

Features

- Compliant with AEC-Q200 Rev-C- Stress Test Qualification for Passive Components in Automotive Applications
- Radial leaded devices
- Smaller size for similar Ihold rating
- Faster tripping
- RoHS compliant* and halogen free**

MF-RG Series - PTC Resettable Fuses

Agency recognition: c Sus

Applications

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

Electrical Characteristics

| Model V max. Volts | V max | . I max. Amps | Ihold | I _{trip} | Init Resis | | 1 Hour (R ₁) Post-Trip Resistance | Max. Time To Trip | | Tripped Power Dissipation |
|-----------------------|-------|------------------|---------------------|-------------------|------------------|--------|---|--------------------------------------|-----|---------------------------------|
| | Volts | | Amperes at 23 °C | | Ohms at 23 °C | | Ohms at 23 °C | Amperes Seconds at 23 °C at 23 °C | | Watts at 23 °C |
| | | | Hold | Trip | Min. | Max. | Max. | | | Тур. |
| MF-RG300 | 16 | 100 | 3.00 | 5.10 | 0.038 | 0.065 | 0.0975 | 15 | 1.0 | 2.30 |
| MF-RG400 | 16 | 100 | 4.00 | 6.80 | 0.021 | 0.0385 | 0.0600 | 20 | 1.7 | 2.40 |
| MF-RG500 | 16 | 100 | 5.00 | 8.50 | 0.015 | 0.023 | 0.0340 | 25 | 2.0 | 2.60 |
| MF-RG600 | 16 | 100 | 6.00 | 10.20 | 0.010 | 0.0185 | 0.0280 | 30 | 3.3 | 2.8 |
| MF-RG650 | 16 | 100 | 6.50 | 11.10 | 0.0088 | 0.0158 | 0.0240 | 33 | 3.5 | 3.0 |
| MF-RG700 | 16 | 100 | 7.00 | 11.90 | 0.0077 | 0.0130 | 0.0200 | 35 | 3.5 | 3.0 |
| MF-RG800 | 16 | 100 | 8.00 | 13.60 | 0.0056 | 0.0110 | 0.0175 | 40 | 5.0 | 3.0 |
| MF-RG900 | 16 | 100 | 9.00 | 15.30 | 0.0047 | 0.0092 | 0.0135 | 45 | 5.5 | 3.3 |
| MF-RG1000 | 16 | 100 | 10.00 | 17.00 | 0.0040 | 0.0071 | 0.0102 | 50 | 6.0 | 3.6 |
| MF-RG1100 | 16 | 100 | 11.00 | 18.70 | 0.0037 | 0.0062 | 0.0089 | 55 | 7.0 | 3.7 |

Environmental Characteristics

| Operating/Storage Temperature | 40 °C to +85 °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, | . No change |
| | Condition A | - |
| Moisture Sensitivity Level (MSL) | Level 1 | |
| ESD Classification - HBM | Class 6 | |
| Humidity Aging Thermal Shock Solvent Resistance Vibration Moisture Sensitivity Level (MSL) | +85 °C, 85 % R.H. 1000 hours 40 °C to +85 °C, 10 times MIL-STD-202, Method 215 MIL-STD-883C, Method 2007.1, Condition A Level 1 | . ±5 % typical resistance change . ±10 % typical resistance change . 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 | $Rmin \le R \le Rmax$ |
| 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 - Ihold (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-RG400 | 5.9 | 5.3 | 4.8 | 4.0 | 3.5 | 3.2 | 2.8 | 2.5 | 1.9 | |
| MF-RG500 | 7.3 | 6.6 | 6.0 | 5.0 | 4.4 | 4.0 | 3.6 | 3.1 | 2.4 | |
| MF-RG600 | 8.8 | 8.0 | 7.2 | 6.0 | 5.2 | 4.8 | 4.2 | 3.8 | 2.8 | |
| MF-RG650 | 10.3 | 9.3 | 8.4 | 7.0 | 6.2 | 5.6 | 5.0 | 4.4 | 3.3 | |
| MF-RG700 | 10.3 | 9.3 | 8.4 | 7.0 | 6.2 | 5.6 | 5.0 | 4.4 | 3.3 | |
| MF-RG800 | 11.7 | 10.7 | 9.6 | 8.0 | 6.9 | 6.4 | 5.6 | 5.1 | 3.7 | |
| MF-RG900 | 13.2 | 11.9 | 10.7 | 9.0 | 7.9 | 7.2 | 6.4 | 5.6 | 4.2 | |
| MF-RG1000 | 14.7 | 13.3 | 12.0 | 10.0 | 8.7 | 8.0 | 7.0 | 6.3 | 4.7 | |
| MF-RG1100 | 16.1 | 14.6 | 13.1 | 11.0 | 9.7 | 8.8 | 7.8 | 6.9 | 5.2 | |

Itrip is approximately two times Ihold.

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

** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

The products described herein and this document are subject to specific disclaimers as set forth on the last page of this document, and at www.bourns.com/legal/disclaimer.pdf.

MF-RG Series - PTC Resettable Fuses

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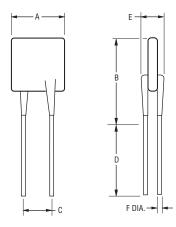
Product Dimensions

| Model | A Max. | B Max. | с | | D Min. | E Max. | F Nom. | Physical Characteristics | |
|-----------|------------------------|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|-----------------------------|----------|
| | IVIAX. | iviax. | Nom. | Tol. ± | | Iviax. | NOIII. | Style | Material |
| MF-RG300 | <u>7.1</u> (0.280) | <u>11.0</u> (0.433) | <u>5.1</u> (0.201) | <u>0.7</u> (0.028) | <u>7.6</u> (0.299) | <u>3.0</u> (0.118) | <u>0.81</u> (0.032) | 1 | Sn/Cu |
| MF-RG400 | <u>9.9</u> (0.350) | <u>12.8</u> (0.504) | <u>5.1</u> (0.201) | <u>0.7</u> (0.028) | <u>7.6</u> (0.299) | <u>3.0</u> (0.118) | <u>0.81</u> (0.032) | 1 | Sn/Cu |
| MF-RG500 | <u>10.4</u> (0.409) | <u>14.3</u> (0.563) | <u>5.1</u> (0.201) | <u>0.7</u> (0.028) | <u>7.6</u> (0.299) | <u>3.0</u> (0.118) | <u>0.81</u> (0.032) | 1 | Sn/Cu |
| MF-RG600 | <u>10.7</u> (0.421) | <u>17.1</u> (0.673) | <u>5.1</u> (0.201) | <u>0.7</u> (0.028) | <u>7.6</u> (0.299) | <u>3.0</u> (0.118) | <u>0.81</u> (0.032) | 1 | Sn/Cu |
| MF-RG650 | <u>11.2</u> (0.441) | <u>19.7</u> (0.776) | <u>5.1</u> (0.201) | <u>0.7</u> (0.028) | $\frac{7.6}{(0.299)}$ | <u>3.0</u> (0.118) | <u>0.81</u> (0.032) | 1 | Sn/Cu |
| MF-RG700 | <u>11.2</u> (0.441) | <u>19.7</u> (0.776) | <u>5.1</u> (0.201) | <u>0.7</u> (0.028) | <u>7.6</u> (0.299) | <u>3.0</u> (0.118) | <u>0.81</u> (0.032) | 1 | Sn/Cu |
| MF-RG800 | <u>12.7</u> (0.500) | <u>20.9</u> (0.823) | <u>5.1</u> (0.201) | <u>0.7</u> (0.028) | $\frac{7.6}{(0.299)}$ | <u>3.0</u> (0.118) | <u>0.81</u> (0.032) | 1 | Sn/Cu |
| MF-RG900 | <u>14.0</u> (0.551) | <u>21.7</u> (0.854) | <u>5.1</u> (0.201) | <u>0.7</u> (0.028) | $\frac{7.6}{(0.299)}$ | <u>3.0</u> (0.118) | <u>0.81</u> (0.032) | 1 | Sn/Cu |
| MF-RG1000 | <u>16.5</u> (0.650) | <u>21.7</u> (0.854) | <u>5.1</u> (0.201) | <u>0.7</u> (0.028) | $\frac{7.6}{(0.299)}$ | <u>3.0</u> (0.118) | <u>0.81</u> (0.032) | 1 | Sn/Cu |
| MF-RG1100 | <u>17.5</u> (0.689) | <u>26.0</u> (1.024) | <u>5.1</u> (0.201) | <u>0.7</u> (0.028) | 7.6 (0.299) | <u>3.0</u> (0.118) | <u>0.81</u> (0.032) | 1 | Sn/Cu |

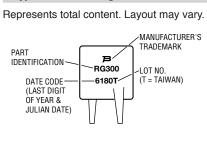
Packaging options:

BULK: MF-RG300~MF-RG1100 = 500 pcs. per bag.

TAPE & REEL: MF-RG300~MF-RG500 = 3000 pcs. per reel; MF-RG600~MF-RG1100 = 1000 pcs. per reel. AMMO-PACK: MF-RG300~MF-RG500 = 2000 pcs. per reel; MF-RG600~MF-RG1100 = 1000 pcs. per reel.



Typical Part Marking



| How to Order |
|--|
| MF - RG 300 - 0 - 14 |
| Multifuse® Product Designator |
| Series RG = Smaller Radial Leaded Component |
| Hold Current, I _{hold} 300-1100 (3.0 Amps - 11.0 Amps) |
| Packaging Options |
| Part Number Suffix Option |

0.81 (20AWG)

1. 0

11....

MM

(INCHES)

DIMENSIONS:

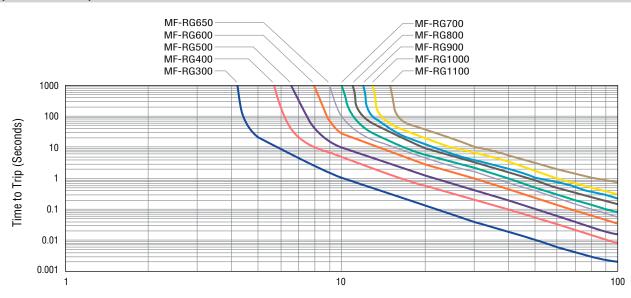
Also available with kinked leads (see How to Order).

Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific disclaimers as set forth on the last page of this document, and at <u>www.bourns.com/legal/disclaimer.pdf</u>.

MF-RG Series - PTC Resettable Fuses

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Typical Time to Trip at 23 °C



Fault Current (Amps)

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Asia-Pacific: Tel: +886-2 2562-4117 • Email: asiacus@bourns.com EMEA: Tel: +36 88 520 390 • Email: eurocus@bourns.com The Americas: Tel: +1-951 781-5500 • Email: americus@bourns.com www.bourns.com

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.

| arrier tape width W W $\begin{pmatrix} 10 \\ (709) \\ (709) \\ (709) \\ (0024,039) \\ (002$ | Dimension Description | IEC Mark | EIA Mark | Dime Dimensions | ensions Tolerance |
|--|---|----------------|-----------------------|--------------------|----------------------|
| bid down tape width W_4 $\frac{11}{(433)}$ min. bid down tape W_0 No protrusion pp distance between tape edges W_2 W_6 $\frac{3}{(118)}$ max. procket hole position W_1 W_5 $\frac{9}{(354)}$ $\frac{-0.540}{(-0.2240.03)}$ procket hole diameter D_0 D_0 $\frac{4}{(157)}$ $\frac{40.2}{(4.0078)}$ becissa to plane (straight lead) H H 11 $\frac{40.2}{(126)}$ $\frac{4.11}{(4.02)}$ becissa to top (straight lead) H_0 H_0 T_6 $\frac{40.2}{(16.078)}$ $\frac{40.2}{(16.078)}$ becissa to top (straight lead) H_1 H_1 H_1 $\frac{9}{(16.0216)}$ $max.$ verall width wike protrusion (straight lead) C_1 $\frac{55.0}{(16.039)}$ $max.$ veral width wike lad protrusion (kinked lead) C_1 $\frac{11}{(17.1)}$ $max.$ veral width wike lad protrusion (kinked lead) C_2 $\frac{42.5}{(14.031)}$ $max.$ veral width wike lad protrusion (kinked lead) C_1 $\frac{11}{(17.03)}$ $max.$ rotrusion I_1 I_1 I_1 I_1 | Carrier tape width | | | 18 | -0.5/+1.0 |
| bill down tape W_0 No protuision op distance between tape edges W_2 W_6 $\frac{3}{(118)}$ max. procket hole position W_1 W_5 $\frac{9}{(254)}$ $\frac{-0.5470.75}{(40078)}$ procket hole diameter D_0 D_0 $\frac{4}{(157)}$ $\frac{4.02}{(40078)}$ bacissa to plane (straight lead) H H H_1 H_1 H_1 bscissa to top (straight lead) H_1 H_1 H_1 H_1 H_1 bscissa to top (straight lead) H_1 H_1 H_1 H_1 H_1 H_2 H_2 max. bscissa to top (straight lead) H_1 H_1 H_1 H_1 H_1 H_2 H_2 max. verall width wile al protrusion (straight lead) C_1 $\frac{55.0}{(1673)}$ max. verall width wo lead protrusion (kinked lead) C_2 $\frac{42.5}{(1673)}$ max. verall width wo lead protrusion (kinked lead) C_2 $\frac{42.5}{(1673)}$ max. rotrusion otoutot L L L $\frac{11}{(1039)}$ max. rotru | Hold down tape width | | W4 | | |
| pp distance between tape edges W_2 W_q (118) max. procket hole position W_1 W_5 $\frac{9}{(354)}$ $(0.024+0.02)$ procket hole diameter D_0 D_0 (157) $(e.0078)$ becissa to plane (straight lead) H_0 H_0 (16) $e.05$ becissa to plane (kinked lead) H_0 H_0 (16) $e.05$ becissa to top (kinked lead) H_1 H_1 38.0 max. becissa to top (kinked lead) H_1 H_1 32.2 max. verall width wide aprotrusion (straight lead) C_1 (2.166) max. verall width wide ap rotrusion (straight lead) C_2 (54.0) max. verall width wide ap rotrusion (kinked lead) C_2 (2.166) max. verall width wide lead protrusion (kinked lead) C_2 (1.073) max. verall width wole ad protrusion (kinked lead) C_2 (1.073) max. verall width wole ad protrusion (kinked lead) C_2 (2.54) 0.0 verall width wole lead protrusion (kinked lead) C_2 | Hold down tape | W ₀ | | | |
| wr the position W_1 W_5 $\frac{9}{(354)}$ $\frac{-0.5/40.75}{(0.0740.03)}$ procket hole diameter D_0 D_0 $\frac{4}{(157)}$ $\frac{4.02}{(4.0078)}$ bacissa to plane (straight lead) H H H $\frac{15.5}{(7.28)}$ $\frac{4.30}{(4.18)}$ bacissa to plane (kinked lead) H_0 H_0 $\frac{16}{(63)}$ $\frac{4.02}{(4.02)}$ bacissa to plane (kinked lead) H_1 bacissa to top (kinked lead) H_1 H_1 H_1 H_1 H_1 werall width w/lead protrusion (straight lead) C_1 $\frac{55.0}{(2.165)}$ max.werall width w/lead protrusion (straight lead) C_2 $\frac{64.2}{(2.126)}$ max.verall width w/lead protrusion (kinked lead) I_1 I_1 $I_{(03)}$ max.rotrusion of cutout L L $I_{(1673)}$ max.verall width w/lead protrusion (kinked lead) I_2 I_2 max.verall width w/lead protrusion (kinked lead) I_2 I_2 max.verall width w/lead protrusion (kinked lead) I_1 I_1 $I_{(03)}$ max.verall width w/lead protrusion (kinked lead) I_1 I_1 I_1 I_2 verall width w/lead protrusion (kinked lead) I_1 I_1 I_1 I_2 verall width w/lead protrusion (kinked lead) I_1 I_1 I_2 I_2 verall width w/lead protrusion I_1 I_1 | Top distance between tape edges | W2 | W ₆ | | max. |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | Sprocket hole position | W1 | W5 | 9 | |
| becissa to plane (straight lead) H H H $\frac{18.5}{(278)}$ $\frac{43.0}{(2118)}$ becissa to plane (kinked lead) H ₀ H ₀ H ₀ $\frac{16}{(63)}$ $\frac{40.5}{(4.02)}$ becissa to top (straight lead) H ₁ H ₁ H ₁ $\frac{38.0}{(1.496)}$ max. becissa to top (kinked lead) H ₁ H ₁ H ₁ $\frac{38.0}{(1.496)}$ max. becissa to top (kinked lead) H ₁ H ₁ H ₁ $\frac{32.2}{(1.265)}$ max. verall width wilead protrusion (straight lead) C ₁ $\frac{43.2}{(2.165)}$ max. verall width wilead protrusion (straight lead) C ₂ $\frac{43.2}{(1.67)}$ max. verall width wilead protrusion (straight lead) C ₂ $\frac{42.5}{(1.673)}$ max. verall width wilead protrusion (straight lead) C ₂ $\frac{42.5}{(1.673)}$ max. rotrusion (straight lead) C ₂ $\frac{42.5}{(1.673)}$ max. rotrusion foutout L L $\frac{1}{(.439)}$ max. rotrusion of outout L L $\frac{1}{(.439)}$ max. rotrusion of outout L L $\frac{1}{(.439)}$ max. rotrusion beyond hold-down tape $\frac{22}{(1.65)}$ kospecified $\frac{25.4}{(1.603)}$ $\frac{40.3}{(2.102)}$ the holerance $\frac{20 consecutive}{(\frac{4.03}{(2.102)})}$ max. ape thickness it t $\frac{0.99}{(0.55)}$ max. $\frac{40.3}{(1.000)}$ $\frac{4.02}{(2.102)}$ max. $\frac{40.2}{(1.57)}$ $\frac{40.2}{(2.039)}$ procket hole alignment $\frac{4.0}{(1.507)}$ $\frac{4.02}{(2.039)}$ ape thickness with splice $\frac{4.1}{(2.009)}$ $\frac{2.7}{(0.55)}$ max. $\frac{4.0}{(1.57)}$ $\frac{4.02}{(2.009)}$ ody tateral deviation Δ_P Δ_P 0 $\frac{4.1.3}{(2.009)}$ $\frac{2.5}{(0.008)}$ $\frac{-2.7}{(0.051)}$ $\frac{4.02}{(2.021)}$ ead seating plane deviation Δ_P Δ_P 0 $\frac{4.1.3}{(2.009)}$ $\frac{2.5}{(0.008)}$ $\frac{-2.7}{(0.051)}$ $\frac{2.5}{(0.008)}$ $\frac{2.5}{(0.008)}$ $\frac{2.7}{(0.008)}$ $\frac{2.5}{(0.008)}$ 2. | Sprocket hole diameter | D ₀ | D ₀ | 4 | ±0.2 |
| becissa to plane (kinked lead) Ho Ho Ho $\frac{16}{(83)}$ $\frac{40.5}{(4.02)}$ becissa to to (straight lead) Hr Hr Hr $\frac{38.0}{(1.496)}$ max. becissa to to (kinked lead) Hr Hr Hr $\frac{38.0}{(1.496)}$ max. becissa to to (kinked lead) Hr Hr $\frac{1}{(1.288)}$ max. Verall width whead protrusion (straight lead) Cr $\frac{43.2}{(1.7)}$ max. verall width whead protrusion (straight lead) Cr $\frac{43.2}{(1.7)}$ max. verall width whead protrusion (straight lead) Cr $\frac{43.2}{(1.7)}$ max. verall width whead protrusion (straight lead) Cr $\frac{1.0}{(2.185)}$ max. rotrusion (straight lead) Cr $\frac{1.0}{(2.185)}$ max. rotrusion of cutout L L $\frac{1.0}{(1.399)}$ max. rotrusion beyond hold-down tape Ir Q Ir $\frac{1.0}{(0.399)}$ max. rotrusion beyond hold-down tape Ir Q Consecutive $\frac{\pm 1}{(\pm 0.039)}$ revice pitch Procket hole pitch Proteck thole pitch Proteck thole alignment $\frac{25.4}{(1.603)}$ max. $\frac{4.0}{(\pm 0.039)}$ max. 4. | Abscissa to plane (straight lead) | Н | Н | 18.5 | ±3.0 |
| becises to top (straight lead) H_1 H_1 $(\frac{1380}{(1.496)}$ max. becises to top (kinked lead) H_1 H_1 $(\frac{32.2}{(1.269)}$ max. verall width w/lead protrusion (straight lead) C_1 $(\frac{43.2}{(1.17)}$ max. verall width w/lead protrusion (kinked lead) C_1 $(\frac{43.2}{(1.77)}$ max. verall width w/lead protrusion (kinked lead) C_2 $(\frac{2.10}{(1.673)}$ max. verall width w/lead protrusion (kinked lead) C_2 $(\frac{42.5}{(1.673)}$ max. verall width w/lead protrusion (kinked lead) C_2 $(\frac{42.5}{(1.673)}$ max. rotrusion of cutout L L $(\frac{11}{(.433)}$ max. rotrusion of cutout L L $(\frac{11}{(.433)}$ max. rotrusion beyond hold-down tape I_2 I_2 Not specified procket hole pitch P_0 P_0 $(\frac{12.7}{(0.5)}$ $(\frac{4.03}{(4.012)})$ ape thickness t t t $\frac{0.9}{(0.055)}$ max. pilce sprocket hole alignment $(\frac{4.0}{(.177)}$ max. $\frac{4.0}{(.1679)}$ max. $\frac{4.0}{(.1679)}$ $\frac{4.0.3}{(4.012)}$ ead seating plane deviation ΔP_1 P_1 $\frac{3.81}{(4.051)}$ $\frac{4.0.7}{(4.208)}$ max. $\frac{4.0}{(.0008+0.31)}$ $\frac{-4.0.3}{(4.0051)}$ $\frac{1.1}{(4.457)}$ max. $\frac{1.1}{(.1000)}$ $\frac{1.1}{(.2001)}$ $\frac{-2.0.3}{(.2001)}$ -2.0 | Abscissa to plane (kinked lead) | H ₀ | H ₀ | 16 | ±0.5 |
| becissa to top (kinked lead) H_1 H_1 $\frac{32.2}{(1.269)}$ max. verall width w/lead protrusion (straight lead) C_1 $\frac{55.0}{(2.165)}$ max. werall width w/lead protrusion (kinked lead) C_1 $\frac{43.2}{(1.7)}$ max. werall width w/lead protrusion (kinked lead) C_2 $\frac{54.0}{(1.673)}$ max. werall width w/lead protrusion (kinked lead) C_2 $\frac{42.5}{(1.673)}$ max. werall width w/lead protrusion (kinked lead) C_2 $\frac{42.5}{(1.673)}$ max. werall width w/lead protrusion (kinked lead) L L $\frac{11}{(1.433)}$ max. rotrusion of cutout L L $\frac{11}{(4.33)}$ max. rotrusion of cutout L L $\frac{11}{(4.33)}$ max. rotrusion beyond hold-down tape I_2 I_2 Not specified procket hole pitch P_0 P_0 $\frac{12.7}{(0.5)}$ $\frac{4.0.3}{(4.012)}$ the tolerance 20 consecutive $\frac{41}{(4.039)}$ max. per hickness with splice t t $\frac{0.9}{(0.79)}$ max. pilce sprocket hole alignment $\frac{40.0}{(1.57)}$ $\frac{40.2}{(4.051)}$ ead seating plane deviation Δ_P Δ_P 0 $\frac{4.1.3}{(0.015)}$ $\frac{40.7}{(0.050)}$ max. ead seating plane deviation Δ_P P_1 $\frac{3.811}{(0.015)}$ $\frac{40.7}{(0.020)}$ max. ead spacing F F $\frac{5.08}{(220)}$ max. ead spacing F F $\frac{5.08}{(220)}$ max. ead spacing F F $\frac{5.08}{(220)}$ max. ead spacing A_P | Abscissa to top (straight lead) | H ₁ | H ₁ | 38.0 | |
| verall width w/lead protrusion (straight lead) C_1 $\frac{55.0}{(2.165)}$ max.verall width w/lead protrusion (kinked lead) C_1 $\frac{43.2}{(1.7)}$ max.verall width w/lead protrusion (straight lead) C_2 $\frac{54.0}{(2.126)}$ max.verall width w/lead protrusion (straight lead) C_2 $\frac{42.5}{(1.673)}$ max.verall width w/lead protrusion (straight lead) C_2 $\frac{42.5}{(1.673)}$ max.verall width w/lead protrusion (straight lead) l_1 L_1 $\frac{10}{(.039)}$ max.ead protrusion of cutout L L $\frac{11}{(.433)}$ max.rotrusion of cutout L L $\frac{11}{(.433)}$ max.rotrusion beyond hold-down tape l_2 l_2 Not specifiedprocket hole pitch P_0 P_0 $\frac{12.7}{(0.5)}$ $\frac{±0.3}{(\pm 0.12)}$ evice pitch $\frac{25.4}{(1.679)}$ $\frac{±0.3}{(2.5)}$ max.ape thickness with splice t t $\frac{0.9}{(0.35)}$ max.plice sprocket hole alignment $\frac{4.0}{(.157)}$ $\frac{±0.2}{(\pm 0.08)}$ $\frac{4.1}{(\pm 0.039)}$ ody tape plane deviation ΔP_1 P_1 $\frac{3.81}{(0.05)}$ $\frac{4.0.7}{(\pm 0.05)}$ eed spacing F F 5.08 $-0.2/40.8$ eed uidth w w $\frac{56.0}{(2.20)}$ max.eed idiameter d a $\frac{370.0}{(.006/+0.31)}$ max.oot pathwean flagond has during 4.75 ± 3.25 | Abscissa to top (kinked lead) | H ₁ | H ₁ | 32.2 | max. |
| verall width w/lead protrusion (kinked lead) C_1 $\frac{43.2}{(1.7)}$ max.werall width w/o lead protrusion (straight lead) C_2 $\frac{54.0}{(2.126)}$ max.werall width w/o lead protrusion (kinked lead) C_2 $\frac{42.5}{(1.673)}$ max.ead protrusion I_1 L_1 $\frac{1.0}{(0.09)}$ max.rotrusion of cutout L L $\frac{11}{(4.33)}$ max.rotrusion beyond hold-down tape I_2 I_2 Not specifiedprocket hole pitch P_0 P_0 $\frac{12.7}{(0.5)}$ $\frac{\pm 0.3}{(\pm 0.12)}$ evice pitch $\frac{25.4}{(1.000)}$ $\frac{\pm 0.3}{(\pm 0.12)}$ max.ape thickness t t 0.9 max.ape thickness t t 0.9 max.plice sprocket hole alignment $\frac{4.0}{(1.079)}$ max. $\frac{4.0.3}{(\pm 0.03)}$ ody tape plane deviation Δ_P Δ_P 0 $\frac{\pm 1.3}{(\pm 0.03)}$ ead seating plane deviation Δ_P_1 P_1 $\frac{3.81}{(0.15)}$ $\frac{40.7}{(\pm 0.02)}$ eed spacing F F 5.08 $-0.2/t0.8$ eed diameter d a $\frac{370.0}{(14.57)}$ max.eed between flagges lace during d a $\frac{370.0}{(14.57)}$ max. | Overall width w/lead protrusion (straight lead) | | C1 | 55.0 | max. |
| verall width w/o lead protrusion (straight lead) C_2 $\frac{54.0}{(2.126)}$ ($2.126)$ max.verall width w/o lead protrusion (kinked lead) C_2 $\frac{42.5}{(1.673)}$ (1.73)max.ead protrusion l_1 L_1 $\frac{1.0}{(0.39)}$ (1.433)max.rotrusion of cutout L L $\frac{1}{(1.433)}$ (1.433)max.rotrusion beyond hold-down tape l_2 l_2 Not specifiedprocket hole pitch P_0 P_0 $\frac{12.7}{(0.5)}$ (± 0.12) ± 0.3 (± 0.12)itch tolerance 20 consecutive $\frac{\pm 1}{(\pm 0.39)}$ (± 0.35) ± 0.3 (± 0.12)pevice pitch t t t 0 ((1.57)) $\frac{\pm 0.3}{(\pm 0.12)}$ ape thickness t t t 0 ((1.57)) $\frac{\pm 1}{(\pm 0.39)}$ ody lateral deviation Δ_h Δ_h 0 $\frac{\pm 1}{(\pm 0.39)}$ ody tape plane deviation Δ_P_1 P_1 $\frac{3.81}{(0.15)}$ $\frac{\pm 0.7}{(\pm 0.08)}$ ody tape plane deviation Δ_P_1 P_1 $\frac{3.81}{(0.15)}$ $\frac{\pm 0.7}{(\pm 0.28)}$ eed spacing F F $\frac{5.08}{(200)}$ $-0.2/\mu 0.8$ eed spacing F F $\frac{5.08}{(200)}$ $-0.2/\mu 0.8$ eed diameter d a $\frac{370.0}{(14.57)}$ max. | Overall width w/lead protrusion (kinked lead) | | C ₁ | 43.2 | max. |
| verall width w/o lead protrusion (kinked lead) C_2 $\frac{42.5}{(1.673)}$ max.ead protrusion l_1 L_1 $\frac{1.0}{(0.39)}$ max.rotrusion of cutout L L $\frac{11}{(4.33)}$ max.rotrusion beyond hold-down tape l_2 l_2 Not specifiedprocket hole pitch P_0 P_0 $\frac{12.7}{(0.5)}$ $\frac{\pm 0.3}{(\pm 0.12)}$ itch tolerance 20 consecutive $\frac{\pm 1}{(\pm 0.39)}$ evice pitch 25.4 ± 0.3 (1.000) ape thickness t t 0.9 ape thickness t t 0.9 max. $\frac{4.0}{(1.000)}$ $\frac{\pm 0.2}{(\pm 0.01)}$ plice sprocket hole alignment Δ_h Δ_h 0 $\frac{4.0}{(1.57)}$ $\frac{\pm 0.2}{(\pm 0.08)}$ $\frac{\pm 0.2}{(\pm 0.08)}$ ody tape plane deviation Δ_P Δ_P 0 $\frac{\pm 1.3}{(\pm 0.51)}$ $\frac{\pm 0.7}{(\pm 0.08)}$ $\frac{\pm 0.7}{(\pm 0.08)}$ ead spacing F F 5.08 ead spacing F F $\frac{5.08}{(200)}$ ead spacing F F $\frac{5.08}{(200)}$ ead spacing F F $\frac{5.08}{(200)}$ ead spacing d a $\frac{370.0}{(1.457)}$ max. $\frac{4.75}{(1.457)}$ $\frac{4.75}{(1.457)}$ max. $\frac{4.75}{(2.20)}$ $\frac{4.75}{(1.457)}$ max. $\frac{4.75}{(2.20)}$ $\frac{4.75}{(1.457)}$ max. $\frac{4.75}{(2.20)}$ $\frac{4.75}{(1.457)}$ max. $\frac{4.75}{(2.20)}$ $\frac{4.75}{(1.457)}$ max.< | Overall width w/o lead protrusion (straight lead) | | <i>C</i> ₂ | 54.0 | max. |
| ead protrusion l_1 L_1 $\frac{1.0}{(0.09)}$ max.rotrusion of cutout L L $\frac{11}{(4.33)}$ max.rotrusion beyond hold-down tape l_2 l_2 Not specifiedprocket hole pitch P_0 P_0 $\frac{12.7}{(0.5)}$ $\frac{\pm 0.3}{(\pm 0.12)}$ itch tolerance 20 consecutive $\frac{\pm 1}{(\pm 0.39)}$ evice pitch 20 consecutive $\frac{\pm 1}{(\pm 0.39)}$ ape thickness t t 0.9 ape thickness with splice t_1 $\frac{2.0}{(0.09)}$ max. $\frac{4.0}{(1.57)}$ $\frac{\pm 0.2}{(\pm 0.09)}$ plice sprocket hole alignment $\frac{4.0}{(.157)}$ $\frac{\pm 1.3}{(.051)}$ ody tape plane deviation Δ_P Δ_P 0 $\frac{\pm 1.3}{(.051)}$ ead seating plane deviation ΔP_1 P_1 $\frac{3.81}{(.015)}$ $\frac{\pm 0.7}{(.008)}$ ead spacing F F $\frac{5.08}{(.200)}$ $-0.2/40.8$ eed diameter d a $\frac{370.0}{(.008/+.031)}$ max.eed dameter d a $\frac{370.0}{(.008/+.031)}$ max. | Overall width w/o lead protrusion (kinked lead) | | C2 | 42.5 | max. |
| LL $\frac{11}{(433)}$ max.rotrusion beyond hold-down tape l_2 l_2 Not specifiedprocket hole pitch P_0 P_0 $\frac{12.7}{(0.5)}$ $\frac{40.3}{(±.012)}$ itch tolerance 20 consecutive $\frac{\pm 1}{(\pm.039)}$ evice pitch $\frac{25.4}{(1.000)}$ $\pm 0.3}{(\pm.012)}$ ape thickness t t $\frac{0.9}{(0.35)}$ ape thickness t t $\frac{0.9}{(0.35)}$ ape thickness with splice t_1 $\frac{2.0}{(0.79)}$ plice sprocket hole alignment $\frac{4.0}{(1.57)}$ $\frac{\pm 0.2}{(\pm.008)}$ ody lateral deviation Δ_h Δ_h 0 $\frac{\pm 1}{(\pm.039)}$ Δ_P 0 $\frac{\pm 1.3}{(\pm.051)}$ ead seating plane deviation ΔP_1 P_1 $\frac{3.81}{(.015)}$ ± 0.7 ead spacing F F 5.08 $0.2/40.8$ ead spacing K K 370.0 (14.57) ead lameter d a 370.0 (14.57) pace between places lase device 4.75 ± 3.25 | Lead protrusion | I ₁ | L ₁ | 1.0 | max. |
| Instruction beyond hold-down tape l_2 l_2 l_2 Not specifiedprocket hole pitch P_0 P_0 $\frac{12.7}{(0.5)}$ $\frac{\pm 0.3}{(\pm 0.12)}$ itch tolerance20 consecutive $\frac{\pm 1}{(\pm 0.39)}$ evice pitch $\frac{25.4}{(1.000)}$ $\pm 0.3}{(\pm 0.12)}$ ape thickness t t $\frac{0.95}{(0.09)}$ max. $\frac{25.4}{(1.000)}$ $\frac{10.7}{(\pm 0.12)}$ ape thickness with splice t_1 $\frac{2.0}{(0.79)}$ plice sprocket hole alignment $\frac{4.0}{(.157)}$ $\frac{\pm 0.2}{(\pm 0.08)}$ ody lateral deviation Δ_h Δ_h 0 $\frac{\pm 1.3}{(\pm 0.51)}$ ead seating plane deviation ΔP_1 P_1 $\frac{3.81}{(.015)}$ $\frac{\pm 0.7}{(.028)}$ ead spacing F F $\frac{5.08}{(.200)}$ $\frac{-0.2/+0.8}{(.008)+(.031)}$ teel width w w w $\frac{370.0}{(.220)}$ max.ape thickness davice 4.75 ± 3.25 | Protrusion of cutout | L | L | 11 | max. |
| procket hole plichP0P0 $\overline{(0.5)}$ $\overline{(\pm.012)}$ itch tolerance $20 \operatorname{consecutive}$ $\frac{\pm 1}{(\pm.039)}$ vevice pitch $\frac{25.4}{(1.000)}$ ± 0.3 ape thickness t t $\frac{0.9}{(.035)}$ ape thickness with splice t_1 $\frac{2.0}{(.079)}$ plice sprocket hole alignment $\frac{4.0}{(.157)}$ $\frac{\pm 0.2}{(\pm.008)}$ ody lateral deviation Δ_h Δ_h 0 $\frac{\pm 1}{(\pm.039)}$ ead seating plane deviation ΔP_1 P_1 $\frac{3.81}{(.015)}$ $\frac{\pm 0.7}{(\pm.028)}$ ead spacing F F 5.08 $-0.2/+0.8$ $(.008/+.031)$ w w $\frac{370.0}{(.200)}$ max.ieel diameter d a $\frac{370.0}{(.14.57)}$ max. | Protrusion beyond hold-down tape | I2 | I2 | | |
| itch tolerance20 consecutive $\frac{\pm 1}{(\pm,039)}$ evice pitch $\frac{25.4}{(1.000)}$ $\frac{\pm 0.3}{(\pm.012)}$ ape thickness t t $\frac{0.9}{(.035)}$ ape thickness with splice t_1 $\frac{2.0}{(.079)}$ plice sprocket hole alignment $\frac{4.0}{(.157)}$ $\frac{\pm 0.2}{(\pm.008)}$ ody lateral deviation Δ_h Δ_h 0 $\frac{4.0}{(.157)}$ $\frac{\pm 1.3}{(\pm.061)}$ ead seating plane deviation Δ_P Δ_P ΔP_1 P_1 $\frac{3.81}{(.015)}$ ead seating plane deviation ΔP_1 P_1 $\frac{6.00}{(.200)}$ $\frac{-0.2/+0.8}{(.008)}$ ead spacing F F $\frac{5.08}{(.200)}$ ead util w w $\frac{370.0}{(.14.57)}$ max. $\frac{370.0}{(.14.57)}$ $max.$ teel diameter d a $\frac{370.0}{(.14.57)}$ max. $\frac{4.75}{(.14.57)}$ ± 3.25 | Sprocket hole pitch | P ₀ | P ₀ | | |
| evice pitch $\frac{25.4}{(1.000)}$ $\frac{\pm 0.3}{(\pm .012)}$ ape thickness t t $\frac{0.9}{(.035)}$ max.ape thickness with splice t_1 $\frac{2.0}{(.079)}$ max.plice sprocket hole alignment $\frac{4.0}{(.157)}$ $\frac{\pm 0.2}{(\pm .008)}$ ody lateral deviation Δ_h Δ_h 0 $\frac{\pm 1}{(\pm .039)}$ ody tape plane deviation Δ_p Δ_p 0 $\frac{\pm 1.3}{(\pm .051)}$ ead seating plane deviation ΔP_1 P_1 $\frac{3.81}{(.015)}$ $\frac{\pm 0.7}{(\pm .028)}$ ead spacing F F $\frac{5.08}{(.200)}$ $\frac{-0.2/40.8}{(.008/+.031)}$ leel width w w $\frac{370.0}{(.200)}$ max.eel diameter d a $\frac{370.0}{(.1457)}$ max. | Pitch tolerance | | | | ±1 |
| ape thicknesstt $\frac{0.9}{(.035)}$ max.ape thickness with splice t_1 $\frac{2.0}{(.079)}$ max.plice sprocket hole alignment $\frac{4.0}{(.157)}$ $\frac{\pm 0.2}{(\pm .008)}$ ody lateral deviation Δ_h Δ_h 0ody tape plane deviation Δ_p Δ_p 0ead seating plane deviation ΔP_1 P_1 $\frac{3.81}{(.015)}$ $\frac{\pm 0.7}{(\pm .028)}$ ead spacing F F $\frac{5.08}{(.200)}$ $\frac{-0.2/+0.8}{(.008/+.031)}$ teel widthww $\frac{56.0}{(2.20)}$ max.ead spacing A_75 $\frac{+3.25}{+3.25}$ | Device pitch | | | | ±0.3 |
| ape thickness with splice t_1 $\frac{2.0}{(.079)}$ max.plice sprocket hole alignment $\frac{4.0}{(.157)}$ $\frac{\pm 0.2}{(\pm.008)}$ ody lateral deviation Δ_h Δ_h 0 $\frac{\pm 1}{(\pm.039)}$ ody tape plane deviation Δ_p Δ_p 0 $\frac{\pm 1.3}{(\pm.051)}$ ead seating plane deviation ΔP_1 P_1 $\frac{3.81}{(.015)}$ $\frac{\pm 0.7}{(\pm.028)}$ ead spacing F F $\frac{5.08}{(.200)}$ $\frac{-0.2/+0.8}{(.008/+.031)}$ leel width w w $\frac{56.0}{(2.20)}$ max.ead spacing d a $\frac{370.0}{(14.57)}$ max. | Tape thickness | t | t | 0.9 | x 7 |
| plice sprocket hole alignment $\frac{4.0}{(.157)}$ $\frac{\pm 0.2}{(\pm.008)}$ ody lateral deviation Δ_h Δ_h 0 $\frac{\pm 1}{(\pm.039)}$ ody tape plane deviation Δ_p Δ_p 0 $\frac{\pm 1.3}{(\pm.051)}$ ead seating plane deviation ΔP_1 P_1 $\frac{3.81}{(.015)}$ $\frac{\pm 0.7}{(\pm.028)}$ ead spacing F F $\frac{5.08}{(.200)}$ $\frac{-0.2/+0.8}{(.008/+.031)}$ teel width w w $\frac{56.0}{(2.20)}$ max.eel diameter d a $\frac{370.0}{(14.57)}$ max. | Tape thickness with splice | | t1 | 2.0 | max. |
| ody lateral deviation Δ_h Δ_h 0 $\frac{\pm 1}{(\pm.039)}$ ody tape plane deviation Δ_p Δ_p Δ_p 0 $\frac{\pm 1.3}{(\pm.051)}$ ead seating plane deviation ΔP_1 P_1 $\frac{3.81}{(015)}$ $\frac{\pm 0.7}{(\pm.028)}$ ead spacing F F F $\frac{5.08}{(.200)}$ $\frac{-0.2/+0.8}{(.008/+.031)}$ eel width w w $\frac{56.0}{(2.20)}$ max.teel diameter d a $\frac{370.0}{(14.57)}$ max.pages between flanges less device $\frac{4.75}{(150)}$ ± 3.25 | Splice sprocket hole alignment | | | 4.0 | |
| ody tape plane deviation Δ_p Δ_p 0 $\frac{\pm 1.3}{(\pm.051)}$ ead seating plane deviation ΔP_1 P_1 $\frac{3.81}{(.015)}$ $\frac{\pm 0.7}{(\pm.028)}$ ead spacing F F $\frac{5.08}{(.200)}$ $\frac{-0.2/+0.8}{(.008/+.031)}$ eel width w w $\frac{56.0}{(2.20)}$ max.teel diameter d a $\frac{370.0}{(14.57)}$ max.page between flanges less device $\frac{4.75}{(1.57)}$ ± 3.25 | Body lateral deviation | Δh | Δ_h | | ±1 |
| ead seating plane deviation ΔP_1 P_1 $\frac{3.81}{(.015)}$ $\frac{\pm 0.7}{(\pm .028)}$ ead spacingFF $\frac{5.08}{(.200)}$ $\frac{-0.2/+0.8}{(.008/+.031)}$ leel widthww $\frac{56.0}{(2.20)}$ max.leel diameterda $\frac{370.0}{(14.57)}$ max.page between flanges less device $\frac{4.75}{(1.57)}$ ± 3.25 | Body tape plane deviation | Δ_{p} | Δ_{p} | 0 | ±1.3 |
| ead spacingF $\frac{5.08}{(.200)}$ $\frac{-0.2/+0.8}{(.008/+.031)}$ leel widthww $\frac{56.0}{(2.20)}$ max.leel diameterda $\frac{370.0}{(14.57)}$ max.page between flanges less device $\frac{4.75}{2}$ ± 3.25 | Lead seating plane deviation | ΔP_1 | P ₁ | | ±0.7 |
| weel widthww $\frac{56.0}{(2.20)}$ max.leel diameterda $\frac{370.0}{(14.57)}$ max.page between flanges less device $\frac{4.75}{2}$ ± 3.25 | Lead spacing | F | F | 5.08 | -0.2/+0.8 |
| da $\frac{370.0}{(14.57)}$ max.page between flanges less device $\frac{4.75}{2}$ ± 3.25 | Reel width | W | W | 56.0 | |
| page between flanges less device $\frac{4.75}{\pm 3.25}$ | Reel diameter | d | а | 370.0 | max. |
| | Space between flanges less device | | | | ±3.25 (±.128) |

MM DIMENSIONS: (INCHES)

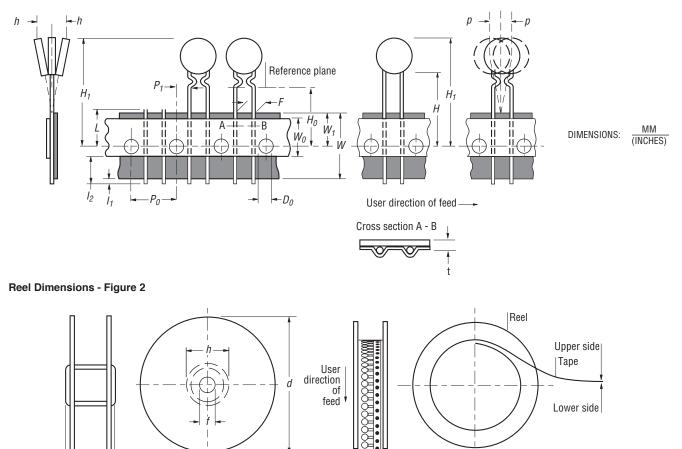
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MF-RG Series Tape and Reel Specifications

BOURNS

| | IEC | EIA | Dimensions | | |
|----------------------------|------|------|---|-------------------------|--|
| Dimension Description | Mark | Mark | Dimensions | Tolerance | |
| Arbor hole diameter | f | С | <u>26.0</u> (1.02) | <u>±12.0</u> (±.472) | |
| Core diameter | h | п | <u>80.0</u> (3.15) | max. | |
| Вох | | | $\frac{64}{(2.50)} \frac{372}{(14.6)} \frac{372}{(14.6)}$ | nom. | |
| Consecutive missing places | | | 3 | max. | |
| Empty places per reel | | | Not specified | | |

Taped Component Dimensions - Figure 1



Specifications are subject to change without notice.

W

Users should verify actual device performance in their specific applications.

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