

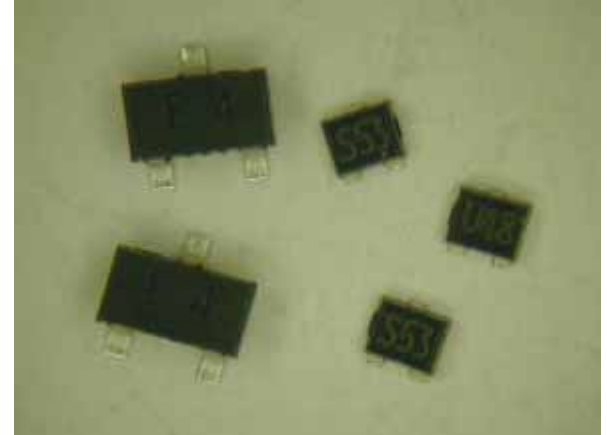
MRUS51S

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

Micro power Built-in IC Ultra-minimum MR sensor

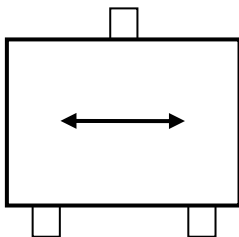
FEATURES

- Low Voltage Operation
- Micro power (6 μ W(typ):Vcc=1.8V)
-suited for battery-operation
- Ultra-small size MR(Magnet-resistance)sensor
-The Volume and mounting area are **70% smaller**,
and the Height is about **50% lower** than MRSS23E
- Operating ambient temperature range : -40°C to +85°C
- Operating in one way magnetic field
- Operating with independent pole (easily manufacture)
- Superior Temperature Stability
- Lead Free goods
- ROHS targeted

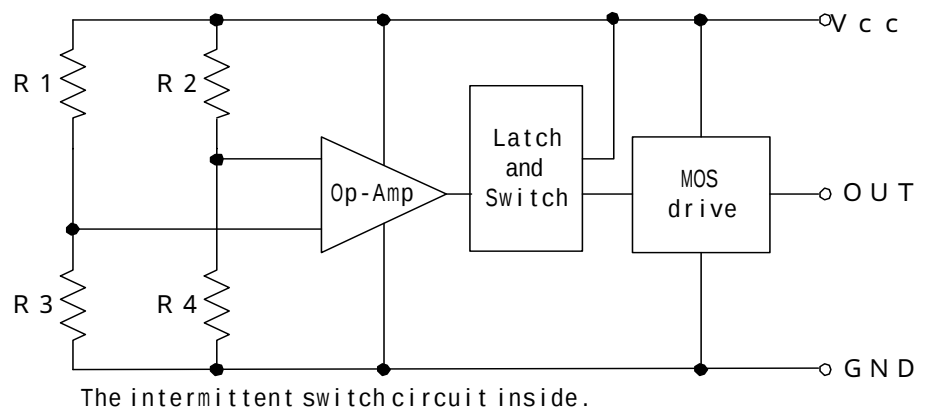


FUNDEMENTAL OPERATION

Direction of Magnetic Field



Circuit Block



PERFORMANCE

Performance Characteristics

	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 1.5(typ) mT (Magnetic Flux Density) {1.2kA/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

Operating Conditions Recommended

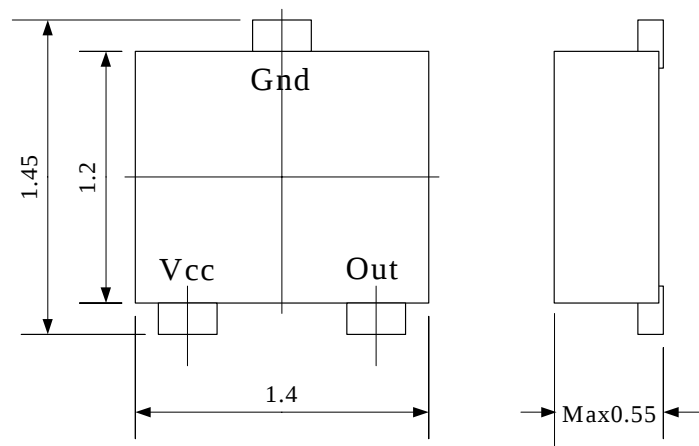
(Ta = 25±3°C unless otherwise specified)

Item	Output	Condition	Min	Std	Max	Unit
Source Voltage	-	-	1.6	1.8	3.5	V
Supply Current	(AVG)	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 (1.2)	2.2 (1.8)	mT ^(*1) (kA/m) ^(*2)
	Lo-level Output Hoff	25±3°C	0.5 (0.4)	-	-	

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

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

DIMENSIONS



(Unit:mm)

ABSOLUTE MAXIMUM RATINGS

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

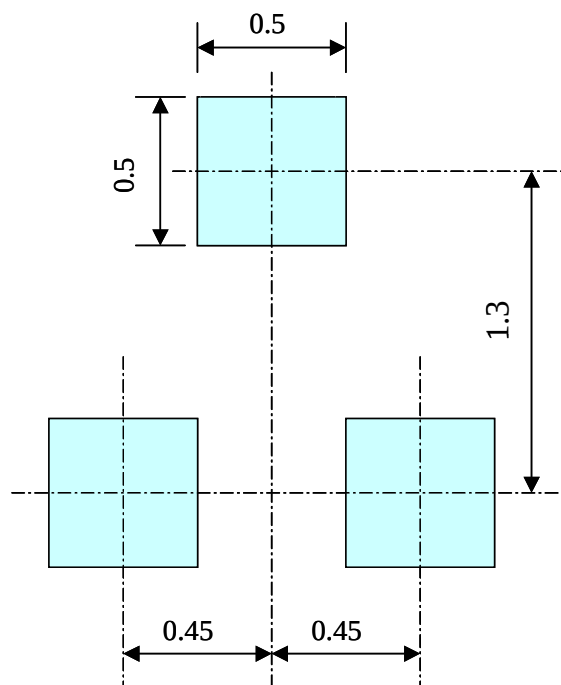
Item	Condition	Specifications	Unit
Supply Voltage	-	5.0	V
Storage Temperature	-	-40 ~ +125	°C

ESD PROTECTION

Human Body Model (HBM) tests according to: MIL-STD-883D Method: 3015.7

Parameter	Symbol	Limited Values		Unit	Notes
		Min	Max		
ESD Voltage	VESD	± 4		kV	R=1.5kΩ C=100pF T=25

RECOMMENDED MOUNT PAD



(Unit:mm)



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