

## CYSJ1069 GaAs HALL-EFFECT ELEMENTS

CYSJ series Hall-effect element is a ion-implanted magnetic field sensor made of mono-crystal gallium arsenide (GaAs) semiconductor material group . -V using ion-implanted technology. It can convert a magnetic flux density signal linearly into voltage output.

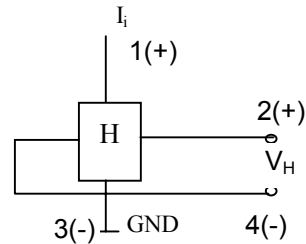
### FEATURES

- High Linearity
- Superior Temperature Stability
- Miniature Package

### TYPICAL APPLICATION

- Magnetic Field Measurement
- DC Brushless Motor
- Current Sensor
- Non-contact Switch
- Position Control
- Detection Of Revolution

### BLOCK DIAGRAM



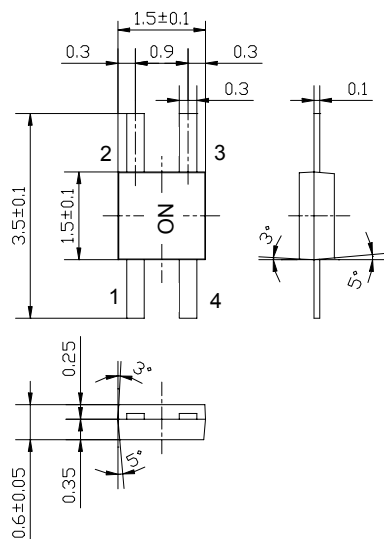
### ABSOLUTE MAXIMUM RATING

Parameter	Symbol	Value	Unit
Max. Input current	$I_i$	10	mA
Operating temperature range	$T_A$	-55~125	°C
Storage temperature range	$T_S$	-55~150	°C

### ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$ )

Parameter	Symbol	Test condition	Value	Unit
Hall output voltage	$V_H$	$B=100\text{mT } I_i=5\text{mA}$	100~120	mV
Offset voltage	$V_o/V_H$	$I_i=5\text{mA } B=0/B=100\text{mT}$	<5	%
Input resistance	$R_i$	$B=0\text{mT } I_i=0.1\text{mA}$	450~750	$\Omega$
Output resistance	$R_o$	$B=0\text{mT } I_i=0.1\text{mA}$	750~1400	$\Omega$
Temperature coefficient of hall output voltage	$\alpha V_H$	$I_i=5\text{mA } B=100\text{mT}$	-0.06	%/°C
Temperature coefficient of input and output resistance	$\alpha_i, V_o$	$I_i=1\text{mA } B=0\text{mT}$	0.3	%/°C
Linearity	$\Delta K_H$	$I_i=5\text{mA } B=0\sim 300\text{mT}$	2	%

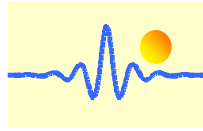
### Package Outline Drawing (Unit: mm)



Mark: ON

#### PIN NOTE

1(+), 3(-) INPUT  
2(+), 4(-) OUPUT



## Characteristics Curves

