

Hall Sensor

Module No.: HS-52

1. General Description:

HS-52 is a high-sensitivity Hall element of evaporated InSb film. The sensor allows bipolar response.

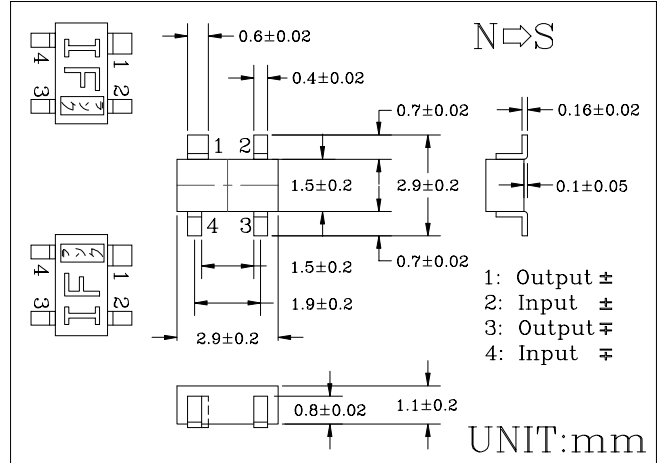
2. Features:

- Connection to electrode is made by highly reliable gold wire bonding process, causing stable characteristics to be kept.
- High sensitive output voltage because of being composed of magnetic substances.
- Very small-sized package, permitting Hall element-applied device to keep compact and thin.
- The symmetrical terminal layout allows reverse pin insertion for use.
- Packaging forms for automatic insertion.

3. Application

- Brushless motors.
- Contactless switch.
- Detection of rotation or position of magnetic substance.

Dimensions



4. Absolute Maximum Ratings

(Ta=25°C)

Parameter	Symbol	Ratings	Unit
Control current	ICC	20	mA
Power dissipation	PD	150	mW
Operating temperature	Topr	-40 ~ +120	°C
Storage temperature	Tstg	-40 ~ +150	°C
Soldering temperature *1	Tsol	260	°C

*1 At the position of 2mm from the bottom of the package within 5 seconds.

5. Electro-Magnetic Characteristics

(Ta=25°C)

Parameter	Symbol	Testing conditions	Min.	Max.	Unit
No-load hall Voltage *1	VH	Vc=1V, B=500G	120	320	mV
Imbalanced ratio *2	Vo/VH	Vc=1V, B=0G	-7	+7	%
Input resistance	RIN	Im=1mA	240	550	Ω
Output resistance	ROUT	Im=1mA	240	550	Ω
Thermal coefficient of VH	α	Ta=-20~+100°C		-2	%/°C
Thermal coefficient of RIN, ROUT	β	Ta=-20~+100°C		-2	%/°C

*1 $V_H = V_{HM} - V_O$ V_{HM} : Measured hall voltage (at 500 Gauss)

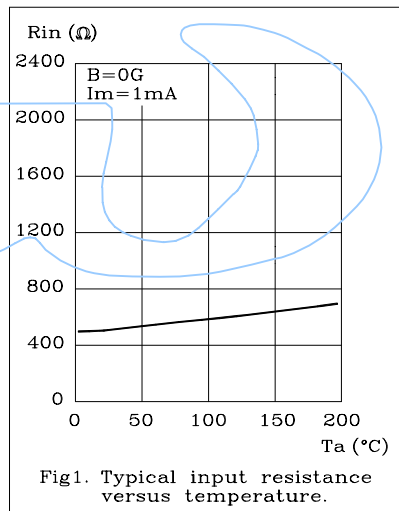
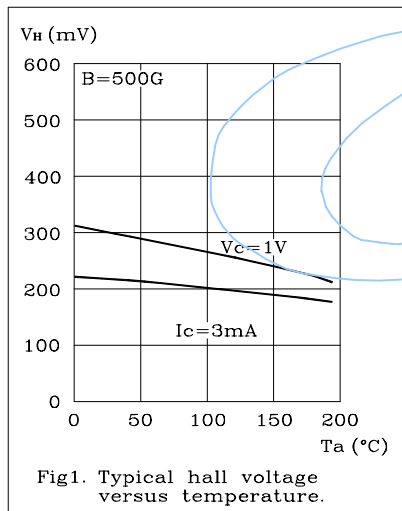
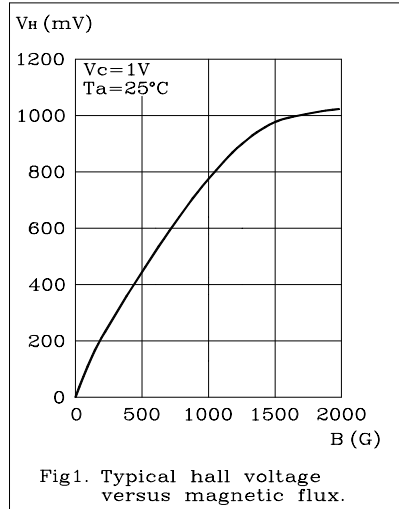
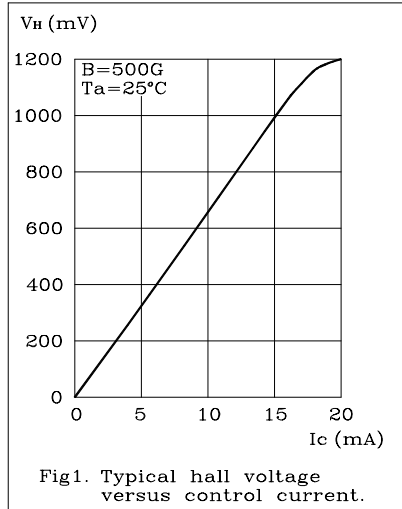
*2 V_O : Offset voltage (at 0 Gauss)



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6. Graph data



7. Classification

V_H (mV) \ R_{IN} (Ω)	240~550	MARK
140~173	3	IF3
163~200	4	IF4
192~235	5	IF5
225~275	6	IF6
265~320	7	IF7