

# 885 Series Fuse



Agency Approvals				
Agency	Agency File Number	Ampere Range		
c <b>FL</b> us	E10480	1A–5A		
$\triangle$	R50395911	1A–5A		

# **Electrical Characteristics for Series**

**Electrical Specifications by Item** 

% of Ampere Rating	Opening Time
125%	1 hour, Minimum
200%	2 minutes, Maximum
1000%	1 second, Maximum

# Description

The 885 Nano<sup>2®</sup> Surface Mount Fuses are high voltage rated fuses with high interrupting current ratings at 450VDC/500VDC and 350VAC.

## Features

- Heat resistant plastic body that meets flammability rating of V-0 to UL 94.
- Meets Littelfuse's Automotive qualifications\*
- Low voltage drop
- High Reliability
- Solderless Fuse
- High pulse resistance

\* Largely based on Littelfuse internal AEC-Q200 test plan

## Applications

- Li-ion battery packs used in electric vehicles
- Sense lines

profiles

compliant

NMX 248-14

HV DC/DC converter

🗭 HF Rohs C SA us 🛆

• Lead-free -- compatible

with lead-free solders

• Halogen-free and RoHS

Recognized to UL/CSA/

 Evaluated to EN 60127-1 and EN 60127-7

NMX 248-1 and UL/CSA/

and higher temperature

 Battery Management Systems (BMS)

# Additional Information

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Datasheet

Ampere Max **Nominal Cold** Nominal Nominal Nom Power Agency Approvals Interrupting Amp Rating Voltage Rating Resistance Melting Voltage Drop Dissipation Code Rating c **F** us  $\triangle$ (A) I2t (A2sec) (mW) (V) (Ohms)<sup>1</sup> (mV) 1500A @ 350VDC 100A @ 500VDC 1.00 001. 50A @ 600VDC 0.0780 0.80 105 105 Х Х 100A @ 350VAC 150A @ 250VAC 1500A @ 350VDC 0.0630 1.25 Х Х 1.25 1.25 105 131 500 100A @ 500VDC 1.60 01.6 0.0473 2.30 98 157 Х Х 100A @ 350VAC 0.0322 4.70 2.00 002. 91 182 Х Х 150A @ 250VAC 1500A @ 125VDC 2.50 02.5 0.0267 6.90 88 220 Х Х 100A @ 500VDC 100A @ 350VAC 3.15 3.15 0.0196 13.35 79 249 Х Х 150A @ 250VAC 1500A @ 125VDC 4.00 004. 0.0152 21.30 79 316 Х Х 100A @ 450VDC 450 100A @ 350VAC 35.00 395 5.00 005. 0.0119 79 Х Х 150A @ 250VAC

#### Notes:

Cold resistance measured at less than 10% of rated current at 23°C.

2. I<sup>2</sup>t values slated for 10xIn opening time

3. If you have special electrical characteristic needs, please contact Littelfuse to discuss application specific options.



**Temperature Re-rating Curve** 

# Surface Mount Fuses $NANO^{2(R)} > 500 VDC Rated Fuse > 885 Series$

#### 140 1 120 I PERCENT OF RATING 100 80 + 1 60 T 25°C 40 Т 20 20°C 40°C 60°C 68°F 104°F 140°F -60°C -40°C -76°F -40°F -20°C -4°F 80°C 100°C 120°C 176°F 212°F 248°F 120°C 0°C 32°F AMBIENT TEMPERATURE Note: 1. Rerating depicted in this curve is in addition to the standard derating of 25% for continuous operation.





# **Soldering Parameters**

Reflow Condition		Pb – Free assembly
Pre Heat	- Temperature Min (T <sub>s(min)</sub> )	150°C
	- Temperature Max (T <sub>s(max)</sub> )	200°C
	- Time (Min to Max) (t <sub>s</sub> )	60 - 180 secs
Average ramp up rate (Liquidus Temp ( $T_L$ ) to peak		5°C/second max.
T <sub>S(max)</sub> to T <sub>L</sub> - Ramp-up Rate		5°C/second max.
Reflow	- Temperature (T <sub>L</sub> ) (Liquidus)	217°C
	- Temperature (t <sub>L</sub> )	60 - 150 secs
Peak Temperature (T <sub>P</sub> )		260+ <sup>0/-5</sup> °C
Time within 5°C of actual peak Temperature (tp)		20 – 40 seconds
Ramp-down Rate		5°C/second max.
Time 25°C to peak Temperature (T <sub>P</sub> )		8 minutes max.
Do not exceed		260°C

Wave Soldering Parameters

260°C Peak Temperature, 3 seconds max.





# **Product Characteristics**

**Dimensions** 

1A

2.8±0.1mm

Materials	Body: Plastic UL 94 V-0 Cap: Tin Plated Brass
Product Marking	Body: Brand Logo, Current Rating, Voltage Rating, Series, Date Code
Solderability	JESD22-B102E Method 1
Resistance to Soldering Heat	MIL-STD-202 Method 210 Test Condition K

Operating Temperature	-40°C to +105°C with proper derating	
Vibration	MIL-STD-202 Method 201 and 204	
Moisture Sensitivity Level	J-STD-020, Level 1	

# **Part Numbering System**



#### **Recommended Pad Layout**



# 0885 001 D R SERIES **AMP Code** Refer to Electrical Specifications table **QUANTITY Code** D = 1500 pcs **PACKAGING Code**

R = Tape and Reel

### Date Code Information



Packaging					
Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code		
Tape and Reel	EIA-481-D	1500	D		

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