

OH024

GaAs Hall Element

Magnetic Sensor

■ Features

- Hall voltage: typ. 90mV ($V_C=3V$, $B=1kG$)
- Input resistance: typ. $2k\Omega$ (min. $1.5k\Omega$)
- Output resistance: typ. $7k\Omega$ (max. $10k\Omega$)
- Being packed in Mini type (4-pin) with projection for fixing position, automatic insertion using magazine packaging is possible

■ Applications

- Various Hall motors (Suitable for portable type apparatus, CD, VD, VTR, FDD etc.)
- Wide application (OA apparatus etc.) is possible

■ Absolute Maximum Ratings ($T_a=25^\circ C$)

Item	Symbol	Value	Unit
Control Voltage	V_C	6	V
Power Dissipation	P_D	150	mW
Operating Ambient Temperature	T_{opr}	$-55 \sim +125$	$^\circ C$
Storage Temperature	T_{stg}	$-55 \sim +125$	$^\circ C$

■ Electrical Characteristics ($T_a=25^\circ C$)

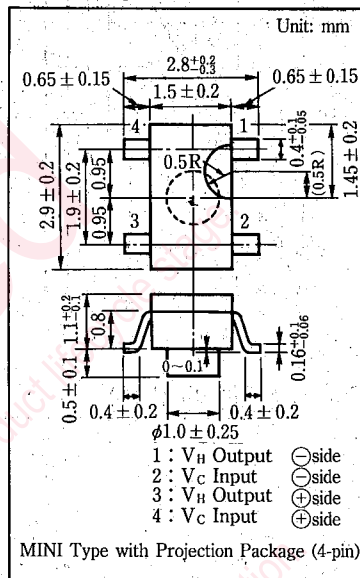
Item	Symbol	Condition	min.	typ.	max.	Unit
Hall Voltage	V_H^{*1}	$V_C=3V$, $B=1kG$	70	90	110	mV
Unequilibrium Voltage	V_{HO}	$V_C=3V$, $B=0$			± 9.5	mV
Input Resistance	R_{IN}	$I_C=0.1mA$, $B=0$	1.5	2	4	$k\Omega$
Output Resistance	R_{OUT}	$I_C=0.1mA$, $B=0$	4	7	10	$k\Omega$
Temperature Coefficient of Hall Voltage	β	$I_C=1.5mA$, $B=1kG$			-0.06	$\%/^\circ C$
Temperature Coefficient of Input Resistance	α	$I_C=0.1mA$, $B=0$			0.3	$\%/^\circ C$
Linearity of Hall Voltage	γ^{*2}	$I_C=1mA$, $B=0.5kG/1kG$			2.0	%

$$*1 V_H = \frac{|V_{H+}| + |V_{H-}|}{2}$$

*2 Linearity γ of V_H is percentage to mean value of difference between k_H , and k_{Hz} which are accumulated sensibility measured by

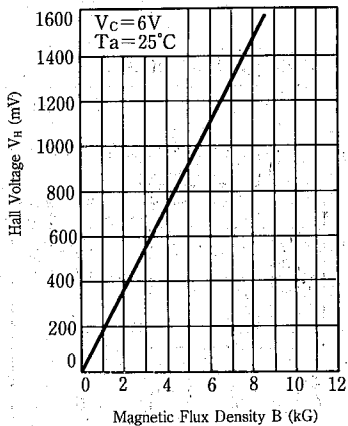
$$\gamma = \frac{K_{H1} - K_{H0.5}}{(K_{H0.5} + K_{H1})/2} \quad (\text{accumulated sensibility } K_H = \frac{V_H}{I_C \cdot B})$$

■ Package Dimensions

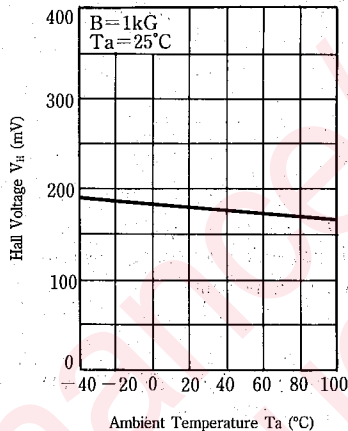


Marking Symbol : OU

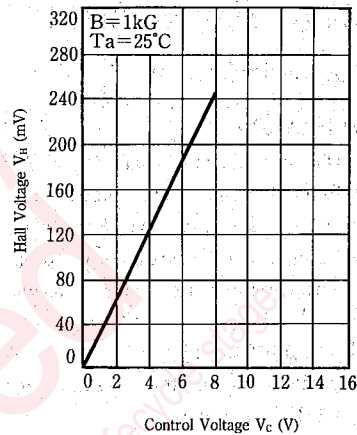
$V_H - B$



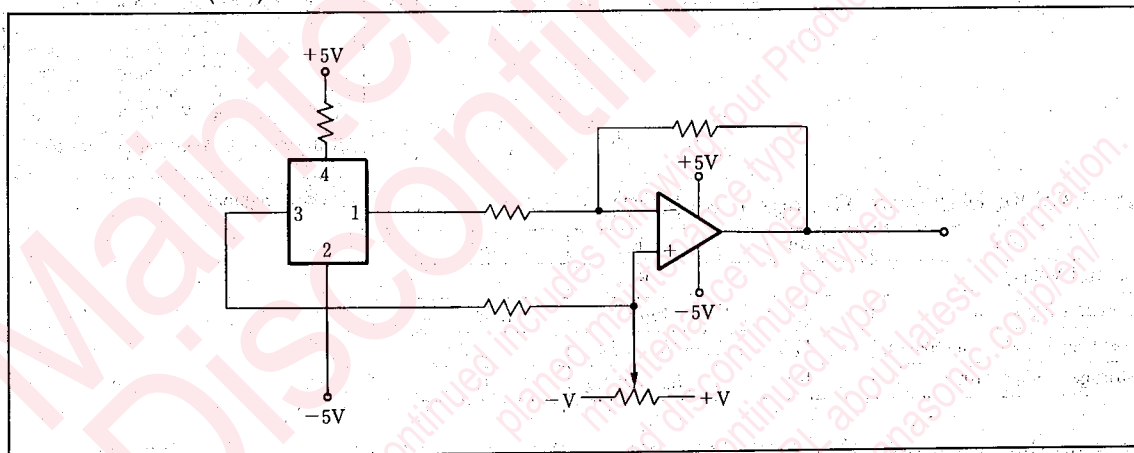
$V_H - T_a$



$V_H - V_C$



■ Drive Circuit (Ex.)



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