

MRSS31U

Micro power Built-in IC ultra-minimum MR sensor

FEATURES

*Micro power (15 μ W(typ):Vcc=3V)
and High-sensitivity(2mT(typ))
(suited for battery-operation)

*Ultra-small size

MR(Magneto-resistance)sensor

* Volume and mounting area are 50%
smaller than MRSS22L.

* Height is about 4mm lower than
MRSS22L.

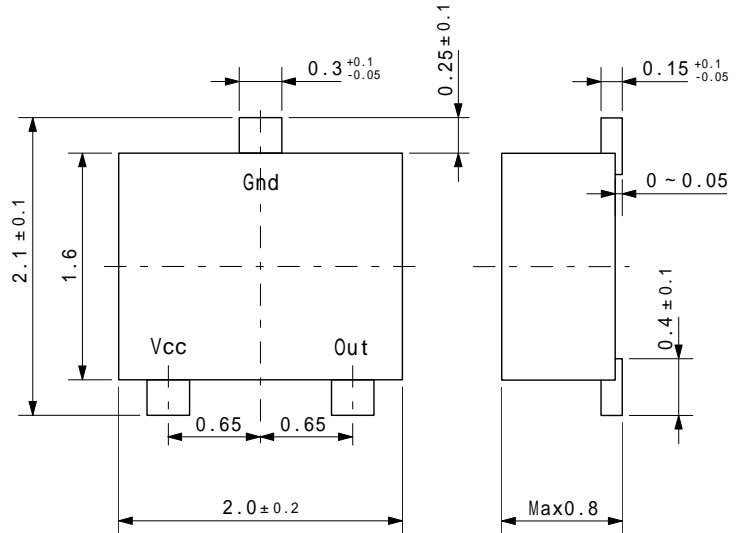
*Operating in one way magnetic field

*Operating with independent pole
(easily manufacture)

*Superior Temperature stability

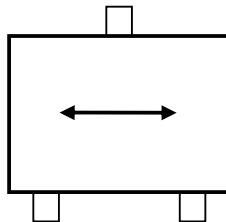
*Lead free goods

1.Dimension (Unit:mm)

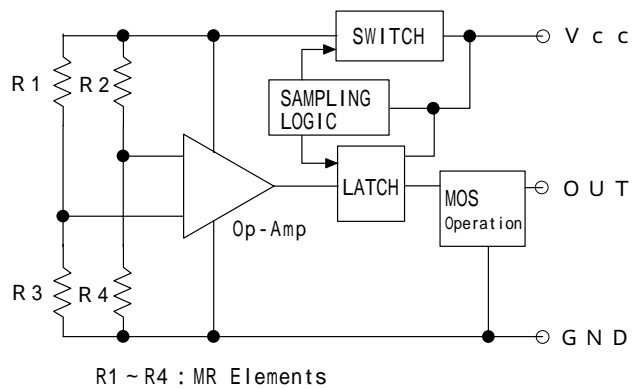


2.Fundamental Operation

2-1.Direction of Magnetic Field



2-2.Circuit Block



2-3.Performance Characteristics (25 \pm 3 $^{\circ}$ C)

	Operating require Condition	Output Voltage
When power switch is ON	H = 0 mT(Magnetic Flux Density) [0 A/m (Magnetic Field Strength)]	Hi-level
When magnetic field is applied	H \geq 2.0(Typ)mT(Magnetic Flux Density) [1.6kA/m (Magnetic Field Strength)]	Lo-level
When magnetic field is applied	H \leq 0.5 mT (Magnetic Flux Density) [0.4kA/m(Magnetic Field Strength)]	Hi-level

3.Performance

3-1.Operating Conditions Recommended

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

Item	Output	Condition	Min	Std	Max	Unit
Supply Voltage	-	-	2.5	3.0	3.7	V
Supply Current	-	Vcc=3V	-	5	-	μA
Ambient Temperature	-	-	-20	25	80	°C
Output Voltage	VOH	Vcc=3V Iout=2mA	2.7	-	-	V
	VOL	VCC=3V Iout=-2mA	-	-	0.3	V
Operating Magnetic Field	Hi-level output Hon		-	2.0 (1.6)	2.5 (2.0)	mT ^(*1)
	Lo-level output Hoff		0.5 (0.4)	-	-	(kA/m) ^(*2)

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

*2) () = [kA/m](SI)

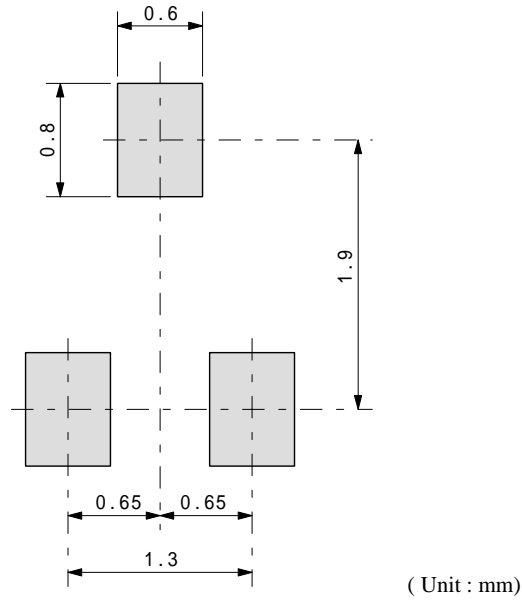
3-2.Absolute Maximum Ratings

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

Item	Condition	Specifications	Unit
Supply Voltage	-	5.0	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.

4. Recommended Mount Pad



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