Package Power Dissipation



●Taping



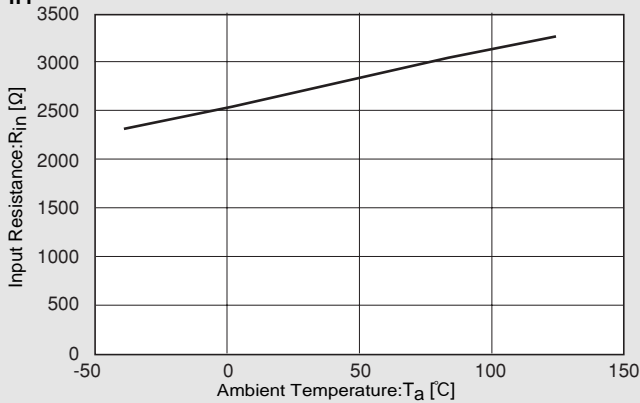
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•Handling precautions required for preventing electrostatic discharge.

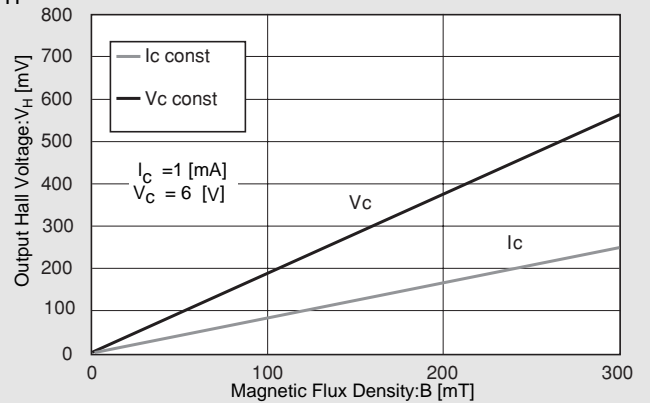
•This product contains gallium arsenide (GaAs). Handling and discarding precautions required.

●Characteristic Curves

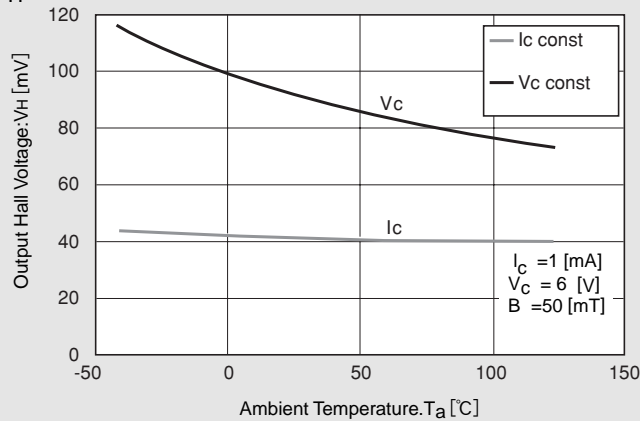
$R_{in}-T$



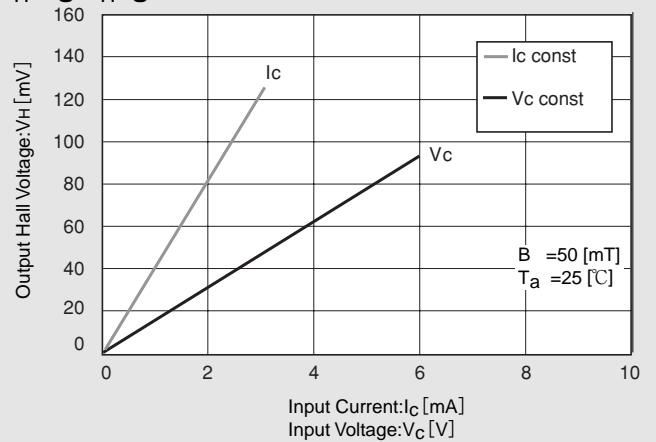
V_H-B



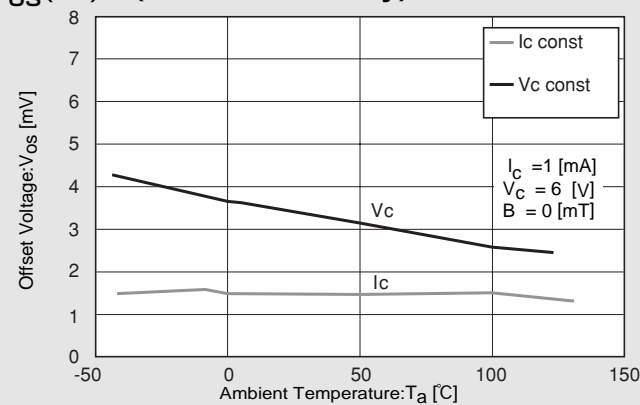
V_H-T



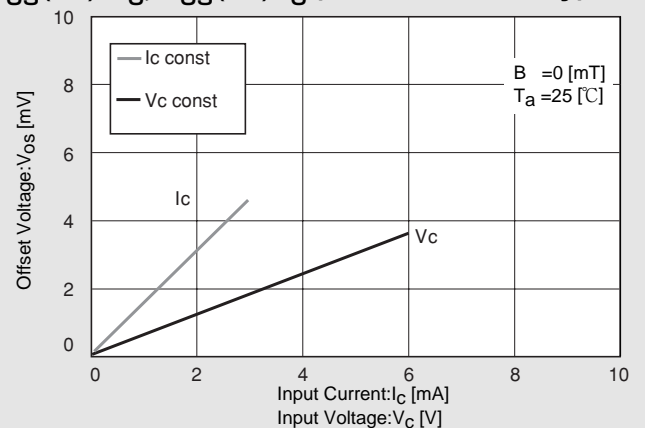
V_H-V_C, V_H-I_C



$V_{OS}(V_u)-T$ (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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June 2, 2010