

HG-116C

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($T_a=25^\circ\text{C}$)

Item	Symbol	Limit	Unit
Max. Input Current	I_C	13	mA
Max. Input Power	P_D	150	mW
Operating Temp. Range	Topr.	-40 ~ +125	$^\circ\text{C}$
Storage Temp. Range	Tstg.	-40 ~ +150	$^\circ\text{C}$



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

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Output Hall Voltage	V_H^*	$B=50\text{mT}, I_C=5\text{mA}$	34		52	mV
Input Resistance	R_{in}	$B=0\text{mT}, I_C=0.1\text{mA}$	650		850	Ω
Output Resistance	R_{out}	$B=0\text{mT}, I_C=0.1\text{mA}$	650		850	Ω
Offset Voltage	$V_{os}(V_u)$	$B=0\text{mT}, I_C=5\text{mA}$	-7		7	mV
Temp. Coefficient of V_H	αV_H^*	$B=50\text{mT}, I_C=5\text{mA}$ $T_a=25\sim 125^\circ\text{C}$	-0.01		-0.05	%/ $^\circ\text{C}$
Temp. Coefficient of R_{in}	αR_{in}^*	$B=0\text{mT}, I_C=0.1\text{mA}$ $T_a=25\sim 125^\circ\text{C}$	0.1		0.3	%/ $^\circ\text{C}$
Linearity	ΔK^*	$B=0.1/0.5\text{T}, I_C=5\text{mA}$			2	%

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

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

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

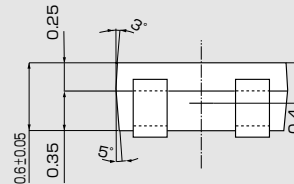
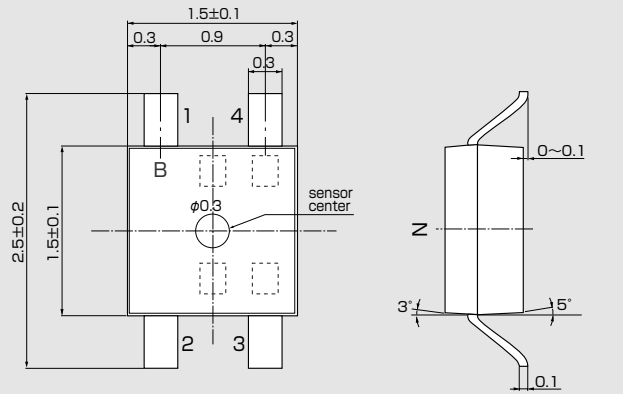
$$4. \Delta K = \frac{K(B_1) - K(B_2)}{[K(B_1) + K(B_2)]/2} \times 100$$

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

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

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

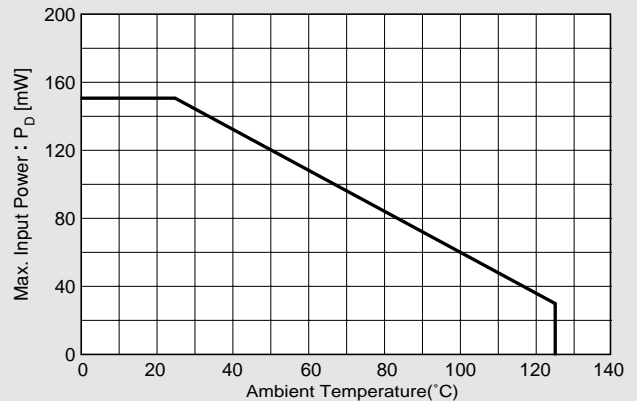
●Dimensional Drawing (Unit : mm)



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

●Characteristic Curves

Allowable Package Power Dissipation



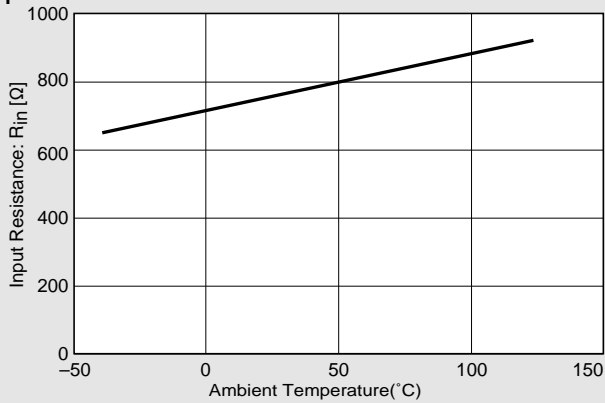
●Taping



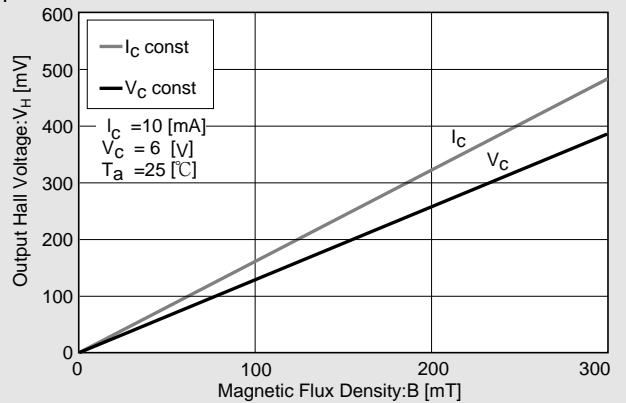
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- Handling precautions required for preventing electrostatic discharge.
- This product contains gallium arsenide (GaAs) .Handling and discarding precautions required.

●Characteristic Curves

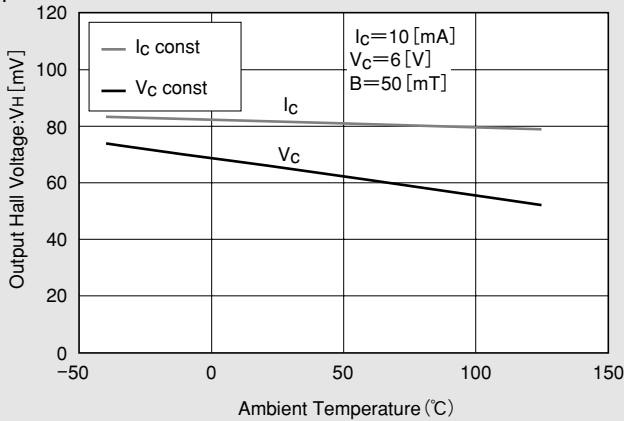
R_{in} -T



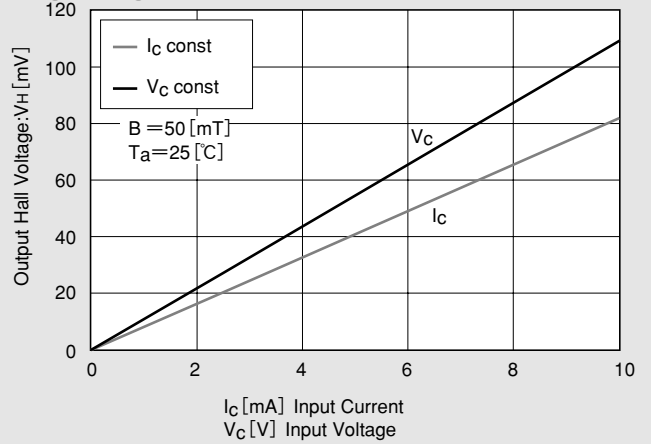
V_H -B



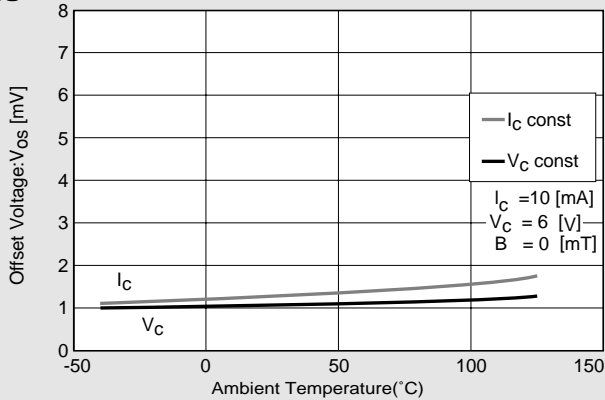
V_H -T



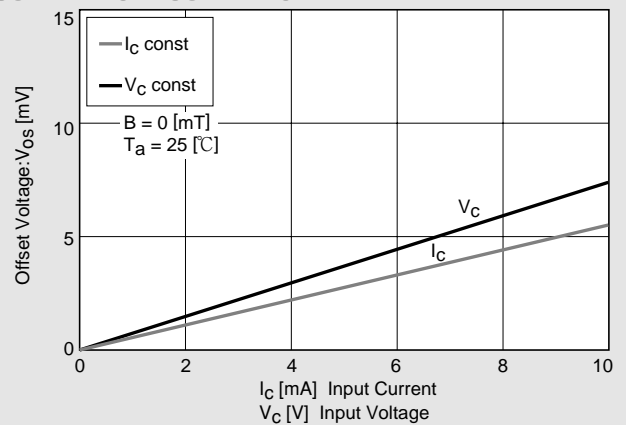
V_H - V_c , V_H - I_c



$V_{OS}(V_u)$ -T



$V_{OS}(V_u)$ - V_c , $V_{OS}(V_u)$ - I_c



※Magnetic Flux Density
1[mT]=10[G]

$R_{in}=750$ [Ω], $V_{OS}=1.0$ [mV] [$I_c=5$ [mA]]
In This Example : $R_{in}=750$ [Ω], $V_{OS}=1.0$ [mV], [$I_c=5$ [mA]]

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June 2, 2010