




## Features

- Axial/radial leaded
- Fully compatible with current industry standards
- Weldable nickel terminals
- Very low internal resistance
- RoHS compliant\*
- Agency recognition:   

## Applications

Any application that requires extra protection at elevated ambient temperatures, which the 100 °C trip temperature provides.

- Rechargeable battery pack protection
- Cellular phones
- Laptop computers

## MF-LS Series - PTC Resettable Fuses

### Electrical Characteristics

| Model      | V max. Volts | I max. Amps | I <sub>hold</sub> | I <sub>trip</sub> | Initial Resistance |       | 1 Hour (R <sub>1</sub> ) 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-LS100S  | 24           | 100         | 1.0               | 2.5               | 0.070              | 0.130 | 0.260   | 5                 | 7.0              | 1.5                       |
| MF-LS180   | 24           | 100         | 1.8               | 3.8               | 0.040              | 0.068 | 0.120   | 9                 | 2.9              | 2.0                       |
| MF-LS180L  | 24           | 100         | 1.8               | 3.8               | 0.040              | 0.068 | 0.120   | 9                 | 2.9              | 2.0                       |
| MF-LS180S  | 24           | 100         | 1.8               | 3.8               | 0.040              | 0.068 | 0.120   | 9                 | 2.9              | 2.0                       |
| MF-LS190   | 24           | 100         | 1.9               | 4.2               | 0.030              | 0.057 | 0.100   | 10                | 3.0              | 1.9                       |
| MF-LS190RU | 15           | 100         | 1.9               | 4.2               | 0.030              | 0.057 | 0.100   | 10                | 3.0              | 1.9                       |
| MF-LS260   | 24           | 100         | 2.6               | 5.2               | 0.025              | 0.042 | 0.076   | 13                | 5.0              | 2.3                       |
| MF-LS300   | 24           | 100         | 3.0               | 6.3               | 0.015              | 0.031 | 0.055   | 15                | 4.0              | 2.0                       |
| MF-LS340   | 24           | 100         | 3.4               | 6.8               | 0.016              | 0.027 | 0.050   | 17                | 5.0              | 2.7                       |

NOTE: Slotted option available on all models.

### 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..... ±10 % typical resistance change     |
| Humidity Aging.....                | +85 °C, 85% R.H. 7 days..... ±5 % typical resistance change |
| Vibration .....                    | MIL-STD-883C..... No change                                 |
|                                    | Condition A   |

### Test Procedures And Requirements For Model MF-LS Series

| Test                 | Test Conditions                                       | Accept/Reject Criteria                   |
|----------------------|---|--|
| Visual/Mech.....     | Verify dimensions and materials.....                  | Per MF physical description              |
| Resistance.....      | In still air @ 23 °C.....                             | R <sub>min</sub> ≤ R ≤ R <sub>1max</sub> |
| Time to Trip.....    | At specified current, V <sub>max</sub> , 23 °C.....   | T ≤ max. time to trip (seconds)          |
| Hold Current.....    | 30 min. at I <sub>hold</sub> .....                    | No trip                                  |
| Trip Cycle Life..... | V <sub>max</sub> , I <sub>max</sub> , 100 cycles..... | No arcing or burning                     |
| Trip Endurance ..... | V <sub>max</sub> , 48 hours.....                      | No arcing or burning                     |

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

### Thermal Derating Chart - I<sub>hold</sub>/ I<sub>trip</sub> (Amps)

| Model      | Ambient Operating Temperature |             |             |             |             |             |             |             |             |
|------------|-------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|            | -40 °C                        | -20 °C      | 0 °C        | 23 °C       | 40 °C       | 50 °C       | 60 °C       | 70 °C       | 85 °C       |
| MF-LS100S  | 1.80 / 4.50                   | 1.60 / 4.00 | 1.40 / 3.50 | 1.00 / 2.50 | 0.80 / 2.00 | 0.70 / 1.75 | 0.60 / 1.50 | 0.40 / 1.00 | 0.20 / 0.50 |
| MF-LS180   | 3.10 / 6.54                   | 2.60 / 5.49 | 2.20 / 4.64 | 1.80 / 3.80 | 1.30 / 2.74 | 1.10 / 2.32 | 0.90 / 1.90 | 0.60 / 1.27 | 0.20 / 0.42 |
| MF-LS180L  | 3.10 / 6.54                   | 2.60 / 5.49 | 2.20 / 4.64 | 1.80 / 3.80 | 1.30 / 2.74 | 1.10 / 2.32 | 0.90 / 1.90 | 0.60 / 1.27 | 0.20 / 0.42 |
| MF-LS180S  | 3.10 / 6.54                   | 2.60 / 5.49 | 2.20 / 4.64 | 1.80 / 3.80 | 1.30 / 2.74 | 1.10 / 2.32 | 0.90 / 1.90 | 0.60 / 1.27 | 0.20 / 0.42 |
| MF-LS190   | 3.30 / 7.29                   | 2.80 / 6.19 | 2.40 / 5.31 | 1.90 / 4.20 | 1.40 / 3.09 | 1.20 / 2.65 | 1.10 / 2.43 | 0.70 / 1.55 | 0.40 / 0.88 |
| MF-LS190RU | 3.30 / 7.29                   | 2.80 / 6.19 | 2.40 / 5.31 | 1.90 / 4.20 | 1.40 / 3.09 | 1.20 / 2.65 | 1.10 / 2.43 | 0.70 / 1.55 | 0.40 / 0.88 |
| MF-LS260   | 4.30 / 8.60                   | 3.70 / 7.40 | 3.10 / 6.20 | 2.60 / 5.20 | 1.90 / 3.80 | 1.60 / 3.20 | 1.40 / 2.80 | 1.10 / 2.20 | 0.60 / 1.20 |
| MF-LS300   | 5.10 / 10.7                   | 4.40 / 9.24 | 3.70 / 7.77 | 3.00 / 6.30 | 2.30 / 4.83 | 1.90 / 3.99 | 1.60 / 3.36 | 1.20 / 2.52 | 0.60 / 1.26 |
| MF-LS340   | 5.50 / 11.0                   | 4.70 / 9.40 | 4.00 / 8.00 | 3.40 / 6.80 | 2.60 / 5.20 | 2.20 / 4.40 | 1.90 / 3.80 | 1.50 / 3.00 | 0.80 / 1.60 |

\*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.

# MF-LS Series - PTC Resettable Fuses

**BOURNS®**

## Product Dimensions

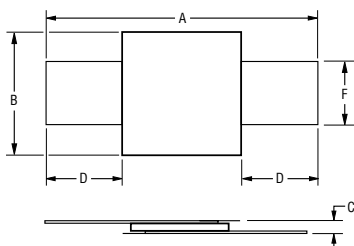
| Model      | A               |                 | B               |                 | C              |                 | D              |                | F              |                | Pkg. Style |
|------------|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|----------------|----------------|----------------|----------------|------------|
|            | Min.            | Max.            | Min.            | Max.            | Min.           | Max.            | Min.           | Max.           | Min.           | Max.           |            |
| MF-LS100S  | 20.9<br>(0.823) | 23.1<br>(0.909) | 4.9<br>(0.193)  | 5.2<br>(0.205)  | 0.6<br>(0.024) | 1.0<br>(0.039)  | 4.1<br>(0.161) | 5.5<br>(0.217) | 3.8<br>(0.150) | 4.1<br>(0.161) | S          |
| MF-LS180   | 24.0<br>(0.945) | 26.0<br>(1.024) | 4.9<br>(0.193)  | 5.2<br>(0.205)  | 0.6<br>(0.024) | 1.0<br>(0.039)  | 4.1<br>(0.161) | 5.5<br>(0.217) | 3.8<br>(0.150) | 4.1<br>(0.161) | Std.       |
| MF-LS180L  | 35.0<br>(1.38)  | 37.5<br>(1.48)  | 4.9<br>(0.193)  | 5.6<br>(0.22)   | 0.6<br>(0.024) | 1.0<br>(0.039)  | 9.6<br>(0.38)  | 10.0<br>(0.40) | 3.8<br>(0.150) | 4.2<br>(0.17)  | Std.       |
| MF-LS180S  | 24.0<br>(0.945) | 26.0<br>(1.024) | 4.9<br>(0.193)  | 5.2<br>(0.205)  | 0.6<br>(0.024) | 1.0<br>(0.039)  | 4.1<br>(0.161) | 5.5<br>(0.217) | 3.8<br>(0.150) | 4.1<br>(0.161) | S          |
| MF-LS190   | 21.3<br>(0.839) | 23.4<br>(0.921) | 10.2<br>(0.402) | 11.0<br>(0.433) | 0.5<br>(0.020) | 1.1<br>(0.043)  | 5.0<br>(0.197) | 7.6<br>(0.299) | 4.8<br>(0.189) | 5.4<br>(0.213) | Std.       |
| MF-LS190RU | 19.8<br>(0.780) | 20.8<br>(0.819) | 13.3<br>(0.524) | 14.3<br>(0.563) | 0.4<br>(0.016) | 0.76<br>(0.030) | 8.1<br>(0.319) | 9.5<br>(0.374) | 3.8<br>(0.150) | 4.1<br>(0.161) | RU         |
| MF-LS260   | 24.0<br>(0.945) | 26.0<br>(1.024) | 10.8<br>(0.425) | 11.9<br>(0.469) | 0.6<br>(0.024) | 1.0<br>(0.039)  | 5.0<br>(0.197) | 7.0<br>(0.276) | 5.9<br>(0.232) | 6.1<br>(0.240) | Std.       |
| MF-LS300   | 28.4<br>(1.118) | 31.8<br>(1.252) | 13.0<br>(0.512) | 13.5<br>(0.531) | 0.5<br>(0.020) | 1.1<br>(0.043)  | 6.3<br>(0.248) | 8.9<br>(0.350) | 6.0<br>(0.236) | 6.6<br>(0.260) | Std.       |
| MF-LS340   | 24.0<br>(0.945) | 26.0<br>(1.024) | 14.8<br>(0.583) | 15.9<br>(0.626) | 0.6<br>(0.024) | 1.0<br>(0.039)  | 4.0<br>(0.158) | 5.0<br>(0.197) | 6.0<br>(0.236) | 6.1<br>(0.240) | Std.       |

Packaging: Bulk - 500 pcs. per bag.  
Tape and Reel - Consult factory.

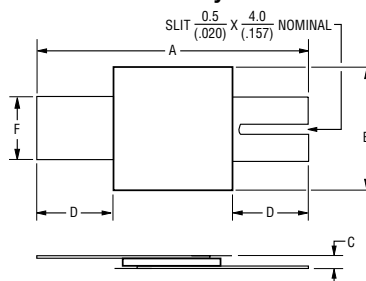
NOTE: Longer lead option available. Consult factory.

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

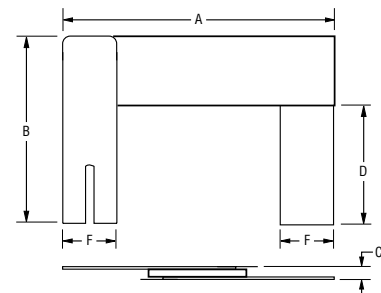
Standard Style



"S" Style



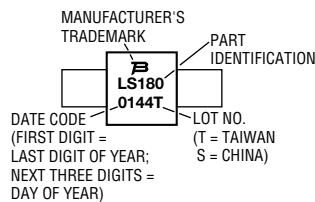
"RU" Style



Terminal material: quarter-hard nickel

## Typical Part Marking

Represents total content. Layout may vary.



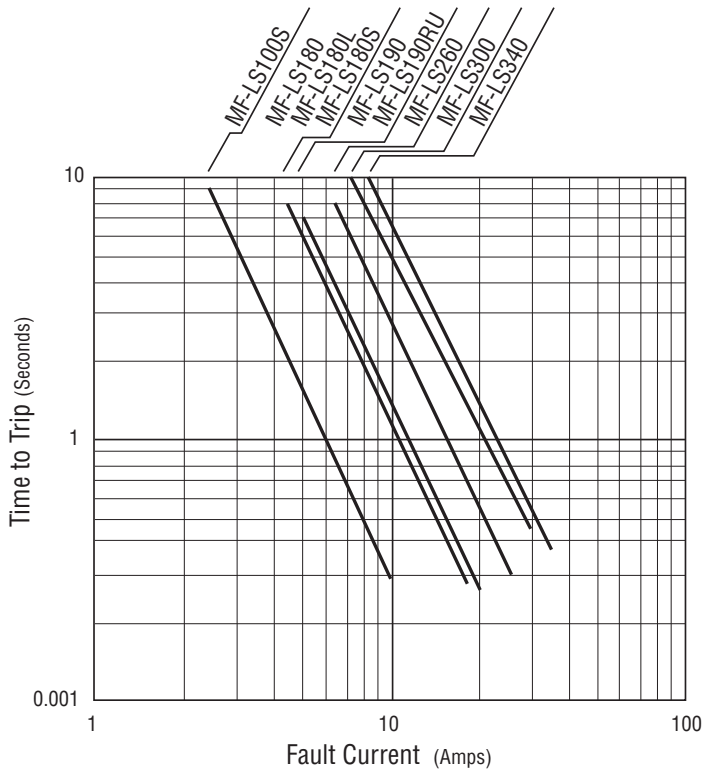
Specifications are subject to change without notice. Customers should verify actual device performance in their specific applications.

# MF-LS Series - PTC Resettable Fuses

**BOURNS®**

## Typical Time to Trip at 23 °C

MF-LS models offer trip temperatures lower than MF-S models for extra protection at elevated temperatures.



## How to Order

**MF - LS 100 S -**

Multifuse® Product Designator \_\_\_\_\_

Series \_\_\_\_\_  
 LS = Axial Leaded "Strap" Component

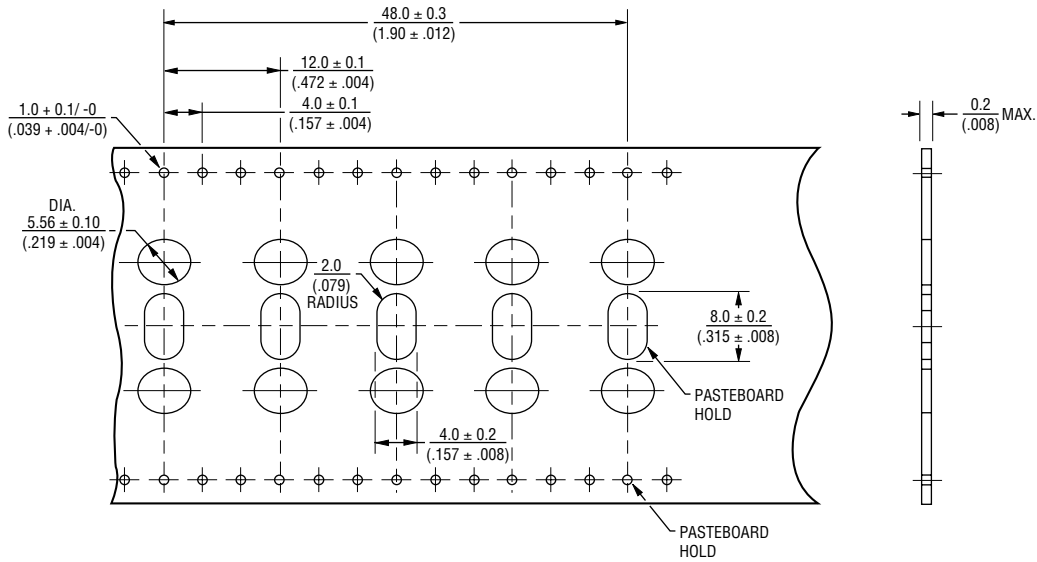
Hold Current,  $I_{hold}$  \_\_\_\_\_  
 100-340 (1.0 Amps - 3.40 Amps)

Lead Option \_\_\_\_\_  
 S = Slotted Lead Option  
 RU = Radial Lead Option

Packaging Options \_\_\_\_\_  
 - = Bulk Packaging  
 - 2 = Tape and Reel\*

\*Packaged per EIA486-B

**Taped Component Dimensions**



**Reel Dimensions**



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

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.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

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.



Тел: +7 (812) 336 43 04 (многоканальный)  
Email: [org@lifeelectronics.ru](mailto:org@lifeelectronics.ru)