

1S-004

MS-0040 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=0.4.

Shipped in tray (225 pcs 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°C)

Item	Symbol	Limit	Unit	
Max.Input.Power	PD	430	mW	
Operating Temp. Range	Topr.	−40 ~ 100	°C	
Storage Temp. Range	Tstg.	−40 ~ 125	°C	

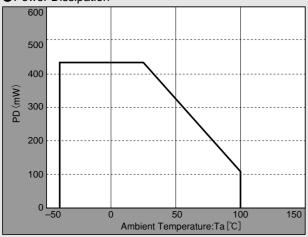
(Notice) Maximum input voltage in use is depend on the magnetic flux density of bias

Magnetic & Electrical Characteristics (Ta=25°C)

Item	Symbol	Conditions	Min.	Тур.	Max.	Unit
Input Resistance	R _{in} (0)	I _C =1mA, B=0T	230		375	Ω
Output Resistance	R _{out} (0)	I _C =1mA, B=0T	230		375	Ω
Phase-A Voltage	VA(0)	V _C =5V, B=0T	2.46	2.5	2.54	٧
Phase-B Voltage	VB(0)	V _C =5V, B=0T	2.46	2.5	2.54	٧
Phase-A Voltage	VA(B)	V _C =5V, B=0.45T	2.46	2.5	2.54	٧
Phase-B Voltage	VB(B)	V _C =5V, B=0.45T	2.46	2.5	2.54	٧
Input Resistance Change Ratio	△R _{in/} R _{in} ®	I _C =1mA, B=0.45/0T	170			%
Output Resistance Change Ratio	∆R _{out} R _{out} *	I _C =1mA, B=0.45/0T	170			%

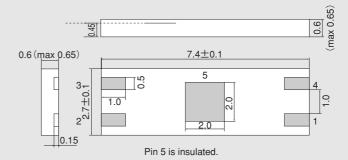
 $(*)\triangle R_{in}/R_{in}=(R_{in}(B)-R_{in}(0))/R_{in}(0)$ B=0.45T $(^{**}) \triangle R_{out}/R_{out} = (R_{out}(B)-R_{out}(0))/R_{out}(0) \quad B=0.45T$

Power Dissipation



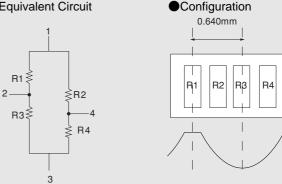


Dimensional Drawing (Unit:mm)



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

Equivalent Circuit



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



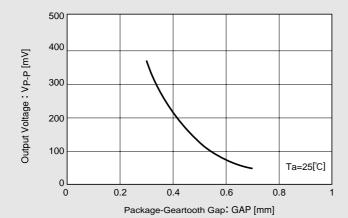
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Certain applications using semiconductor devices may involve potential risks of personal injury, property damage, or loss of life. In order to minimize these risks, adequate design and operating safeguards should be provided by the customer to minimize inherent or procedural hazards. Inclusion of our products in such applications is understood to be fully at the risk of the customer using our devices or systems.

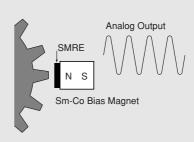
•This product contains galium arsenide (GaAs) .Handling and discarding precautions required.

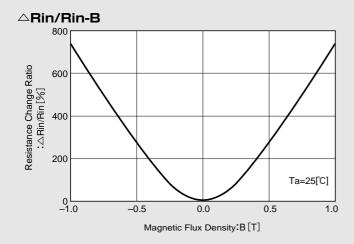
Characteristic Curves

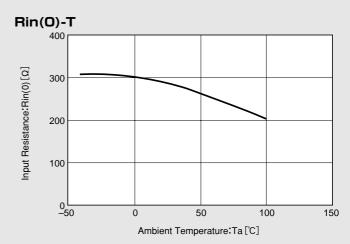
(Reference)Output Voltage-GAP(Package-Geartooth)

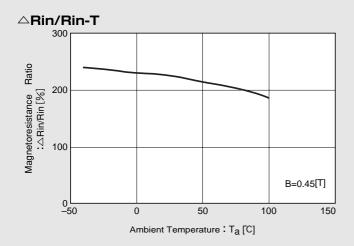


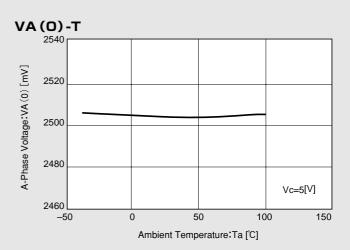
m=0.4 Geartooth











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