



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:   



The slotted lead option is currently available but not recommended for new designs.

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,..... No change
Condition A	

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.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.

Applications

Any application that requires protection at low resistances:

- Rechargeable battery pack protection
- Cellular phones
- Laptop computers

MF-LR Series - PTC Resettable Fuses

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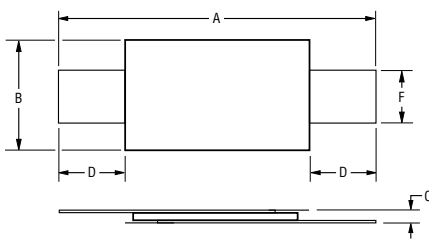
Product Dimensions

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.

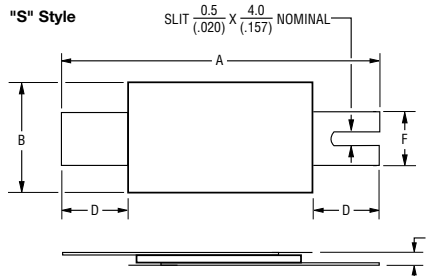
Packaging: Bulk - 500 pcs. per bag.
Tape and Reel - Consult factory.

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

Standard Style

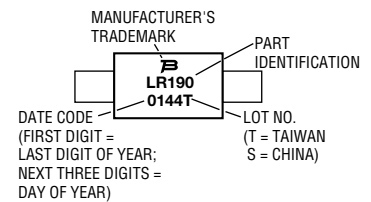


"S" Style



Typical Part Marking

Represents total content. Layout may vary.



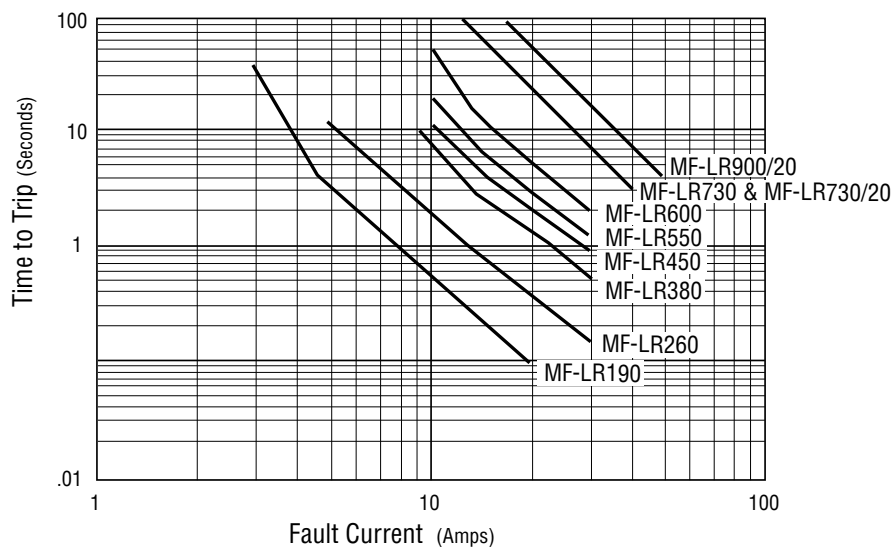
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MF-LR Series - PTC Resettable Fuses

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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.

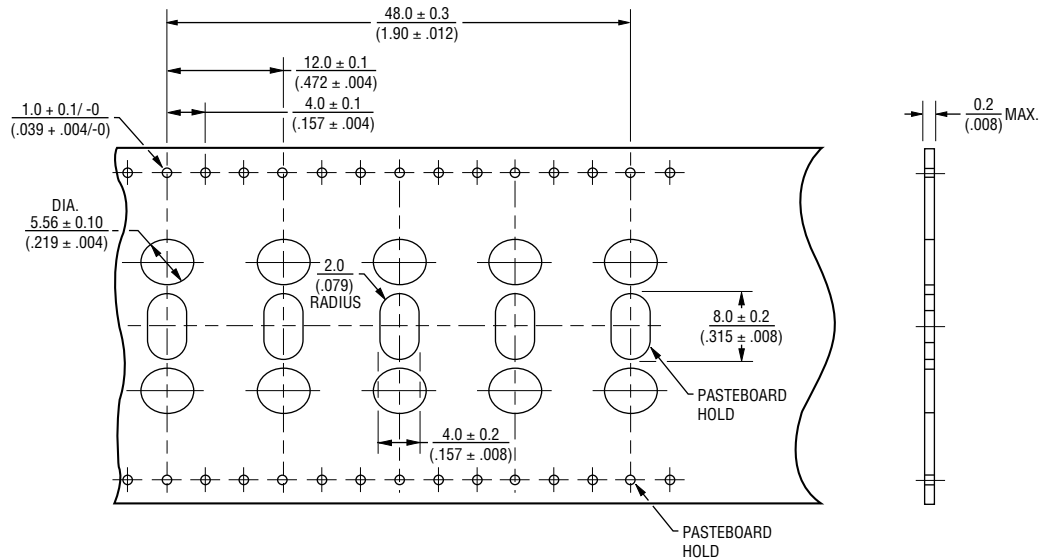
**Slotted Lead Option applies only to Models MF-LR190 & MF-LR260. This option is currently available but not recommended for new designs.

***Packaged per EIA 486-B

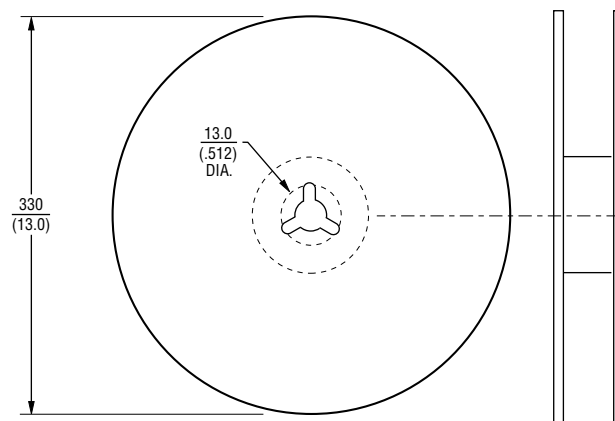
MF-S, MF-LS, MF-LR and MF-VS Series Tape and Reel Specifications

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Taped Component Dimensions



Reel Dimensions



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

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