

HG-106A

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

•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

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

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Output Hall Voltage	V_H	$B=0.1\text{T}, V_C=6\text{V}$	150		190	mV
Input Resistance	R_{in}	$B=0\text{T}, I_C=0.1\text{mA}$	450		750	Ω
Output Resistance	R_{out}	$B=0\text{T}, I_C=0.1\text{mA}$	1,000		2,000	Ω
Offset Voltage	V_{os}	$B=0\text{T}, V_C=6\text{V}$	-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}	$B=0\text{T}, I_C=0.1\text{mA}$			0.3	%/°C
Linearity of output Hall voltage	ΔK	$B=0.1/0.5\text{T}, I_C=0.5\text{mA}$			2	M Ω

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

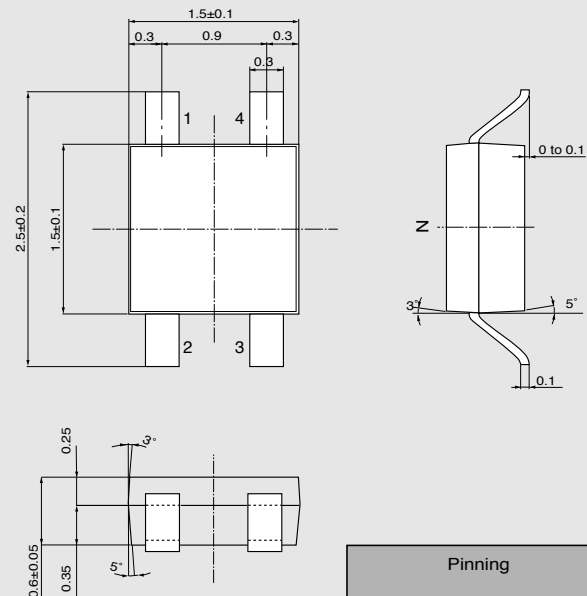
$$2. \alpha V_H = \frac{1}{V_H(T_1)} \times \frac{V_H(T_2) - V_H(T_1)}{(T_2 - T_1)} \times 100$$

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

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

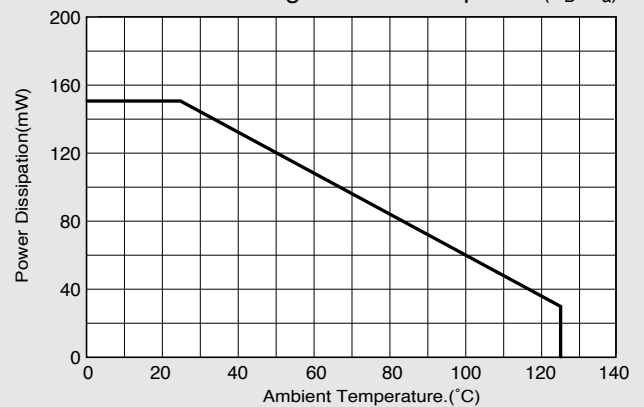


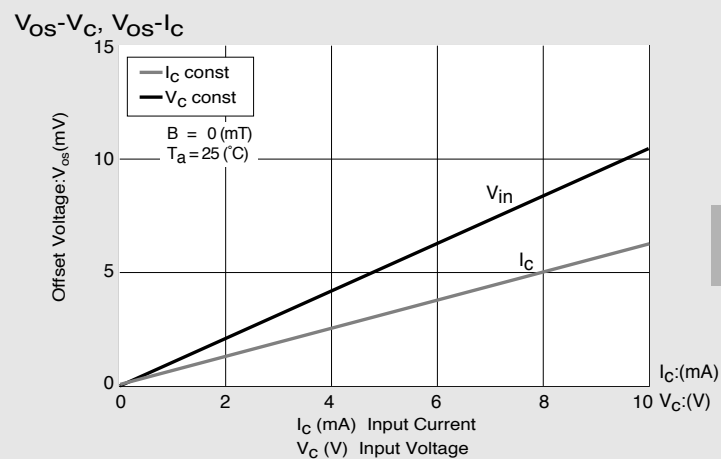
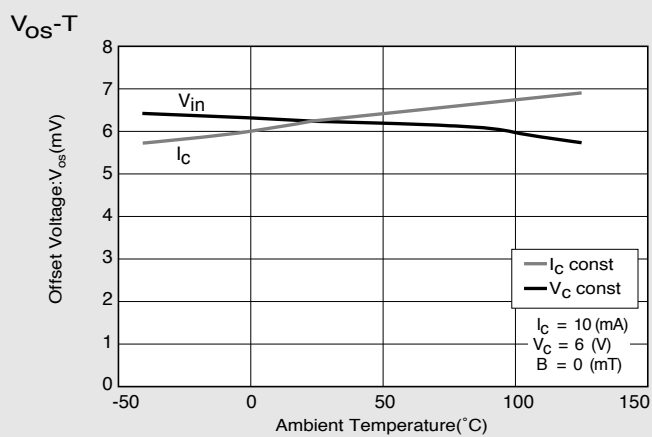
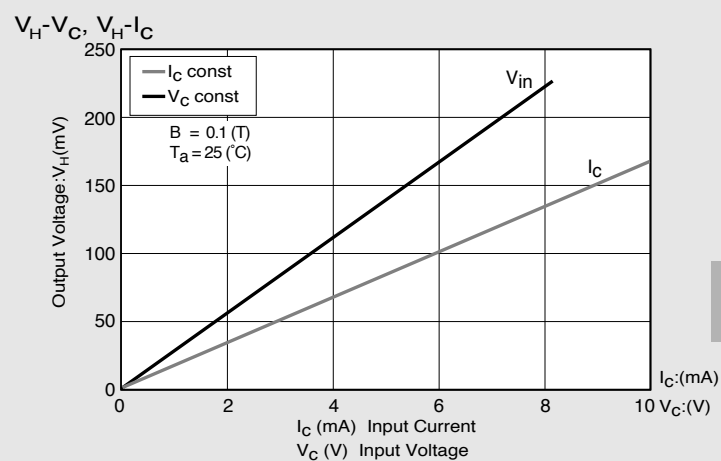
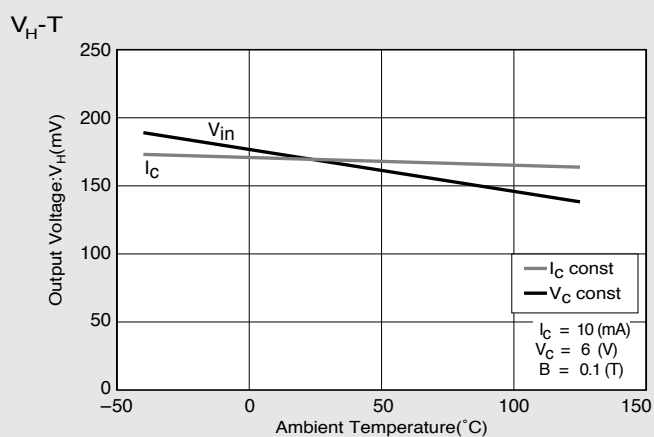
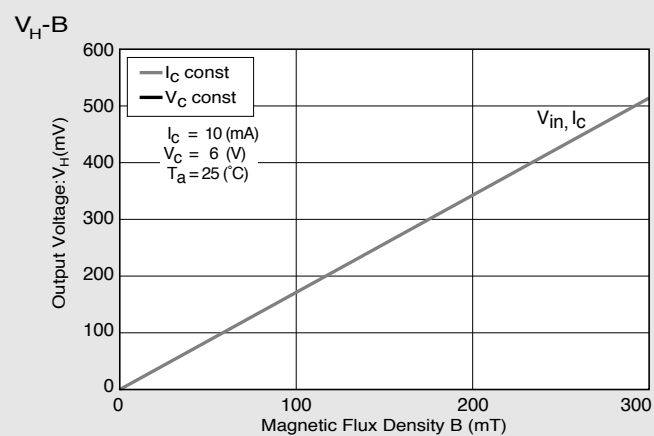
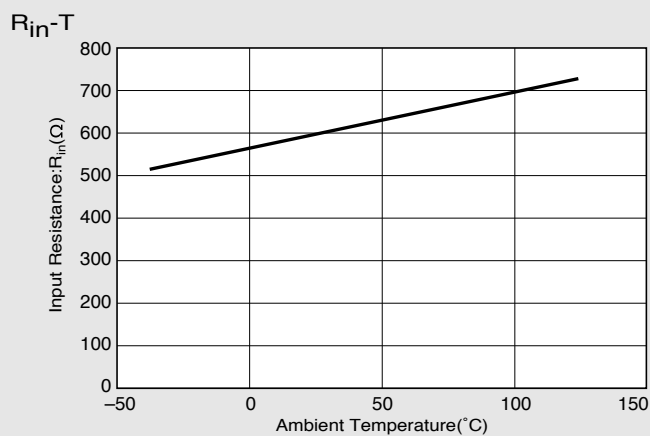
•Dimensional Drawing (mm)



•Characteristic Curves

Allowable Package Power Dissipation ($P_D - T_a$)





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

In This Example : $R_{in}=350(\Omega)$, $V_{OS}=4.7(\text{mV})$, $V_C=1(\text{V})$