

885 Series Fuse



Description

The 885 Nano² 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
- 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

* 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

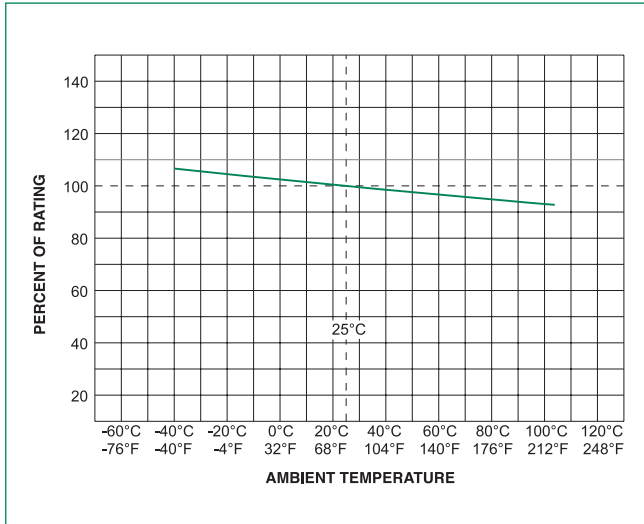
Electrical Specifications by Item

Ampere Rating (A)	Amp Code	Max Voltage Rating (V)	Interrupting Rating	Nominal Cold Resistance (Ohms) 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 100A @ 350VAC 150A @ 250VAC	0.0630	1.25	105	131	X	X
1.60	01.6		1500A @ 350VDC 100A @ 500VDC 100A @ 350VAC 150A @ 250VAC	0.0473	2.30	98	157	X	X
2.00	002.		1500A @ 350VDC 100A @ 500VDC 100A @ 350VAC 150A @ 250VAC	0.0322	4.70	91	182	X	X
2.50	02.5		1500A @ 350VDC 100A @ 500VDC 100A @ 350VAC 150A @ 250VAC	0.0267	6.90	88	220	X	X
3.15	3.15	450	1500A @ 125VDC 100A @ 500VDC 100A @ 350VAC 150A @ 250VAC	0.0196	13.35	79	249	X	X
4.00	004.		1500A @ 125VDC 100A @ 450VDC 100A @ 350VAC 150A @ 250VAC	0.0152	21.30	79	316	X	X
5.00	005.		1500A @ 125VDC 100A @ 450VDC 100A @ 350VAC 150A @ 250VAC	0.0119	35.00	79	395	X	X

Notes:

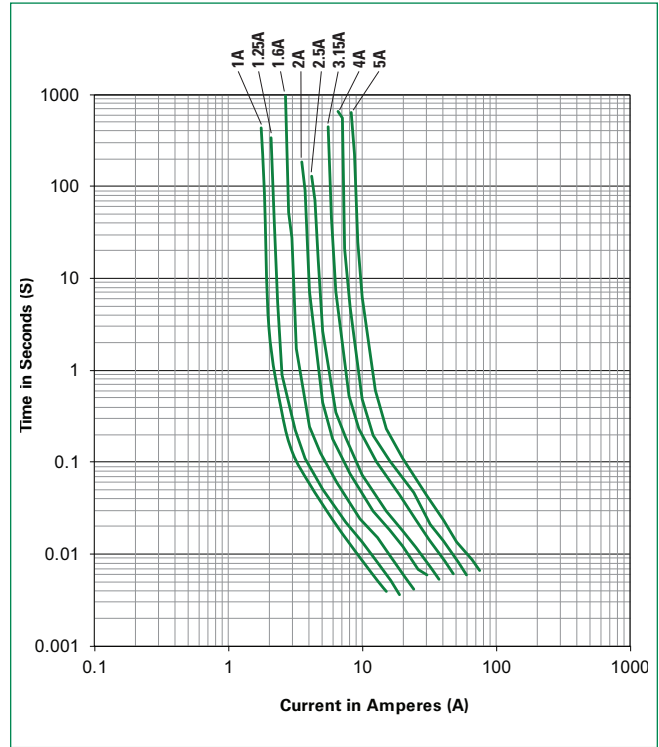
- Cold resistance measured at less than 10% of rated current at 23°C.
- I²t values slated for 10xIn opening time
- If you have special electrical characteristic needs, please contact Littelfuse to discuss application specific options.

Temperature Re-rating Curve



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

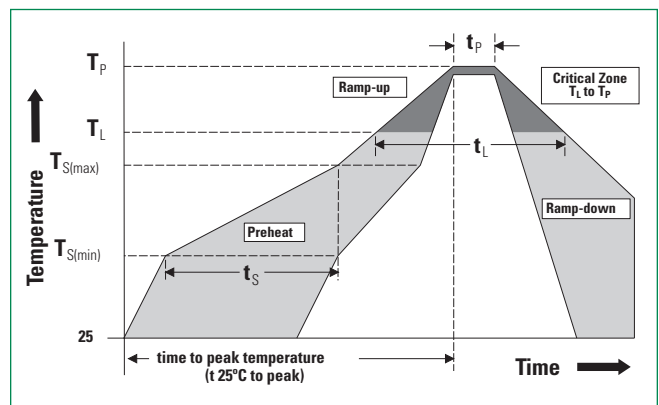
Average Time Current Curves



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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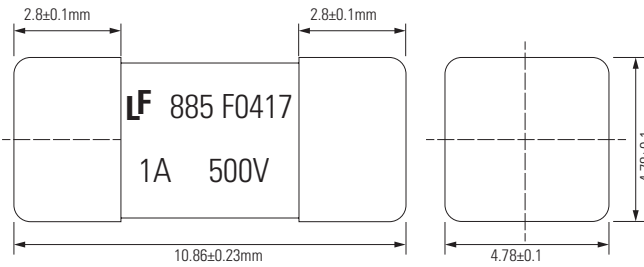


Product Characteristics

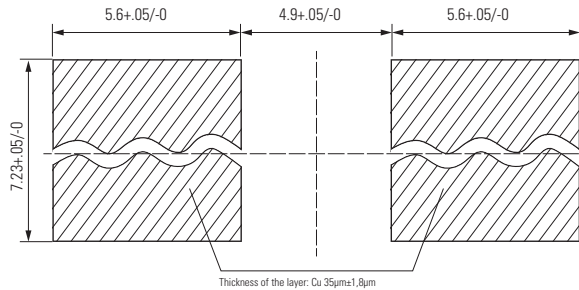
Materials	Body: Plastic UL 94 V-0 Cap: Tin Plated Brass
Product Marking	Body: Brand Logo, Current Rating, Voltage Rating, Series, Date Code
Solderability	JESD22-B102E Method 1
Resistance to Soldering Heat	MIL-STD-202 Method 210 Test Condition K

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

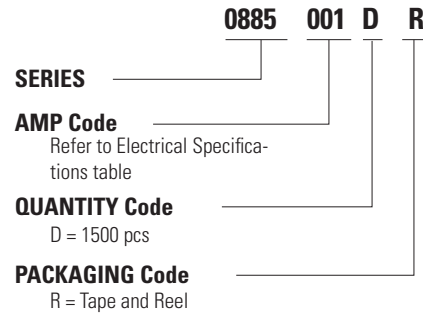
Dimensions



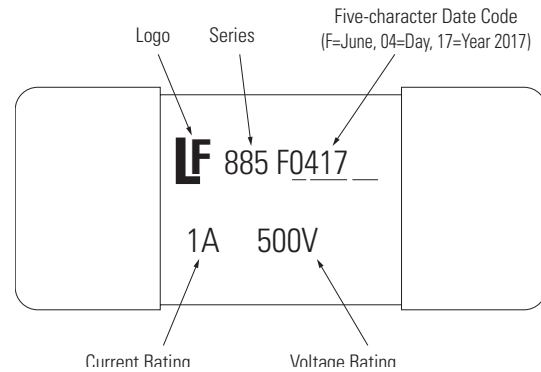
Recommended Pad Layout



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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