

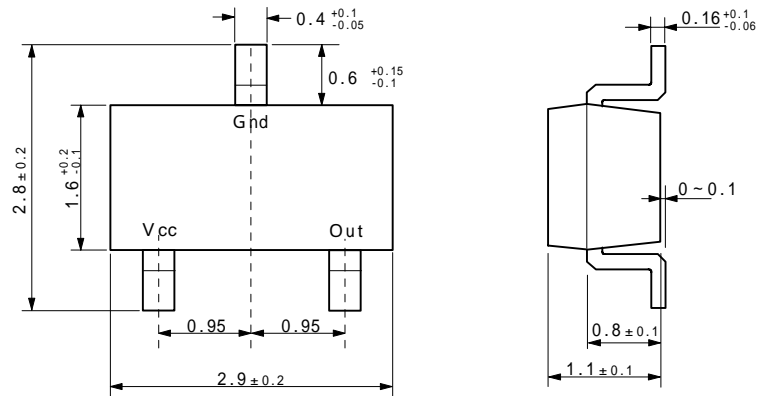
**MRSS23E**

**Low voltage operating type Built-in IC ultra-minimum MR sensor**

**FEATURES**

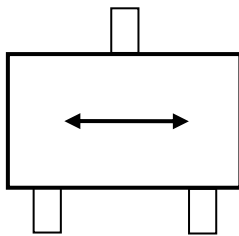
- Micro power ( $6\mu\text{W}(\text{typ})$ ): $V_{cc}=1.8\text{V}$  and High-sensitivity( $1.7\text{mT}(\text{typ})$ )  
(suited for battery-operation)
- Operating ambient temperature range ( $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ )
- Operating in one way magnetic field
- Operating with independent pole (easily manufacture)
- Lead free products

1.Dimension (Unit : mm)

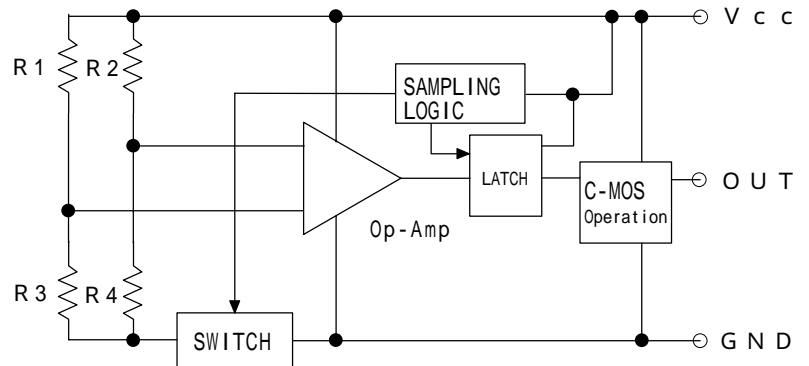


2.Fundamental Operation

2-1.Direction of Magnetic Field



2-2.Circuit Block



R1 ~ R4 : MR Elements

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

	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 1.7(Typ)mT (Magnetic Flux Density) [1.4kA/m (Magnetic Field Strength) ]	Lo-level
When magnetic field is applied	H 0.5 mT (Magnetic Flux Density) [0.6kA/m (Magnetic Field Strength) ]	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
Source Voltage	-	-	1.6	1.8	3.5	V
Source Current	-	Vcc=3V	-	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		-	1.7 (1.4)	2.2 (1.8)	mT <sup>(*1)</sup>
	Lo-level output Hoff		0.5 (0.4)	-	-	(kA/m)

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

3-2.Absolute Maximum Ratings

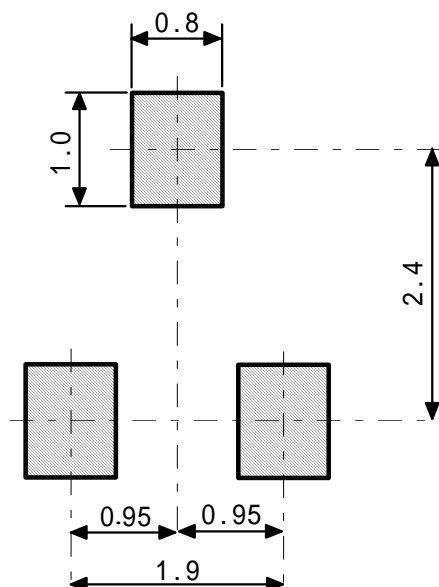
(Ta = 25±3°C unless otherwise specified)

Item	Condition	Specifications	Unit
Source 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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- Recommended Mount Pad



(Unit : mm)

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