





Features

- Radial leaded devices
- Cured, flame retardant epoxy polymer insulating material meets UL 94V-0 requirements
- Bulk packaging, tape and reel available
- Resettable circuit protection
- Agency recognition:  
- RoHS compliant*

Applications

- Food blenders, coffee machines
- HVAC
- Electric fans, blowers
- AC adaptors

MF-RM Series - PTC Resettable Fuses

Electrical Characteristics

| Model | Typical Current Trip Limit | | V _{max} | | I _{max} | Initial Resistance | One Hour Post-Trip Resistance | Max. Time to Trip | | Tripped Power Dissipation |
|--------------|----------------------------|----------------------------|-------------------|-------------------|-------------------|----------------------------|-------------------------------|-------------------|--------|---------------------------|
| | I _{hold} at 23 °C | I _{trip} at 23 °C | Operating Voltage | Interrupt Voltage | Interrupt Current | R _{Min.} at 23 °C | R ₁ Max. at 23 °C | at 23 °C | | PD Typ. at 23 °C |
| | (A) | (A) | (Vac) | (Vac) | (A) | (Ohms) | (Ohms) | (A) | (Sec.) | (W) |
| MF-RM005/240 | 0.05 | 0.12 | 240 | 265 | 1.0 | 18.50 | 65.00 | 0.25 | 10.0 | 0.9 |
| MF-RM008/240 | 0.08 | 0.19 | 240 | 265 | 1.2 | 7.40 | 26.00 | 0.40 | 10.0 | 0.9 |
| MF-RM012/240 | 0.12 | 0.30 | 240 | 265 | 1.2 | 3.00 | 12.00 | 0.60 | 15.0 | 1.0 |
| MF-RM016/240 | 0.16 | 0.37 | 240 | 265 | 2.0 | 2.50 | 7.80 | 0.80 | 15.0 | 1.4 |
| MF-RM025/240 | 0.25 | 0.56 | 240 | 265 | 3.5 | 1.30 | 3.80 | 1.25 | 18.5 | 1.5 |
| MF-RM033/240 | 0.33 | 0.74 | 240 | 265 | 4.5 | 0.77 | 2.60 | 1.65 | 21.0 | 1.7 |
| MF-RM040/240 | 0.40 | 0.90 | 240 | 265 | 5.5 | 0.60 | 1.90 | 2.00 | 24.0 | 2.0 |
| MF-RM055/240 | 0.55 | 1.25 | 240 | 265 | 7.0 | 0.45 | 1.45 | 2.75 | 26.0 | 3.4 |

Environmental Characteristics

| | |
|----------------------------|---|
| Operating Temperature..... | -20 °C to +85 °C |
| Humidity Aging..... | +85 °C, 85 % R.H. 1000 hours±20 % typical resistance change |
| Passive Aging..... | +85 °C, 1000 hours.....±20 % typical resistance change |
| Vibration | MIL-STD-883C, Method 2007.1,.....No change Condition A |
| Solvent Resistance..... | MIL-STD-202, Method 215No change |

Test Procedures And Requirements For Model MF-RM Series

| Item | Test Conditions | Accept/Reject Criteria |
|------------------------|---|--|
| Visual/Mechanical..... | Verify dimensions and material..... | Per MF physical description |
| Resistance..... | In still air @ 23 °C..... | R _{min} ≤ R ≤ R _{1max} |
| Time to Trip..... | 240 Vac, specified current | T ≤ max. time to trip |
| Hold Current..... | At I _{hold} | No trip |
| Trip Cycle Life..... | 240 Vac, I _{max} , 100 cycles | No arcing or burning |
| Trip Endurance | a) 240 Vac, I _{max} , 24 hours | No arcing or burning |
| | b) 265 Vac, I _{max} , 30 mins. | |
| Solderability..... | MIL-STD-202, Method 208 | 95 % min. coverage |

UL File Number [E174545](#)
 TÜV Certificate Number [R50232433](#)

*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.

Advantages

- Resettable feature with overtemperature and overcurrent protection can save expensive components from having to be replaced after tripping, e.g., transformers with built in thermal fuses
- Faster than bimetallic switch designs that take on average approximately 30 seconds to cool down and reset
- Generally lower electromagnetic interference than bimetallic switches

Benefits

- Reduced repair and replacement costs
- Reduced nuisance tripping
- Combined overcurrent and overtemperature protector in one device

MF-RM Series - PTC Resettable Fuses

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Thermal Derating Chart - I_{hold} (Amps)

| Model | Ambient Operating Temperature | | | | | | | |
|--------------|-------------------------------|------|-------|-------|-------|-------|-------|-------|
| | -20 °C | 0 °C | 23 °C | 40 °C | 50 °C | 60 °C | 70 °C | 85 °C |
| MF-RM005/240 | 0.08 | 0.06 | 0.05 | 0.04 | 0.04 | 0.03 | 0.03 | 0.02 |
| MF-RM008/240 | 0.12 | 0.10 | 0.08 | 0.07 | 0.06 | 0.05 | 0.04 | 0.03 |
| MF-RM012/240 | 0.18 | 0.15 | 0.12 | 0.10 | 0.09 | 0.07 | 0.06 | 0.04 |
| MF-RM016/240 | 0.24 | 0.20 | 0.16 | 0.13 | 0.11 | 0.10 | 0.08 | 0.05 |
| MF-RM025/240 | 0.38 | 0.32 | 0.25 | 0.21 | 0.18 | 0.15 | 0.13 | 0.09 |
| MF-RM033/240 | 0.50 | 0.42 | 0.33 | 0.27 | 0.23 | 0.20 | 0.17 | 0.11 |
| MF-RM040/240 | 0.61 | 0.51 | 0.40 | 0.33 | 0.28 | 0.24 | 0.20 | 0.14 |
| MF-RM055/240 | 0.80 | 0.68 | 0.55 | 0.46 | 0.40 | 0.35 | 0.29 | 0.22 |

Product Dimensions

| Model | A Max. | B Max. | C | | D Min. | E Max. | Physical Characteristics | | |
|--------------|-----------------|-----------------|----------------|----------------|----------------|----------------|--------------------------|-----------------|----------|
| | | | Nom. | Tol. ± | | | Style | Lead Dia. | Material |
| MF-RM005/240 | 8.3 (0.327) | 12.9 (0.508) | 5.1 (0.201) | 0.7 (0.028) | 7.6 (0.299) | 3.8 (0.150) | 1 | 0.51 (0.020) | Sn/Cu |
| MF-RM008/240 | 8.3 (0.327) | 12.9 (0.508) | 5.1 (0.201) | 0.7 (0.028) | 7.6 (0.299) | 3.8 (0.150) | 1 | 0.51 (0.020) | Sn/Cu |
| MF-RM012/240 | 8.3 (0.327) | 12.9 (0.508) | 5.1 (0.201) | 0.7 (0.028) | 7.6 (0.299) | 3.8 (0.150) | 1 | 0.51 (0.020) | Sn/Cu |
| MF-RM016/240 | 9.9 (0.390) | 13.8 (0.543) | 5.1 (0.201) | 0.7 (0.028) | 7.6 (0.299) | 3.8 (0.150) | 1 | 0.51 (0.020) | Sn/Cu |
| MF-RM025/240 | 10.0 (0.394) | 20.0 (0.787) | 5.1 (0.201) | 0.7 (0.028) | 7.6 (0.299) | 3.8 (0.150) | 2 | 0.65 (0.026) | Sn/Cu |
| MF-RM033/240 | 11.4 (0.449) | 20.0 (0.787) | 5.1 (0.201) | 0.7 (0.028) | 7.6 (0.299) | 3.8 (0.150) | 2 | 0.65 (0.026) | Sn/Cu |
| MF-RM040/240 | 11.5 (0.453) | 20.9 (0.823) | 5.1 (0.201) | 0.7 (0.028) | 7.6 (0.299) | 3.8 (0.150) | 2 | 0.65 (0.026) | Sn/Cu |
| MF-RM055/240 | 14.0 (0.551) | 22.4 (0.882) | 5.1 (0.201) | 0.7 (0.028) | 7.6 (0.299) | 4.1 (0.161) | 2 | 0.81 (0.032) | Sn/Cu |

Packaging options:

BULK: 500 pcs. per bag.

TAPE & REEL: 2000 pcs. per reel (MF-RM005/240~MF-RM040/240); 1000 pcs. per reel (MF-RM055/240)

0.51 (24AWG)

0.65 (22AWG)

0.81 (20AWG)

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

Style 1



Style 2



Typical Part Marking

Represents total content. Layout may vary.



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MF-RM Series - PTC Resettable Fuses

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Typical Time to Trip at 23 °C



- A = MF-RM005/240
- B = MF-RM008/240
- C = MF-RM012/240
- D = MF-RM016/240
- E = MF-RM025/240
- F = MF-RM033/240
- G = MF-RM040/240
- H = MF-RM055/240

How to Order

MF - RM 005 / 240 - 2

Multifuse®
Product Designator

Series
RM = Radial Leaded Component

Hold Current, I_{hold}
005-055 (0.05 Amps - 0.55 Amps)

Operating Voltage, V_{max}
240 = 240 Vac

Packaging Options
- 0 = Bulk Packaging
- 2 = Tape and Reel

*Packaged per EIA486-B

BOURNS®

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MF-RM 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 | $\frac{18}{(.709)}$ | $\frac{-0.5/+1.0}{(-0.02/+0.039)}$ |
| Hold down tape width | W_0 | W_4 | $\frac{11}{(.433)}$ | min. |
| Hold down tape | | | No protrusion | |
| Top distance between tape edges | W_2 | W_6 | $\frac{3}{(.118)}$ | max. |
| Sprocket hole position | W_1 | W_5 | $\frac{9}{(.354)}$ | $\frac{-0.5/+0.75}{(-0.02/+0.03)}$ |
| Sprocket hole diameter | D_0 | D_0 | $\frac{4}{(.157)}$ | $\frac{\pm 0.2}{(\pm 0.079)}$ |
| Abscissa to plane (MF-RM005/240~MF-RM016/240) | H | H | $\frac{18.5}{(.728)}$ | $\frac{\pm 3.0}{(\pm .118)}$ |
| Abscissa to plane (MF-RM025/240~MF-RM055/240) | H_0 | H_0 | $\frac{16}{(.63)}$ | $\frac{\pm 0.5}{(\pm .02)}$ |
| Abscissa to top (MF-RM005/240~MF-RM016/240) | H_1 | H_1 | $\frac{32.2}{(1.268)}$ | max. |
| Abscissa to top (MF-RM025/240~MF-RM055/240) | H_1 | H_1 | $\frac{45.0}{(1.772)}$ | max. |
| Overall width w/lead protrusion (MF-RM005/240~MF-RM016/240) | | C_1 | $\frac{43.2}{(1.701)}$ | max. |
| Overall width w/lead protrusion (MF-RM025/240~MF-RM055/240) | | C_1 | $\frac{56.0}{(2.205)}$ | max. |
| Overall width w/o lead protrusion (MF-RM005/240~MF-RM016/240) | | C_2 | $\frac{42.5}{(1.673)}$ | max. |
| Overall width w/o lead protrusion (MF-RM025/240~MF-RM055/240) | | C_2 | $\frac{56.0}{(2.205)}$ | max. |
| Lead protrusion | l_1 | L_1 | $\frac{1.0}{(.039)}$ | max. |
| Protrusion of cutout | L | L | $\frac{11}{(.433)}$ | max. |
| Protrusion beyond hold-down tape | l_2 | l_2 | Not specified | |
| Sprocket hole pitch | P_0 | P_0 | $\frac{12.7}{(.500)}$ | $\frac{\pm 0.3}{(\pm .012)}$ |
| Pitch tolerance | | | 20 consecutive | $\frac{\pm 1}{(\pm .039)}$ |
| Device pitch (MF-RM005/240-MF-RM040/240) | | | $\frac{12.7}{(.500)}$ | $\frac{\pm 0.3}{(\pm .012)}$ |
| Device pitch (MF-RM055/240) | | | $\frac{25.4}{(1.00)}$ | $\frac{\pm 0.6}{(\pm .024)}$ |
| Tape thickness | t | t | $\frac{0.9}{(.035)}$ | max. |
| Tape thickness with splice (MF-RM005/240~MF-RM040/240) | | t_1 | $\frac{1.5}{(.059)}$ | max. |
| Tape thickness with splice (MF-RM055/240) | | t_1 | $\frac{2.3}{(.091)}$ | max. |
| Splice sprocket hole alignment | | | 0 | $\frac{\pm 0.3}{(\pm .012)}$ |
| Body lateral deviation | Δ_h | Δ_h | 0 | $\frac{\pm 1}{(\pm .039)}$ |
| Body tape plane deviation | Δ_p | Δ_p | 0 | $\frac{\pm 0.3}{(\pm .012)}$ |
| Lead seating plane deviation | ΔP_1 | P_1 | $\frac{3.81}{(.015)}$ | $\frac{\pm 0.7}{(\pm .028)}$ |
| Lead spacing | F | F | $\frac{5.08}{(.200)}$ | $\frac{+0.8/-0.5}{(+.031/-0.020)}$ |

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

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MF-RM Series Tape and Reel Specifications

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| Dimension Description | IEC Mark | EIA Mark | Dimensions | |
|---|----------|-----------------------|---|------------------|
| | | | Dimensions | Tolerance |
| Reel width (MF-RM005/240~MF-RM040/240) | <i>w</i> | <i>w</i> ₂ | 56.0 (2.20) | max. |
| Reel width (MF-RM055/240) | <i>w</i> | <i>w</i> ₂ | 63.5 (2.50) | max. |
| Reel diameter | <i>d</i> | <i>a</i> | 370.0 (14.57) | max. |
| Space between flanges (MF-RM005/240~MF-RM040/240) | <i>h</i> | <i>w</i> ₁ | 48.0 (1.89) | max. |
| Space between flanges (MF-RM055/240) | <i>h</i> | <i>w</i> ₁ | 55.0 (2.17) | max. |
| Arbor hole diameter | <i>f</i> | <i>c</i> | 26.0 (1.02) | ±12.0 (±.472) |
| Core diameter | <i>h</i> | <i>n</i> | 91.0 (3.58) | max. |
| Box | | | 64 (2.5) 372 (14.6) 372 (14.6) | max. |
| Consecutive missing places | | | 3 | max. |
| Empty places per reel | | | 0.1 % | max. |

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

Taped Component Dimensions - Figure 1



Reel Dimensions - Figure 2



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Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

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Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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