



Features

- 72 V rated
- Radial leaded devices
- Cured, flame retardant epoxy polymer insulating material meets UL 94 V-0 requirements
- RoHS compliant*
- Agency recognition:   

Applications

Almost anywhere there is a low voltage power supply, up to 72 V and a load to be protected, including:

- Security and fire alarm systems
- Loudspeakers
- Power transformers

MF-RX/72 Series - PTC Resettable Fuses

Electrical Characteristics

Model	V max. Volts	I max. Amps	I _{hold}	I _{trip}	Initial Resistance		1 Hour (R ₁) Post-Trip Resistance	Max. Time To Trip		Tripped Power Dissipation	
			Amperes at 23 °C		Ohms at 23 °C		Ohms at 23 °C	Amperes at 23 °C	Seconds at 23 °C	Watts at 23 °C	
			Hold	Trip	Min.	Max.	Max.			Typ.	
MF-RX020/72	72	40	0.20	0.40	1.50	2.84		4.40	1.0	2.2	0.40
MF-RX025/72	72	40	0.25	0.50	1.00	1.95		3.00	1.25	2.5	0.45
MF-RX030/72	72	40	0.30	0.60	0.76	1.36		2.10	1.5	3.0	0.50
MF-RX040/72	72	40	0.40	0.80	0.52	0.86		1.29	2.0	3.9	0.55
MF-RX050/72	72	40	0.50	1.00	0.41	0.77		1.17	2.5	4.0	0.75
MF-RX065/72	72	40	0.65	1.30	0.27	0.48		0.72	3.25	5.3	0.90
MF-RX075/72	72	40	0.75	1.50	0.18	0.40		0.60	3.75	6.3	0.90
MF-RX090/72	72	40	0.90	1.80	0.14	0.31		0.47	4.5	7.2	1.00
MF-RX110/72	72	40	1.10	2.20		0.15	0.25	0.38	5.5	8.2	1.50
MF-RX135/72	72	40	1.35	2.70	0.12	0.19	0.30	6.75	9.6	1.70	
MF-RX160/72	72	40	1.60	3.20	0.09	0.14	0.22	8.0	11.4	1.90	
MF-RX185/72	72	40	1.85	3.70	0.08	0.12	0.19	9.25	12.6	2.10	
MF-RX250/72	72	40	2.50	5.00	0.05	0.08	0.13	12.5	15.6	2.50	
MF-RX300/72	72	40	3.00	6.00	0.04	0.06	0.10	15.0	19.8	2.80	
MF-RX375/72	72	40	3.75	7.50	0.03	0.05	0.08	18.75	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	+85 °C to -55 °C, 10 times..... ±10 % typical resistance change
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/72 Series

Test	Test Conditions	Accept/Reject Criteria
Visual/Mech.	Verify dimensions and materials	Per MF physical description
Resistance.....	In still air @ 23 °C	R _{min} ≤ R ≤ R _{max}
Time to Trip.....	5 times I _{hold} , V _{max} , 23 °C	T ≤ max. time to trip (seconds)
Hold Current	30 min. at I _{hold}	No trip
Trip Cycle Life.....	V _{max} , I _{max} , 100 cycles.....	No arcing or burning
Trip Endurance	V _{max} , 48 hours.....	No arcing or burning
UL File Number	E174545 http://www.ul.com/ Follow link to Certifications, then UL File No., enter E174545	
CSA File Number.....	CA110338 http://directories.csa-international.org/ Under "Certification Record" and "File Number"	
enter	110338-0-000	
TÜV Certificate Number	R 02057213 http://www.tuvdotcom.com/ Follow link to "other certificates", enter File No. 2057213	

*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

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Additional Features

- Resettable circuit protection
- Bulk packaging, tape and reel and Ammo-Pak available on most models

MF-RX/72 Series - PTC Resettable Fuses

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Product Dimensions

Model	A	B	C		D	E	Physical Characteristics		
	Max. Max.		Nom.	Tol. ±	Min.	Max.	Style	Lead Dia.	Material
MF-RX020/72	$\frac{7.4}{(0.291)}$	$\frac{12.7}{(0.5)}$	$\frac{5.1}{(0.201)}$	$\frac{0.7}{(0.028)}$	$\frac{7.6}{(0.30)}$	$\frac{3.1}{(0.122)}$	1	$\frac{0.51}{(0.020)}$	Sn/CuFe
MF-RX025/72	$\frac{7.4}{(0.291)}$	$\frac{12.7}{(0.5)}$	$\frac{5.1}{(0.201)}$	$\frac{0.7}{(0.028)}$	$\frac{7.6}{(0.30)}$	$\frac{3.1}{(0.122)}$	1	$\frac{0.51}{(0.020)}$	Sn/CuFe
MF-RX030/72	$\frac{7.4}{(0.291)}$	$\frac{13.4}{(0.528)}$	$\frac{5.1}{(0.201)}$	$\frac{0.7}{(0.028)}$	$\frac{7.6}{(0.30)}$	$\frac{3.1}{(0.122)}$	1	$\frac{0.51}{(0.020)}$	Sn/CuFe
MF-RX040/72	$\frac{7.4}{(0.291)}$	$\frac{13.7}{(0.539)}$	$\frac{5.1}{(0.201)}$	$\frac{0.7}{(0.028)}$	$\frac{7.6}{(0.30)}$	$\frac{3.1}{(0.122)}$	1	$\frac{0.51}{(0.020)}$	Sn/CuFe
MF-RX050/72	$\frac{7.9}{(0.311)}$	$\frac{13.7}{(0.539)}$	$\frac{5.1}{(0.201)}$	$\frac{0.7}{(0.028)}$	$\frac{7.6}{(0.30)}$	$\frac{3.1}{(0.122)}$	1	$\frac{1.051}{(0.020)}$	Sn/Cu
MF-RX065/72	$\frac{9.7}{(0.382)}$	$\frac{15.2}{(0.598)}$	$\frac{5.1}{(0.201)}$	$\frac{0.7}{(0.028)}$	$\frac{7.6}{(0.30)}$	$\frac{3.1}{(0.122)}$	1	$\frac{0.51}{(0.020)}$	Sn/Cu
MF-RX075/72	$\frac{10.4}{(0.409)}$	$\frac{16.0}{(0.630)}$	$\frac{5.1}{(0.201)}$	$\frac{0.7}{(0.028)}$	$\frac{7.6}{(0.30)}$	$\frac{3.1}{(0.122)}$	1	$\frac{0.51}{(0.020)}$	Sn/Cu
MF-RX090/72	$\frac{11.7}{(0.461)}$	$\frac{16.70}{(0.657)}$	$\frac{5.1}{(0.201)}$	$\frac{0.7}{(0.028)}$	$\frac{7.6}{(0.30)}$	$\frac{3.1}{(0.122)}$	1	$\frac{0.51}{(0.020)}$	Sn/Cu
MF-RX110/72	$\frac{10.84}{(0.427)}$	$\frac{16.84}{(0.662)}$	$\frac{5.1}{(0.201)}$	$\frac{0.7}{(0.028)}$	$\frac{7.6}{(0.30)}$	$\frac{3.1}{(0.122)}$	2	$\frac{0.81}{(0.032)}$	Sn/Cu
MF-RX135/72	$\frac{12.26}{(0.483)}$	$\frac{18.26}{(0.718)}$	$\frac{5.1}{(0.201)}$	$\frac{0.7}{(0.028)}$	$\frac{7.6}{(0.30)}$	$\frac{3.1}{(0.122)}$	2	$\frac{0.81}{(0.032)}$	Sn/Cu
MF-RX160/72	$\frac{13.94}{(0.549)}$	$\frac{19.94}{(0.785)}$	$\frac{5.1}{(0.201)}$	$\frac{0.7}{(0.028)}$	$\frac{7.6}{(0.30)}$	$\frac{3.1}{(0.122)}$	2	$\frac{0.81}{(0.032)}$	Sn/Cu
MF-RX185/72	$\frac{15.18}{(0.598)}$	$\frac{21.18}{(0.833)}$	$\frac{5.1}{(0.201)}$	$\frac{0.7}{(0.028)}$	$\frac{7.6}{(0.30)}$	$\frac{3.1}{(0.122)}$	2	$\frac{0.81}{(0.032)}$	Sn/Cu
MF-RX250/72	$\frac{17.84}{(0.702)}$	$\frac{23.84}{(0.938)}$	$\frac{10.2}{(0.402)}$	$\frac{0.7}{(0.028)}$	$\frac{7.6}{(0.30)}$	$\frac{3.1}{(0.122)}$	2	$\frac{0.81}{(0.032)}$	Sn/Cu
MF-RX300/72	$\frac{20.67}{(0.814)}$	$\frac{26.67}{(1.050)}$	$\frac{10.2}{(0.402)}$	$\frac{0.7}{(0.028)}$	$\frac{7.6}{(0.30)}$	$\frac{3.1}{(0.122)}$	2	$\frac{0.81}{(0.032)}$	Sn/Cu
MF-RX375/72	$\frac{23.51}{(0.926)}$	$\frac{29.51}{(1.161)}$	$\frac{10.2}{(0.402)}$	$\frac{0.7}{(0.028)}$	$\frac{7.6}{(0.30)}$	$\frac{3.1}{(0.122)}$	2	$\frac{0.81}{(0.032)}$	Sn/Cu

Packaging options:

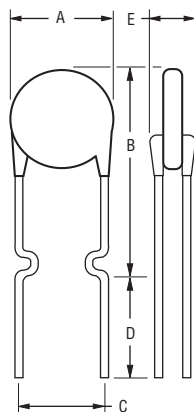
BULK: 500 pcs. per bag.

TAPE & REEL: MF-RX020/72-2 ~ MF-RX090/72-2 = 3000 pcs. per reel; MF-RX110/72-2 ~ MF-RX160/72-2 = 1500 pcs. per reel;
MF-RX185/72-2 - MF-RX375/72-2 = 1000 pcs. per reel.

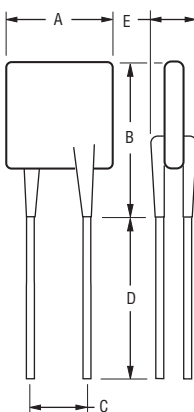
AMMO-PACK: MF-RX020/72-AP ~ MF-RX090/72-AP = 2000 pcs. per pack; MF-RX110/72-AP ~ MF-RX160/72-AP = 1000 pcs. per pack;
MF-RX185/72-AP - MF-RX375/72-AP = 500 pcs. per pack.

DIMENSIONS: MM
(INCHES)

Style 1

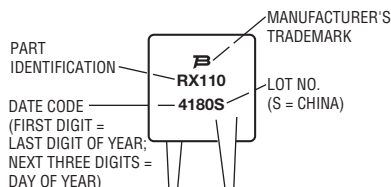


Style 2



Typical Part Marking

Represents total content. Layout may vary.



How to Order

MF - RX 110/72 - 2

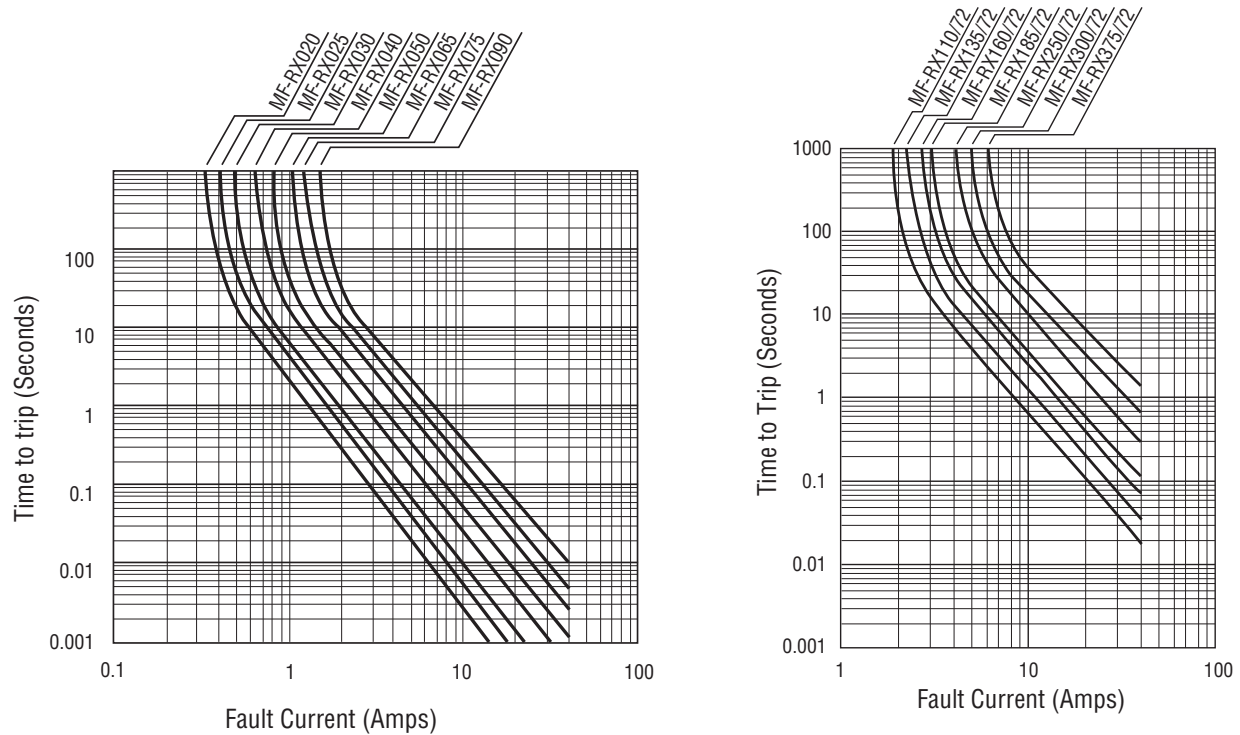
Multifuse®
Product Designator
Series
RX = Radial Leaded Component
Hold Current, I_{hold}
020-375 (0.20 Amps - 3.75 Amps)
Maximum Voltage, V_{max}
72 (72 Volts)
Packaging Options
- 0 = Bulk Packaging
- 2 = Tape and Reel*
- AP = Ammo-Pak*
*Packaged per EIA 486-B

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MF-RX/72 Series - PTC Resettable Fuses

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Typical Time to Trip at 23 °C



The Time to Trip curves represent typical performance of a device in a simulated application environment. Actual performance in specific customer applications may differ from these values due to the influence of other variables.

Thermal Derating Chart - I_{hold} (Amps)

Model	Ambient Operating Temperature									
	-40 °C	-20 °C	0 °C	23 °C	40 °C	50 °C	60 °C	70 °C	85 °C	
MF-RX020/72	0.31	0.27	0.24	0.20	0.16	0.14	0.13		0.11	0.08
MF-RX025/72	0.39	0.34	0.30	0.25	0.20	0.18	0.16	0.14	0.10	
MF-RX030/72	0.47	0.41	0.36	0.30	0.24	0.22	0.19	0.16	0.12	
MF-RX040/72	0.62	0.54	0.48	0.40	0.32	0.29	0.25	0.22	0.16	
MF-RX050/72	0.78	0.68	0.60	0.50	0.41	0.36	0.32	0.27	0.20	
MF-RX065/72	1.01	0.88	0.77	0.65	0.53	0.47	0.41	0.35	0.26	
MF-RX075/72	1.16	1.02	0.89	0.75	0.61	0.54	0.47	0.41	0.30	
MF-RX090/72	1.40	1.22	1.07	0.90	0.73	0.65	0.57	0.49	0.36	
MF-RX110/72	1.71	1.50	1.31		1.10		0.89	0.79	0.69	0.59
MF-RX135/72	2.09	1.84	1.61		1.35		1.09	0.97	0.85	0.73
MF-RX160/72	2.48	2.18	1.90		1.60		1.30	1.15	1.01	0.86
MF-RX185/72	2.87	2.52	2.20		1.85		1.50	1.33	1.17	1.00
MF-RX250/72	3.88	3.40	2.98		2.50		2.03	1.80	1.58	1.35
MF-RX300/72	4.65	4.08	3.57		3.00		2.43	2.16	1.89	1.62
MF-RX375/72	5.81	5.10	4.46		3.75		3.04	2.70	2.36	2.03
										1.50

MF-RX/72 SERIES, REV. H, 04/14

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MF-R/72 & MF-RX/72 Series Tape and Reel Specifications **BOURNS®**

Devices taped using EIA468–B/IEC60286-2 standards. See table below and Figures 1 and 2 for details.

Dimension Description	IEC Mark	EIA Mark	Dimensions	
			Dimensions	Tolerance
Carrier tape width	W	18	$\overline{(.709)}$	$\overline{-0.5/+1.0}$ $\overline{(-0.02/+0.039)}$
Hold down tape width	W_0	W_4	$\overline{.11}$ $\overline{(.433)}$	min.
Hold down tape			No protrusion	
Top distance between tape edges	W_2	6^3	$\overline{(.118)}$	max.
Sprocket hole position	W_1	5^9	$\overline{(.354)}$	$\overline{-0.5/+0.75}$ $\overline{(-0.02/+0.03)}$
Sprocket hole diameter	D_0	0^4	$\overline{(.157)}$	$\overline{\pm 0.2}$ $\overline{(\pm .0078)}$
Abscissa to plane (straight lead)	H	18.5	$\overline{(.728)}$	$\overline{\pm 3.0}$ $\overline{(\pm .118)}$
Abscissa to plane (kinked lead)	H_0	0^{16}	$\overline{(.63)}$	$\overline{\pm 0.5}$ $\overline{(\pm .02)}$
Abscissa to top (straight lead)	H_1	$1^{38.0}$	$\overline{1.496}$	max.
Abscissa to top (kinked lead)	H_1	1	$\overline{32.2}$ $\overline{1.268}$	max.
Overall width w/lead protrusion (straight lead)		C_1	$\overline{55.0}$ $\overline{2.165}$	max.
Overall width w/lead protrusion (kinked lead)		C_1	$\overline{43.2}$ $\overline{1.7}$	max.
Overall width w/o lead protrusion (straight lead)		$C_2^{54.0}$	$\overline{2.126}$	max.
Overall width w/o lead protrusion (kinked lead)		$C_2^{42.5}$	$\overline{1.673}$	max.
Lead protrusion	l_1	1	$\overline{1.0}$ $\overline{(.039)}$	max.
Protrusion of cutout	L		$\overline{.11}$ $\overline{(.433)}$	max.
Protrusion beyond hold-down tape	l_2	2 Not	specified	
Sprocket hole pitch	P_0	0	$\overline{12.7 \pm 0.3}$ $\overline{(0.5)}$	$\overline{(\pm .012)}$
Pitch tolerance			20 consecutive ± 1	$\overline{(\pm .039)}$
Device pitch: MF-R/72, MF-RX110/72-MF-RX185/72			$\overline{12.7}$ $\overline{(0.5)}$	$\overline{\pm 0.3}$ $\overline{(\pm .012)}$
Device pitch: MF-RX250/72–MF-RX375/72			$\overline{25.4}$ $\overline{(1.0)}$	$\overline{\pm 0.6}$ $\overline{(\pm .024)}$
Tape thickness	t		$\overline{0.9}$ $\overline{(.035)}$	max.
Tape thickness with splice: MF-R/72, MF-RX110/72-MF-RX185/72		$t_1^{1.5}$	$\overline{.059}$	max.
Tape thickness with splice: MF-RX250/72–MF-RX375/72		$t_1^{2.3}$	$\overline{.091}$	max.
Splice sprocket hole alignment			0 ± 0.3	$\overline{(\pm .012)}$
Body lateral deviation	Δ_h	$\Delta_h 0$	± 1	$\overline{(\pm .039)}$
Body tape plane deviation	Δ_p	$\Delta_p 0$	± 1.3	$\overline{(\pm .051)}$
Lead seating plane deviation	ΔP_1	1	$\overline{3.81}$ $\overline{(.015)}$	$\overline{\pm 0.7}$ $\overline{(\pm .028)}$
Lead spacing: MF-R/72, MF-RX110/72-MF-RX185/72	F	5.08	$\overline{(0.2)}$	$\overline{-0.2/+0.8}$ $\overline{(-0.006/+0.031)}$
Lead spacing: MF-RX250/72–MF-RX375/72	F	10.2	$\overline{(0.402)}$	$\overline{-0.2/+0.8}$ $\overline{(-0.006/+0.031)}$

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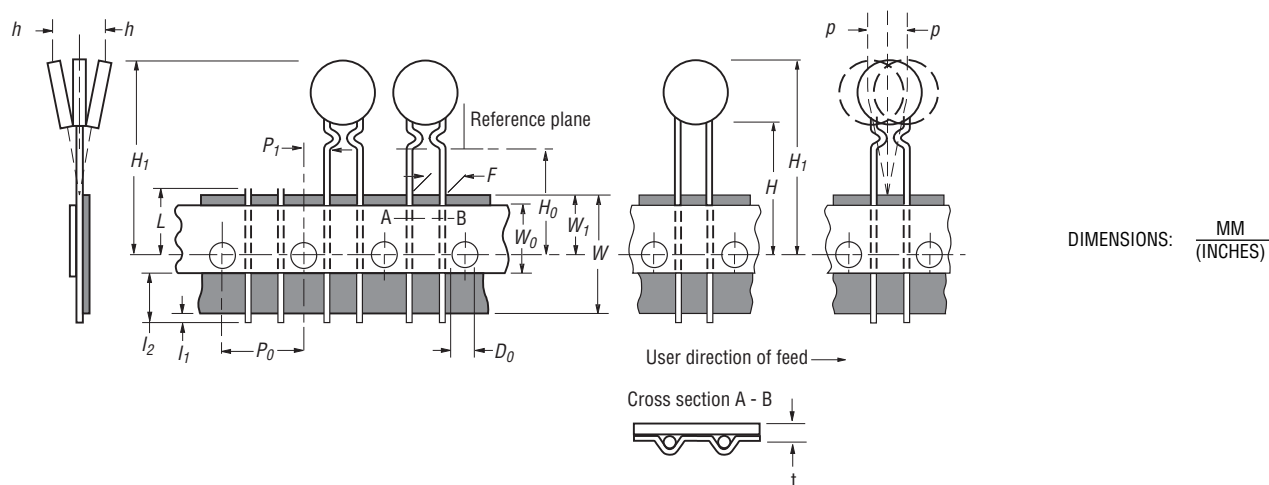
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DIMENSIONS: $\overline{\text{MM}}$
(INCHES)

MF-R/72 & MF-RX/72 Series Tape and Reel Specifications **BOURNS®**

Dimension Description	IEC Mark	EIA Mark	Dimensions	
			Dimensions	Tolerance
Reel width	w W	2 56.0	(2.205)	max.
Reel diameter	d a		370.0 (14.57)	max.
Space between flanges less device	W_1	h (.187)	4.75	± 3.25 ($\pm .128$)
Arbor hole diameter	f	c 26.0	(1.024)	± 12.0 ($\pm .472$)
Core diameter	h n		80 (3.15)	max.
Box			64 372 372 (2.52) (14.6) (14.6)	max.
Consecutive missing places			3	max.
Empty places per reel			Not specified	

Taped Component Dimensions - Figure 1



Reel Dimensions - Figure 2

