MS-0020

MS-0020 is a SON package semiconductor magnetoresisitive element.
It can detect gear rotation with high accuracy combined with a bias magnet for use,and outputs the phases A and B of module m=0.2.

Shipped in tray (225pcs per pack)

Notice : It is requested to read and accept "IMPORTANT NOTICE" written on the back of the front cover of this catalogue.

●Absolute Maximum Ratings (Ta=25℃)

Item	Symbol	Limit	Unit
Max.Input.Power	PD	395	mW
Operating Temp. Range	Topr.	−40 ～ 100	℃
Storage Temp. Range	Tstg.	−40 ～ 125	℃

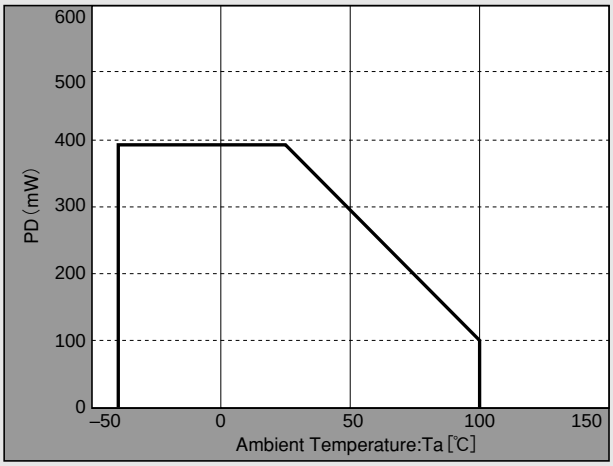
(Notice) Maximum input voltage in use is depend on the magnetic flux density of bias magnet.

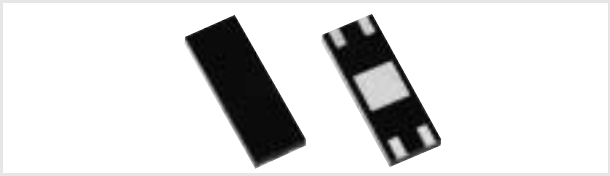
●Magnetic & Electrical Characteristics (Ta=25℃) (Ta=25℃)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Input Resistance	$R_{in}(0)$	I_C=1mA, B=0T	205		330	Ω
Output Resistance	$R_{out}(0)$	I_C=1mA, B=0T	205		330	Ω
Phase-A Voltage	VA(0)	V_C=5V, B=0T	2.46	2.5	2.54	V
Phase-B Voltage	VB(0)	V_C=5V, B=0T	2.46	2.5	2.54	V
Phase-A Voltage	VA(B)	V_C=5V, B=0.45T	2.46	2.5	2.54	V
Phase-B Voltage	VB(B)	V_C=5V, B=0.45T	2.46	2.5	2.54	V
Input Resistance Change Ratio	$\triangle R_{in}/R_{in}$ (*)	I_C=1mA, B=0.45/0T	170			%
Output Resistance Change Ratio	$\triangle R_{out}/R_{out}$ (**)	I_C=1mA, B=0.45/0T	170			%

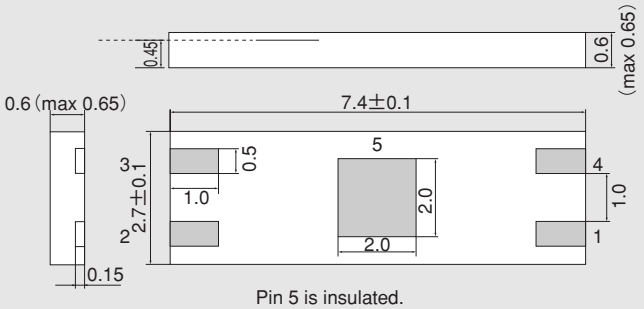
(*)$\triangle R_{in}/R_{in}=(R_{in}(B)-R_{in}(0))/R_{in}(0)$ B=0.45T
(**)$\triangle R_{out}/R_{out}=(R_{out}(B)-R_{out}(0))/R_{out}(0)$ B=0.45T

●Power Dissipation





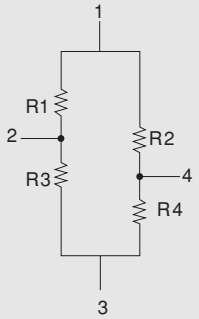
●Dimensional Drawing (Unit:mm)



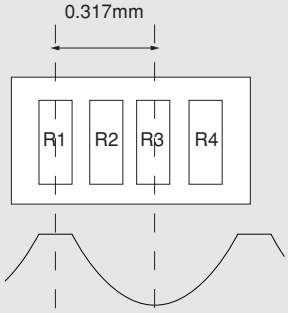
Pin 5 is insulated.

Pinning		
Input	1(＋)	3(－)
Output	2(B相)	4(A相)

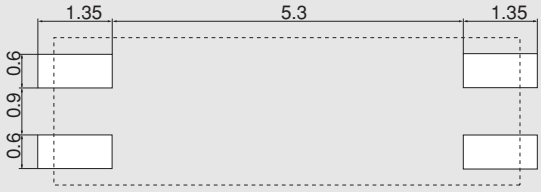
●Equivalent Circuit



●Configuration



●Land Pattern(for reference only)(Unit:mm)

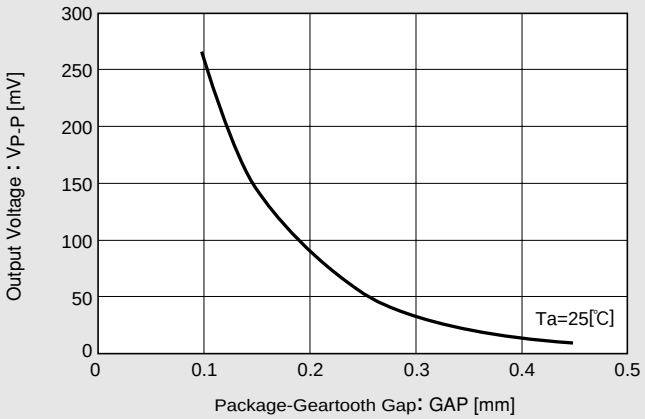


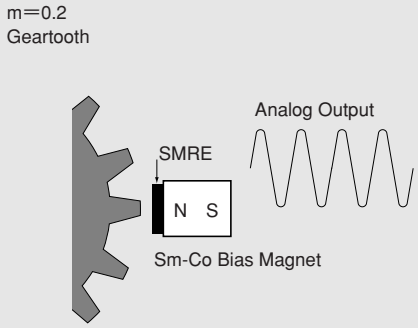
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•This product contains galium arsenide (GaAs). Handling and discarding precautions required.

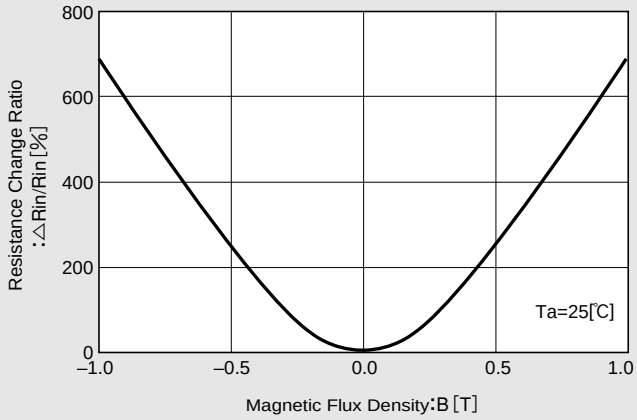
●Characteristic Curves

(Reference)Output Voltage-GAP(Package-Geartooth)

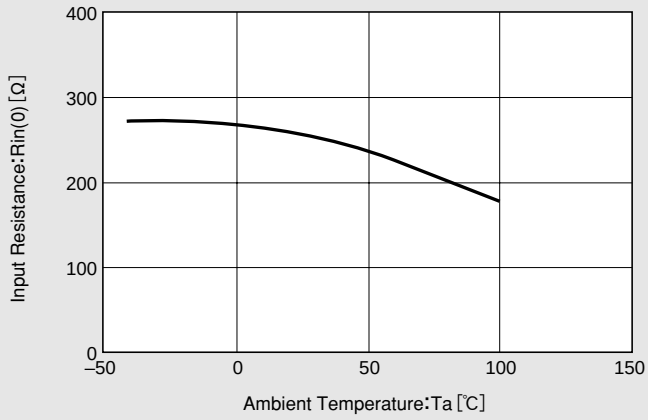




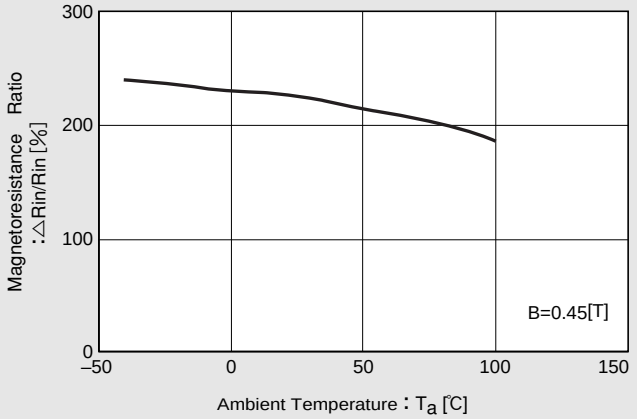
△Rin/Rin-B



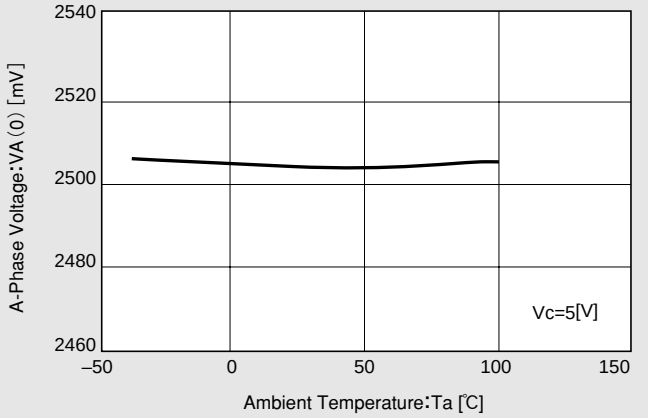
Rin(O)-T



△Rin/Rin-T



VA (O) -T



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December 7, 2010