BOURNS®

Features

- Radial leaded devices
- Smaller size for similar Ihold rating
- Faster tripping
- RoHS compliant*

Applications

- Automotive applications
- Anywhere space is limited and fast tripping is required

MF-RG 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-RG300	16	100	3.00	5.10	0.038	0.065	0.0975	15	1.0	2.30
MF-RG500	16	100	5.00	8.50	0.015	0.023	0.0340	25	2.0	2.60

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	-40 °C to +85 °C, 10 times	±10 % typical resistance change
Solvent Resistance	MIL-STD-202, Method 215	No change
Vibration	MIL-STD-883C, Method 2007.1, Condition A	No change

Test Procedures And Requirements For Model MF-RG 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	5 times Ihold, 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

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-RG300	4.4	4.0	3.6	3.0	2.6	2.4	2.1	1.9	1.4
MF-RG500	7.3	6.6	6.0	5.0	4.4	4.0	3.6	3.1	2.4

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

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

Specifications are subject to change without notice.
Customers should verify actual device performance in their specific applications.

MF-RG Series - PTC Resettable Fuses

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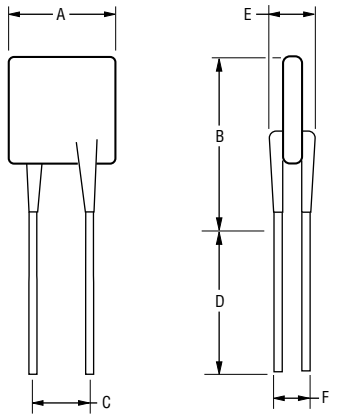
Product Dimensions

Model	A Max.	B Max.	C Nom.	C Tol. ±	D Min.	E Max.	F Nom.	Physical Characteristics Style	Lead Dia.	Material
MF-RG300	7.1 (0.280)	11.0 (0.433)	5.1 (0.201)	0.7 (0.028)	7.6 (0.299)	3.0 (0.118)	0.81 (0.032)	1	0.81 (0.032)	Sn/Cu
MF-RG500	10.4 (0.409)	14.3 (0.563)	5.1 (0.201)	0.7 (0.028)	7.6 (0.299)	3.0 (0.118)	0.81 (0.032)	1	0.81 (0.032)	Sn/Cu

Packaging options:
BULK: 500 pcs. per bag. TAPE & REEL: 3000 pcs. per reel. AMMO-PACK: 2000 pcs. per reel.

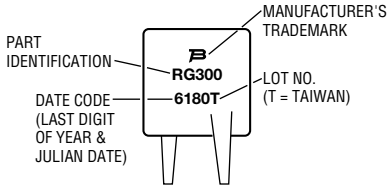
0.81 (20AWG) DIMENSIONS: MM (INCHES)



NOTE: Kinked leads are available for board standoff options. Contact factory for details.

Typical Part Marking

Represents total content. Layout may vary.



How to Order

MF - RG 300 - 0

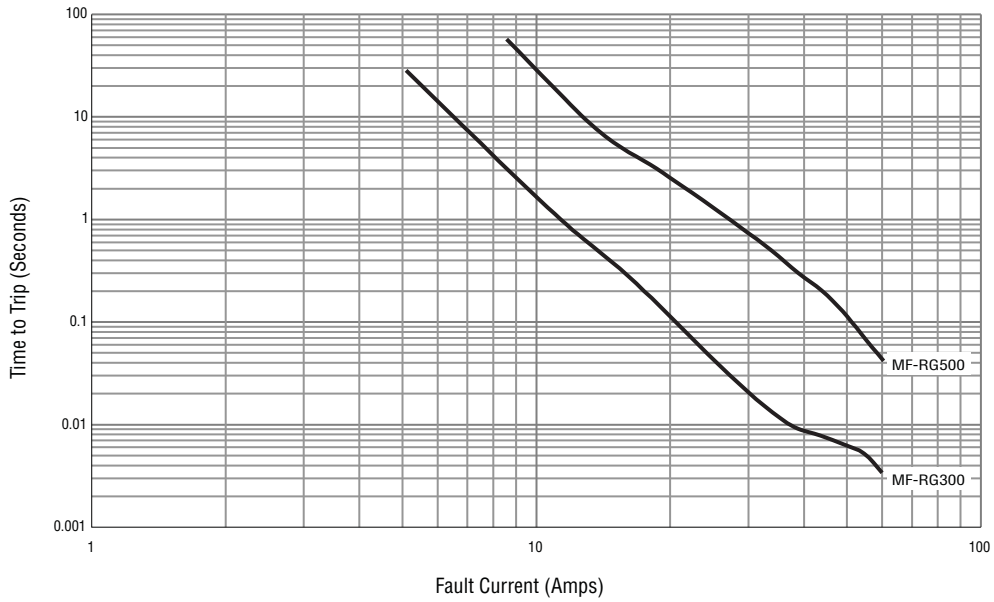
Multifuse® Product Designator

Series
RG = Smaller Radial Leaded Component

Hold Current, Ihold
300-500 (3.0 Amps - 5.0 Amps)

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

Typical Time to Trip at 23 °C



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MF-RG Series Tape and Reel Specifications

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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*	*W*	18 (.709)	-0.5/+1.0 (-0.02/+.039)
Hold down tape width: all others		*W4*	11 (.433)	min.
Hold down tape	*W0*		No protrusion	
Top distance between tape edges	*W2*	*W6*	3 (.118)	max.
Sprocket hole position	*W1*	*W5*	9 (.354)	-0.5/+0.75 (-0.02/+0.03)
Sprocket hole diameter	*D0*	*D0*	4 (.157)	±0.2 (±.0078)
Abscissa to plane (straight lead)	*H*	*H*	18.5 (.728)	±3.0 (±.118)
Abscissa to plane (kinked lead)	*H0*	*H0*	16 (.63)	±0.5 (±.02)
Abscissa to top (straight lead)	*H1*	*H1*	38.0 (1.496)	max.
Abscissa to top (kinked lead)	*H1*	*H1*	32.2 (1.268)	max.
Overall width w/lead protrusion (straight lead)		*C1*	55.0 (2.165)	max.
Overall width w/lead protrusion (kinked lead)		*C1*	43.2 (1.7)	max.
Overall width w/o lead protrusion (straight lead)		*C2*	54.0 (2.126)	max.
Overall width w/o lead protrusion (kinked lead)		*C2*	42.5 (1.673)	max.
Lead protrusion	*I1*	*L1*	1.0 (.039)	max.
Protrusion of cutout	*L*	*L*	11 (.433)	max.
Protrusion beyond hold-down tape	*I2*	*I2*	Not specified	
Sprocket hole pitch	*P0*	*P0*	12.7 (0.5)	±0.3 (±.012)
Pitch tolerance			20 consecutive	±1 (±.039)
Device pitch:			12.7 (0.5)	
Tape thickness	*t*	*t*	0.9 (.035)	max.
Tape thickness with splice:		*t1*	2.0 (.079)	max.
Splice sprocket hole alignment			4.0 (.157)	±0.2 (±.008)
Body lateral deviation	Δ*h*	Δ*h*	0	±1 (±.039)
Body tape plane deviation	Δ*p*	Δ*p*	0	±0.3 (±.051)
Lead seating plane deviation	Δ*P1*	*P1*	3.81 (.015)	±0.7 (±.028)
Lead spacing:	*F*	*F*	8.0 (.1315)	
Reel width	*w*	*w*	56.0 (2.20)	max.
Reel diameter	*d*	*a*	370.0 (14.57)	max.
Space between flanges less device			4.75 (.187)	±3.25 (±.128)

DIMENSIONS = MM (INCHES)

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MF-RG Series Tape and Reel Specifications

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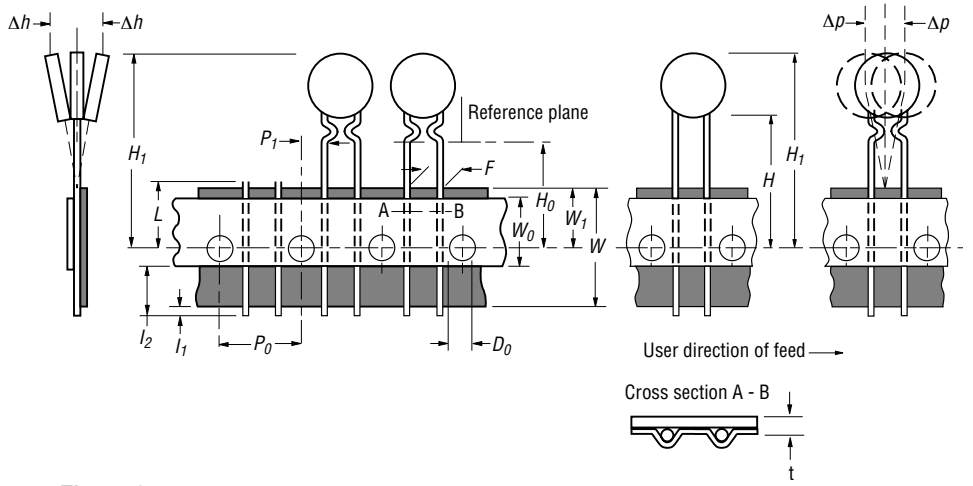
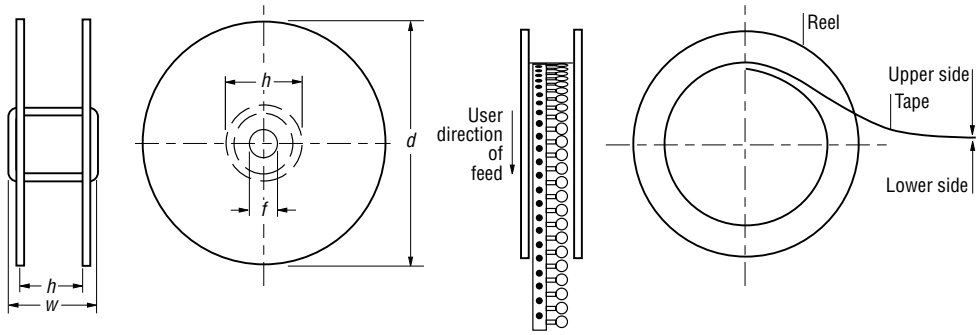
Dimension Description	IEC Mark	EIA Mark	Dimensions	Tolerance
Arbor hole diameter	*f*	*c*	26.0 (1.02)	±12.0 (±.472)
Core diameter	*h*	*n*	80.0 (3.15)	max.
Box			64 (2.52) 372 (14.6) 362 (14.25)	max.
Consecutive missing places			3	max.
Empty places per reel			Not specified	

Taped Component Dimensions - Figure 1



DIMENSIONS = MM / (INCHES)

Reel Dimensions - Figure 2



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