

InSb Hall Element

Product Information

Model: NHE520

Description: Hall Element NHE520

1. Applications

* Brushless DC motors (CD-ROM drive, floppy disk drive, other small precision motors etc.), Noncontacting sensors (limit switch, flux leakage detection, rotation speed detection and position detection etc.), Other magnetic flux sensors.

2. 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 resistance for transistor circuits.

* Small size package suitable for compact application.

* Symmetrical terminal layout allows the same electrical characteristics with 180° horizontally rated application.

* Terminal layout compatible with products made by other manufacturers.

* Packing suitable for SMT (taping: 3000 pcs/tape)

3. Absolute Maximum Ratings

Item	Symbol	Conditions	Limit	Unit
Max. Input Current	I _{c max}	-	20(at 25℃)	mA
Power Dissipation	P _d	-	150	mW
Operating Temp. Range	T _{opr}	-	-20~+110	℃
Storage Temp. Range	T _{stg}	-	-40~+125	℃

4. Electrical Characteristics (at ambient temperature: 25℃)

Item	Symbol	Conditions	Min.	Max.	Unit
Hall Output Voltage	V _H	V _c =1V, B=500G(50mT)	122	320	mV
Offset Voltage	V ₀	V _c =1V, B=0G(0mT)	-7	+7	mV
Input Resistance	R _{in}	I _c =1mA, B=0G(0mT)	240	550	Ω
Output Resistance	R _{out}	I _c =1mA, B=0G(0mT)	240	550	Ω
Hall Output Temperature Coefficient	α _{HI}	based on the measured value got at 20°, take the average value of measured values got at 0° ~40℃, B=500G(50mT), I _c =5mA	-	-1.8	%/℃
Input Resistance Temperature Coefficient	α _R	based on the measured value got at 20°, take the average value of measured values got at 0° ~40℃, B=50mT, I _c =0.1mA	-	-1.8	%/℃

5. This series is classified according to Hall output voltage

Hall Output Voltage V _H (mV)	Rank	Printing Symbol
140~174	3	IF3
163~200	4	IF4
192~235	5	IF5
225~275	6	IF6
265~320	7	IF7

①NHE520

