

InSb Type Hall Element

MODEL

NHE312



Features

Nicera Hall element is a high sensitivity type Hall element of evaporated InSb film.

High sensitivity for effective performance in low magnetic fields.

Appropriate input and output resistances for transistor circuits.

DIP type package.

Applications

Brushless motors

(Power motor)

Current sensor

Noncontacting magnetic sensors

Position sensors, rotation sensors

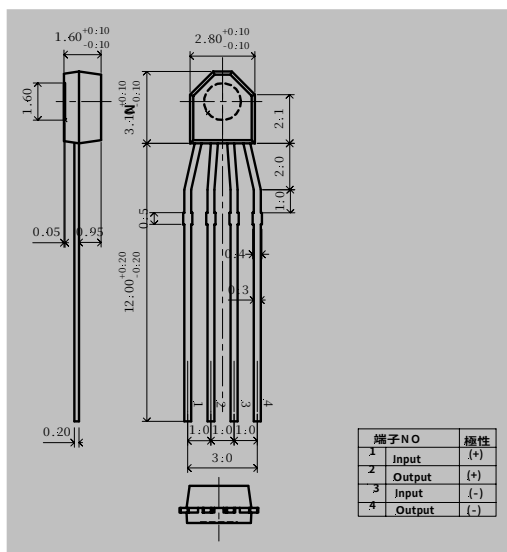
Other magnetic flux sensors

Specifications

◆Pb-Free products◆

Nicera can supply Pb-Free products

◆ Dimensional Drawing◆



◆Absolute Maximum Rating◆

Item	Symbol	Limit	Unit
Max. Input Current	I _{cmax}	20(at25°C)	mA
Power Dissipation	P _d	150	mW
Operating Temp. Range	T _{opr}	-20~110	°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(500G)	196		428	mV
Offset Voltage	V _o	V _c =1V B=0mT(0G)	-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	α _{HI}	20°C基準 Average on 0~40°C B=50mT I _c =5mA		-2.0%		%/°C
Temp. Coefficient of R _{in}	α _R	20°C基準 Average on 0~40°C B=50mT I _c =0.1mA		-2.0%		%/°C

$$\text{※1: } \alpha_{HI} = [1/V_H(T_1)] \times [(V_H(T_3) - V_H(T_2)) / (T_3 - T_2)] \times 100$$

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

$$\text{※3: } T_1=20^\circ\text{C}, T_2=0^\circ\text{C}, T_3=40^\circ\text{C}$$

◆Classification of Output Voltage I◆

Model	Rank	V _H (mV)	Conditions
NHE312	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
	8	310~370	(at 50mT)
	9	360~428	V _o =Offset Voltage(at 0 mT)

◆ Packaging◆

Model	Packaging	Reel Max. (pcs)	Carton Max. (pcs)
NHE312	Bulk Package	200(Pack)	24,000

◆ Characteristics Curve ◆

