

### 885 Series Fuse



#### 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. It complies with IEC 60127-7 Standard.

#### Features

- Heat resistant plastic body, UL 94 V-0
- Meets Littelfuse's Automotive qualifications\*
- Low voltage drop
- High Reliability Solderless Fuse
- High pulse resistance
- Lead-free – compatible with lead-free solders and higher temperature profiles
- Halogen-free and RoHS compliant

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

#### Agency Approvals

AGENCY	AGENCY FILE NUMBER	AMPERE RANGE
	E10480	1A–5A
	R50395911	1A–5A

#### Electrical Characteristics for Series

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

#### Applications

- Li-ion battery packs used in electric vehicles
- Battery Management Systems (BMS)
- Sense lines
- HV DC/DC converter

#### Additional Information



Datasheet





Resources



Samples

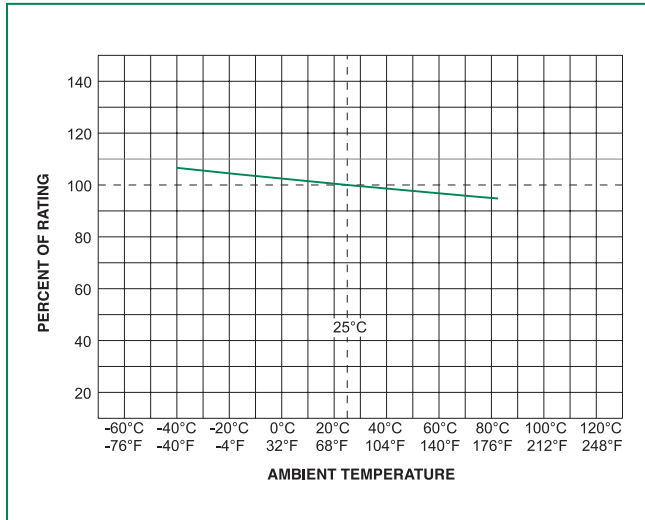
#### Electrical Specifications by Item

Ampere Rating (A)	Amp Code	Max Voltage Rating (V)	Interrupting Rating	Nominal Cold Resistance (Ohms) <sup>1</sup>	Nominal Melting I <sup>2</sup> t (A <sup>2</sup> sec)	Nominal Voltage Drop (mV)	Nom Power Dissipation (mW)	Agency Approvals	
									
1.00	001.	500	1500A @ 350VDC 100A @ 500VDC 100A @ 350VAC	0.0780	0.80	105	105	X	X
1.25	1.25			0.0630	1.25	105	131	X	X
1.60	01.6			0.0473	2.30	98	157	X	X
2.00	002.			0.0322	4.70	91	182	X	X
2.50	02.5	450	1500A @ 125VDC 100A @ 500VDC 100A @ 350VAC	0.0267	6.90	88	220	X	X
3.15	3.15			0.0196	13.35	79	249	X	X
4.00	004.			0.0152	21.30	79	316	X	X
5.00	005.			0.0119	35.00	79	395	X	X

Notes:

1. 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.

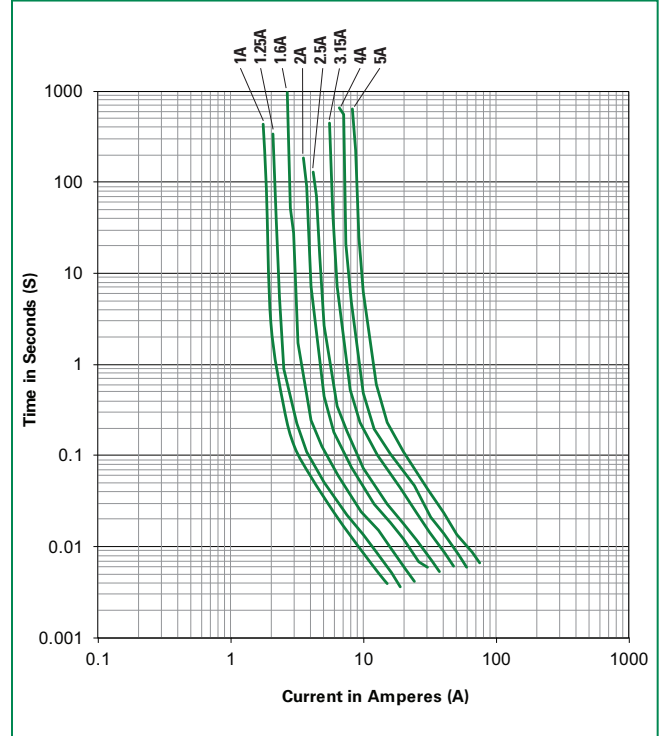
## Temperature Re-rating Curve



Note:

1. Re-rating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

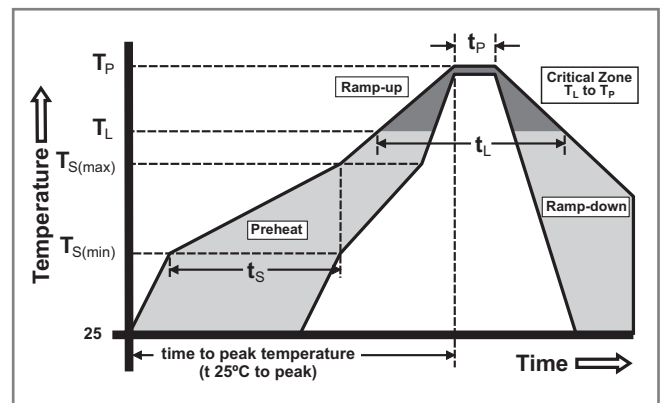
## Average Time Current Curves



## 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 – 120 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 – 90 seconds
Peak Temperature ( $T_p$ )		260 <sup>+0/-5</sup> °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

Wave Soldering Parameters	260°C Peak Temperature, 3 seconds max.
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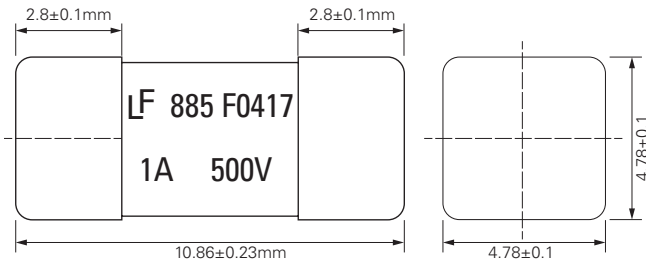


### Product Characteristics

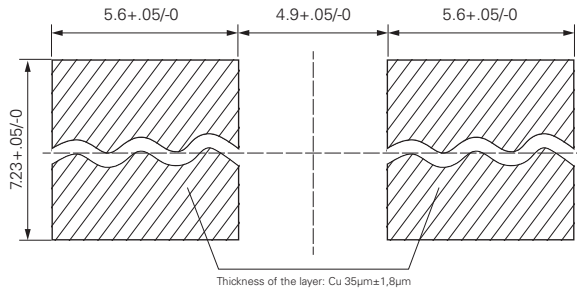
<b>Materials</b>	Body: Plastic UL 94 V-0 Cap: Tin Plated Brass
<b>Product Marking</b>	Body: Brand Logo, Current Rating, Voltage Rating, Series, Date Code
<b>Solderability</b>	JESD22-B102E Method 1
<b>Resistance to Soldering Heat</b>	MIL-STD-202 Method 210 Test Condition K

<b>Operating Temperature</b>	-40°C to +85°C with proper derating
<b>Climatic Category</b>	IEC 60068-1, -2-1, -2-2, -2-78 (-40°C to +85°C/21 days)
<b>Vibration</b>	MIL-STD-202 Method 201 and 204
<b>Moisture Sensitivity Level</b>	J-STD-020, Level 1

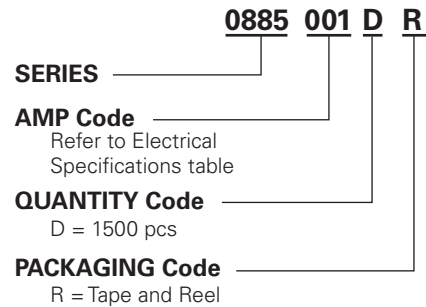
### Dimensions



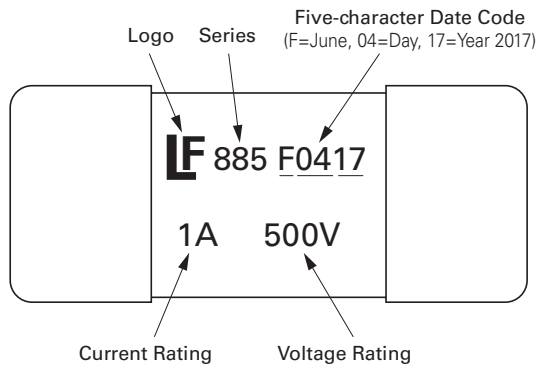
Recommended Pad Layout



### Part Numbering System



### Date Code Information



### Packaging

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

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