

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

Certain applications using semiconductor devices may involve potential risks of personal injury, property damage, or loss of life. In order to minimize these risks, adequate design and operating safeguards should be provided by the customer to minimize inherent or procedural hazards. Inclusion of AKE products in such applications is understood to be fully at the risk of the customer using AKE devices or systems.

勝特力材料 886-3-5753170
勝特力電子(上海) 86-21-54151736
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Item	Symbol		Limit	Unit
Max. Input Current	I_C	Const. Current Drive	20	mA
Operating Temp. Range	$T_{opr.}$		-40 to +110	°C
Storage Temp. Range	$T_{stg.}$		-40 to +125	°C

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Output Hall Voltage	V_H	Const. Voltage Drive $B=50\text{mT}$, $V_C=IV$	168		320	mV
Input Resistance	R_{in}	$B=0\text{mT}$, $I_C=0.1\text{mA}$	240		550	Ω
Output Resistance	R_{out}	$B=0\text{mT}$, $I_C=0.1\text{mA}$	240		550	Ω
Offset Voltage	V_{OS}	$B=0\text{mT}$, $V_C=IV$	-7		+7	mV
Temp. Coefficient of V_H	αV_H	$B=50\text{mT}$, $I_C=5\text{mA}$		-1.8		$\%/^{\circ}\text{C}$
Temp. Coefficient of R_{in}	αR_{in}	$B=0\text{mT}$, $I_C=0.1\text{mA}$		-1.8		$\%/^{\circ}\text{C}$
Dielectric Strength		100V D.C	1.0			M Ω

$$2. \alpha V_H = \frac{1}{V_H(T_1)} \times \frac{V_H(T_3) - V_H(T_2)}{(T_3 - T_2)} \times 100$$

$$3. \alpha R_{in} = \frac{1}{R_{in}(T_1)} \times \frac{R_{in}(T_3) - R_{in}(T_2)}{(T_3 - T_2)} \times 100$$

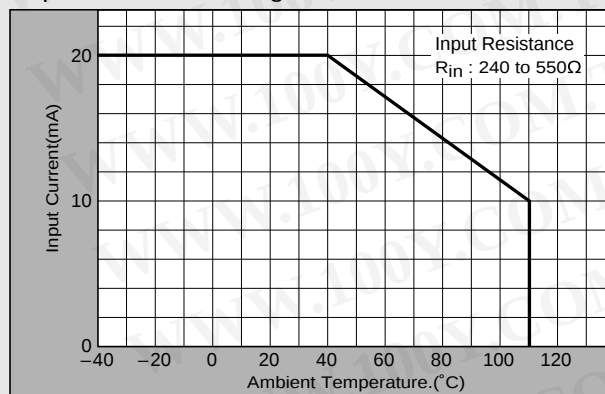
$$T_1 = 20^\circ\text{C}, T_2 = 0^\circ\text{C}, T_3 = 40^\circ\text{C}$$

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



Rank	V_H [mV]	Conditions
C	168 to 204	B=50mT, V_C =IV Constant Voltage Drive
D	196 to 236	
E	228 to 274	
F	266 to 320	

- Input Current Derating Curve



Note : R_{in} of Hall element decreases rapidly as ambient temperature increases. Ensure compliance with input current derating curve envelope, throughout the operating temperature range.

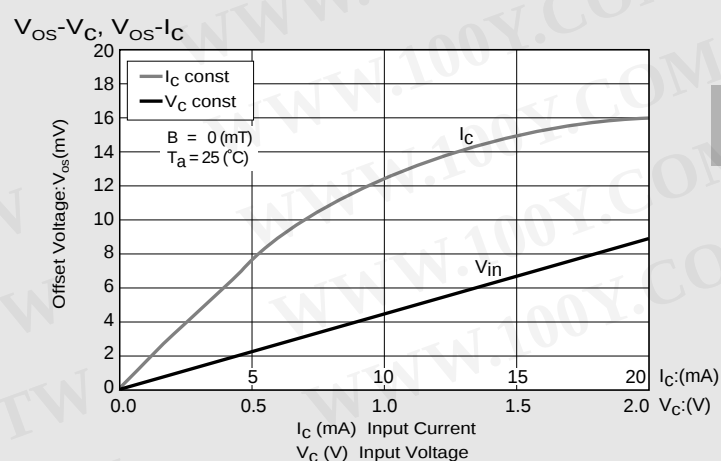
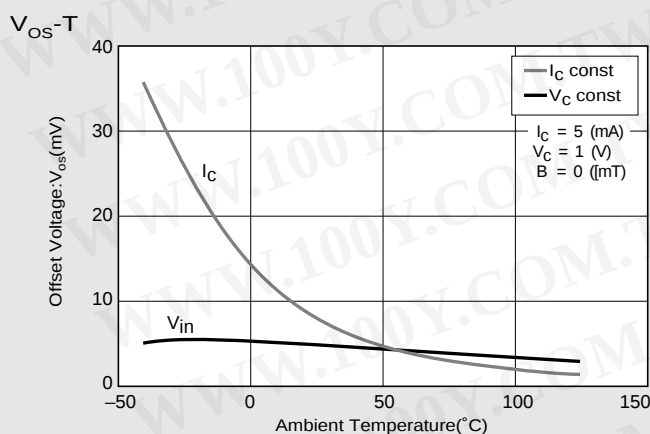
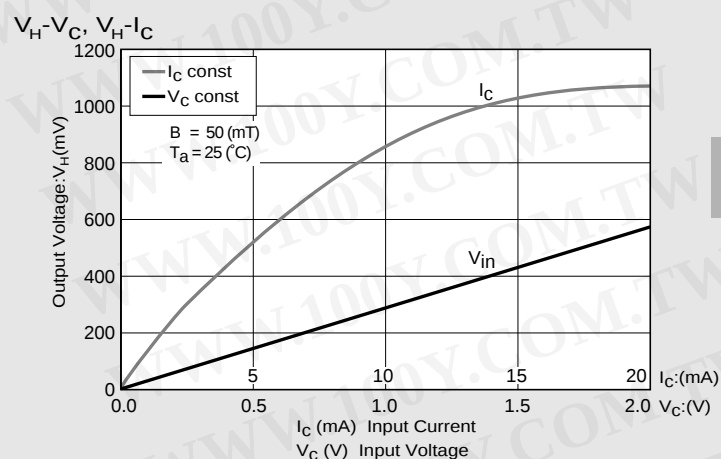
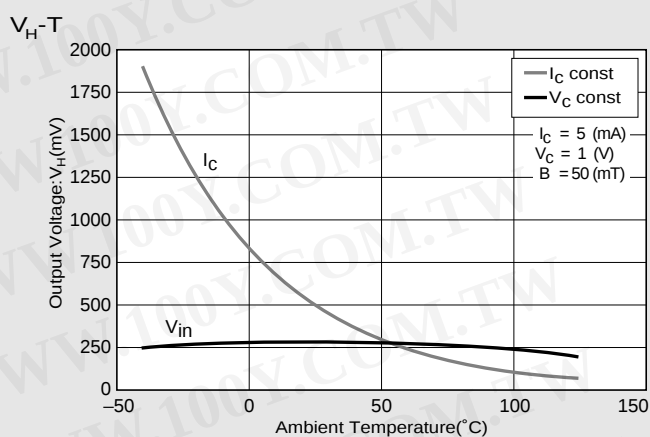
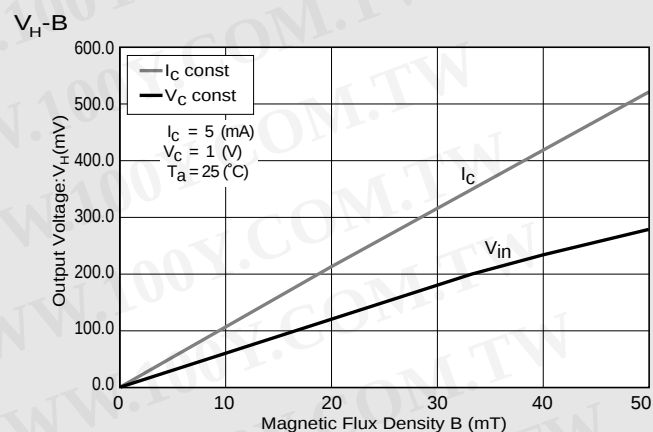
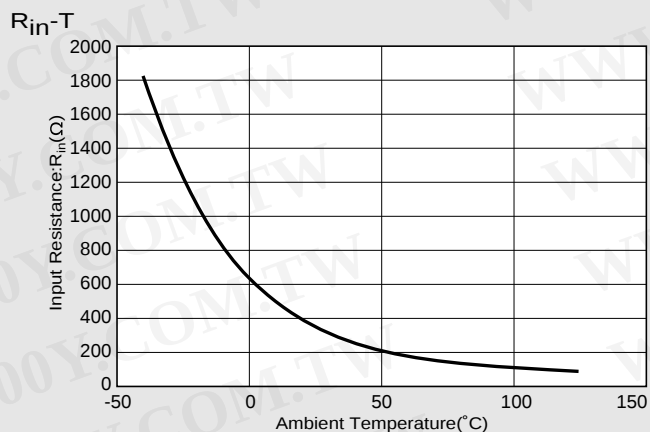
Input Resistance
 $R_{in} : 240 \text{ to } 550\Omega$

Ambient Temperature (°C)	Input Voltage (V)
-40	2.0
0	2.0
20	2.0
40	2.0
60	1.6
80	1.2
100	0.8
110	0.9
115	0.0
120	0.0

Note : For constant-voltage drive, stay within this input voltage derating curve envelope.

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•Characteristic Curves



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

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