

MODEL

NHE528F

Features

- This is a high sensitivity type of Nicera Hall element using evaporated InSb film.
- It performs effectively in low magnetic fields due to the high sensitivity.
- The input and output resistance values are suitable for transistor circuits.
- Due to its compact package, it is suitable for thin motors.

Applications

- Brushless motors
- DVD drive, CD-ROM drive, floppy disk drive
- Other small precision motors
- Non-contacting magnetic sensors
- Position sensors, rotation sensors, current sensors
- Magnetic flux sensors other than those above

Specification

◆ Halogen and Pb-free products ◆

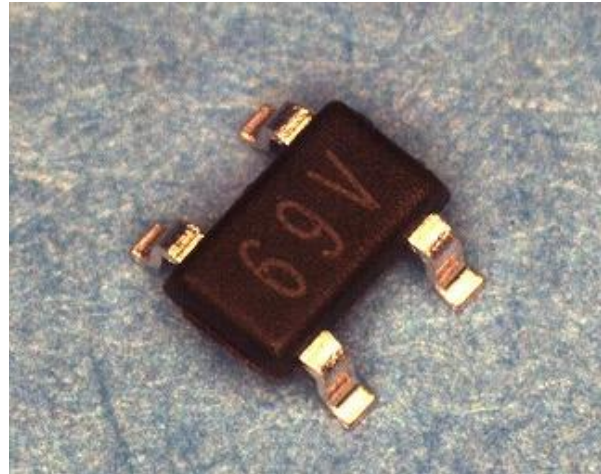
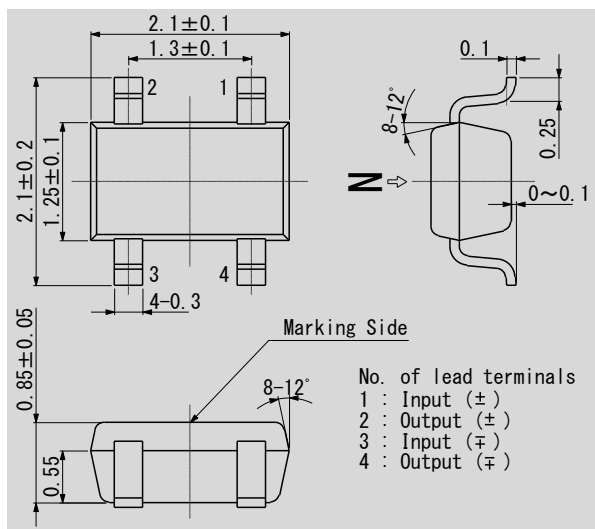
Nicera is able to supply halogen and Pb-free products.

For these products, "HF" is put at the end of model names as below.

NHE528F-HF

◆ Dimensional Drawing ◆

(UNIT: mm)



◆ Absolute Maximum Ratings ◆

| Item | Symbol | Limit | Unit |
|-----------------------|-------------------|-------------|------|
| Max. Input Current | I _{cmax} | 20(at 25°C) | mA |
| Operating Temp. Range | T _{opr} | -40~110 | °C |
| Storage Temp. Range | T _{stg} | -40~125 | °C |

◆ Electrical Characteristics (T=25°C) ◆

| Item | Symbol | Conditions | Min. | Typ. | Max. | Unit |
|--------------------------------------|--------------------|---|------|------|------|------|
| Output Voltage | V _H | V _c =1V B=50mT | 196 | | 370 | mV |
| Offset Voltage | V _o | V _c =1V B=0mT | -7 | | 7 | mV |
| Input Resistance | R _{in} | I=1mA | 240 | | 550 | Ω |
| Output Resistance | R _{out} | I=1mA | 240 | | 550 | Ω |
| Temp. Coefficient of V _H | ※1 α _{HI} | Standard 20°C Average 0~40°C B=50mT I _c =5mA | | -1.8 | | %/°C |
| Temp. Coefficient of R _{in} | ※2 α _R | B=0mT I _c =0.1mA | | -1.8 | | %/°C |

$$\text{※1: } \alpha_{HI} = [1/V_H(T1)] \times [(V_H(T3) - V_H(T2)) / (T3 - T2)] \times 100$$

$$\text{※2: } \alpha_R = [1/R_{in}(T1)] \times [(R_{in}(T3) - R_{in}(T2)) / (T3 - T2)] \times 100$$

$$T1=20^\circ\text{C}, T2=0^\circ\text{C}, T3=40^\circ\text{C}$$

◆ Classification of Output Voltage ◆

| Model | Rank | V _H (mV) | Conditions |
|---------|------|---------------------|---|
| NHE528F | 5 | 196~236 | Constant Voltage Drive V _H =V _H M-V _o V _H M=Measured Hall Voltage (at 50mT) V _o =Offset Voltage(at 0 mT) |
| | 6 | 228~274 | |
| | 7 | 266~320 | |
| | 8 | 310~370 | |

※ Please design with multiple ranks (three ranks or more).

◆ Packaging ◆

| Model | Packaging | Reel Max. (pcs) | Carton Max. (pcs) |
|---------|-------------|-----------------|-------------------|
| NHE528F | Taping reel | 4,000 | 120,000 |

◆ Characteristics Curve ◆

