

For technical assistance call the Multifuse®  
Products number on the back cover.



## Features

- Radial Leaded Devices
- Cured, flame retardant epoxy polymer insulating material meets UL 94V-0 requirements
- Bulk packaging, tape and reel and Ammo-Pak available on most models
- Agency recognition: UL, TÜV & CSA (pending)

## Applications

- Almost anywhere there is a low voltage power supply, up to 60V and a load to be protected, including:
- Security and fire alarm systems
  - Loud speakers
  - Power transformers

# MF-RX Series - PTC Resettable Fuses

## Electrical Characteristics

Model	V max. Volts	I max. Amps	I <sub>hold</sub>	I <sub>trip</sub>	Initial Resistance		1 Hour (R <sub>1</sub> ) Post-Trip Resistance	Max. Time To Trip at 5 <sup>th</sup> I <sub>h</sub>	Tripped Power Dissipation
			Amperes at 23°C		Ohms at 23°C		Ohms at 23°C	Seconds at 23°C	Watts at 23°C
			Hold	Trip	Min.	Max.	Max.		
MF-RX110	60	40	1.10	2.20	0.15	0.25	0.38	8.2	1.50
MF-RX135	60	40	1.35	2.70	0.12	0.19	0.30	9.6	1.70
MF-RX160	60	40	1.60	3.20	0.09	0.14	0.22	11.4	1.90
MF-RX185	60	40	1.85	3.70	0.08	0.12	0.19	12.6	2.10
MF-RX250	60	40	2.50	5.00	0.05	0.08	0.13	15.6	2.50
MF-RX300	60	40	3.00	6.00	0.04	0.06	0.10	19.8	2.80
MF-RX375	60	40	3.75	7.50	0.03	0.05	0.08	24.0	3.20

## Environmental Characteristics

Operating/Storage Temperature	.....-40°C to +85°C
Maximum Device Surface Temperature	
in Tripped State	.....125°C
Passive Aging	.....+85°C, 1000 hours .....±5% typical resistance change
Humidity Aging	.....+85°C, 85% R.H. 1000 hours.....±5% typical resistance change
Thermal Shock	.....MIL-STD-202F, Method 107G, .....±10% typical resistance change +125°C to -40°C, 10 times
Mechanical Shock	.....MIL-STD-202, Method 213, .....No resistance change Condition 1 (100g, 6 seconds)
Solvent Resistance	.....MIL-STD-202, Method 215 .....No change
Vibration	.....MIL-STD-883C, Method 2007.1, .....No change Condition A

## Test Procedures And Requirements For Model MF-RX Series

Test	Test Conditions	Accept/Reject Criteria
Visual/Mech.	.....Verify dimensions and materials.....	.....Per MF physical description
Resistance	.....In still air @ 23°C	.....R <sub>min</sub> ≤ R ≤ R <sub>max</sub>
Time to Trip	.....5 times I <sub>hold</sub> , V <sub>max</sub> , 23°C	.....T ≤ max. time to trip (seconds)
Hold Current	.....30 min. at I <sub>hold</sub> .....	.....No trip
Trip Cycle Life	.....V <sub>max</sub> , I <sub>max</sub> , 100 cycles	.....No arcing or burning
Trip Endurance	.....V <sub>max</sub> , 48 hours	.....No arcing or burning

## Thermal Derating Chart - I<sub>hold</sub> (Amps)

Part No.	Ambient Operating Temperature								
	-40°C	-20°C	0°C	23°C	40°C	50°C	60°C	70°C	85°C
MF-RX110	1.71	1.50	1.31	1.10	0.89	0.79	0.69	0.59	0.44
MF-RX135	2.09	1.84	1.61	1.35	1.09	0.97	0.85	0.73	0.54
MF-RX160	2.48	2.18	1.90	1.60	1.30	1.15	1.01	0.86	0.64
MF-RX185	2.87	2.52	2.20	1.85	1.50	1.33	1.17	1.00	0.74
MF-RX250	3.88	3.40	2.98	2.50	2.03	1.80	1.58	1.35	1.00
MF-RX300	4.65	4.08	3.57	3.00	2.43	2.16	1.89	1.62	1.20
MF-RX375	5.81	5.10	4.46	3.75	3.04	2.70	2.36	2.03	1.50

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## Additional Features

- Resettable circuit protection

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**BOURNS®**

## Product Dimensions

Model	A		B		C		D		E		Physical Characteristics		
	Max.	Max.	Nom.	Tol. ±	Min.	Max.	Style	Lead	Material				
MF-RX110	13.0	18.0	5.1	0.7	7.6	3.1	1	0.81 dia.	Sn/Cu				
MF-RX135	14.5	19.6	5.1	0.7	7.6	3.1	1	0.81 dia.	Sn/Cu				
MF-RX160	16.3	21.3	5.1	0.7	7.6	3.1	1	0.81 dia.	Sn/Cu				
MF-RX185	17.8	22.9	5.1	0.7	7.6	3.1	1	0.81 dia.	Sn/Cu				
MF-RX250	21.3	26.4	10.2	0.7	7.6	3.1	1	0.81 dia.	Sn/Cu				
MF-RX300	24.9	30.0	10.2	0.7	7.6	3.1	1	0.81 dia.	Sn/Cu				
MF-RX375	28.4	33.5	10.2	0.7	7.6	3.1	1	0.81 dia.	Sn/Cu				

DIMENSIONS = MM

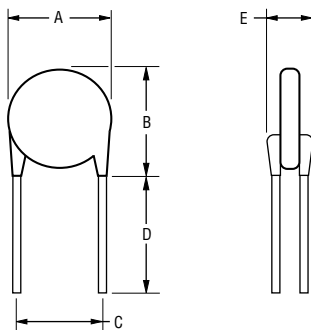
Packaging options:

BULK: All models = 100 pcs. per bag.

TAPE & REEL: MF-RX110 – MF-RX160 = 1500 pcs. per reel; MF-RX185 = 1000 pcs. per reel

AMMO-PACK: MF-RX110 – MF-RX160 = 1000 pcs. per reel; MF-RX185 = 500 pcs. per reel

### Package 1



Lead Material  
0.81 dia. (20AWG)

NOTE: Kinked lead option is available for board standoff. Contact factory for details.

## How to Order

**MF - RX 110 -**

Multifuse® Product Designator

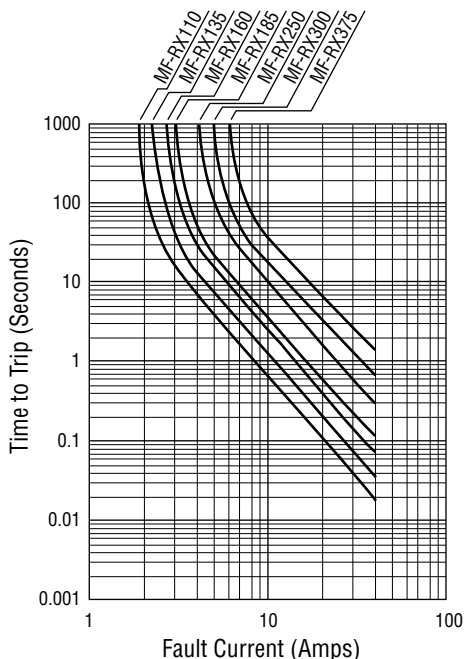
Style \_\_\_\_\_  
 R = Radial Leaded Component  
 RX = Radial Leaded Component  
 S = Axial Leaded "Strap" Component  
 LS = Low Temperature Axial Leaded "Strap" Component  
 SM = Surface Mount Component  
 MSM = 4.5mm SMD  
 D = Uncoated, Unleaded "Disk" Component

Hold Current,  $I_{hold}$   
 110-375 (1.10 Amps - 3.75 Amps)

Packaging Options  
 - \_\_\_\_\_ = Bulk Packaging  
 - 2 = Tape and Reel\*  
 - AP = Ammo-Pak\*

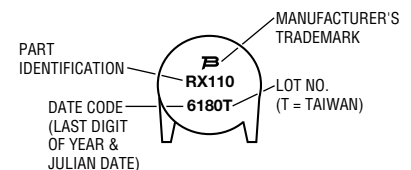
\*Packaged per EIA 486-B

## Typical Time to Trip at 23°C



## Typical Part Marking

Represents total content. Layout may vary.



MF-RX SERIES, REV. B, 7/11/97

Specifications are subject to change without notice.