

TOSHIBA HALL SENSOR GaAs ION IMPLANTED PLANAR TYPE

THS122

HIGH STABILITY MOTOR CONTROL. DIGITAL TACHOMETER.

CRANK SHAFT POSITION SENSOR.

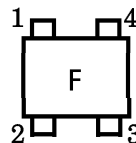
- Super Small Package.
- Excellent Temperature Characteristics.
- Wide Operating Temperature Range. (; -55~125°C)
- Excellent Output Voltage Linearity.
- High Specific Sensitivity. : $K^* = 38 \times 10^{-2} / T$ (Typ.)

MAXIMUM RATINGS (Ta = 25°C)

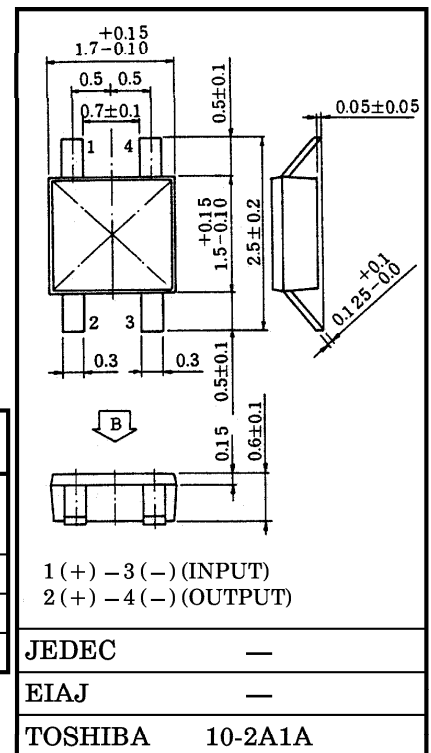
CHARACTERISTIC		SYMBOL	RATING	UNIT
Control Current	DC	I _C	10**	mA
	1s		15**	
Power Dissipation		P _D	100**	mW
Operating Temperature Range		T _{opr}	-55~125	°C
Storage Temperature Range		T _{stg}	-55~150	°C

** Mounted on a printed circuit board.

Marking



Unit in mm



Weight : 0.0047g

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

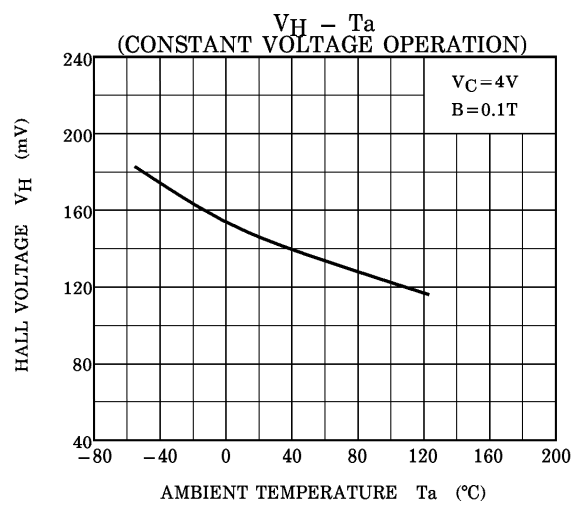
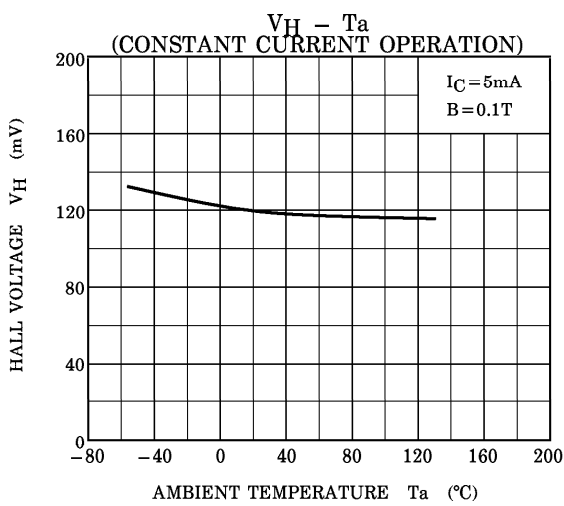
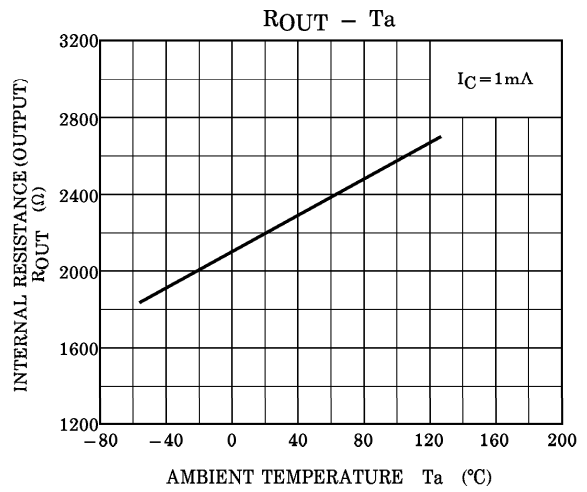
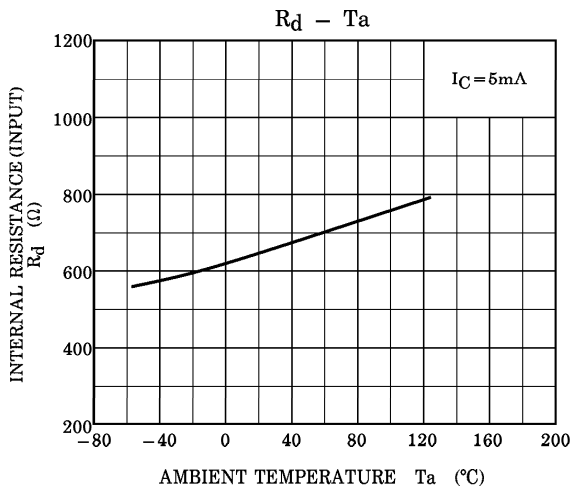
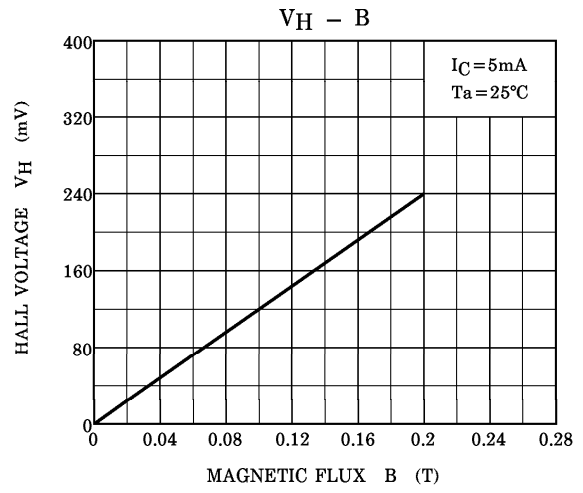
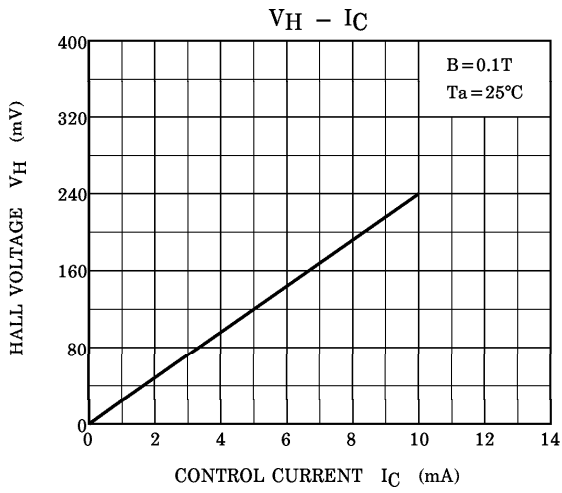
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Internal Resistance (Input)	R _d	I _C = 5mA	450	—	900	Ω
Residual Voltage Ratio	V _{HO} / V _H	I _C = 5mA, B = 0 / B = 0.1T	—	—	±10	%
Hall Voltage (Note 1)	V _H	I _C = 5mA, B = 0.1T	80	—	190	mV
Temperature Coefficient (Note 2)	V _{HT}	I _C = 5mA, B = 0.1T T1 = 25°C, T2 = 125°C	—	—	-0.06	% / °C
Linearity (Note 3)	ΔK _H	I _C = 5mA, B1 = 0.05T, B2 = 0.1T	—	—	2	%
Specific Sensitivity (Note 4)	K*	I _C = 5mA, B = 0.1T	—	38	—	×10 ⁻² / T
Internal Resistance (Output)	R _{OUT}	I _C = 1mA	—	—	3200	Ω

Note 1 : V_H = V_{HM} - V_{HO} (V_{HM} is meter indication)

Note 2 : $V_{HT} = \frac{1}{V_H(T1)} \cdot \frac{V_H(T2) - V_H(T1)}{T2 - T1} \times 100 (\% / ^\circ C)$ V_{HO} : Residual Voltage

Note 3 : $\Delta K_H = \frac{K_H(B2) - K_H(B1)}{1/2 \{ K_H(B1) + K_H(B2) \}} \times 100 (\%)$, $K_H = \frac{V_H}{I_C \cdot B}$ K_H : Product Sensitivity

Note 4 : $K^* = V_H / (R_d \times I_C \times B) = K_H / R_d$



RESTRICTIONS ON PRODUCT USE

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