





## MRS-F-41

- Feature**
- A magnetic resistance element is an InSb mono-crystal. That sensitivity and the ratio of S/N are high.
  - It can be detected even if detected material doesn't stick to the detection side
  - Output doesn't depend on the movement speed of the magnetic body, and it can detect a stationary body.
  - A detection part is pure resistance, and hardly catches guidance noise.
  - It is the miniature metal case package which can use even the limited space.

### Absolute Maximum Rating (Ta=25°C)

Item	Symbol	Standard Value	Unit
Excitation,Maximum	V <sub>a</sub> max	5.5	V
Withstand Voltage	V <sub>I</sub>	100	V
Allowable Loss	P <sub>D</sub>	44	mW
Operation Environmental Temperature	T <sub>opg</sub>	-30 ~ +85	°C
Preserved Environmental Temperature	T <sub>stg</sub>	-30 ~ +85	°C

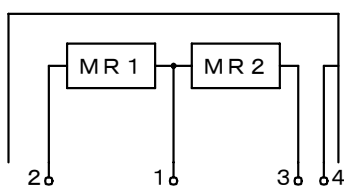
### Electrical Property (Ta=25°C)

Item	Symbol	Condition	min.	Typ.	Max.	Unit
Output voltage	V <sub>OUT</sub>	V <sub>a</sub> =5V <sup>*1</sup>	0.16		0.42	mVrms
Resistance balance	d	I=1mA <sup>*2</sup>			30	%
Input resistance	R	I=1mA	900	—	3500	Ω
Voltage Noise	V <sub>NW</sub>	V <sub>a</sub> =5V			50	μV <sub>P-P</sub>
Piezo Noise	V <sub>NP</sub>	V <sub>a</sub> =5V,press=10g			300	μV <sub>P-P</sub>
Magnetic Flux Density	B			0.95 (S Pole)		T
Detection Width	W			3		mm

\*1 Input uses the magnetic flux which occurs when it is charged with current of 50Hz, 100mA(rms) in the line of φ 0.1mm.

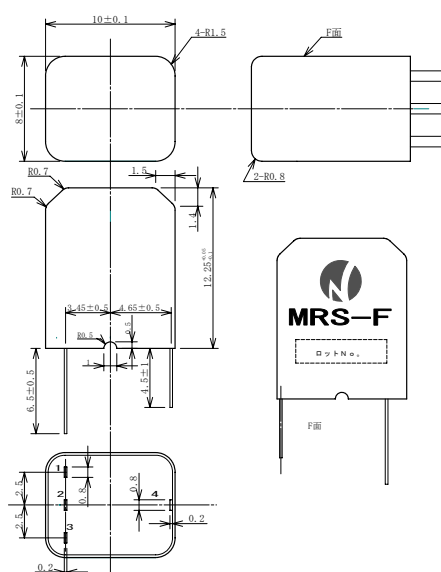
\*2  $d = |MR1 - MR2| / MR1$  (or  $MR2$ ) \*100

### Internal Circuit Figure



1	Vout
2	Va
3	GND
4	FG

### Contour Measure Figure



# The product specifications and the appearance are possibility of changing without notice.





## MRS-F-51

- Feature**
- A magnetic resistance element is an InSb mono-crystal. That sensitivity and the ratio of S/N are high.
  - It can be detected even if detected material doesn't stick to the detection side
  - Output doesn't depend on the movement speed of the magnetic body, and it can detect a stationary body.
  - A detection part is pure resistance, and hardly catches guidance noise.
  - The height of sensor is 4.5mm. This is height such as DIP type operational amplifier.

### Absolute Maximum Rating (Ta=25°C)

Item	Symbol	Standard Value	Unit
Excitation,Maximum	V <sub>a</sub> max	5.5	V
Withstand Voltage	V <sub>I</sub>	100	V
Allowable Loss	P <sub>D</sub>	44	mW
Operation Environmental Temperature	T <sub>opg</sub>	-30 ~ +85	°C
Preserved Environmental Temperature	T <sub>stg</sub>	-30 ~ +85	°C

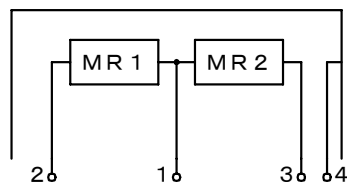
### Electrical Property (Ta=25°C)

Item	Symbol	Condition	min.	Typ.	Max.	Unit
Output voltage	V <sub>OUT</sub>	V <sub>a</sub> =5V <sup>*1</sup>	0.16		0.42	mVrms
Resistance balance	d	I=1mA <sup>*2</sup>			30	%
Input resistance	R	I=1mA	700	—	4500	Ω
Voltage Noise	V <sub>NW</sub>	V <sub>a</sub> =5V			50	μV <sub>P-P</sub>
Piezo Noise	V <sub>NP</sub>	V <sub>a</sub> =5V,press=10g			300	μV <sub>P-P</sub>
Magnetic Flux Density	B			0.75 (S Pole)		T
Detection Width	W			3		mm

\*1 Input uses the magnetic flux which occurs when it is charged with current of 50Hz, 100mA(rms) in the line of φ 0.1mm.

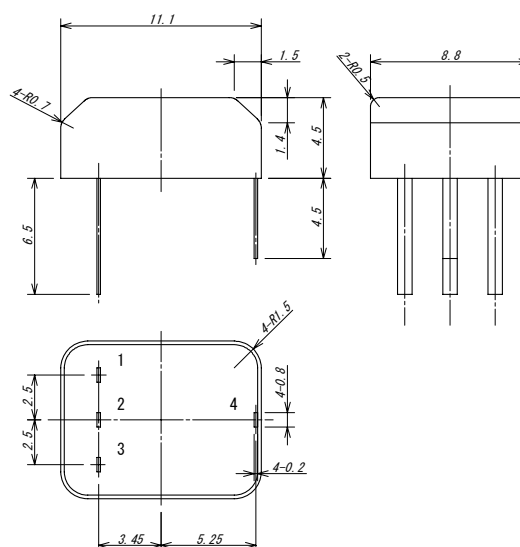
\*2  $d = |MR1 - MR2| / MR1$  (or MR2) \*100

### Internal Circuit Figure



1	Vout
2	Va
3	GND
4	FG

### Contour Measure Figure



# The product specifications and the appearance are possibility of changing without notice.

