Features

- Radial Leaded Devices
- Cured, flame retardant epoxy polymer insulating material meets UL 94V-0 requirements
- RoHS compliant*
- Agency recognition:

Applications

Almost anywhere there is a load to be protected with a voltage supply of up to 90 V, including:

- Broadband cable power passing taps
- Set-top boxes

MF-R/90 Series - PTC Resettable Fuses

Electrical Characteristics

Model	V max. Volts	I max. Amps	Ihold	Itrip	Initial Resistance Values		One Hour Post-Trip Resistance Standard Trip	Maximum Time To Trip		Nominal Tripped Power Dissipation
			Amps at 23 °C	Amps at 23 °C	Ohms at 23 °C		Ohms at 23 °C	Amps at 23 °C	Seconds at 23 °C	Watts at 23 °C
			Hold	Trip	Min.	Max.	Max.			Typ.
MF-R055/90	90	10	0.55	1.1	0.45	0.9	2.0	1.6	60	2.0
MF-R055/90U	90	10	0.55	1.1	0.45	0.9	2.0	1.6	28	2.0
MF-R075/90	90	10	0.75	1.5	0.37	0.75	1.65	2.0	60	2.5

"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 .....±5 % typical resistance change
Humidity Aging.....+85°C, 85% R.H. 1000 hours.....±5 % typical resistance change
Thermal Shock.....+125 °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-R/90 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	At specified current, Vmax, 23 °C	T ≤ max. time to trip (seconds)
Hold Current	30 min. at Ihold	No trip
Trip Cycle Life	Vmax, Imax, 100 cycles	No arcing or burning
Trip Endurance	Vmax, 48 hours	No arcing or burning

UL File Number .....E 174545S
CSA File Number .....CA 110338
TÜV File Number R2057213

Thermal Derating Chart - I_{hold} / I_{trip} (Amps)

Model	Ambient Operating Temperature								
	-40 °C	-20 °C	0 °C	23 °C	40 °C	50 °C	60 °C	70 °C	85 °C
MF-R055/90	0.85 / 1.7	0.75 / 1.5	0.65 / 1.3	0.55 / 1.1	0.45 / 0.9	0.4 / 0.8	0.35 / 0.7	0.3 / 0.6	0.22 / 0.44
MF-R055/90U	0.85 / 1.7	0.75 / 1.5	0.65 / 1.3	0.55 / 1.1	0.45 / 0.9	0.4 / 0.8	0.35 / 0.7	0.3 / 0.6	0.22 / 0.44
MF-R075/90	1.15 / 2.3	1.0 / 2.0	0.9 / 1.8	0.75 / 1.5	0.61 / 1.22	0.55 / 1.1	0.48 / 0.96	0.41 / 0.82	0.30 / 0.6

*RoHS Directive 2002/95/EC Jan 27 2003 including Annex
Specifications are subject to change without notice.
Customers should verify actual device performance in their specific applications.

Additional Features

- Bulk packaging, tape and reel and Ammo-Pak available on most models
- Patents pending

MF-R/90 Series - PTC Resettable Fuses

BOURNS®

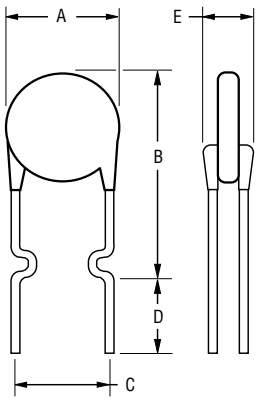
Product Dimensions

Model	A Max.	B Max.	C (Pitch) Nom.	D Min.	E Max.	Physical Characteristics		
						Style	Lead Dia.	Material
MF-R055/90	10.9 (0.43)	14.0 (0.55)	5.1 ± 0.7 (0.201 ± 0.028)	6.3 (0.248)	3.6 (0.142)	1	0.81 (0.032)	Sn/Cu
MF-R055/90U	10.3 (0.4)	10.3 (0.4)	5.1 ± 0.7 (0.201 ± 0.028)	6.3 (0.248)	3.0 (0.118)	1	0.81 (0.032)	Sn/Cu
MF-R075/90	11.9 (0.47)	15.5 (0.61)	5.1 ± 0.7 (0.201 ± 0.028)	6.3 (0.248)	3.6 (0.142)	1	0.81 (0.032)	Sn/Cu

Packaging options:
BULK: 500 pcs. per bag. TAPE & REEL: 1500 pcs. per reel. AMMO-PACK: 1000 pcs. per pack

DIMENSIONS = MM / (INCHES)

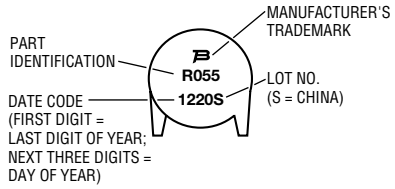
Style 1



Also available with straight leads.

Typical Part Marking

Represents total content. Layout may vary.



How to Order

MF - R 055/90 U - 0

Multifuse® Product Designator

Series
R = Radial Leaded Component

Hold Current, Ihold
055, 075 (0.55 Amps - 0.75 Amps)

Max. Voltage, V

Coating
__ = Coated
U = Uncoated

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

*Packaged per EIA486-B

Typical Time to Trip at 23 °C

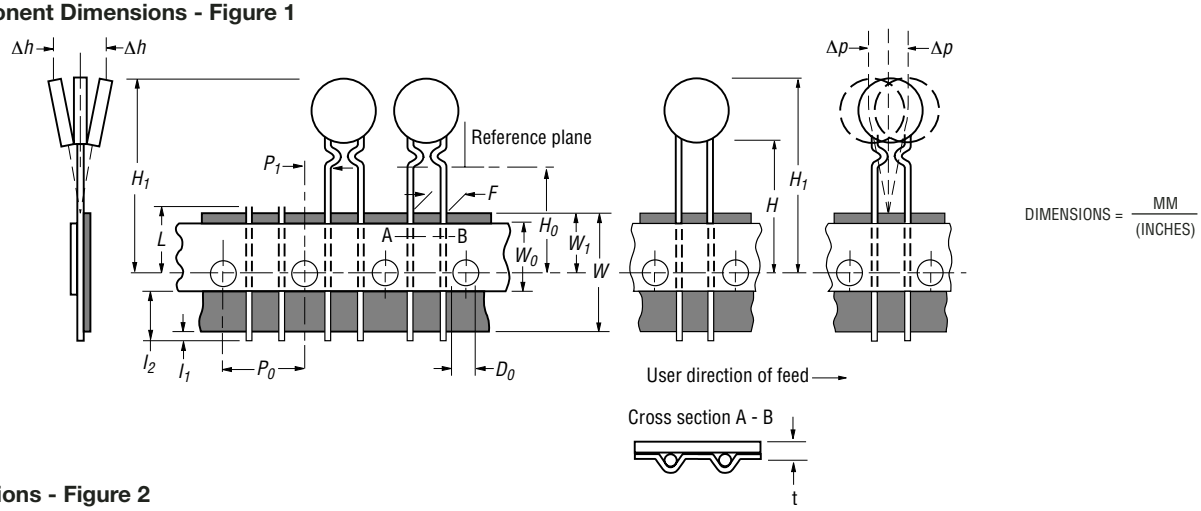
Devices taped using EIA468–B/IEC286-2 standards. See table below and Figures 1 and 2 for details.

Dimension Description	IEC Mark	EIA Mark	Dimensions	
			Dimensions	Tolerance
Carrier tape width	W	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.
Lead protrusion	l_1	L_1	1.0 (.039)	max.
Protrusion of cutout	L	L	11 (.433)	max.
Protrusion beyond hold tape	l_2	l_2	Not specified	
Sprocket hole pitch	P_0	P_0	12.7 (0.5)	±0.3 (±.012)
Pitch tolerance			20 consecutive	±1
Device pitch: MF-R005–MF-R160, MF-R/90, MF-RX/72			12.7 (0.5)	
Device pitch: MF-R185–MF-R400, MF-RX110–MF-RX375, MF-R/600			25.4 (1.0)	
Tape thickness	t	t	0.9 (.035)	max.
Tape thickness with splice: MF-R010–MF-R160		t_1	1.5 (.059)	max.
Tape thickness with splice: MF-R250–MF-R1100 MF-RX110–MF-RX375, MF-R/90		t_1	2.3 (.091)	max.
Splice sprocket hole alignment			0	±0.3 (±.012)
Body lateral deviation	Δh	Δh	0	±1.0 (±.039)
Body tape plane deviation	Δp	Δp	0	±0.3 (±.021)
Lead spacing	F	F	5.08 (0.2)	±0.2 (±.008)
Reel width	w	W_2	56 (2.205)	max.
Reel diameter	d	a	370 (14.57)	max.
Space between flanges less device	W_1	h	4.75 (.187)	±3.25 (±.128)

DIMENSIONS = MM (INCHES)

Dimension Description	IEC Mark	EIA Mark	Dimensions	Tolerance
Arbor hole diameter	*f*	*c*	26 (1.024)	±12.0 (±.472)
Core diameter: MF-R, MF-RX, MF-R/90	*h*	*n*	80 (3.15)	max.
Core diameter: MF-RX/250, MF-R/600	*h*	*n*	91 (3.58)	max.
Box: MF-R, MF-RX, MF-R/90			56 (2.2) 372 (14.6) 372 (14.6)	max.
Box: MF-RX/250			67 (2.64) 372 (14.6) 362 (14.25)	max.
Box: MF-R/600			64 (2.52) 372 (14.6) 362 (14.25)	max.
Consecutive missing places: MF-R, MF-RX, MF-R/90			3	max.
Consecutive missing places: MF-RX/250, MF-R/600			none	
Empty places per reel: MF-R, MF-RX, MF-R/90			Not specified	
Empty places per reel: MF-RX/250, MF-R/600			0.1 %	

Taped Component Dimensions - Figure 1



Reel Dimensions - Figure 2