


Features

- Ultra-low resistance
- Small size
- Alternative shapes and sizes available on request
- Agency recognition 
- RoHS compliant*

Applications

- Battery packs

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MF-LL Series - PTC Resettable Fuse

Electrical Characteristic

Model	V max. Volts	I max. Amps	Typical Current Trip Limit		Initial Resistance Values		1 Hour (R1) Post-Trip Resistance		Max. Time To Trip		Tripped Power Dissipation
			Amperes At 23 °C		mOhms At 23 °C		mOhms At 23 °C		Amperes At 23 °C	Seconds At 23 °C	Watts At 23 °C
			Hold	Trip	Min.	Max.	Min.	Max.			Typ.
MF-LL190	6	50	1.9	4.9	5	15	5	24	9.5	2.0	1.0

Environmental Characteristics

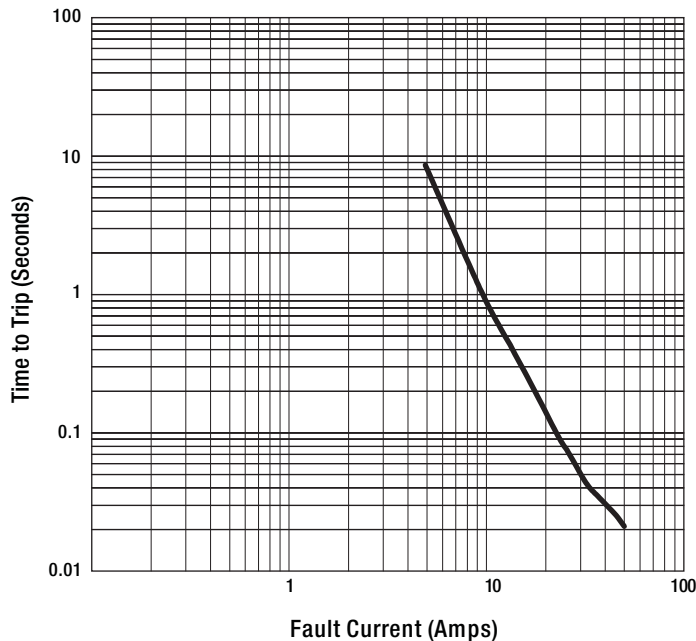
Operating/Storage Temperature.....-40 °C to +85 °C
 Maximum Device Surface Temperature in Tripped State+125 °C
 Storage Conditions+40 °C Max., 70 % RH Max., Packed in original packaging

Test Procedures And Requirements For Model MF-LL Series

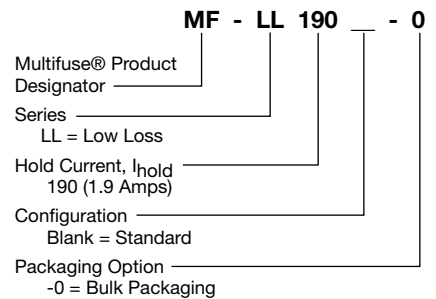
Test	Test Conditions	Accept/Reject Criteria
Humidity Aging	+60 °C, 95 % R.H., 1000 Hours.....	Typical resistance change +30 % to -30 %
Passive Aging.....	+60 °C, 1000 Hours	Typical resistance change +20 % to -20 %
Low temp storage	-40 °C, 1000 Hours.....	Typical resistance change +5 % to -5 %
Thermal Shock	+85 °C to -40 °C, 10 times.....	Typical resistance change +5 % to -5 %
Vibration	MIL-STD-883D, Method 2026	Rmin<R<R1 max

cUL File NumberE 174545S

Typical Time to Trip at 23 °C



How to Order



Typical Part Marking

None.

*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.

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Thermal Derating Chart - I_{hold} (Amps)

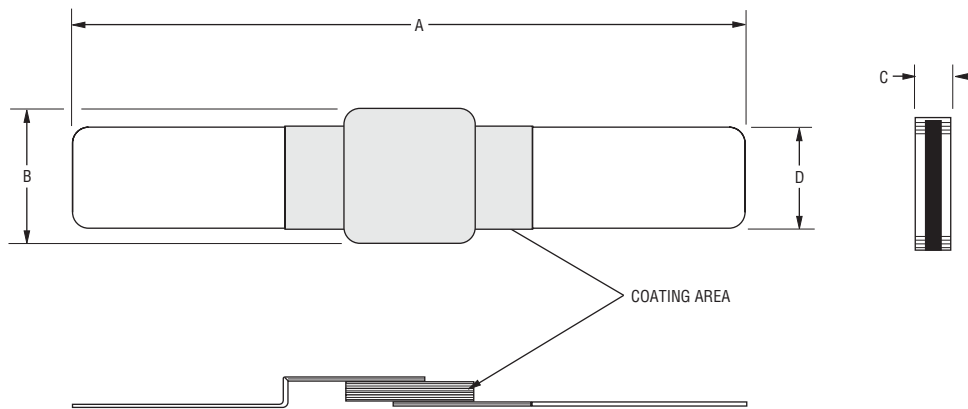
Model	Ambient Operating Temperature							
	-20 °C	0 °C	23 °C	40 °C	50 °C	60 °C	70 °C	85 °C
MF-LL190	2.90	2.50	1.90	1.50	1.30	1.10	0.90	0.50

Product Dimensions

Model	A		B		C		D	
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
MF-LL190	$\frac{15.2}{(0.60)}$	$\frac{16.8}{(0.66)}$	$\frac{2.96}{(0.12)}$	$\frac{3.26}{(0.13)}$	$\frac{0.6}{(0.02)}$	$\frac{1.1}{(0.04)}$	$\frac{2.3}{(0.09)}$	$\frac{2.5}{(0.10)}$

Packaging: Bulk - 1000 pcs. per bag.
 Leads: 1/2 Hardened Nickel 0.1 mm (.004 ") nominal thickness

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



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MF-LL SERIES, REV. E, 04/11

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