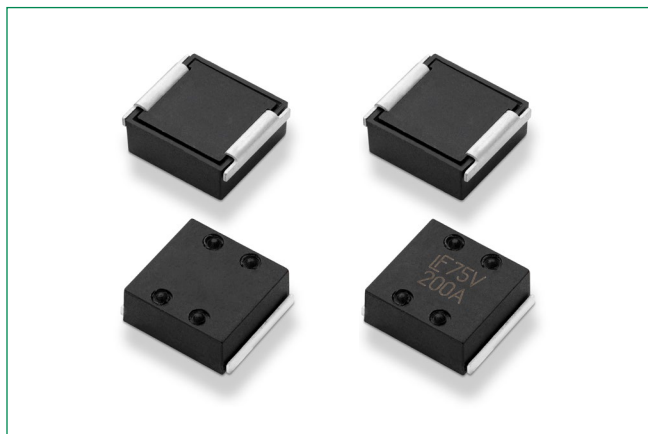


871 Series

High-Current SMD Fuse



Description

The Littelfuse 871 Series high-current SMD fuse is a small square surface-mount fuse that easily supports the higher current requirements of various applications.

Features and Benefits

- Heat resistant plastic body, UL94 V-0
- Low voltage drop
- High-reliability solderless fuse
- High pulse resistance
- Compatible with lead-free solders and higher temperature profiles
- Halogen-free and RoHS-compliant
- AEC-Q200-qualified

Applications

- Datacenter
- Blade server
- Router
- Power supply-power factor correction

Web Resources



Download ECAD models, order samples, and find technical resources at www.littelfuse.com

Agency Approvals

Agency	Agency File Number	Ampere Range
cULus	E71611	150~200 A
△	J50646528	150~200 A

Electrical Characteristics for Series

% of Ampere Rating	Opening Time
100%	1 Hour, Min.
200%	60 Seconds, Max.

Electrical Specifications by Item

Ampere Rating (A)	Amp Code	Max Voltage Rating (V)	Interrupting Rating	Nominal Cold Resistance (mOhms)	Nominal Voltage Drop* (mV)	Nominal Melting I ² t ** (A ² sec)	Agency Approvals	
							cULus	△
150	150.	75 Vdc	1500 A @75 Vdc	0.3	75	21500	X	X
200	200.	75 Vdc		0.24	90	40500	X	X

*Nominal Voltage Drop measured at 100% rated current

** Nominal melting I²t measured at 1500 A

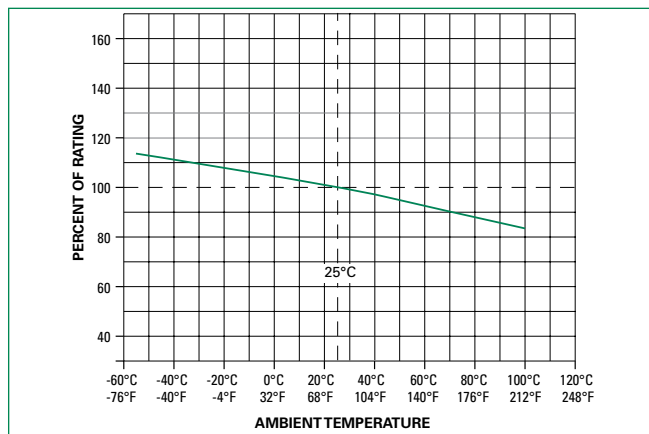
Amp Rating In(A)	Typical Case Temperature Rise(°)*		
	@50% In	@75% In	@100% In
150.	15	35	68
200.	24	76	114

* Typical values based on tests conducted with fuse mounted on FR4 circuit board of 0.093" (2.4 mm) thickness with 15 oz. (525 um) Cu @ rated current.

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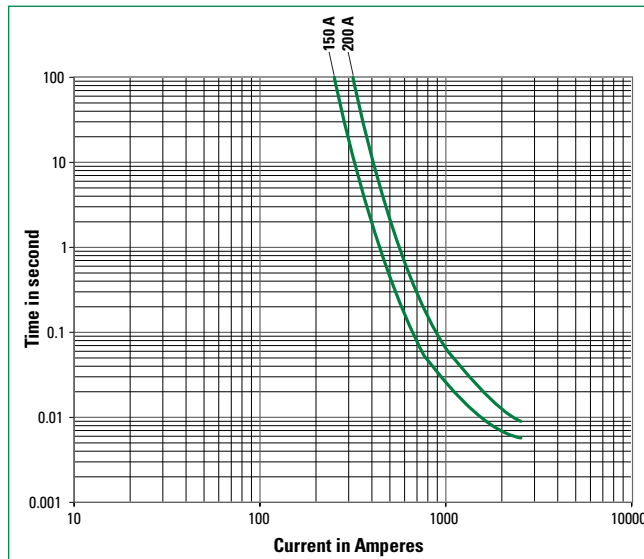
Temperature Re-rating Curve



Notes:

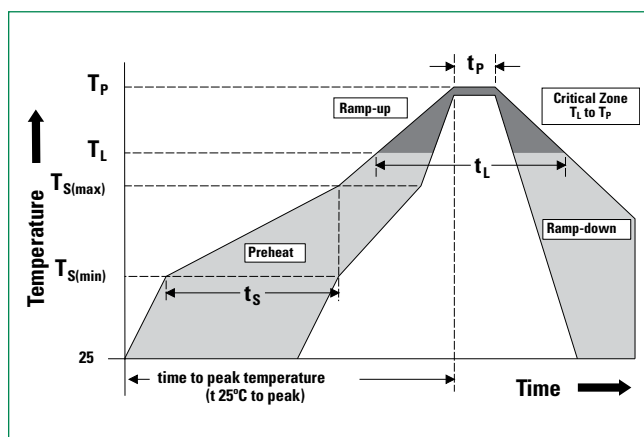
1. Derating depicted in this curve is in addition to the standard derating of 25% for continuous operation.
Example:
 For continuous operation at 70 °C, the fuse should be re-rated as follows:
 $I = (0.75)(0.90)I_n = (0.675)I_n$
2. The temperature re-rating curve represents nominal conditions. For questions about the temperature re-rating curve, please consult Littelfuse technical support assistance.

Average Time Current Curves



Soldering Parameters

Reflow Condition		Pb-free assembly
Pre Heat	- Temperature Min ($T_{s(min)}$)	150 °C
	- Temperature Max ($T_{s(max)}$)	200 °C
	- Time (Min to Max) (t_s)	60–180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		5 °C / second max.
$T_{s(max)}$ to T_L - Ramp-up Rate		5 °C / second max.
Reflow	- Temperature (T_L) (Liquidus)	217 °C
	- Temperature (t_L)	60–150 seconds
Peak Temperature (T_p)		260+0/-5 °C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		5 °C / second max.
Time 25 °C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260 °C

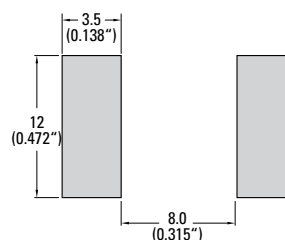
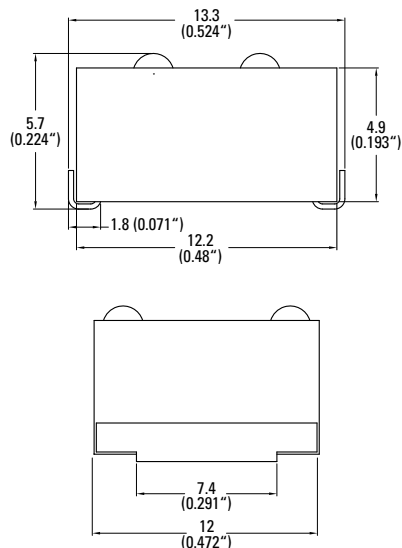


871 Series

High-Current SMD Fuse

Dimensions

Unit: mm (inch)



Recommended Pad Layout

Product Characteristics

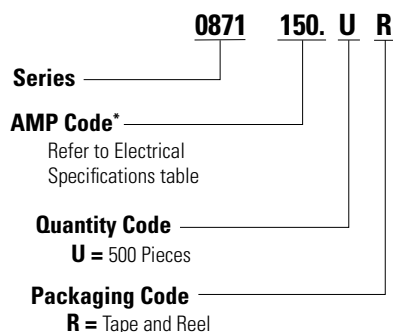
Materials	Body: Thermoplastic, RTI 150 °C Terminations: Tin-plated Copper
Product Marking	Brand logo, Voltage Rating, and Ampere Rating
Operating Temperature ^{1,2}	-55 °C to +100 °C with proper derating

Notes:

- Based on loading at 75% of ampere rating when mounted using recommended pad layout.
- Usage outside of stated operating temperature range requires testing in application.
Maintain case temperature below 150°C in application.

Thermal Shock	MIL-STD-202 Method 107 Test Condition B (-65 °C to 125 °C, 5 cycles).
Moisture Resistance	MIL-STD-202 method 106 High Humidity (90–98%RH), Heat (65 °C)
Vibration	MIL-STD-202, Method 201 (10–55 Hz)
Mechanical Shock	MIL-STD-202, Method 213, Test Condition I (100 G's peak for 6 milliseconds)
Resistance to Solder Heat	MIL-STD-202 Method 210 Test Condition B (10sec at 260 °C)
Solderability	MIL-STD-202 Method 208
MSL Test	Level 2a J-STD-020
Salt Fog	MIL-STD-202 Method 101 Test Condition B (5% NaCL solution, 48 hours exposure)

Part Numbering System



Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code
24 mm Tape and Reel	EIA-481 Rev. D (IEC 60286-3)	500	UR

Disclaimer Notice - Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at <http://www.littelfuse.com/disclaimer-electronics>.