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

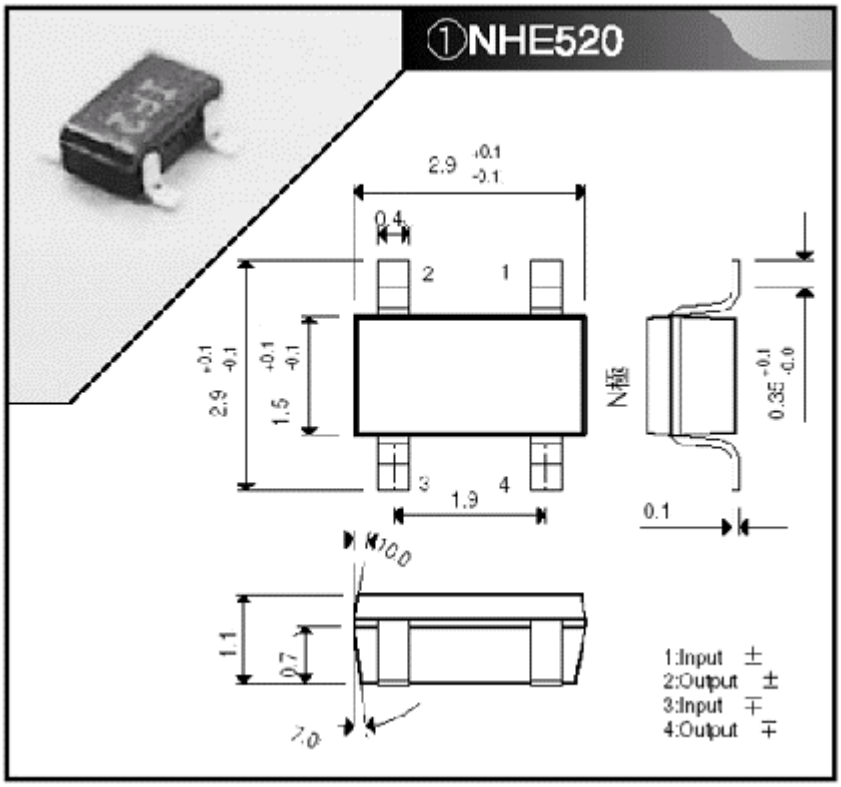
Item	Symbol	Conditions	Limit	Unit
Max. Input Current	Ic max	-	20(at 25℃)	mA
Power Dissipation	Pd	-	150	mW
Operating Temp. Range	Topr	-	-20～+110	℃
Storage Temp. Range	Tstg	-	-40～+125	℃

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

Item	Symbol	Conditions	Min.	Max.	Unit
Hall Output Voltage	V_H	Vc=1v,B=500G(50mT)	122	320	mV
Offset Voltage	V_0	Vc=1V,B=0G(0mT)	-7	+7	mV
Input Resistance	Rin	Ic=1mA,B=0G(0mT)	240	550	Ω
Output Resistance	Rout	Ic=1mA,B=0G(0mT)	240	550	Ω
Hall Output Voltage Temperature Coefficient	αHI	based on the measured value got at 20° , take the average value of measured values got at 0° ～40℃, B=500G(50mT),Ic=5mA	-	-1.8	%/℃
Input Resistance Temperature Coefficient	αR	based on the measured value got at 20° , take the average value of measured values got at 0° ～40℃, B=50mT),Ic=0.1mA	-	-1.8	%/℃

5. This series is classified according to Hall output voltage

Hall Output VoltageV_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
2.9 +0.1 -0.1
0.4
2
1
2.9 +0.1 -0.1
1.5 +0.1 -0.1
3
4
1.9
N極
0.35 +0.1 -0.0
0.1
R0.0
1.1
0.7
7.0
1:Input ±
2:Output ±
3:Input ∓
4:Output ∓