



Features

- Axial leaded
- Fully compatible with current industry standards
- Weldable nickel terminals
- Very low internal resistance
- Operating currents to 9.0 amps
- RoHS compliant*

Agency recognition:

Applications

Any application that requires protection at low resistances:

- Rechargeable battery pack protection
- Cellular phones
- Laptop computers

MF-LR 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-LR190 | 15 | 100 | 1.90 | 3.90 | 0.039 | 0.072 | 0.102 | 9.5 | 5.0 | 1.2 |
| MF-LR190S | 15 | 100 | 1.90 | 3.90 | 0.039 | 0.072 | 0.102 | 9.5 | 5.0 | 1.2 |
| MF-LR260 | 15 | 100 | 2.60 | 5.80 | 0.020 | 0.042 | 0.083 | 13.0 | 5.0 | 1.3 |
| MF-LR260S | 15 | 100 | 2.60 | 5.80 | 0.020 | 0.042 | 0.083 | 13.0 | 5.0 | 1.3 |
| MF-LR380 | 15 | 100 | 3.80 | 8.30 | 0.013 | 0.026 | 0.037 | 19.0 | 5.0 | 2.5 |
| MF-LR450 | 16 | 100 | 4.50 | 8.90 | 0.011 | 0.020 | 0.028 | 22.5 | 5.0 | 1.4 |
| MF-LR550 | 10 | 100 | 5.50 | 10.50 | 0.009 | 0.019 | 0.022 | 27.5 | 5.0 | 1.4 |
| MF-LR600 | 10 | 100 | 6.00 | 11.70 | 0.007 | 0.014 | 0.019 | 30.0 | 5.0 | 2.8 |
| MF-LR730 | 10 | 100 | 7.30 | 14.10 | 0.006 | 0.012 | 0.015 | 30.0 | 5.0 | 3.0 |
| MF-LR730/20** | 20 | 100 | 7.30 | 14.10 | 0.006 | 0.012 | 0.015 | 30.0 | 5.0 | 3.0 |
| MF-LR900/20** | 20 | 100 | 9.00 | 16.70 | 0.006 | 0.010 | 0.014 | 45.0 | 5.0 | 3.0 |

** TÜV recognition and UL approval pending.

Environmental Characteristics

| | |
|---|--|
| Operating/Storage Temperature | -40 °C to +85 °C |
| Maximum Device Surface Temperature in Tripped State | 125 °C |
| Passive Aging | +70 °C, 1000 hours..... ±10 % typical resistance change |
| Humidity Aging | +85 °C, 85% R.H. 7 days..... ±10 % typical resistance change |
| Vibration | MIL-STD-883C, Condition A..... No change |

Test Procedures And Requirements For Model MF-LR Series

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

| Model | Ambient Operating Temperature | | | | | | | | |
|-------------|-------------------------------|--------|------|-------|-------|-------|-------|-------|-------|
| | -40 °C | -20 °C | 0 °C | 23 °C | 40 °C | 50 °C | 60 °C | 70 °C | 85 °C |
| MF-LR190 | 2.8 | 2.5 | 2.3 | 1.9 | 1.6 | 1.5 | 1.4 | 1.2 | 1.0 |
| MF-LR190S | 2.8 | 2.5 | 2.3 | 1.9 | 1.6 | 1.5 | 1.4 | 1.2 | 1.0 |
| MF-LR260 | 3.8 | 3.4 | 3.1 | 2.6 | 2.2 | 2.0 | 1.9 | 1.7 | 1.4 |
| MF-LR260S | 3.8 | 3.4 | 3.1 | 2.6 | 2.2 | 2.0 | 1.9 | 1.7 | 1.4 |
| MF-LR380 | 5.5 | 4.9 | 4.4 | 3.8 | 3.3 | 3.0 | 2.8 | 2.5 | 2.1 |
| MF-LR450 | 6.5 | 5.8 | 5.3 | 4.5 | 3.9 | 3.6 | 3.3 | 2.9 | 2.5 |
| MF-LR550 | 8.0 | 7.1 | 6.2 | 5.5 | 4.7 | 4.3 | 4.0 | 3.6 | 3.0 |
| MF-LR600 | 8.7 | 7.8 | 7.1 | 6.0 | 5.2 | 4.7 | 4.4 | 3.9 | 3.3 |
| MF-LR730 | 10.5 | 9.5 | 8.6 | 7.3 | 7.4 | 6.8 | 6.2 | 5.5 | 4.5 |
| MF-LR730/20 | 10.5 | 9.5 | 8.6 | 7.3 | 7.4 | 6.8 | 6.2 | 5.5 | 4.5 |
| MF-LR900/20 | 12.7 | 11.4 | 10.0 | 9.0 | 7.5 | 6.8 | 6.2 | 5.5 | 4.5 |

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-LR Series - PTC Resettable Fuses

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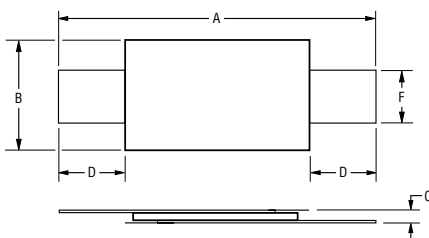
Product Dimensions

| Model | A | | B | | C | | D | | F | | Pkg. Style |
|-------------|-----------------|-----------------|-----------------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------|
| | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | |
| MF-LR190 | 19.9 (0.783) | 22.1 (0.870) | 4.9 (0.193) | 5.2 (0.205) | 0.6 (0.024) | 1.0 (0.039) | 5.5 (0.217) | 7.5 (0.295) | 3.9 (0.154) | 4.1 (0.161) | Std. |
| MF-LR190S | 19.9 (0.783) | 22.1 (0.870) | 4.9 (0.193) | 5.2 (0.205) | 0.6 (0.024) | 1.0 (0.039) | 5.5 (0.217) | 7.5 (0.295) | 3.9 (0.154) | 4.1 (0.161) | S |
| MF-LR260 | 20.9 (0.823) | 23.1 (0.909) | 4.9 (0.193) | 5.2 (0.205) | 0.6 (0.024) | 1.0 (0.039) | 4.1 (0.161) | 5.5 (0.217) | 3.9 (0.154) | 4.1 (0.161) | Std. |
| MF-LR260S | 20.9 (0.823) | 23.1 (0.909) | 4.9 (0.193) | 5.2 (0.205) | 0.6 (0.024) | 1.0 (0.039) | 4.1 (0.161) | 5.5 (0.217) | 3.9 (0.154) | 4.1 (0.161) | S |
| MF-LR380 | 24.0 (0.945) | 26.0 (1.024) | 6.9 (0.272) | 7.5 (0.295) | 0.6 (0.024) | 1.0 (0.039) | 4.1 (0.161) | 5.5 (0.217) | 4.9 (0.193) | 5.1 (0.201) | Std. |
| MF-LR450 | 24.0 (0.945) | 26.0 (1.024) | 9.9 (0.390) | 10.5 (0.414) | 0.6 (0.024) | 1.0 (0.039) | 5.3 (0.209) | 6.7 (0.264) | 5.9 (0.232) | 6.1 (0.240) | Std. |
| MF-LR550 | 35.0 (1.378) | 37.0 (1.457) | 6.9 (0.272) | 7.5 (0.295) | 0.6 (0.024) | 1.0 (0.039) | 5.3 (0.209) | 6.7 (0.264) | 4.9 (0.193) | 5.1 (0.201) | Std. |
| MF-LR600 | 24.0 (0.945) | 26.0 (1.024) | 13.9 (0.547) | 15.9 (0.626) | 0.6 (0.024) | 1.0 (0.039) | 4.1 (0.161) | 5.5 (0.217) | 5.9 (0.232) | 6.1 (0.240) | Std. |
| MF-LR730 | 30.0 (1.18) | 29.1 (1.146) | 13.9 (0.547) | 15.0 (0.590) | 0.6 (0.024) | 1.0 (0.039) | 4.1 (0.161) | 5.5 (0.217) | 5.9 (0.232) | 6.1 (0.240) | Std. |
| MF-LR730/20 | 27.1 (1.067) | 29.1 (1.146) | 13.9 (0.547) | 14.5 (0.571) | 0.6 (0.024) | 1.0 (0.039) | 4.1 (0.161) | 5.5 (0.217) | 5.9 (0.232) | 6.1 (0.240) | Std. |
| MF-LR900/20 | 45.4 (1.787) | 47.6 (1.874) | 7.9 (0.311) | 8.5 (0.335) | 0.6 (0.024) | 1.3 (0.051) | 4.6 (0.181) | 9.2 (0.362) | 5.9 (0.232) | 6.1 (0.240) | Std. |

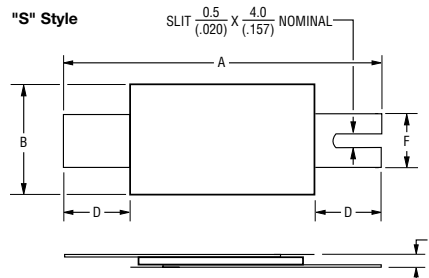
Packaging: Bulk - 500 pcs. per bag.
Tape and Reel - Consult factory.

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

Standard Style

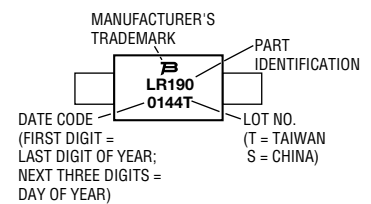


"S" Style



Typical Part Marking

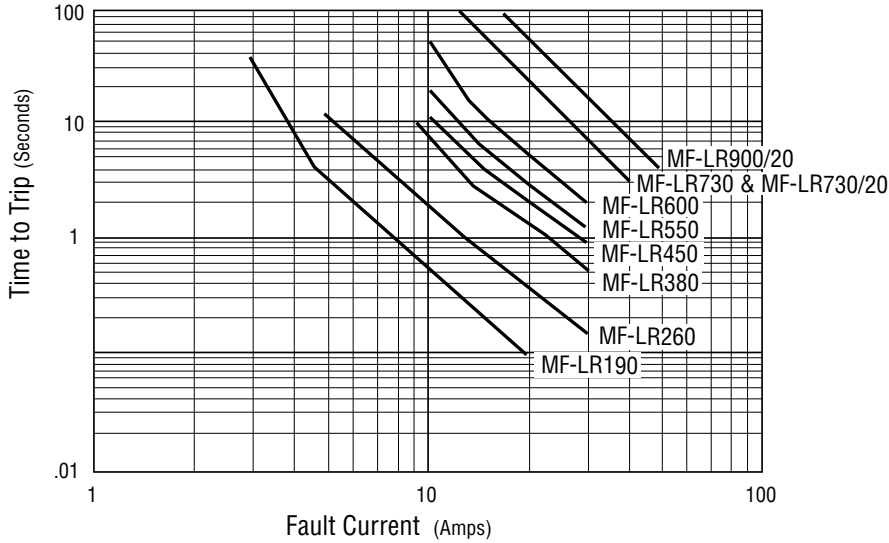
Represents total content. Layout may vary.



MF-LR Series - PTC Resettable Fuses

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Typical Time to Trip at 23 °C



How to Order

MF - LR 730/20 S - 0

Multifuse® Product Designator _____

Series _____
 LR = Axial Leaded "Strap" Component

Hold Current, I_{hold}/V_{max}^* _____
 190-900 (1.90 Amps - 9.00 Amps)

Lead Option _____
 S = Slotted Lead Option

Packaging Options _____

- __ = Bulk Packaging Designator for Models MF-LR190 through MF-LR730
- 0 = Bulk Packaging Designator for Models MF-LR730/20 and MF-LR900/20
- 2 = Tape and Reel***

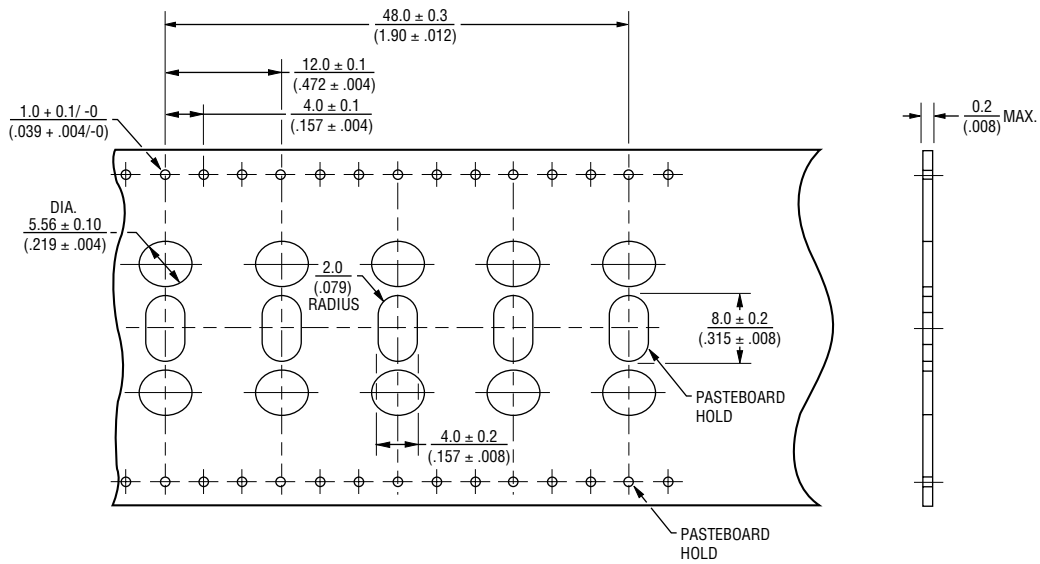
* V_{max} entry applies only to Models MF-LR730/20 & MF-LR900/20.

**Slotted Lead Option applies only to Models MF-LR190 & MF-LR260.

***Packaged per EIA 486-B

MF-S, MF-LS, MF-LR and MF-VS Series Tape and Reel Specifications **BOURNS®**

Taped Component Dimensions



Reel Dimensions

