

# HG-0111

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    | $V_C$      | 10         | V    |
| Max.Input Power       | $P_D$      | 150        | mW   |
| Operating Temp. Range | $T_{opr.}$ | -40 ~ +125 | °C   |
| Storage Temp. Range   | $T_{stg.}$ | -40 ~ +150 | °C   |



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

| Item                          | Symbol               | Conditions   | Min. | Typ. | Max.  | Unit     |
|-------------------------------|----------------------|--|------|------|-------|----------|
| Output Hall Voltage           | $V_H^{**}$           | $B=50\text{mT}, V_C=6\text{V}$                                     | 55   |      | 75    | mV       |
| Input Resistance              | $R_{in}$             | $B=0\text{mT}, I_C=0.1\text{mA}$                                   | 650  |      | 850   | $\Omega$ |
| Output Resistance             | $R_{out}$            | $B=0\text{mT}, I_C=0.1\text{mA}$                                   | 650  |      | 850   | $\Omega$ |
| Offset Voltage                | $V_{os}(V_o)$        | $B=0\text{mT}, V_C=6\text{V}$                                      | -11  |      | +11   | mV       |
| Temp. Coefficient of $V_H$    | $\alpha V_H^{**}$    | $B=50\text{mT}, I_C=5\text{mA}$<br>$T_a=25\sim 125^\circ\text{C}$  |      |      | -0.06 | %/°C     |
| Temp. Coefficient of $R_{in}$ | $\alpha R_{in}^{**}$ | $B=0\text{mT}, I_C=0.1\text{mA}$<br>$T_a=25\sim 125^\circ\text{C}$ |      |      | 0.3   | %/°C     |
| Linearity                     | $\Delta K^{**}$      | $B=0.1/0.5\text{T}, I_C=5\text{mA}$                                |      |      | 2     | %        |

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

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

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

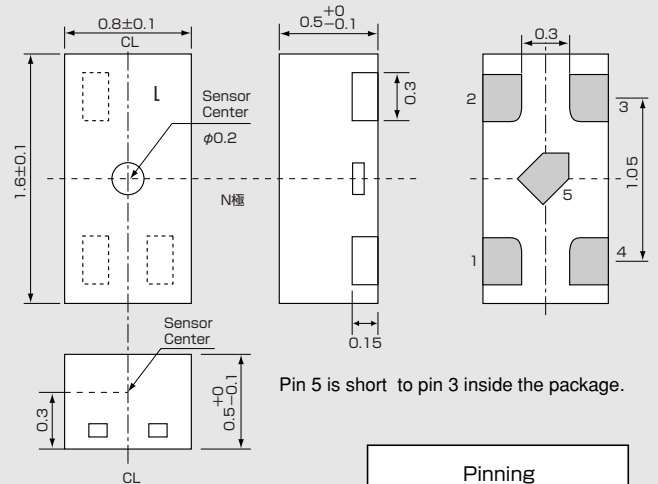
$$4. \Delta K = \frac{K(B_1) - K(B_2)}{[K(B_1) + K(B_2)]/2} \times 100$$

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

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

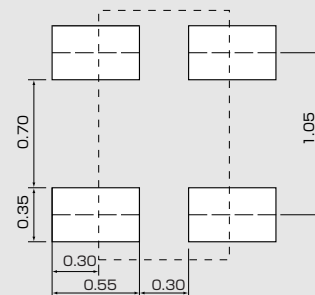
$$B_1 = 0.5\text{T}, B_2 = 0.1\text{T}$$

## ●Dimensional Drawing(Unit : mm)



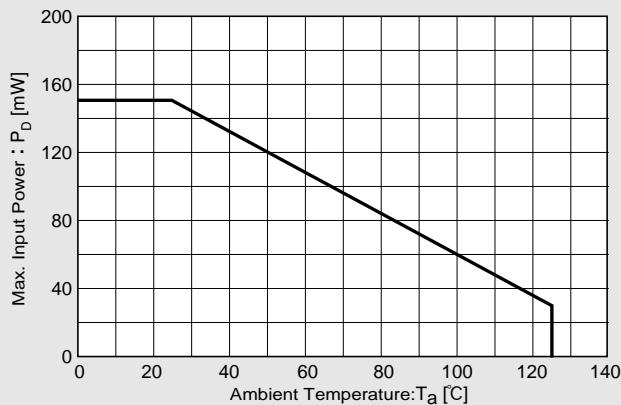
| Pinning |       |       |
|---------|-------|-------|
| Input   | 1 (±) | 3 (∓) |
| Output  | 2 (±) | 4 (∓) |

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



## ●Characteristic Curves

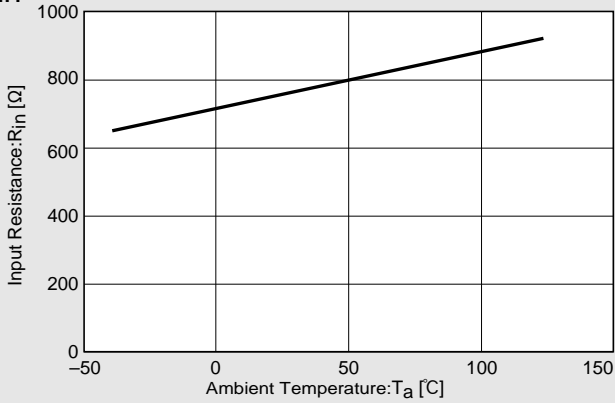
### Allowable Package Power Dissipation



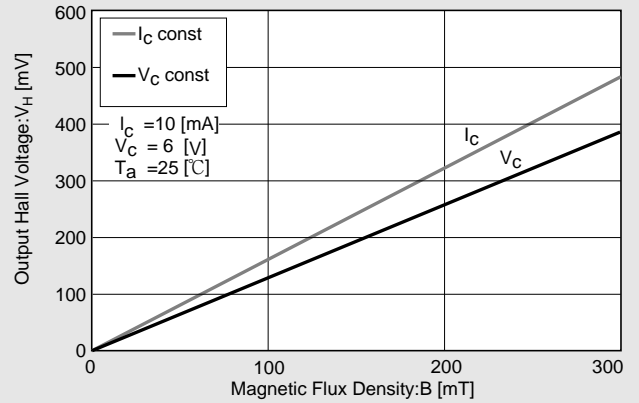
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- Handling precautions required for preventing electrostatic discharge.
- This product contains gallium arsenide (GaAs). Handling and discarding precautions required.

●Characteristic Curves

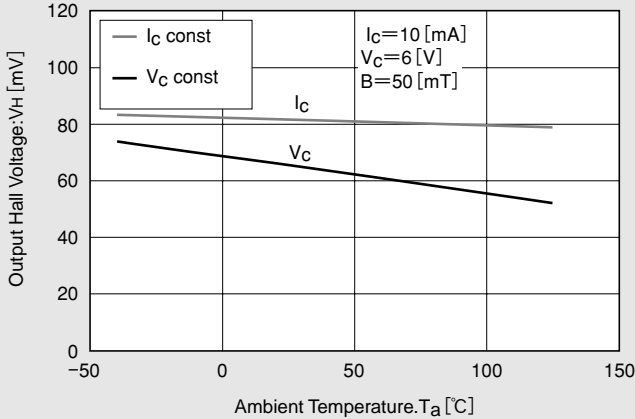
$R_{in}-T$



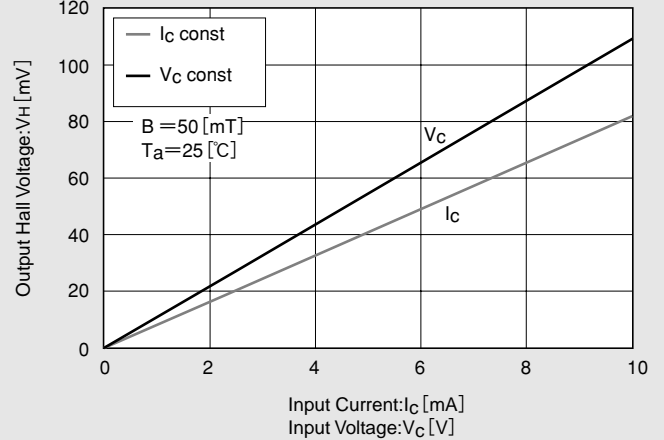
$V_H-B$



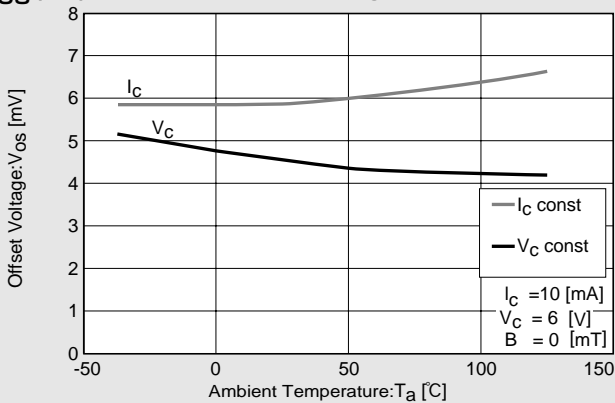
$V_H-T$



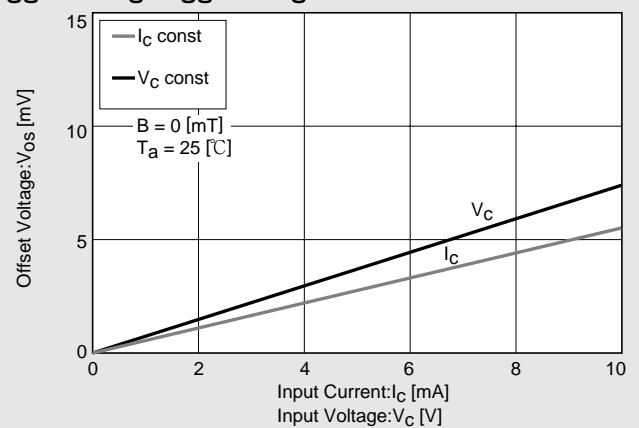
$V_H-V_C, V_H-I_C$



$V_{OS}(V_u)-T$  (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 :  $R_{in}=750$  [Ω],  $V_{OS}=4.6$  [mV], [ $V_C=6$  (V)]

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