

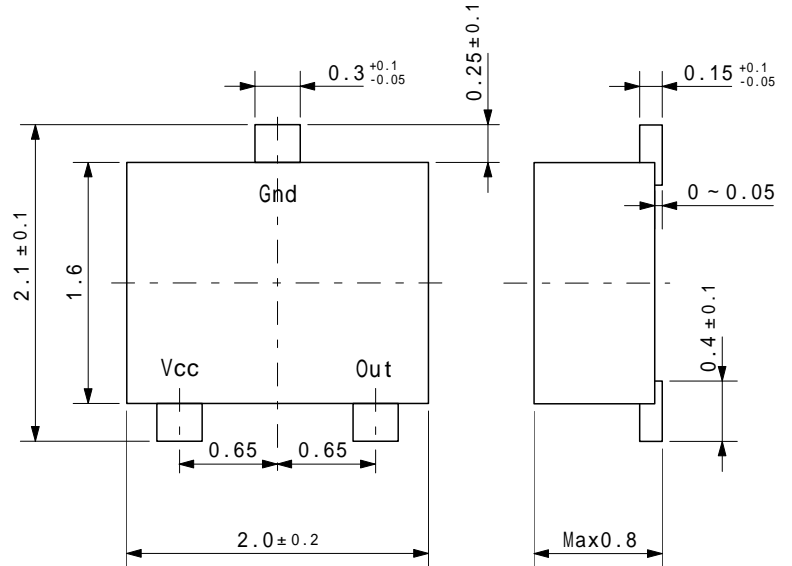
MRSS31U

Micro power Built-in IC ultra-minimum MR sensor

FEATURES

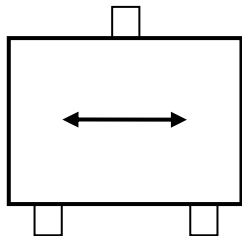
- *Micro power (15μW(typ):Vcc=3V) and High-sensitivity(2mT(typ)) (suited for battery-operation)
- *Ultra-small size
MR(Magneto-resistance)sensor
 - * Volume and mounting area are 50% smaller than MRSS22L.
 - * Height is about 4mm lower than MRSS22L.
- *Operating in one way magnetic field
- *Operating with independent pole (easily manufacture)
- *Superior Temperature stability
- *Lead free goods

1.Dimension (Unit:mm)

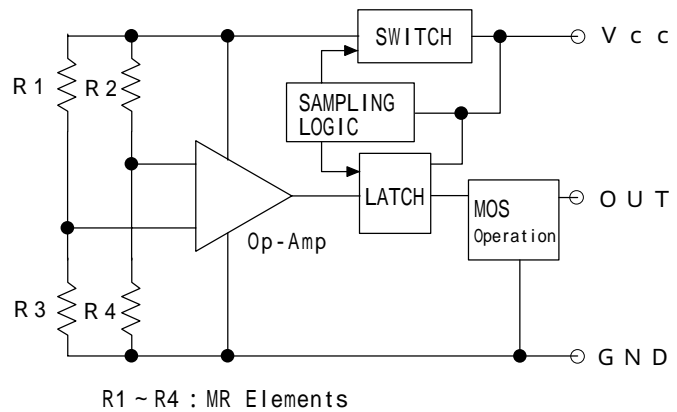


2.Fundamental Operation

2-1.Direction of Magnetic Field



2-2.Circuit Block



2-3.Performance Characteristics (25±3°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 ≥ 2.0(Typ)mT(Magnetic Flux Density) [1.6kA/m (Magnetic Field Strength)] | Lo-level |
| When magnetic field is applied | H ≤ 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)

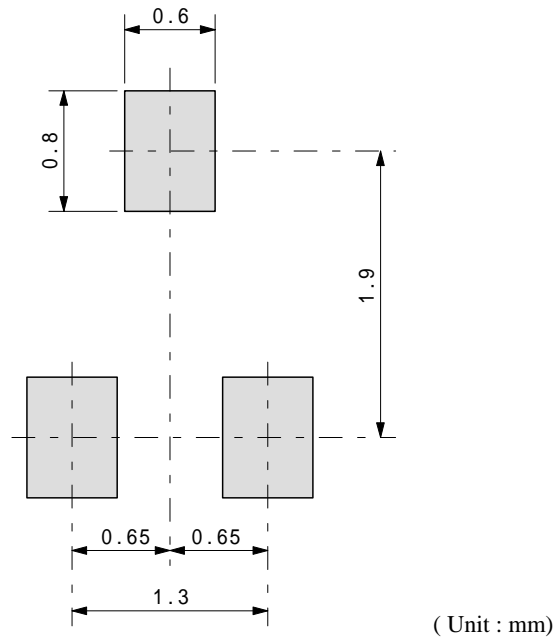
*2) () = [kA/m](SI)

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

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