


*RoHS COMPLIANT



BOURNS®

Features

- Axial/radial leaded
- Fully compatible with current industry standards
- Weldable nickel terminals
- Very low internal resistance
- RoHS compliant*, lead free
- 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 _{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-LS070	15	100	0.7	1.5	0.100	0.200	0.340	3.5	5.0	1.0
MF-LS070S	15	100	0.7	1.5	0.100	0.200	0.340	3.5	5.0	1.0
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 State125 °C
 Passive Aging.....+85 °C, 1000 hours±10 % typical resistance change
 Humidity Aging.....+85 °C, 85 % R.H. 7 days±5 % typical resistance change
 VibrationMIL-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 _{min} ≤ R ≤ R ₁ max
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 NumberE 174545S
 CSA File NumberCA 110338
 TÜV File NumberR2057213

Thermal Derating Chart - I_{hold} / I_{trip} (Amps)

Model	Ambient Operating Temperature								
	-40 °C	-20 °C	0 °C	23 °C	40 °C	50 °C	60 °C	70 °C	85 °C
MF-LS070	1.20 / 2.57	1.09 / 2.33	0.85 / 1.82	0.70 / 1.50	0.50 / 1.07	0.45 / 0.96	0.35 / 0.75	0.28 / 0.60	0.16 / 0.34
MF-LS070S	1.20 / 2.57	1.09 / 2.33	0.85 / 1.82	0.70 / 1.50	0.50 / 1.07	0.45 / 0.96	0.35 / 0.75	0.28 / 0.60	0.16 / 0.34
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.

Additional Features

- Patents pending

MF-LS Series - PTC Resettable Fuses

BOURNS®

Product Dimensions

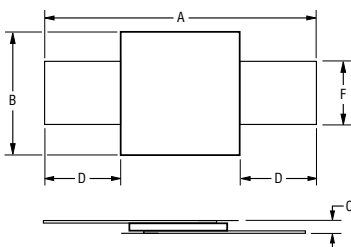
Model	A		B		C		D		F		Pkg. Style
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
MF-LS070	$\frac{19.9}{(0.783)}$	$\frac{22.1}{(0.870)}$	$\frac{4.9}{(0.193)}$	$\frac{5.2}{(0.205)}$	$\frac{0.7}{(0.028)}$	$\frac{1.2}{(0.047)}$	$\frac{5.5}{(0.217)}$	$\frac{7.5}{(0.295)}$	$\frac{3.8}{(0.150)}$	$\frac{4.1}{(0.161)}$	Std.
MF-LS070S	$\frac{19.9}{(0.783)}$	$\frac{22.1}{(0.870)}$	$\frac{4.9}{(0.193)}$	$\frac{5.2}{(0.205)}$	$\frac{0.7}{(0.028)}$	$\frac{1.2}{(0.047)}$	$\frac{5.5}{(0.217)}$	$\frac{7.5}{(0.295)}$	$\frac{3.9}{(0.154)}$	$\frac{4.1}{(0.161)}$	S
MF-LS100S	$\frac{20.9}{(0.823)}$	$\frac{23.1}{(0.909)}$	$\frac{4.9}{(0.193)}$	$\frac{5.2}{(0.205)}$	$\frac{0.6}{(0.024)}$	$\frac{1.0}{(0.039)}$	$\frac{4.1}{(0.161)}$	$\frac{5.5}{(0.217)}$	$\frac{3.8}{(0.150)}$	$\frac{4.1}{(0.161)}$	S
MF-LS180	$\frac{24.0}{(0.945)}$	$\frac{26.0}{(1.024)}$	$\frac{4.9}{(0.193)}$	$\frac{5.2}{(0.205)}$	$\frac{0.6}{(0.024)}$	$\frac{1.0}{(0.039)}$	$\frac{4.1}{(0.161)}$	$\frac{5.5}{(0.217)}$	$\frac{3.8}{(0.150)}$	$\frac{4.1}{(0.161)}$	Std.
MF-LS180L	$\frac{35.0}{(1.38)}$	$\frac{37.5}{(1.48)}$	$\frac{4.9}{(0.193)}$	$\frac{5.6}{(0.22)}$	$\frac{0.6}{(0.024)}$	$\frac{1.0}{(0.039)}$	$\frac{9.6}{(0.38)}$	$\frac{10.0}{(0.40)}$	$\frac{3.8}{(0.150)}$	$\frac{4.2}{(0.17)}$	Std.
MF-LS180S	$\frac{24.0}{(0.945)}$	$\frac{26.0}{(1.024)}$	$\frac{4.9}{(0.193)}$	$\frac{5.2}{(0.205)}$	$\frac{0.6}{(0.024)}$	$\frac{1.0}{(0.039)}$	$\frac{4.1}{(0.161)}$	$\frac{5.5}{(0.217)}$	$\frac{3.8}{(0.150)}$	$\frac{4.1}{(0.161)}$	S
MF-LS190	$\frac{21.3}{(0.839)}$	$\frac{23.4}{(0.921)}$	$\frac{10.2}{(0.402)}$	$\frac{11.0}{(0.433)}$	$\frac{0.5}{(0.020)}$	$\frac{1.1}{(0.043)}$	$\frac{5.0}{(0.197)}$	$\frac{7.6}{(0.299)}$	$\frac{4.8}{(0.189)}$	$\frac{5.4}{(0.213)}$	Std.
MF-LS190RU	$\frac{19.8}{(0.780)}$	$\frac{20.8}{(0.819)}$	$\frac{13.3}{(0.524)}$	$\frac{14.3}{(0.563)}$	$\frac{0.4}{(0.016)}$	$\frac{0.76}{(0.030)}$	$\frac{8.1}{(0.319)}$	$\frac{9.5}{(0.374)}$	$\frac{3.8}{(0.150)}$	$\frac{4.1}{(0.161)}$	RU
MF-LS260	$\frac{24.0}{(0.945)}$	$\frac{26.0}{(1.024)}$	$\frac{10.8}{(0.425)}$	$\frac{11.9}{(0.469)}$	$\frac{0.6}{(0.024)}$	$\frac{1.0}{(0.039)}$	$\frac{5.0}{(0.197)}$	$\frac{7.0}{(0.276)}$	$\frac{5.9}{(0.232)}$	$\frac{6.1}{(0.240)}$	Std.
MF-LS300	$\frac{28.4}{(1.118)}$	$\frac{31.8}{(1.252)}$	$\frac{13.0}{(0.512)}$	$\frac{13.5}{(0.531)}$	$\frac{0.5}{(0.020)}$	$\frac{1.1}{(0.043)}$	$\frac{6.3}{(0.248)}$	$\frac{8.9}{(0.350)}$	$\frac{6.0}{(0.236)}$	$\frac{6.6}{(0.260)}$	Std.
MF-LS340	$\frac{24.0}{(0.945)}$	$\frac{26.0}{(1.024)}$	$\frac{14.8}{(0.583)}$	$\frac{15.9}{(0.626)}$	$\frac{0.6}{(0.024)}$	$\frac{1.0}{(0.039)}$	$\frac{4.0}{(0.158)}$	$\frac{5.0}{(0.197)}$	$\frac{6.0}{(0.236)}$	$\frac{6.1}{(0.240)}$	Std.

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

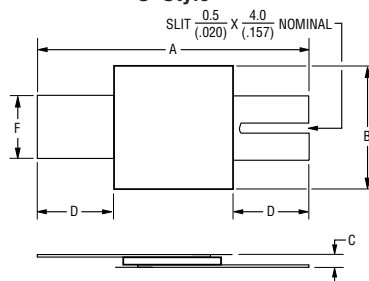
NOTE: Longer lead option available. Consult factory.

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

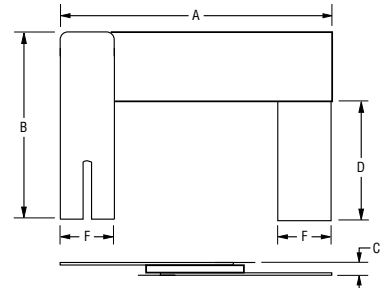
Standard Style



S Style



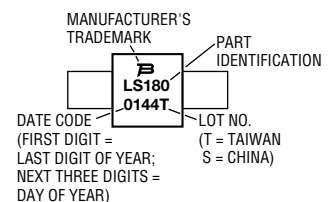
RU Style



Terminal material: quarter-hard nickel

Typical Part Marking

Represents total content. Layout may vary.



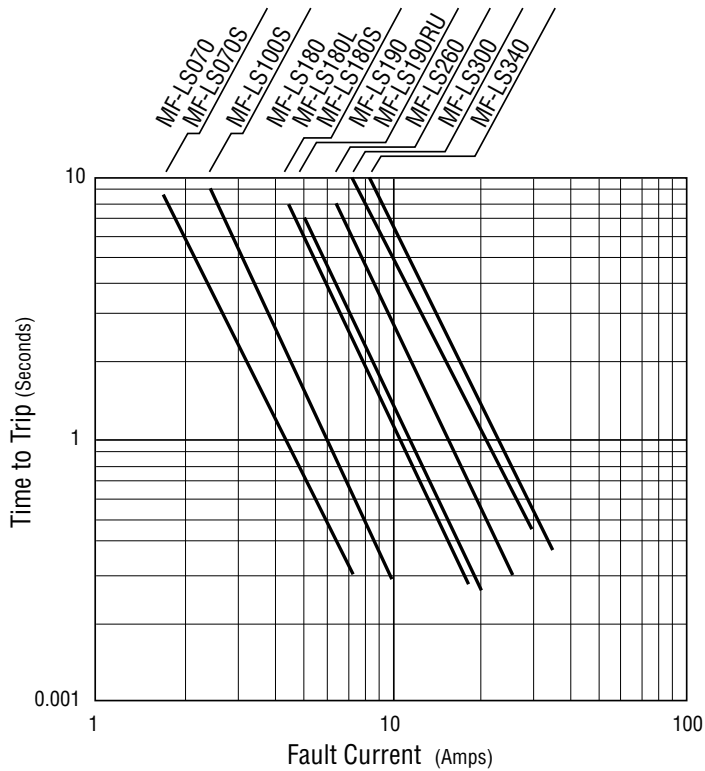
Specifications are subject to change without notice.
Customers should verify actual device performance in their specific applications.

MF-LS Series - PTC Resettable Fuses

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Typical Time to Trip at 23 °C

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

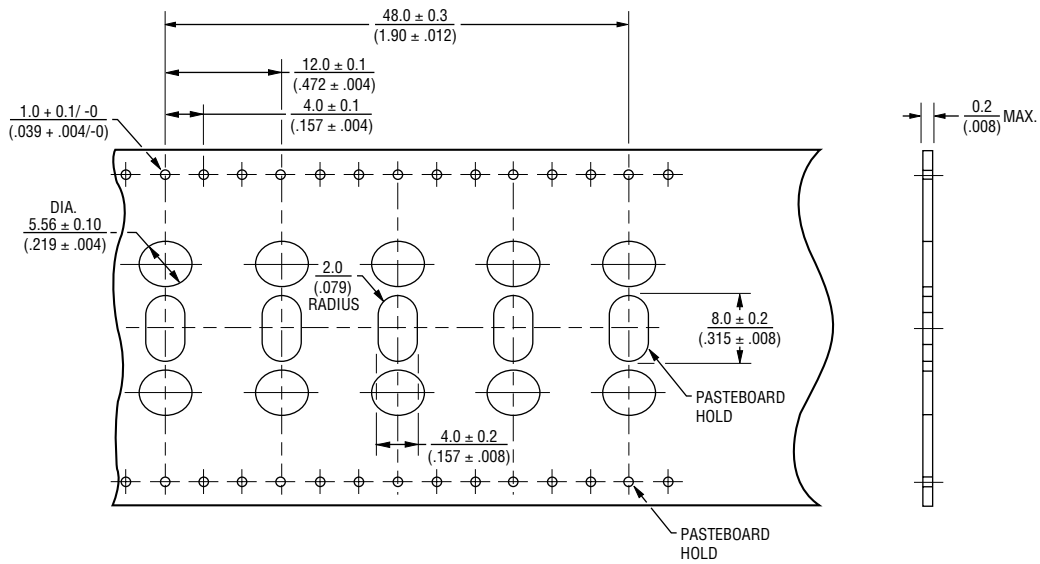


How To Order

MF - LS 100 S -
 Multifuse® Product Designator _____
 Series _____
 LS = Axial Leaded "Strap" Component
 Hold Current, I_{hold} _____
 70-340 (0.70 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

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

Taped Component Dimensions



Reel Dimensions

