

CYTY300B (InSb) HALL-EFFECT ELEMENT

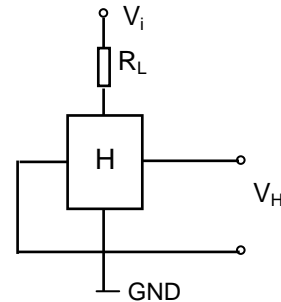
Hall-effect element CYTY300B is made of compound semiconductor material indium stibnite (InSb), which utilizes the Hall-effect principle. It can convert a magnetic flux density signal linearly into voltage output.

FEATURES

- High Magnetic Sensitivity
- Low Offset Voltage
- Miniature Package

TYPICAL APPLICATION

- Magnetic Field Measurement
- Current Sensor
- Detection of Speed
- DC Brushless Motor
- Position Control



1. Maximum Ratings

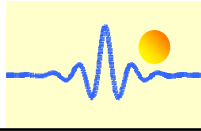
(Ta=25°C)

Parameter	Symbol	Rating	Unit
Maximum Input Current	I _{max}	20 (at 25°C)	mA
Maximum Power Dissipation	P _{max}	150 (at 25°C)	mW
Operating Temperature Range	T _{op}	- 40 ~ + 110	°C
Storage Temperature Range	T _{st}	- 40 ~ + 125	°C

2. Electrical Characteristics (Measured at 25°C)

Parameter	Symbol	Measurement Conditions	Min	Max	Unit
Output Hall Voltage	V _H	V _{in} = 1V, B = 50mT	196	320	mV
Input Resistance	R _{in}	I = 0.1mA	240	550	Ω
Output Resistance	R _{out}	I = 0.1mA	240	550	Ω
Offset Voltage	V _O	V _{in} = 1V, B = 0G	- 7	+ 7	mV
Temp. Coeff. of V _H	α	T _a = 0 ~ + 40°C AVG.	-	- 1.8	% /°C
Temp. Coeff. of R _{in} , R _{out}	β	T _a = 0 ~ + 40°C AVG.	-	- 1.8	% /°C
Dielectric strength		100V DC	1.0		MΩ

$$V_H = V_{HM} - V_O \quad (V_{HM} : \text{The output voltage measured at 500G.})$$



3. CHARACTERISTIC CURVES (only for references)

