

885 Series Fuse

NANO2® > 500 VDC Rated Fuse



Description

The 885 Nano2® Surface Mount Fuses are high voltage rated AEC-Q200 Qualified fuses with high interrupting current ratings at 450VDC/500VDC and 350VAC.

Features & Benefits

- Heat resistant plastic body that meets flammability rating of V-0 to UL 94.
- 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
- Recognized to UL/CSA/NMX 248-1 and UL/CSA/NMX 248-14
- Evaluated to EN 60127-1 and EN 60127-7
- AEC-Q200 Qualified

Additional Information



Resources



Accessories



Samples

Applications

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

Electrical Characteristics for Series

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

Agency Approvals

Agency	Agency File Number	Ampere Range
	E10480	1A–5A
	R50395911	1A–5A

Electrical Specifications by Item

Ampere Rating (A)	Amp Code	Max Voltage Rating (V)	Interrupting Rating	Nominal Cold Resistance (Ohms) ¹	Nominal Melting I ² t (A ² sec)	Nominal Voltage Drop (mV)	Nom Power Dissipation (mW)	Agency Approvals	
1.00	001.	500	1500A @ 350VDC 100A @ 500VDC 50A @ 600VDC 100A @ 350VAC 150A @ 250VAC	0.0780	0.80	105	105	X	X
1.25	1.25		1500A @ 350VDC 100A @ 500VDC	0.0630	1.25	105	131	X	X
1.60	01.6		100A @ 350VAC	0.0473	2.30	98	157	X	X
2.00	002.		150A @ 250VAC	0.0322	4.70	91	182	X	X
2.50	02.5		1500A @ 125VDC 100A @ 500VDC	0.0267	6.90	88	220	X	X
3.15	3.15	450	100A @ 350VAC 150A @ 250VAC	0.0196	13.35	79	249	X	X
4.00	004.		1500A @ 125VDC 100A @ 450VDC	0.0152	21.30	79	316	X	X
5.00	005.		100A @ 350VAC 150A @ 250VAC	0.0119	35.00	79	395	X	X

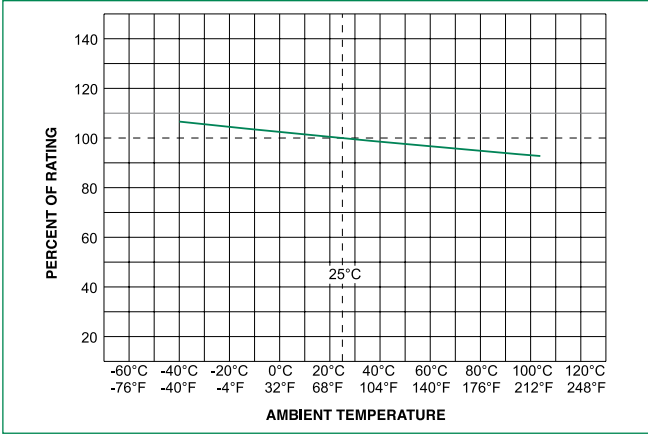
Notes:

1. Cold resistance measured at less than 10% of rated current at 23°C.
2. I²t values slated for 10xIn opening time
3. If you have special electrical characteristic needs, please contact Littelfuse to discuss application specific options.

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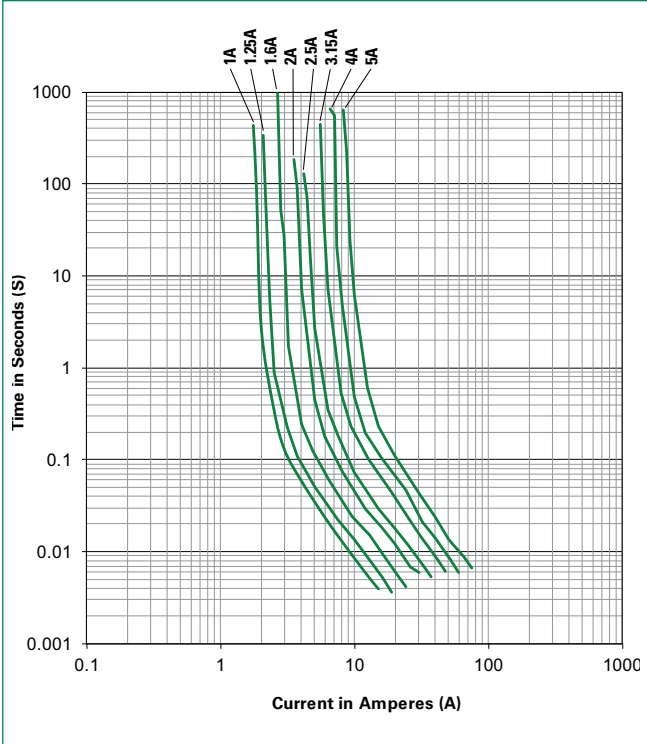
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Temperature Re-rating Curve



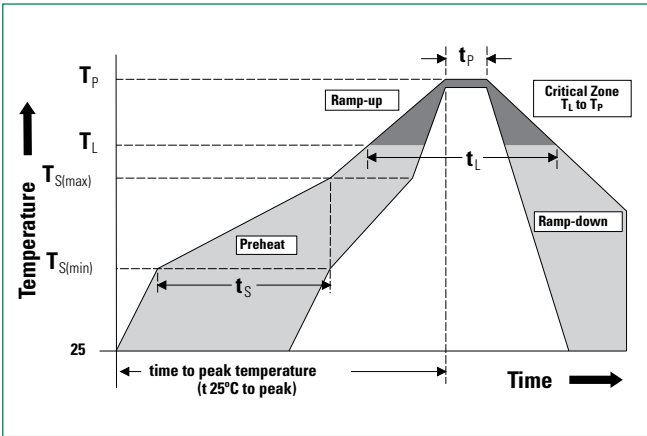
Note:
1. Rerating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

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



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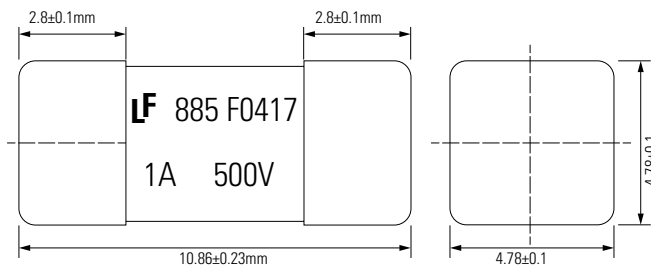
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Product Characteristics

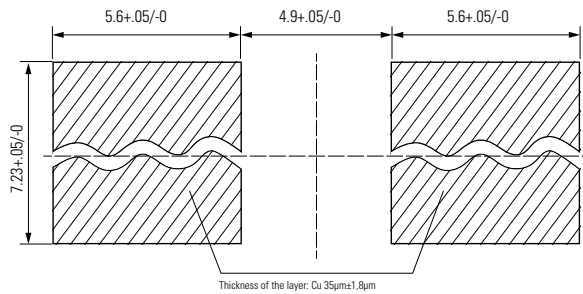
Materials	Body: Plastic UL 94 V-0 Cap: Tin Plated Brass
Product Marking	Body: Brand Logo, Current Rating, Voltage Rating, Series, Date Code
Solderability	JESD22-B102E Method 1
Resistance to Soldering Heat	MIL-STD-202 Method 210 Test Condition K

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

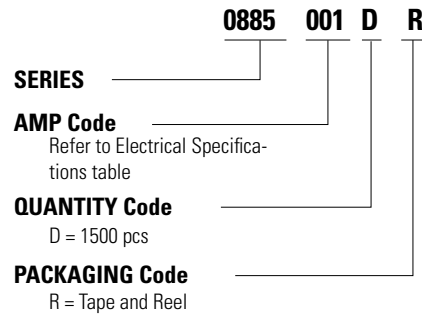
Dimensions



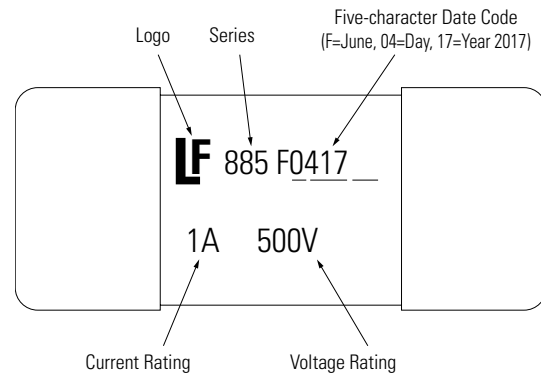
Recommended Pad Layout



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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