

RoHS HF 485 Series Fuse



Agency Approvals

AGENCY	AGENCY FILE NUMBER	AMPERE RANGE
	E10480	500mA – 3.15A

Electrical Characteristics for Series

% of Ampere Rating	Opening Time at 25°C
100%	4 hours, Minimum
200%	60 Seconds, Maximum

Description

The 485 Nano² Fuse Series is a small, fast acting, surface mount ceramic fuse rated at a remarkable 600VDC at its small size and with 100A breaking capacity. It is primarily designed for circuit protection in high energy applications. This product is fully compatible with lead-free solders alloys and higher temperature profiles associated with lead-free assembly.

Features

- Fast Acting / Surface mount high fuse for high voltage (up to 600VDC) applications.
- Relatively high breaking capacity at 100A.
- Fully compatible with lead-free solder alloys and higher temperature profiles associated with lead-free assembly.
- RoHS compliant / Halogen Free
- Rating - 0.5 - 3.15 Amperes.

Applications

- PC server and Telecom systems
- LCD TV inverter boards DC input protection
- Uninterruptible Power Supply (UPS) / 3-Phase Power Supplies
- 380VDC server/lighting in data center

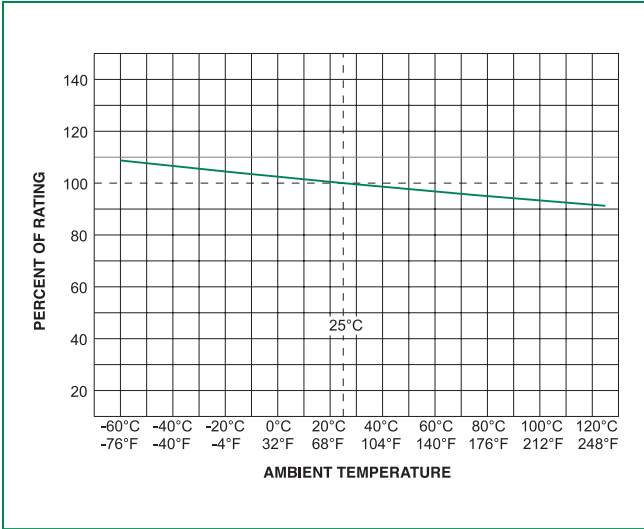
Electrical Specifications by Item

Ampere Rating (A)	Amp Code	Max. Voltage Rating (V)	Interrupting Rating	Nominal Cold Resistance (Ohms)	Nominal Melting I ² t (A ² Sec.)	Agency Approvals
0.5	.500	600	100A @ 250V AC 100A @ 600V DC	0.807	0.0354	P
1	1	600		0.264	0.3044	x
1.5	1.5	600		0.123	0.3917	x
2	2	600		0.0744	0.8962	x
2.5	2.5	600		0.0583	1.4921	x
3.15	3.15	600		0.0395	3.304	x

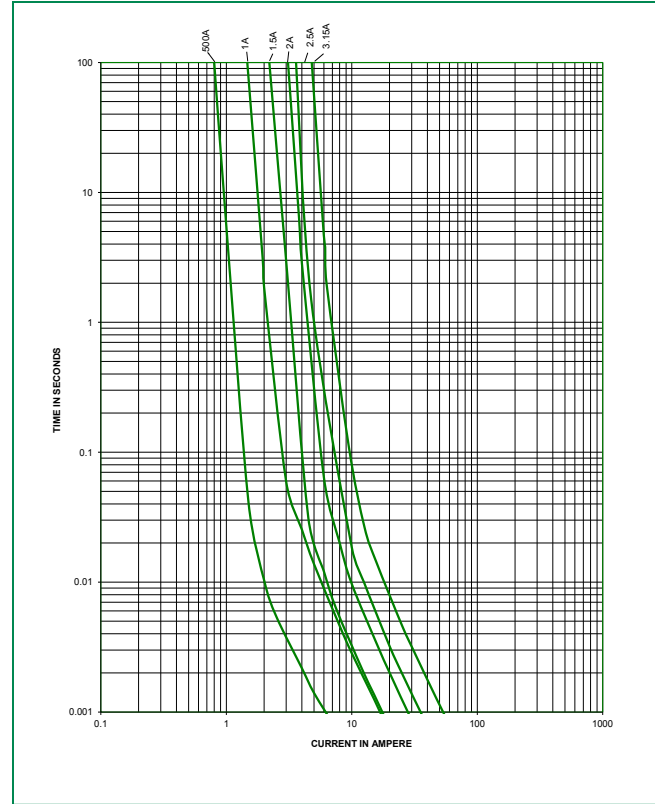
Notes:

- Cold resistance measured at less than 10% of rated current at 23°C
- Agency Approval Table Key. X=Approved or Certified, P=Pending and Blank=Not Approved.
- I²t values stated for 8 msec opening time.

Temperature Derating Curve

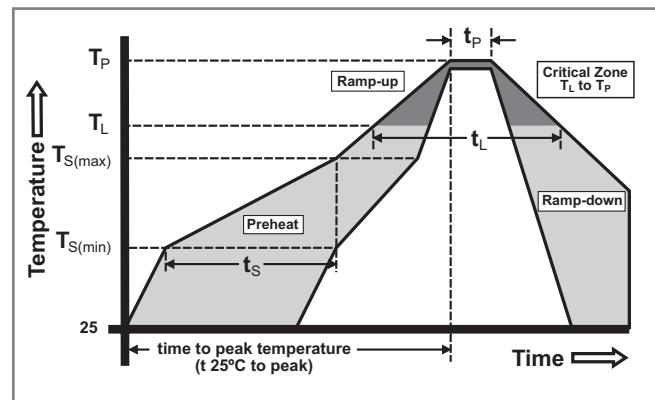


Average Time Current Curves



Soldering Parameters - Reflow Soldering

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 seconds
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)	250 ^{+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	

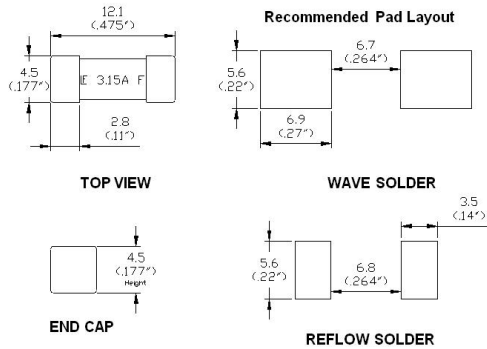


Product Characteristics

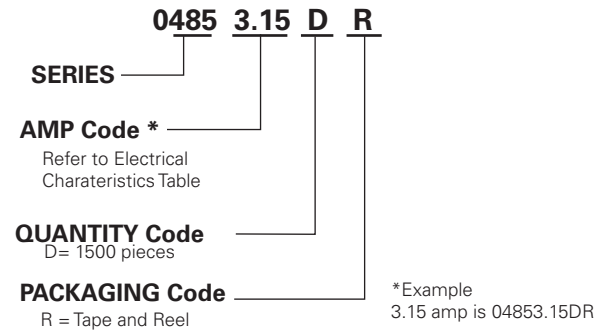
Materials	Body: Ceramic Cap: Silver Plated Brass
Product Marking	Body: Brand Logo, Current Rating
Operating Temperature	-55°C to 125°C with proper derating
Moisture Sensitivity Level	Level 1 J-STD-020C
Solderability	MIL -STD-202, Method 208
Insulation Resistance (after Opening)	MIL -STD-202, Method 302, Test Condition A (10,000 ohms, Minimum)

Thermal Shock	MIL -STD-202, Method 107, Test Condition B, 5 cycles, -65°C to 125°C, 15 minutes @ each extreme
Mechanical Shock	MIL -STD-202, Method 213, Test Condition I: Deenergized. 100G's peak amplitude, sawtooth wave 6ms duration, 3 cycles XYZ+xyz=18 shocks
Vibration	MIL -STD-202, Method 201:0.03" amplitude, 10-55Hz in 1 min. 2hrs. each XYZ=6hrs
Moisture Resistance	MIL -STD-202, Method 106, 10 cycles
Salt Spray	MIL -STD-202, Method 101, Test Condition B (48hrs)
Resistance to Soldering Heat	MIL -STD-202, Method 210, Test Condition B (10 sec at 260°C)

Dimensions



Part Numbering System



Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Option Code
24mm Tape and Reel	EIA-RS 481 - 1, IEC 286, Part 3	1500	DR

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