Features

- Radial leaded devices
- Fast tripping resettable PTCs
- Binned and sorted narrow resistance ranges available
- RoHS compliant*
- Agency recognition:

Applications

- Customer Premise Equipment (CPE)
- Central Office / Telecom Centers (CO)
- Access equipment

MF-RX/250 Series - Telecom PTC Resettable Fuses

Electrical Characteristics

Model	Max. Operating Voltage (Vdc)	Max. Interrupt Ratings		Hold Current	Initial Resistance		One Hour Post-Trip Resistance
		Volts (Vrms)	Amps (A)	Amps at 23 °C	Ohms at 23 °C	Ohms at 23 °C	Ohms at 23 °C
		Max.	Max.	I_H	Min.	Max.	Max.
MF-RX012/250	60	250	3.0	0.12	4.0	8.0	16.0
MF-RX012/250-A	60	250	3.0	0.12	7.0	9.0	16.0
MF-RX012/250-C	60	250	3.0	0.12	5.5	7.5	14.0
MF-RX012/250-F	60	250	3.0	0.12	6.0	10.5	16.0
MF-RX012/250-1	60	250	3.0	0.12	6.0	9.0	16.0
MF-RX012/250-2	60	250	3.0	0.12	8.0	10.5	16.0
MF-RX012/250-T	60	250	3.0	0.12	7.0	12.0	16.0
MF-RX012/250U	60	250	3.0	0.12	6.0	10.0	16.0
MF-RX014/250	60	250	3.0	0.145	3.0	6.0	14.0
MF-RX014/250-A	60	250	3.0	0.145	3.0	5.5	12.0
MF-RX014/250-B	60	250	3.0	0.145	4.5	6.0	14.0
MF-RX014/250-T	60	250	3.0	0.145	5.4	7.5	14.0
MF-RX014/250U	60	250	3.0	0.145	3.5	6.5	12.0
MF-RX018/250	60	250	10.0	0.18	0.8	2.0	4.0
MF-RX018/250U	60	250	10.0	0.18	0.8	2.0	4.0

"U" suffix indicates product without insulation coating.

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	±15 % typical resistance change
Humidity Aging	+85 °C, 85 % R.H. 1000 hours	±15 % typical resistance change
Thermal Shock	+125 °C to -55 °C,10 times	±15 % typical resistance change
Solvent Resistance	MIL-STD-202, Method 215B	No change
Lead Solerability	ANSI/J-STD-002	>95 % coverage
Vibration	MIL-STD-883C, Method 2007.1, Condition A	±5 % typical resistance change
Moisture Sensitivity Level (MSL)	Level 1	
ESD Classification - HBM	Class 6	

Test Procedures And Requirements For Model MF-RX/250 Series

Test	Test Conditions	Accept/Reject Criteria
Visual/Mech.	Verify dimensions and materials	Per MF physical description
Resistance	In still air @ 23 °C	Rmin ≤ R ≤ Rmax
Time to Trip	TTT current, Vmax, 23 °C	T ≤ max. time to trip (seconds)
Hold Current	30 min. at Ihold	No trip
Trip Cycle Life	250 Vrms, 3A, 10 cycles	No arcing or burning

UL File Number	E174545
TÜV File Number	50260658

WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

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

Additional Features

- Ability to withstand AC power cross conditions
- Assists equipment with meeting ITU-T K.20/K.21/K.45
- Assists equipment with meeting Telcordia GR-1089-C Intrabuilding

MF-RX/250 Series - Telecom PTC Resettable Fuses

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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-RX012/250	0.186	0.165	0.143	0.120	0.099	0.088	0.077	0.066	0.050
MF-RX014/250	0.225	0.199	0.172	0.145	0.119	0.106	0.093	0.080	0.060
MF-RX018/250	0.269	0.240	0.211	0.180	0.153	0.138	0.123	0.109	0.087

I_{trip} is approximately two times I_{hold}.

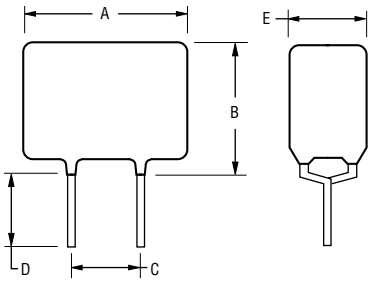
Product Dimensions

Model	A Max.	B Max.	C Nom.	D Min.	E Max.	Physical Characteristics		
						Lead Dia.	Style	Material
MF-RX012/250	6.5 (0.256)	11.0 (0.433)	5.1 ± 0.7 (0.201 ± 0.028)	4.7 (0.185)	4.6 (0.181)	0.65 (0.026)	1	Sn/Cu
MF-RX012/250U	6.0 (0.236)	10.0 (0.394)	5.1 ± 0.7 (0.201 ± 0.028)	4.7 (0.185)	3.8 (0.150)	0.65 (0.026)	2	Sn/Cu
MF-RX014/250	6.5 (0.256)	11.0 (0.433)	5.1 ± 0.7 (0.201 ± 0.028)	4.7 (0.185)	4.6 (0.181)	0.65 (0.026)	1	Sn/Cu
MF-RX014/250U	6.0 (0.236)	10.0 (0.394)	5.1 ± 0.7 (0.201 ± 0.028)	4.7 (0.185)	3.8 (0.150)	0.65 (0.026)	2	Sn/Cu
MF-RX018/250	11.0 (0.433)	13.6 (0.535)	5.1 ± 0.7 (0.201 ± 0.028)	4.7 (0.185)	4.6 (0.181)	0.65 (0.026)	1	Sn/Cu
MF-RX018/250U	10.4 (0.409)	12.6 (0.496)	5.1 ± 0.7 (0.201 ± 0.028)	4.7 (0.185)	3.8 (0.150)	0.65 (0.026)	2	Sn/Cu

Packaging options: BULK: 500 pcs. per bag. TAPE & REEL: 1500 pcs. per reel (available binned).

DIMENSIONS: MM (INCHES)

Style 1



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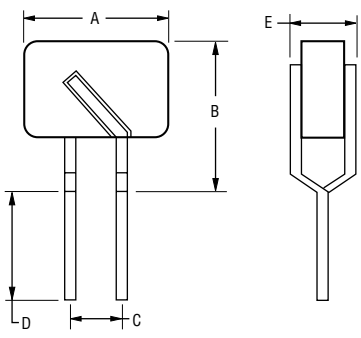
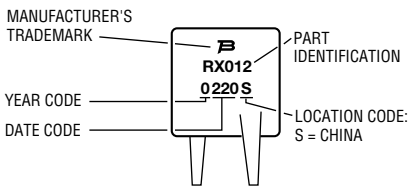


Typical Part Marking

Represents total content. Layout may vary.



MF-RX/250 Series - Telecom PTC Resettable Fuses

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How to Order

MF - RX 012/250 U - A 5 - 2

Multifuse® Product Designator

Series
RX = Radial Leaded Component

Hold Current, I_{hold}
008-018 (0.08-0.18 Amps)

Max. Interrupt Voltage, V
250 (250 Volts)

Telecom Options
U = Uncoated (radial parts only)

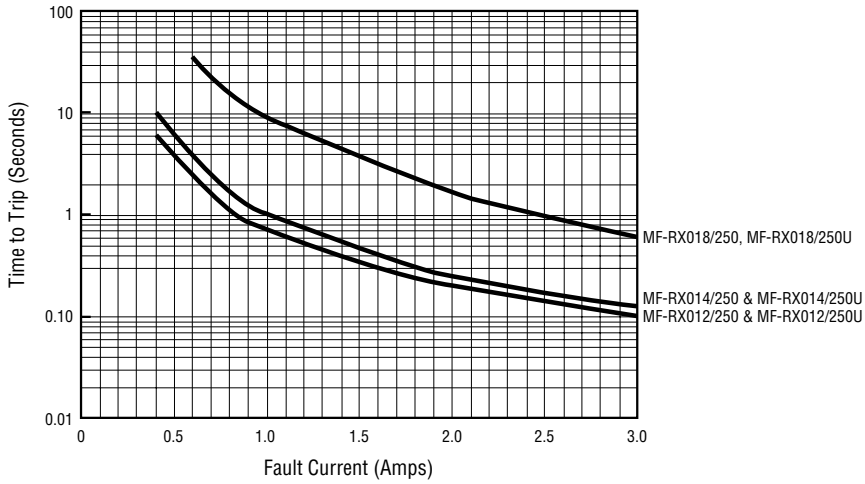
Resistance Sorted
Narrow resistance ranges - see Resistance Options chart

Resistance Bins of 0.5 ohms
05 = 0.5 ohm binned parts (epoxy coated)
5 = 0.5 ohm binned parts (uncoated)

Packaging Options
- 0 = Bulk Packaging
- 2 = Tape and Reel* (available with binned option)

*Packaged per EIA486-B

Typical Time to Trip at 23 °C



Resistance Options

Model	Initial Resistance Values		R1max	Bin
	Ohms @ 23 ° C		Ohms @ 23 ° C	
	Min.	Max.	Max.	
MF-RX012/250	4.0	8.0	16.0	N/A
MF-RX012/250-A05	7.0	9.0	16.0	0.5
MF-RX012/250-C05	5.5	7.5	14.0	0.5
MF-RX012/250-F05	6.0	10.5	16.0	0.5
MF-RX012/250-105	6.0	9.0	16.0	0.5
MF-RX012/250-205	8.0	10.5	16.0	0.5
MF-RX012/250-T05	7.0	12.0	16.0	0.5
MF-RX012/250U	6.0	10.0	16.0	N/A
MF-RX014/250	3.0	6.0	14.0	N/A
MF-RX014/250-A05	3.0	5.5	12.0	0.5
MF-RX014/250-B05	4.5	6.0	14.0	0.5
MF-RX014/250U	3.5	6.5	12.0	N/A

MF-RX/250 Series Tape and Reel Specifications

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Devices taped using EIA468–B/IEC286-2 standards. See table below and Figures 1 through 4 for details.

Dimension Description	IEC Mark	EIA Mark	Dimensions	Dimensions Tolerance
Carrier tape width	W	W	18 (.709)	-0.5/+1.0 (-0.02/+.039)
Hold down tape width	W_0	W_4	11 (.433)	min.
Hold down tape			No protrusion	
Top distance between tape edges	W_2	W_6	3 (.118)	max.
Sprocket hole position	W_1	W_5	9 (.354)	-0.5/+0.75 (-0.02/+0.03)
Sprocket hole diameter	D_0	D_0	4 (.157)	±0.2 (±.0078)
Abscissa to plane (straight lead)	H	H	18.5 (.728)	±3.0 (±.118)
Abscissa to plane (kinked lead)	H_0	H_0	16 (.63)	±0.5 (±.02)
Abscissa to top (straight lead)	H_1	H_1	38.0 (1.496)	max.
Abscissa to top (kinked lead)	H_1	H_1	32.2 (1.268)	max.
Overall width w/lead protrusion (straight lead)		C_1	55.0 (2.165)	max.
Overall width w/lead protrusion (kinked lead)		C_1	43.2 (1.7)	max.
Overall width w/o lead protrusion (straight lead)		C_2	54.0 (2.126)	max.
Overall width w/o lead protrusion (kinked lead)		C_2	42.5 (1.673))	max.
Protrusion of cutout	L	L	11 (.433)	max.
Sprocket hole pitch	P_0	P_0	12.7 (0.5)	±0.3 (±.012)
Pitch tolerance			20 consecutive	±1 (±.039)
Device pitch			12.7 (0.5)	±0.3 (±.012)
Tape thickness	t	t	0.9 (.035)	max.
Tape thickness with splice		t_1	1.5 (.059)	max.
Splice sprocket hole alignment			0	±0.3 (±.012)
Body lateral deviation	Δ_h	Δ_h	0	±1.0 (±.039)
Body tape plane deviation	Δ_p	Δ_p	0	±1.3 (±.051)
Lead spacing	F	F	5.08 (0.2)	-0.5/+0.6 (-.020/+.024)
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	4.75 (.187)	±3.25 (±.128)
Arbor hole diameter	f	c	26.0 (1.024)	±12.0 (±.472)
Core diameter	h	n	91 (3.58)	max.
Box			67 (2.64) 372 (14.6) 362 (14.25)	max.
Consecutive missing places			none	
Empty places per reel			0.1 %	

MM
(INCHES) DIMENSIONS:

MF-RX/250 Series Tape and Reel Specifications

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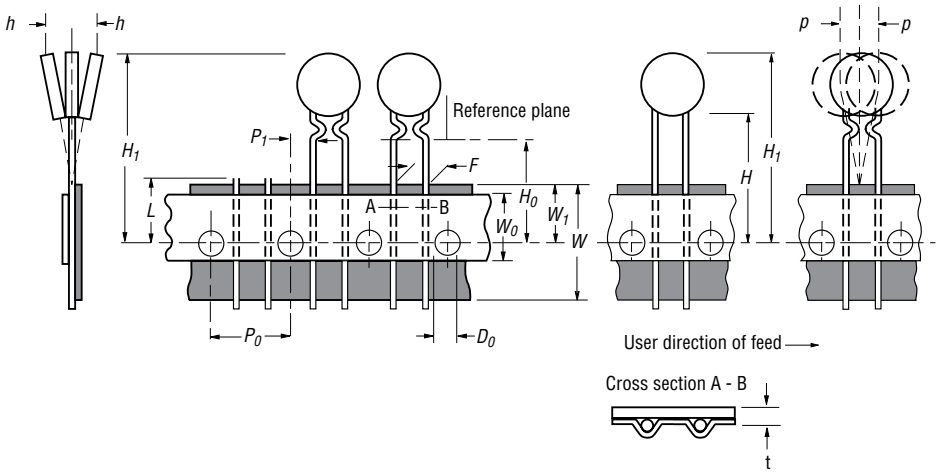
Taped Component Dimensions - Figure 1

Applies to Models:

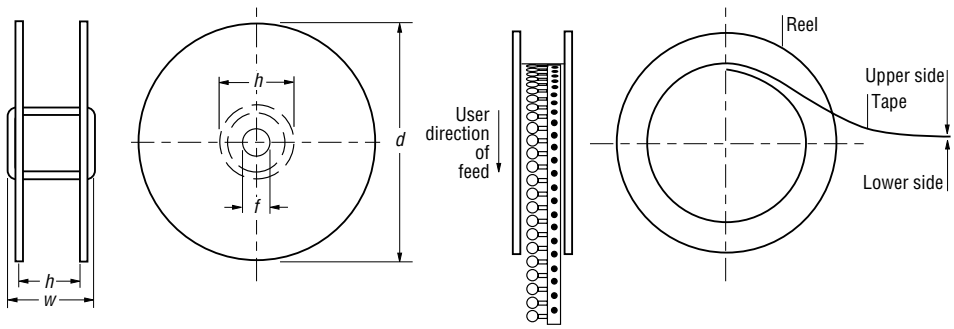
MF-RX012/250U
MF-RX014/250U
MF-RX018/250 MF-RX018/250U



Reel Dimensions - Figure 2

Applies to Models:

MF-RX012/250U
MF-RX014/250U
MF-RX018/250 MF-RX018/250U



DIMENSIONS: MM / (INCHES)

MF-RX/250 Series Tape and Reel Specifications

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Taped Component Dimensions - Figure 3

Applies to Models:

MF-RX012/250
MF-RX012/250-A
MF-RX012/250-C
MF-RX012/250-F
MF-RX012/250-1
MF-RX012/250-2
MF-RX012/250-T
MF-RX014/250
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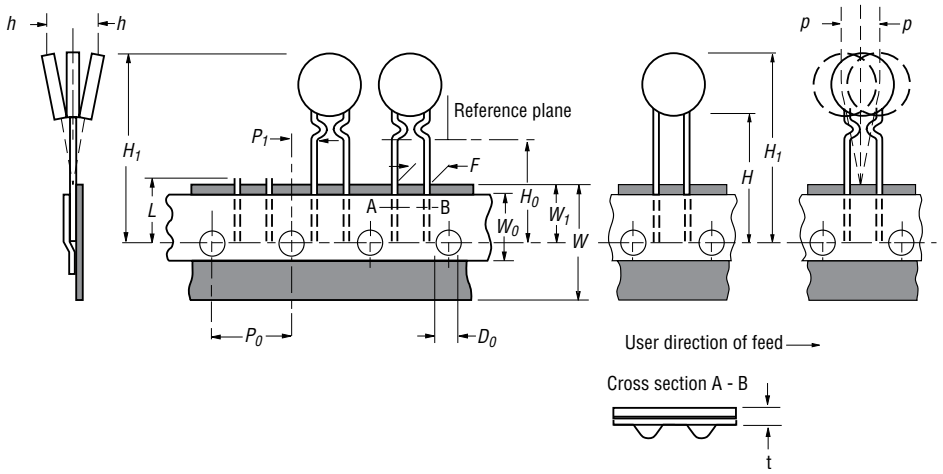
MF-RX014/250-B
MF-RX014-250-T



Reel Dimensions - Figure 4

Applies to Models:

MF-RX012/250
MF-RX012/250-A
MF-RX012/250-C
MF-RX012/250-F
MF-RX012/250-1
MF-RX012/250-2
MF-RX012/250-T
MF-RX014/250
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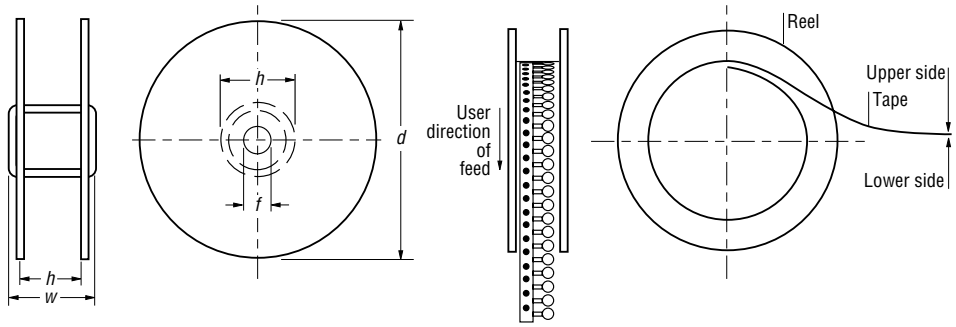
MF-RX014/250-B
MF-RX014-250-T



DIMENSIONS: MM / (INCHES)

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