

MRSM76A/B

Position detection MR sensor

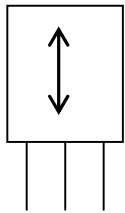
FEATURES

- Position Detection sensor
 - Various usages for position detection
 - Operating with independent pole
 - Wide operating supply voltage
 - No contact detection sensor
 - Dependable for various usages

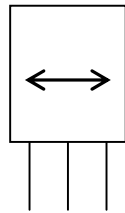


FUNDEMENTAL OPERATION

Direction of Magnetic Field

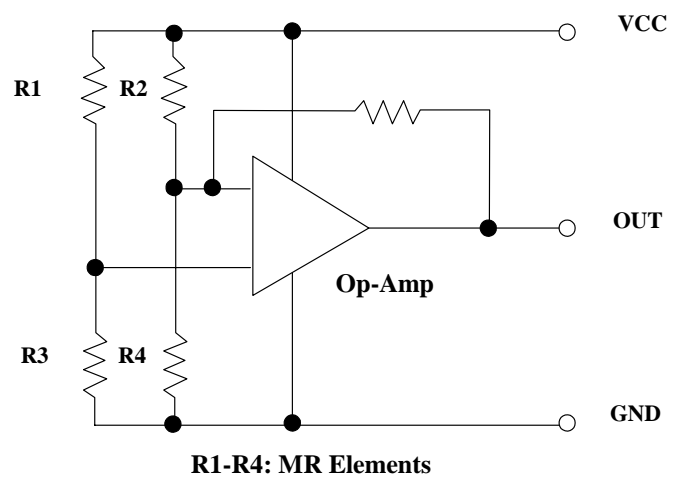


A direction
(When switch is **ON**)



B direction
(When switch is **OFF**)

Circuit Block



PERFORMANCE

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

	Operating require Condition	Output Voltage
When power switch is ON	H = 0.0mT ^{*1)} (Magnetic Flux Density) {0 A/m (Magnetic Field Strength)}	Unfixed
When magnetic field is applied to A direction	H 5.0mT(Magnetic Flux Density) {4.0kA/m ^{*2)} (Magnetic Field Strength)}	Hi-level
When magnetic field is applied to A direction When magnetic field is applied to B direction	H = 0.0mT(Magnetic Flux Density) {0A/m (Magnetic Field Strength)} H 0.0mT(Magnetic Flux Density) {0A/m (Magnetic Field Strength)}	Lo-level

^{*1)} 1 [mT](SI) = 10 [G] (CGS) ^{*2)} () = [kA/m](SI)

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

Item	Symbol	Condition	Min	Std	Max	Unit
Supply Voltage	Vcc	-	3	12	30	V
Ambient Temperature	Ta	-	-20	25	80	°C

Electrical Characteristics (Ta = 25 ± 3 unless otherwise specified)

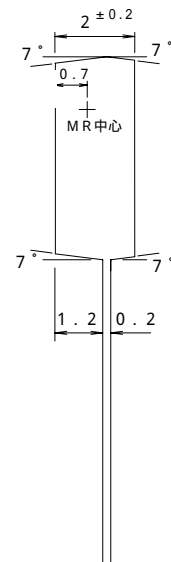
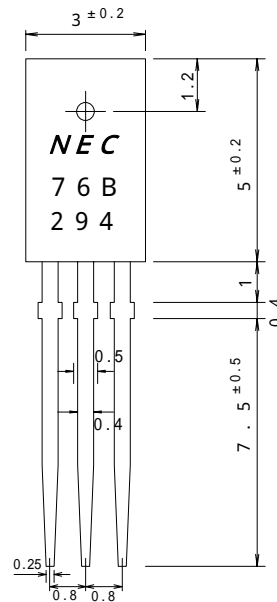
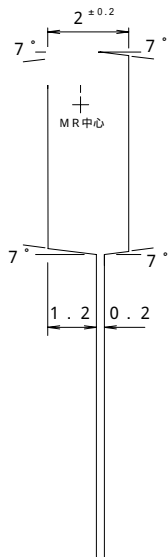
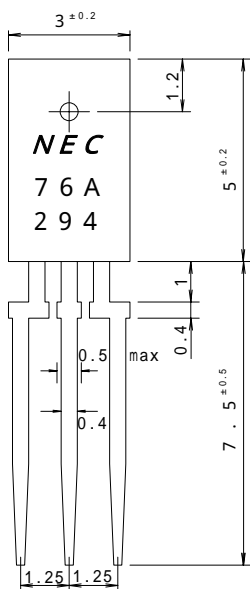
Item	Symbol	Condition	Min	Std	Max	Unit
Circuit Current	Hon	Vcc=12V Output open	-	-	5.0	mA
Output Voltage 1	VoH	RL=10 k Vcc=12V	10	-	-	V
Output Voltage 2	VoL	RL=10 k Vcc=12V	-	-	1	V
Maximum Response Frequency	f(max)	Vcc=12V	2.0	-	-	kHz

ABSOLUTE MAXIMUM RATINGS

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

Item	Condition	Specifications	Unit
Supply Voltage	-	36	V
Operating Temperature	-	-20 ~ +80	°C
Storage Temperature	-	-40 ~ +125	°C

DIMENSIONS (Unit: mm)



NEC

NEC Corporation

Sales and Marketing Department, Fiber Optic Devices Division
1131, Hinode, Abiko, Chiba 270-1198, Japan
Tel: +81-4-7185-7410 Fax: +81-4-7185-7925
<http://www.nec.com/global/prod/fod/>

EWV-19-0173-03E, September, 2010
Copyright © 2010 NEC Corporation

Renesas Electronics Europe GmbH

Sales and Marketing of Semiconductors across Europe
Arcadiastrasse 10, D-40472 Dusseldorf, Germany
Tel: +49-211-6503-0 FAX: +49-211-6503-1327

NEC Corporation of America

Fiber Optech Department (USA & CANADA)
6535 N. State Highway 161, Irving, TX 75039, U.S.A.
Tel: +1-214-262-3693 FAX: +1-214-262-3685