

MODEL

NHE522TU

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 distance from the magnetic sensitive surface to the PCB is the same as the conventional product, NHE524, however, the magnetic body can be approximately 0.55mm closer to the Hall element.

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,

NHE522TU-HF

◆ Absolute Maximum Ratings ◆

Item	Symbol	Limit	Unit
Max. Input Current	I _{cm}	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 _H	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

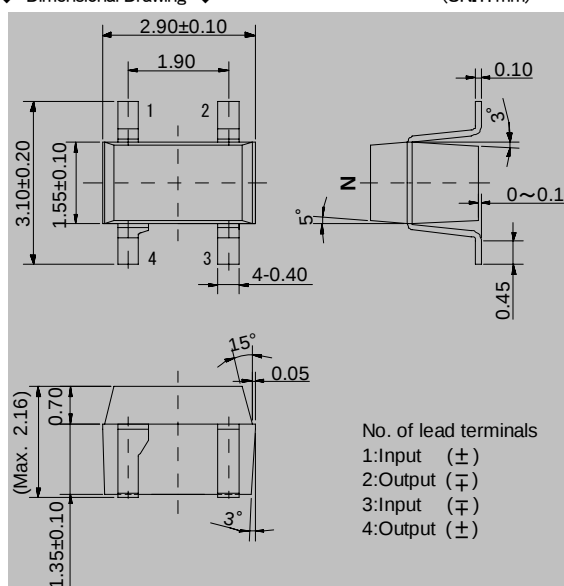
$$※1: \alpha_H = [1/V_H(T_1)] \times [(V_H(T_3) - V_H(T_2)) / (T_3 - T_2)] \times 100$$

$$※2: \alpha_R = [1/R_{in}(T_1)] \times [(R_{in}(T_3) - R_{in}(T_2)) / (T_3 - T_2)] \times 100$$

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

◆ Dimensional Drawing ◆

(UNIT: mm)



◆ Classification of Output Voltage ◆

Model	Rank	V _H (mV)	Conditions
NHE522TU	5	196~236	Constant Voltage Drive
	6	228~274	V _H =V _H M-V _o
	7	266~320	V _H M=Measured Hall Voltage (at 50mT)
	8	310~370	V _o =Offset Voltage(at 0 mT)

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

◆ Packaging ◆

Model	Packaging	Reel Max. (pcs)	Carton Max. (pcs)
NHE522TU	Taping reel	7,500	225,000

◆ Characteristics Curve ◆

