

## Features

- Axial leaded
- 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 <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	Ohms at 23 °C	Amperes at 23 °C	Seconds at 23 °C	Watts at 23 °C	
			Hold	Trip	Min.	Max.						Max.
MF-LR190	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-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-LR550/20	20	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		

### Environmental Characteristics

Operating/Storage Temperature .....	-40 °C to +85 °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 <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

cUL File Number..... E174545  
 TÜV File Number..... R2057213

### Thermal Derating Chart - I<sub>hold</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-LR190	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-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-LR550/20	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<sub>trip</sub> is approximately two times I<sub>hold</sub>.



**WARNING Cancer and Reproductive Harm - [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)**

\*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. Users should verify actual device performance in their specific applications.

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# MF-LR Series - PTC Resettable Fuses

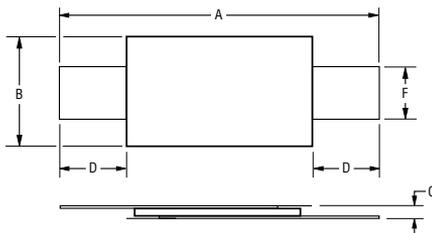
**BOURNS®**

## Product Dimensions

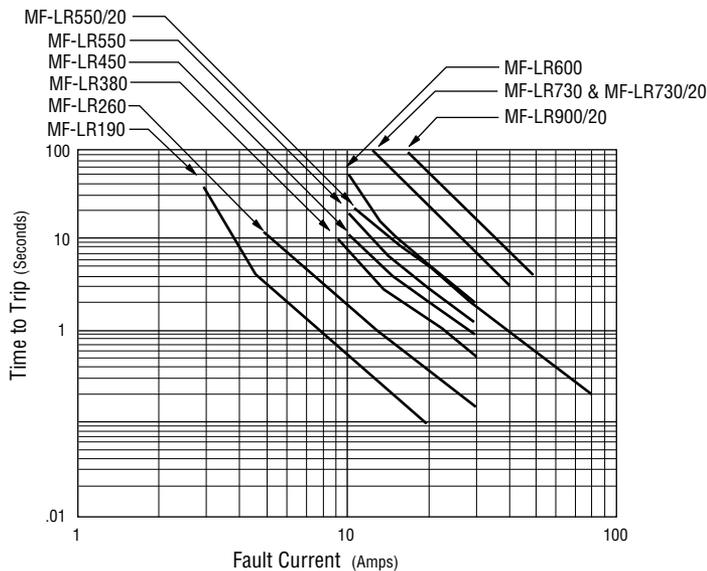
Model	A		B		C		D		F	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
MF-LR190	19.9 (0.783)	22.1 (0.870)	4.9 (0.193)	5.2 (0.205)	0.6 (0.024)	1.0 (0.039)	5.5 (0.217)	7.5 (0.295)	3.9 (0.154)	4.1 (0.161)
MF-LR260	20.9 (0.823)	23.1 (0.909)	4.9 (0.193)	5.2 (0.205)	0.6 (0.024)	1.0 (0.039)	4.1 (0.161)	5.5 (0.217)	3.9 (0.154)	4.1 (0.161)
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)
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)
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)
MF-LR550/20	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)
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)
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)
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)
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)

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

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

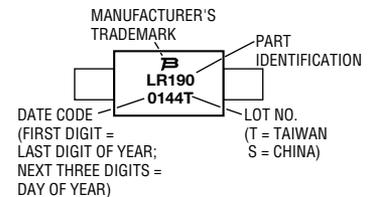


## Typical Time to Trip at 23 °C



## Typical Part Marking

Represents total content. Layout may vary.



## How to Order

**MF - LR 730/20 - 0**

Multifuse® Product Designator

Series LR = Axial Leaded "Strap" Component

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

Packaging Options

- = Bulk Packaging Designator for Models MF-LR190 through MF-LR730
- 0 = Bulk Packaging Designator for Models MF-LR550/20, MF-LR730/20 and MF-LR900/20

\* $V_{max}$  entry applies only to Models MF-LR550/20, MF-LR730/20 & MF-LR900/20.

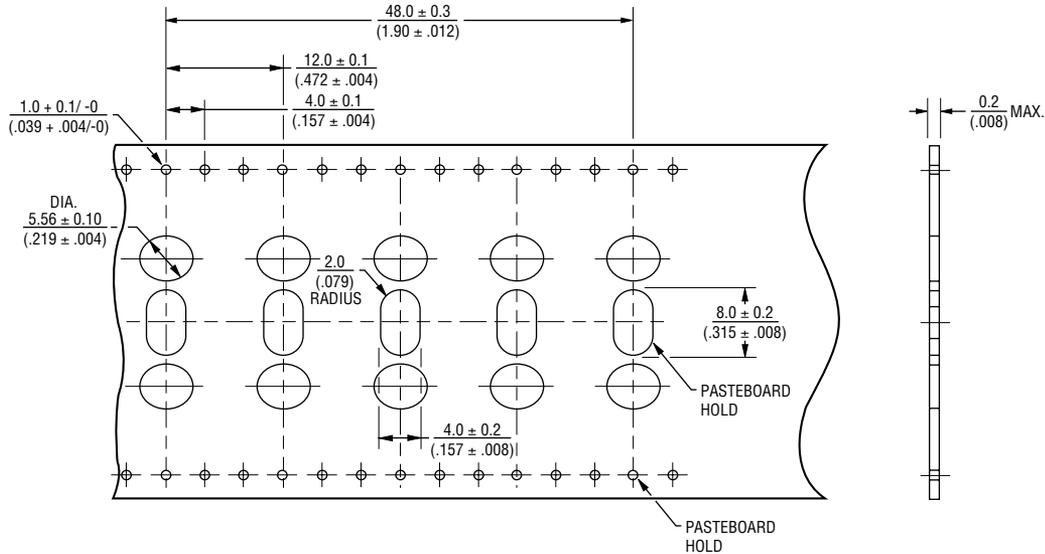
\*\*Packaged per EIA 486-B

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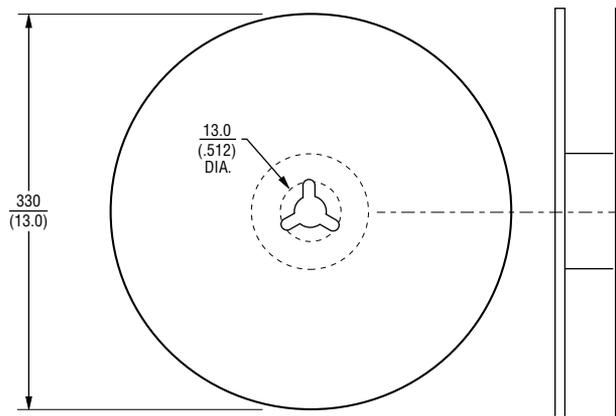
# MF-S, MF-LS, MF-LR\* and MF-VS Series Tape and Reel Specifications



## Taped Component Dimensions



## Reel Dimensions



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

\*Bulk packaging is standard for Model MF-LR Series; consult factory for tape and reel option.

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