MW605 InSb Hall Element

MW605 锑化铟霍尔元件

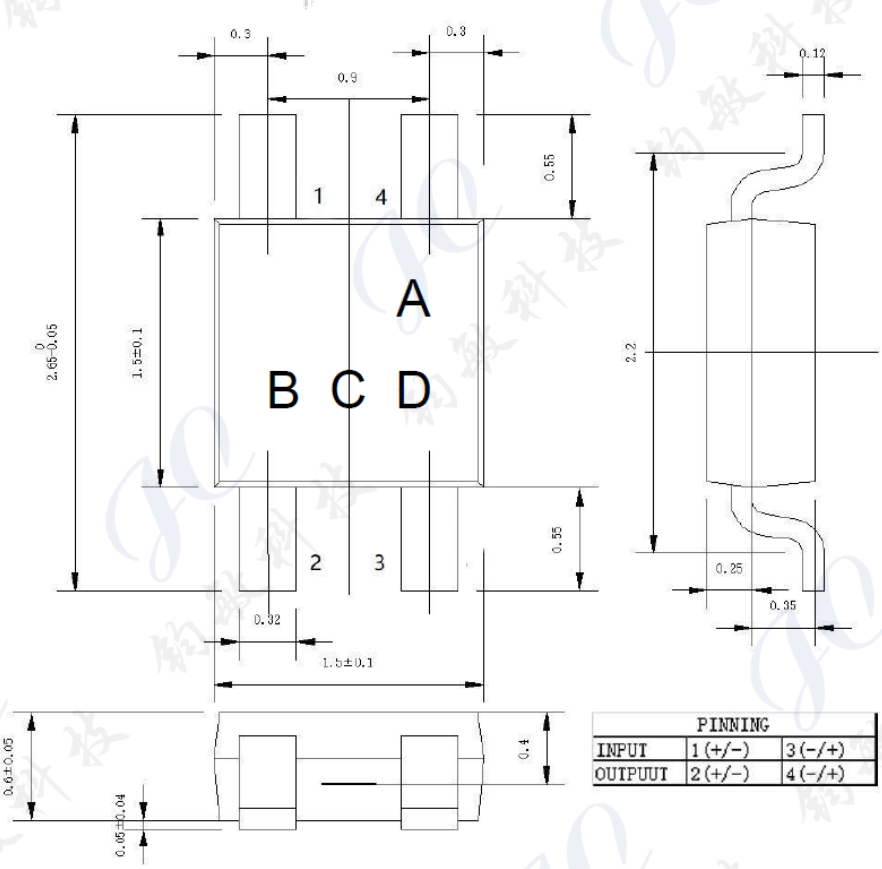
线性锑化铟霍尔元件

Linear InSb Hall Element

SSOT-4 类型封装

SSOT-4 package

- 外形尺寸图 Dimensional Drawing (Unit MM)



● 最大额定值 Absolute Maximum Rating

工作温度

Operating Temperature Range： -40℃ ~ 110℃

存储温度

Storage Temperature Range： -40℃ ~ 125℃

最大输入电流 I_{cmax} [mA]

Maximum Input Current I_{cmax} [mA]： 20mA

● 霍尔输出电压 Classification of Output Hall Voltage (V_H)

级别 Rank	霍尔输出电压 VH/mV	测试条件 Conditions
C	168 ~ 204	B = 50mT, V_C=1V
D	196 ~ 236	
E	228 ~ 274	

● 电气特性（测量温度 25℃）Electrical Characteristic（RT=25℃）

表 1. MW605 电气特性

Table 1. Electrical Characteristics of MW605

项目 Item	符号 Symbol	测量条件 Test Condi.	最小 Min.	标准 Typ.	最大 Max.	单位 Unit
霍尔电压 Hall Voltage	VH	B = 50mT, VC=1V Ta = RT	168		274	mV
输入电阻 Input Resistance	Rin	B = 0mT, IC = 0.1mA Ta = RT	240		550	Ω
输出电阻 Output Resistance	Rout	B = 0mT, IC = 0.1mA Ta = RT	240		550	Ω
非平衡电压 Offset Voltage	Vos	B = 0mT, VC = 1V Ta = RT	-5		+5	mV
输出电压温度系数 Temp. Coeffi. of VH	|αVH|	Average On Ta = 0℃ ~ 40℃ B = 50mT, IC =5mA,		-1.8		%/℃
输入电阻温度系数 Temp. Coeffi. of Rin	αRin	Average On Ta = 0℃ ~ 40℃ B = 0mT, IC =0.1mA		-1.8		%/℃
介电强度 Dielectric strength		100V D.C	1.0			MΩ

Note:

$\boldsymbol{V}_{\mathrm{H}} = \boldsymbol{V}_{\mathrm{H-M}} - \boldsymbol{V}_{\mathrm{os}}$

in which $\boldsymbol{V}_{\mathrm{H-M}}$ is the Output Hall Voltage, $\boldsymbol{V}_{\mathrm{H}}$ is the Hall Voltage and $\boldsymbol{V}_{\mathrm{os}}$ is the offset Voltage under the identical electrical stimuli.

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

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

T_1=20℃, T_2=0℃, T_3=40℃

● 特征曲线图 Characteristic Curves

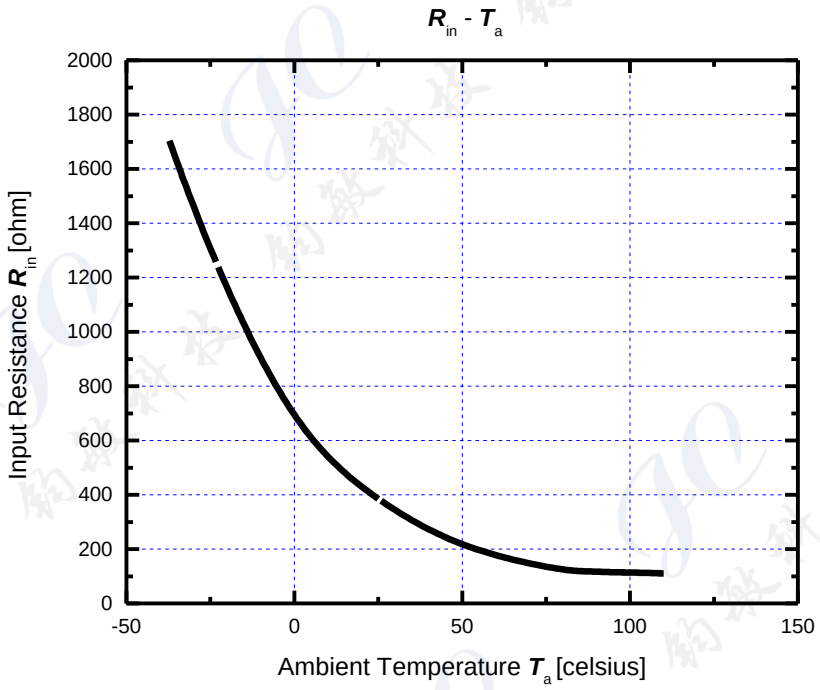


Figure 1. Input resistance R_{in} as a function of ambient temperature T_a .

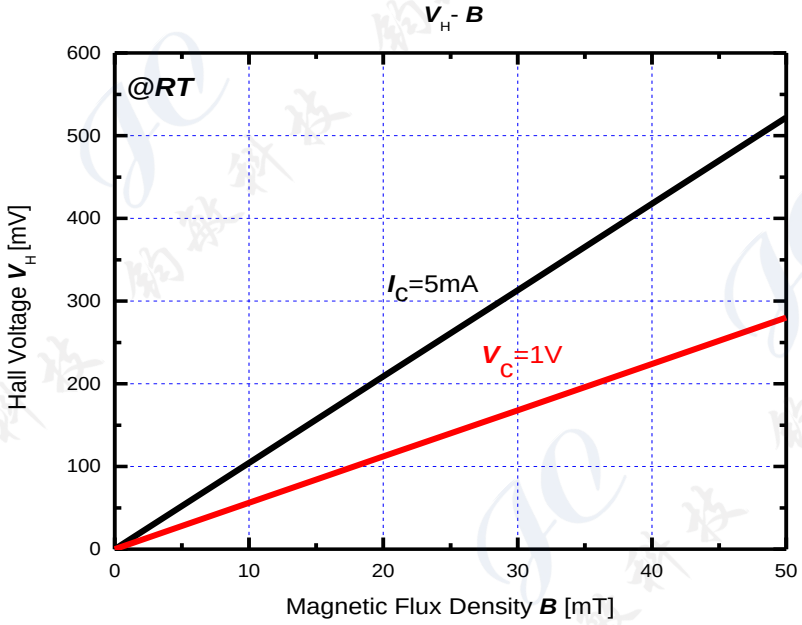


Figure 2. Hall voltage V_H as a function of magnetic flux density B .

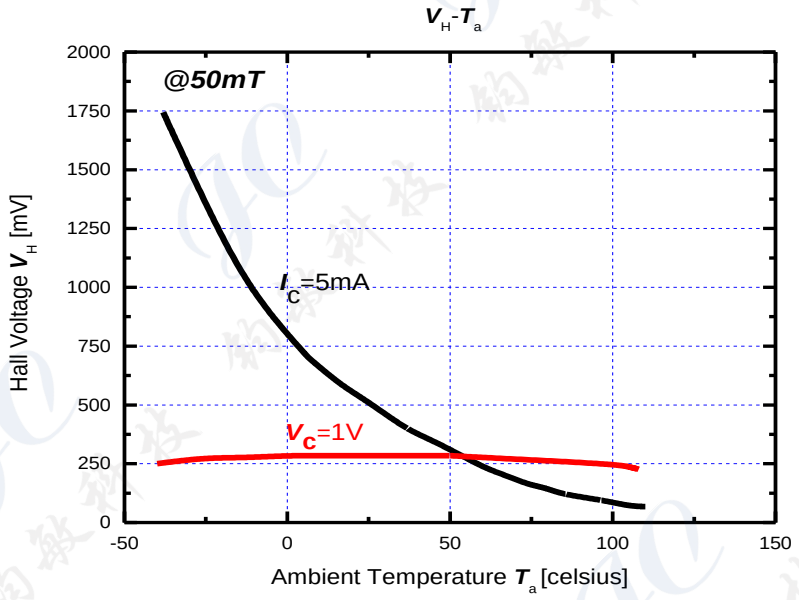


Figure 3. Hall voltage V_H as a function of ambient temperature T_a.

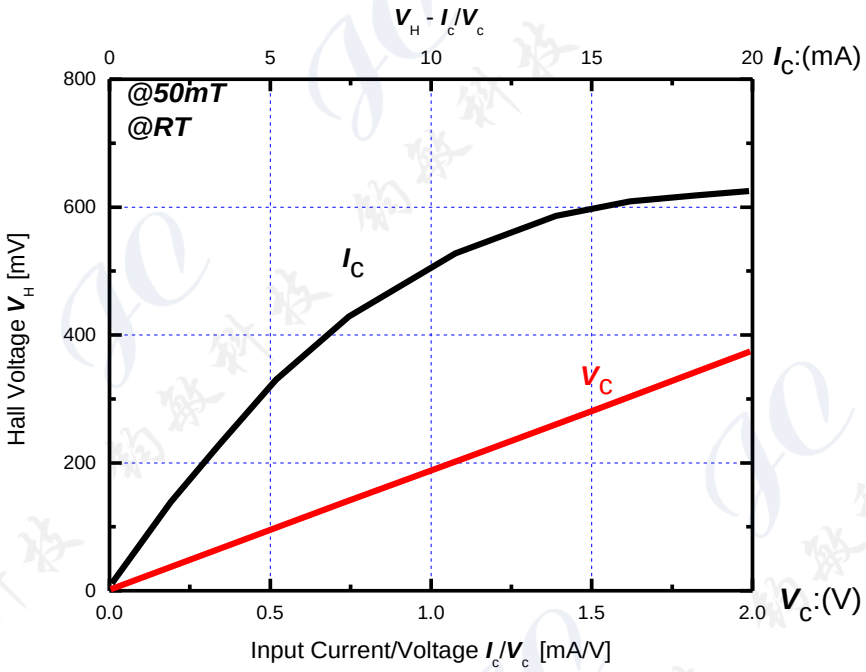


Figure 4. Hall voltage V_H as a function of electrical stimuli I_c/ V_c.

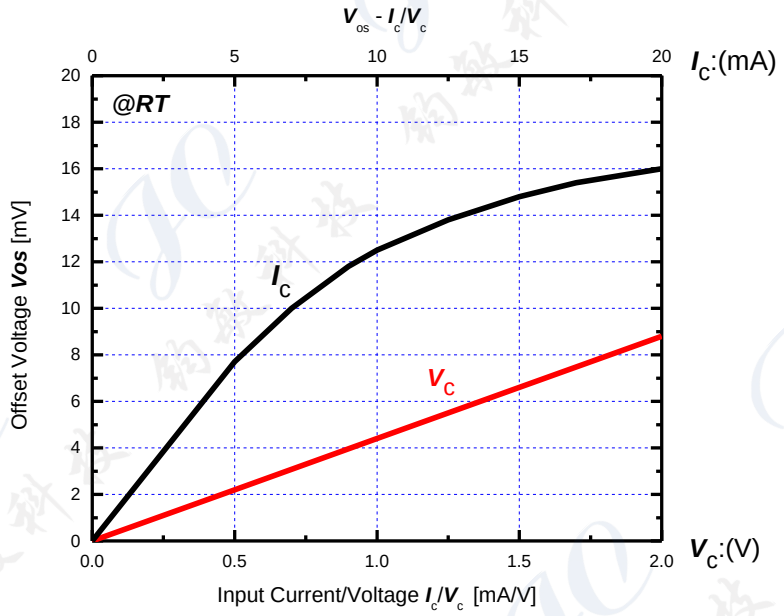


Figure 5. Offset voltage V_{os} as a function of electrical stimuli I_c/ V_c.

● ESD 预防措施

本产品是对 ESD（静电放电）敏感的设备。在以下环境中处理带有 ESD 警告标记的霍尔元件：

- 不太可能出现静电荷的环境 （例如：相对湿度超过 40%RH）。

- 处理器件时佩戴防静电服和腕带

- 对于直接接触器件的容器建议实施 ESD 防护措施。

● Precautions for ESD

This product is the device that is sensitive to ESD (Electrostatic Discharge). Handling Hall Elements with the ESD-Caution mark under the environment in which

- Static electrical charge is unlikely to arise. (Ex; Relative Humidity; over 40%RH).

- Wearing the antistatic suit and wristband when handling the devices.

- Implementing measures against ESD as for containers that directly touch the devices.

● 存储注意事项

- 在开封 MBB 后，产品应在适当的温度和湿度（5 至 35°C，40 至 60%RH）下储存，产品须远离氯气及其他腐蚀性气体。

- 长期储存

本产品用 MBB 密封， 在开封 MBB 后应立即检查湿度指示器。 如果湿度指示器显示内部水分高于 50% RH，请联系当地经销商。

- 超过 2 年的储存

建议在 MBB 密封条件下在氮气环境中储存。 大气中的水氧会导致器件引脚氧化，从而导致引脚焊接能力变差。

● Precautions for Storage

- Products should be stored at an appropriate temperature and humidity (5 to 35°C, 40 to 60%RH) after the unsealing of MBB. Keep products away from chlorine and corrosive gas.

- Long-term storage

Products are sealed in MBB with a moisture indicator. The moisture indicator should be checked right after the unsealing of MBB. If the moisture indicator reveals the internal moisture is above 50% RH, please contact the local distributor.

- For storage longer than 2 years, it is recommended to store in nitrogen atmosphere with MBB sealed. Oxygen and H2O of atmosphere oxidizes leads of products and lead solder ability get worse.

● 安全注意事项

-不要通过燃烧，粉碎或化学处理等方式将本产品变成气体，粉末或液体。

-丢弃本产品时，请遵守法律和公司规定。

● Precautions for Safety

- Do not alter the form of this product into a gas, powder or liquid through burning, crushing or chemical processing.

- Observe laws and company regulations when discarding this product.