HG-106A

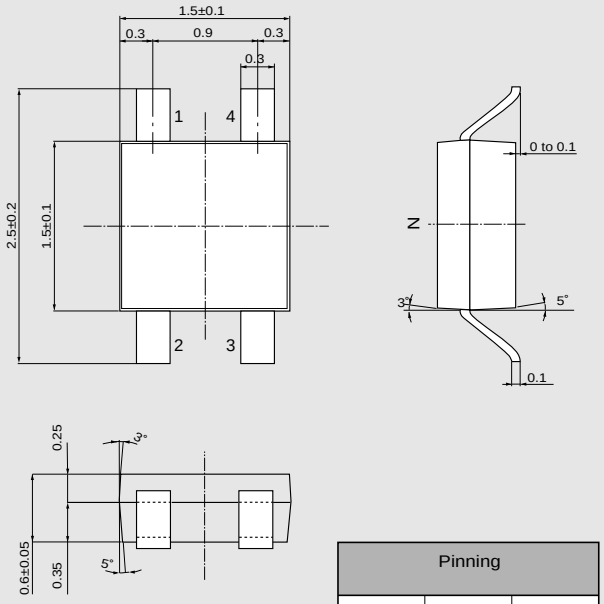
- •High-stability GaAs Hall element.
- •Ultra mini-mold SMT package.
- •Shipped in packet-tape reel (4000pcs per reel).

Note : It is requested to read and accept "IMPORTANT NOTICE".

•Absolute Maximum Ratings

Item	Symbol	Limit	Unit
Max. Input Voltage	V_{in}	8	V
Max. Power Dissipation	P_D	150	mW
Operating Temp. Range	$T_{opr.}$	–40 to +125	˚C
Storage Temp. Range	$T_{stg.}$	–40 to +150	˚C

•Dimensional Drawing (mm)



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

•Electrical Characteristics(T_a=25˚C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Output Hall Voltage	V_H	B=0.1T, V_C=6V	150		190	mV
Input Resistance	R_{in}	B=0T, I_C=0.1mA	450		750	Ω
Output Resistance	R_{out}	B=0T, I_C=0.1mA	1,000		2,000	Ω
Offset Voltage	V_{OS}	B=0T, V_C=6V	–16		+16	mV
Temp. Coefficient of V_H	αV_H	25˚C to 125˚C			-0.06	%/˚C
Temp. Coefficient of R_{in}	αR_{in}	B=0T, I_C=0.1mA			0.3	%/˚C
Linearity of output Hall voltage	ΔK	B=0.1/0.5T, I_C=0.5mA			2	%

Notes : 1. $V_H = VHM - V_{os}$ (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. $\Delta K = \frac{K(B_1) - K(B_2)}{[K(B_1) + K(B_2)] / 2} \times 100$

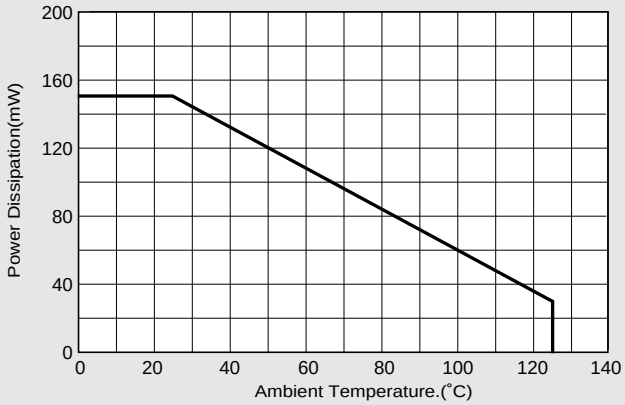
T_1 = 25˚C, T_2 = 125˚C

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

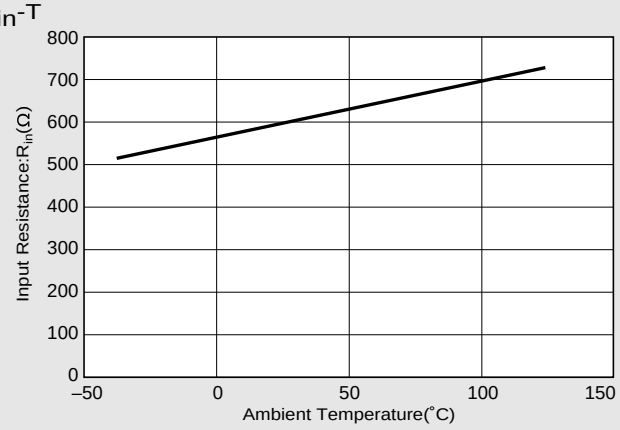
B_1 = 0.5T, B_2 = 0.1T

•Characteristic Curves

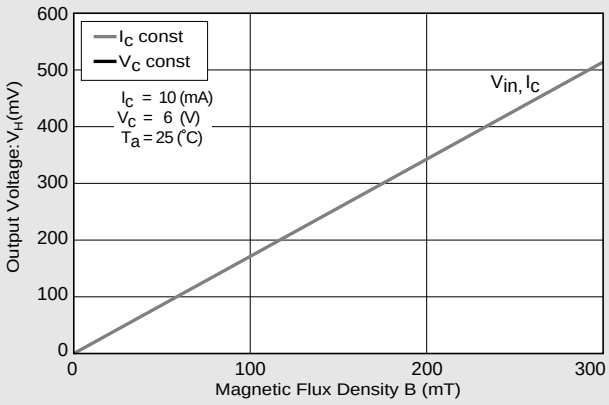
Allowable Package Power Dissipation (P_D–T_a)



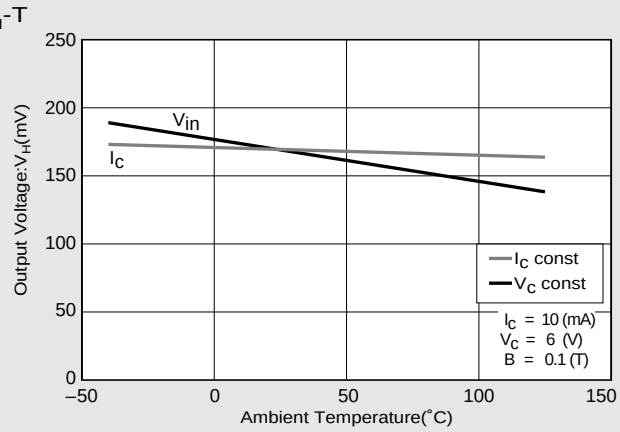
R_{in}-T



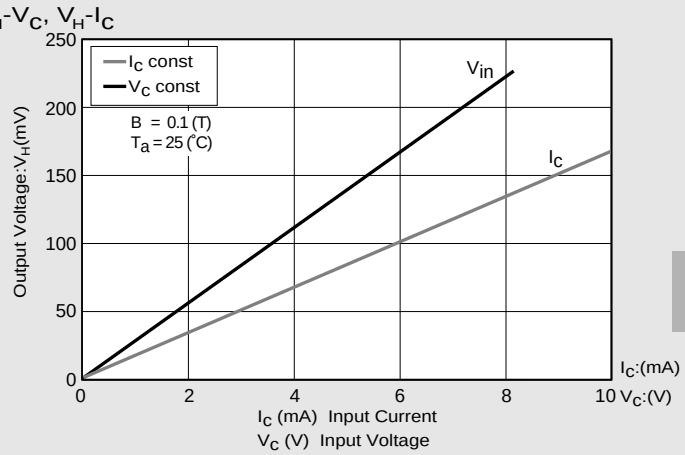
V_H-B



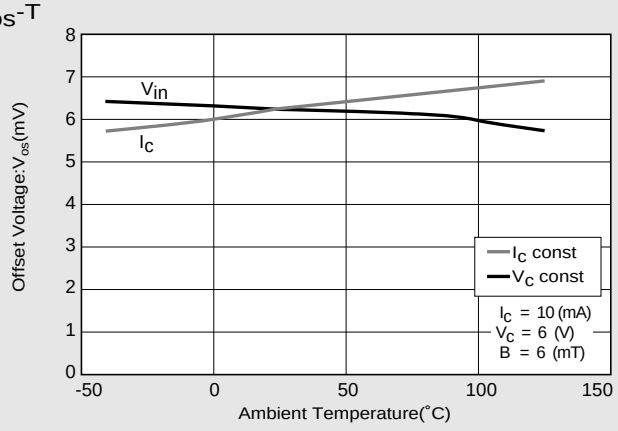
V_H-T



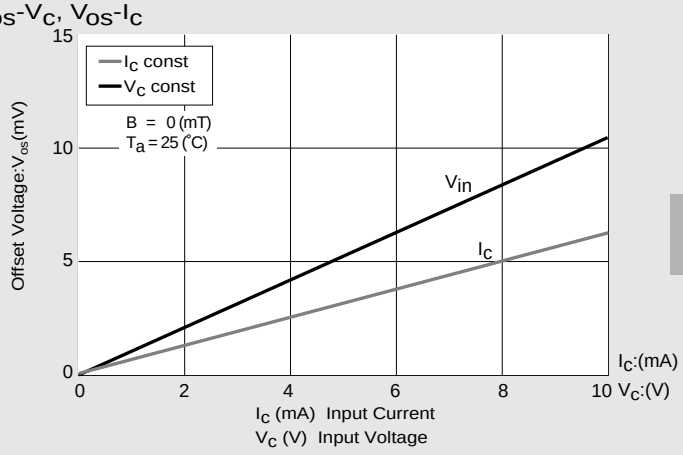
V_H-V_C, V_H-I_C



V_{os}-T



V_{os}-V_C, V_{os}-I_C



*Magnetic Flux Density
1(mT)=10(G)

In This Example : R_{in}=600(Ω), V_{os}=6.3(mV), V_C=6(V)