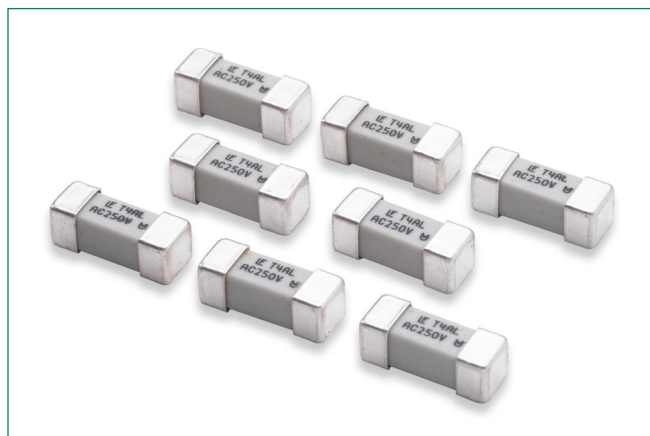


465 Series

NANO2® > 250V UMF Time Lag Fuse



Description

The Surface Mount Nano2® 250 V UMF product family complies with IEC 60127-4 which covers Universal Modular Fuse-Links [UMF]. This is an IEC standard that is accepted world wide.

Features & Benefits

- Listed to IEC 60127-4, Universal Modular Fuse-Links (UMF)
- 250VAC Voltage rating
- RoHS compliant and Halogen Free

Additional Information



Resources



Accessories



Samples

Applications

- Power supply
- Lighting system
- White goods
- Industrial equipment

Agency Approvals

Agency	Agency File Number	Ampere Range
	NBK030205-E10480B	1 A - 5 A
	NBK101105-E184655	6.3 A
	E184655	0.25 A - 6.3 A
	NA	1 A - 6.3 A
	NA	1 A - 6.3 A
	E10480	1 A - 6.3 A

Electrical Characteristics for Series

% of Ampere Rating	Opening Time
125%	1 hour, Minimum
200%	2 minutes, Maximum
1000%	0.01 sec., Min.; 0.1 sec., Max.

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				
						UKCA	CE	PS E	UL	cULus
1.00	001.	250	100A@250VAC	0.1070	2.5	x	x	x	x	x
1.25	1.25	250		0.0830	5.6	x	x	x	x	x
1.60	01.6	250		0.0560	9.0	x	x	x	x	x
2.00	002.	250		0.0390	14.4	x	x	x	x	x
2.50	02.5	250		0.0260	19.6	x	x	x	x	x
3.15	3.15	250		0.0210	32.4	x	x	x	x	x
4.00	004.	250		0.0160	48.4	x	x	x	x	x
5.00	005.	250		0.0130	90.0	x	x	x	x	x
6.30	06.3	250		0.0088	144.4	x	x	x	x	x

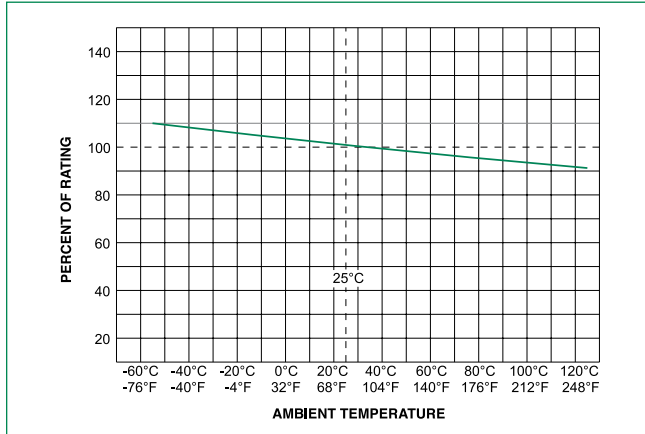
Notes:

- I²t calculated at 8ms.
- Resistance is measured at 10% of rated current, 25°C
- For information and availability of additional ratings please contact Littelfuse

465 Series

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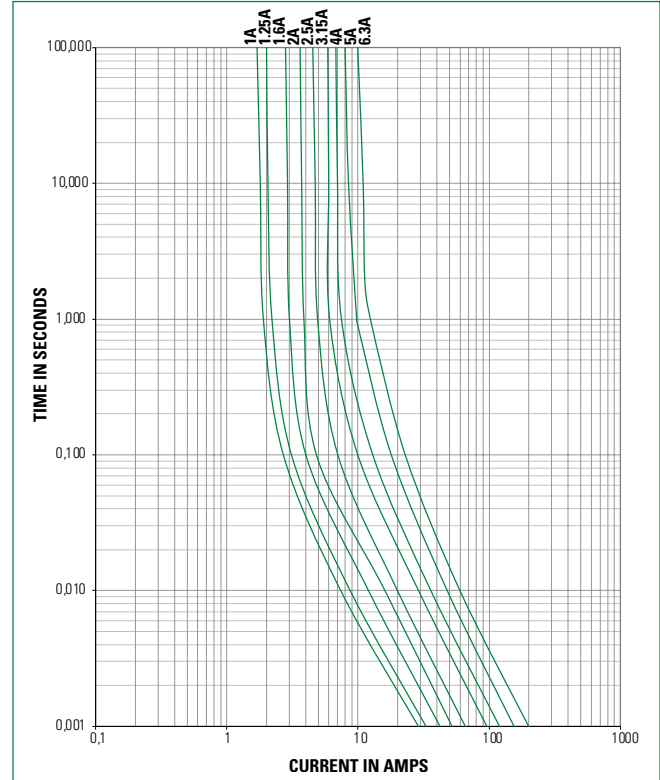
Temperature Re-rating Curve



Note:

1. Rerating depicted in this curve is in addition to the standard derating of 15% for continuous operation.

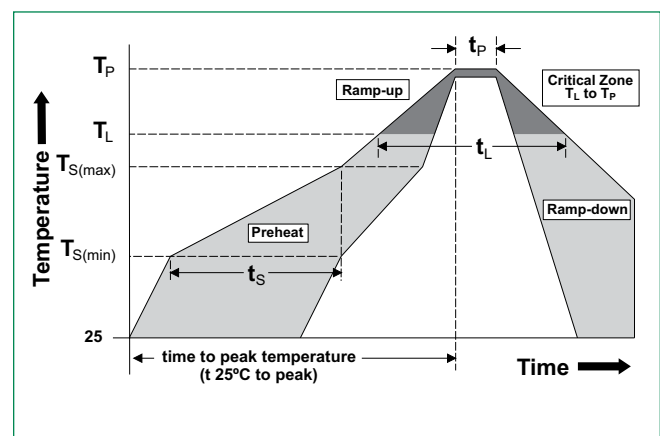
Average Time Current Curves



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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465 Series

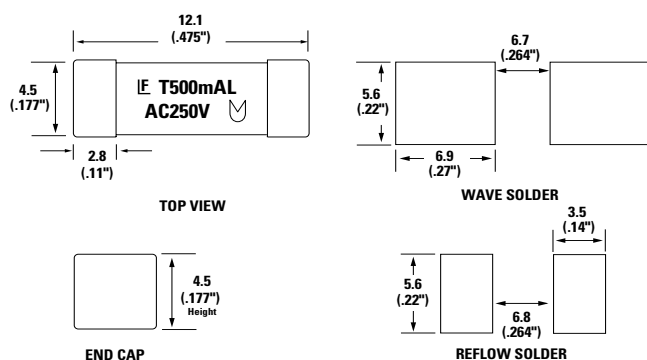
NANO2® > 250V UMF Time Lag Fuse

Product Characteristics

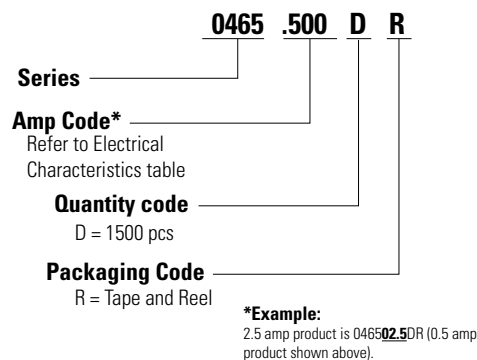
Materials	Body: High Performance Ceramic Terminations: Silver plated brass.
Product Marketing	Brand, Ampere Rating, Voltage Rating, UMF Logo
Operating Temperature	–55°C to 125°C
Moisture Sensitivity Level	J-STD-020, Level 1
Solderability	IEC 60127-4
Insulation Resistance (after opening)	IEC 60127-4 (0.1Mohm min @ 500VDC)
Shock	MIL-STD-202, Method 213, Test Condition A

Thermal Shock	MIL-STD-202, Method 107, Test Condition B , 5 cycles, –65°C to 125°C
Mechanical Shock	MIL-STD-202, Method 213, Test Condition A
Vibration	MIL-STD-202, Method 201 (10-55 Hz)
Moisture Resistance	MIL-STD-202, Method 106, 10 cycles
Salt Spray	MIL-STD-202, Method 101, Test Condition B (48hrs)
Resistance to Soldering Heat	IEC 60127-4

Dimensions



Part Numbering System



Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code
24mm Tape and Reel	EIA RS-481-1 (IEC 60286-3)	1500	DR

Disclaimer Notice - Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at: www.littelfuse.com/disclaimer-electronics.