

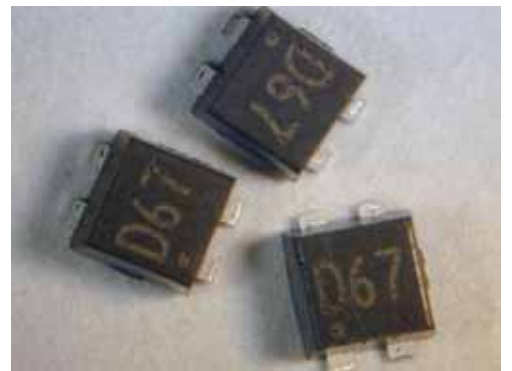
# MRUS71D

**2-output operating type**

**Built-in IC Ultra-minimum MR sensor**

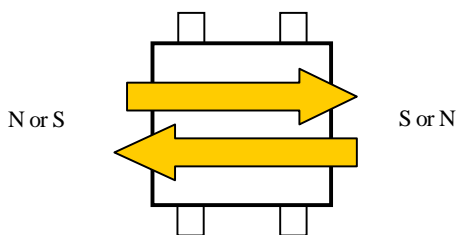
## FEATURES

- Operating Voltage: 2.4 to 3.6V
- Micro power consumption (7.5 $\mu$  W(typ):Vdd=2.5V)
- Operate to two kinds of Magnetic fields(1.5mT, 3.5mT(typ))
- Operating ambient temperature range: -40°C to +85°C
- Operating in one way magnetic field
- Operating with independent pole (easily manufacture)
- RoHS Compliant
- Halogen Free

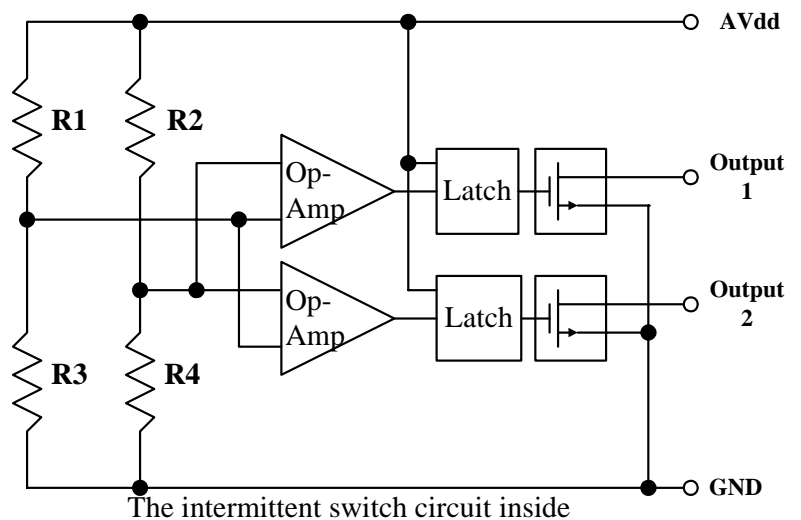


## FUNDEMENTAL OPERATION

Direction of Magnetic Field



Circuit Block



## PERFORMANCE

Performance Characteristics (Ta=25±3°C)

	Operating require Condition	Output Voltage	
		Output 1	Output 2
When power switch is ON	H = 0 mT (Magnetic Flux Density) {0 A/m (Magnetic Field Strength)}	Hi-level	Hi-level
When magnetic field is applied	H 1.5mT(Typ)(Magnetic Flux Density) {1.2kA/m (Magnetic Field Strength)}	Lo-level	Hi-level
	H 3.5mT(Typ)(Magnetic Flux Density) {2.8kA/m (Magnetic Field Strength)}	Lo-level	Lo-level
When magnetic field is applied	H 1.2 mT(Typ)(Magnetic Flux Density) {1.0kA/m (Magnetic Field Strength)}	Hi-level	Hi-level
	H 2.9 mT(Typ)(Magnetic Flux Density) {2.3kA/m (Magnetic Field Strength)}	Lo-level	Hi-level

Recommended Operating Conditions

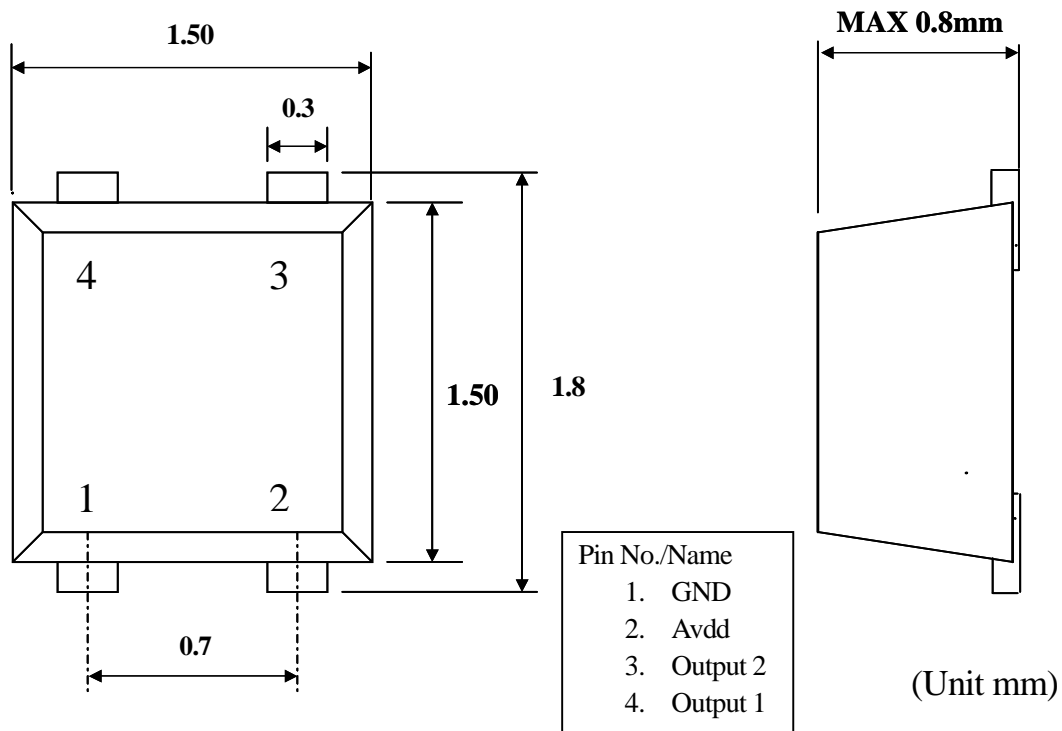
(Ta = 25±3°C unless otherwise specified)

Item	Output	Condition	Min	Std	Max	Unit
Supply Voltage	Avdd	-	2.4	2.5	3.6	V
Supply Current	(AVG)	Avdd=2.5V	-	3	-	μA
Ambient Temperature	-	-	-40	25	85	°C
Output Voltage Hi-level	VOH	Avdd=2.5V V io=1.8V Pull-up 33k ohm	1.71	-	-	V
Operating Magnetic Field	Output 1	Hon 1	-	1.5 (1.2)	2.5 (2.0)	mT <sup>(*1)</sup>  (kA/m) <sup>(*2)</sup>
		Hoff 1	0.5 (0.4)	1.2 (0.8)	-	
	Output 2	Hon 2	-	3.5 (2.8)	4.5 (3.6)	
		Hoff 2	2.2 (1.8)	2.9 (2.3)	-	

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

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

## DIMENSIONS



## ABSOLUTE MAXIMUM RATINGS

( $T_a=25\pm 3^\circ\text{C}$  unless otherwise specified)

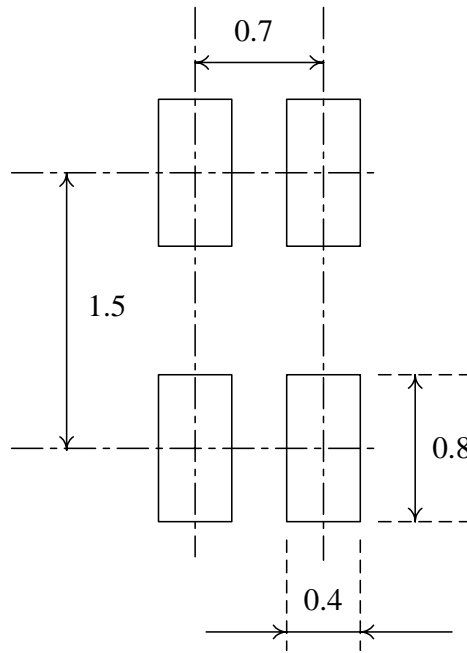
Item	Condition	Specifications	Unit
Supply Voltage	-	6.0	V
Storage Temperature	-	-40 ~ +125	°C

## ESD PROTECTION

Human Body Model    Min.    2000V (HBM: Min.2000V (MIL-STD-883E 3015.7))

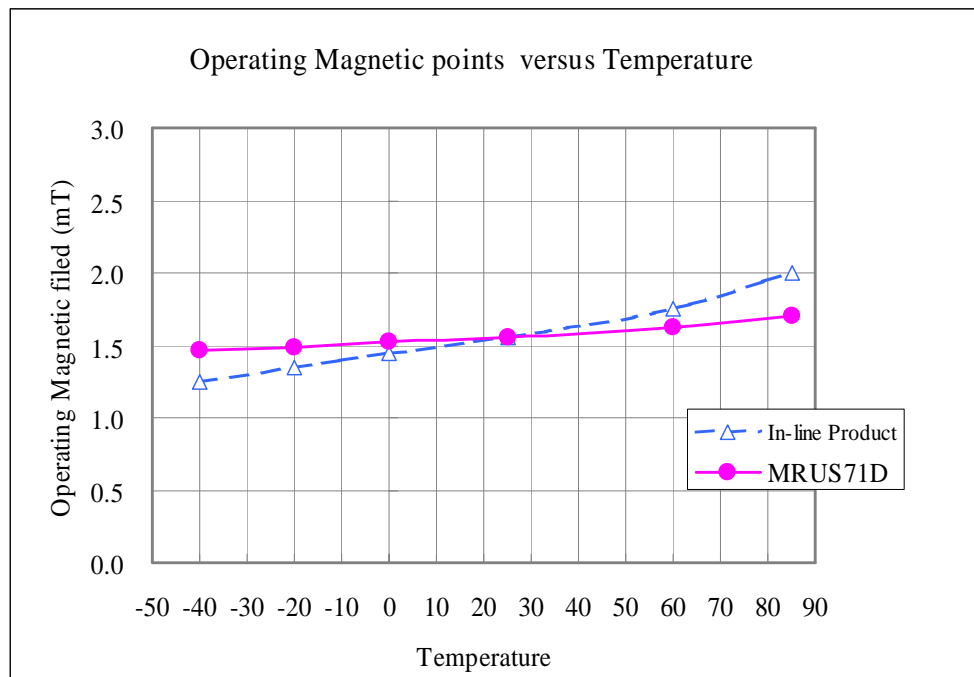
Machine Model        Min.    200V (JESD22-A115-A)

## RECOMMENDED MOUNT PAD



(Unit: mm)

## PERFORMANCE GRAPHS



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