

MRUS51S

Micro power Built-in IC ultra-minimum MR sensor

1.FEATURES

High-sensitivity (1.5mT(typ.)) & Ultra-minimum Size & Low source supply

\*Micro power (6μW(typ):Vcc=1.8V)  
(suited for battery-operation)

1.Dimension (Unit:mm)

\*Ultra-small size

MR(Magneto-resistance)sensor

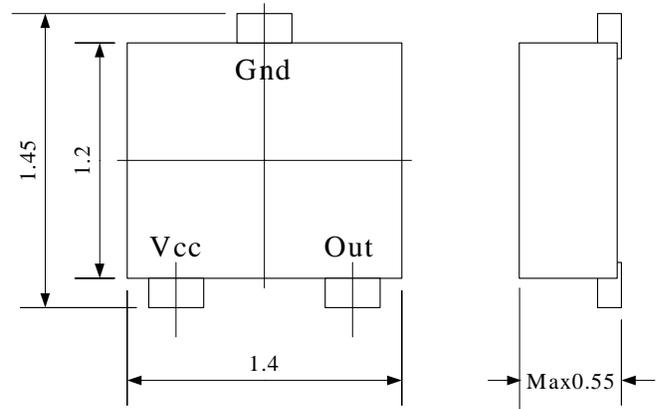
- Volume and mounting area are 70% smaller than MRSS22L.
- \* Height is about 50% lower than MRSS22L.

\*Operating in one way magnetic field

\*Operating with independent pole  
(easily manufacture)

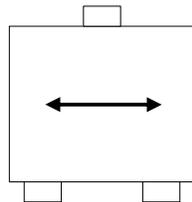
\*Superior Temperature stability

\*Lead free goods

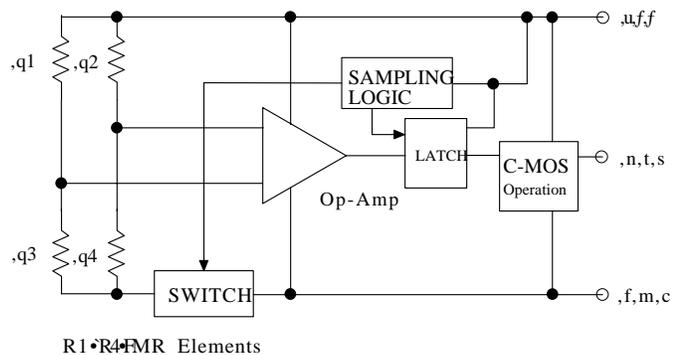


2.Fundamental Operation

2-1.Direction of Magnetic Field



2-2.Circuit Block



2-3.Performance Characteristics (25±3 °C)

	Operating require Condition	Output Voltage
When power switch is ON	H = 0 mT (Magnetic Flux Density)	Hi-level
When magnetic field is applied	H ↓ 2.2 mT (Magnetic Flux Density)	Lo-level
When magnetic field is applied	H ↑ 0.5 mT (Magnetic Flux Density)	Hi-level

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3.Performance

3-1.Operating Conditions Recommended

(Ta = 25±3 °C unless otherwise specified)

Item	Output	Condition	Min	Std	Max	Unit
Supply Voltage	-	-	1.6	1.8	3.5	V
Supply Current	-	Vcc=1.8V	-	3	-	μA
Ambient Temperature	-	-	-40	25	85	°C
Output Voltage	VOH	Vcc=1.8V Iout=1mA	1.6	-	-	V
	VOL	VCC=1.8V Iout=-1mA	-	-	0.2	V
Operating Magnetic Field	Hi-level output Hon	25±3°C	-	1.5 (1.4)	2.2 (1.8)	mT <sup>(*1)</sup>
	Lo-level output Hoff	25±3°C	0.5 (0.4)	-	-	(kA/m)

\*1) 1 [mT](SI) = 10 [G] (CGS)

3-2.Absolute Maximum Ratings

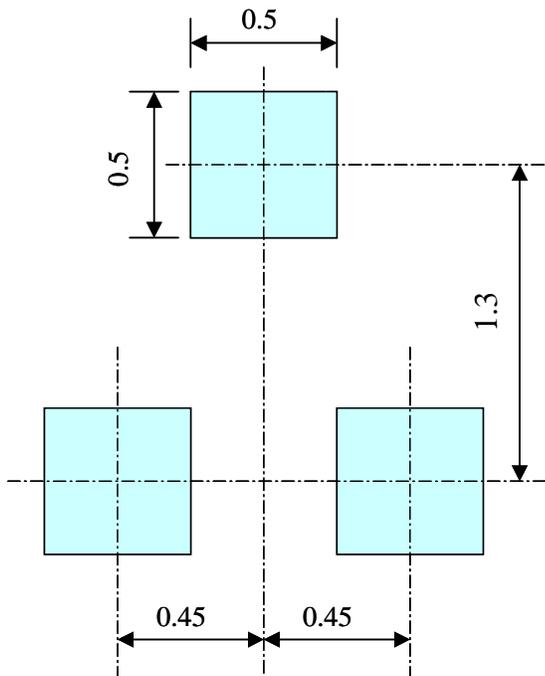
(Ta = 25±3 C° unless otherwise specified)

Item	Condition	Specifications	Unit
Supply Voltage	-	6.0	V
Storage Temperature	-	-40 ~ +125	°C

The products and product specifications described in this material are subject to change without notice for reasons of modification or improvement.

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3-3. Recommended mounting Pad



Unit(mm)

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