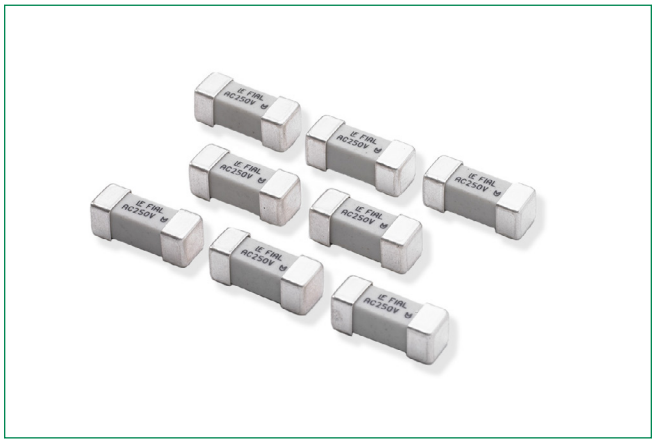
464 Series

NANO²® > 250V UMF > Fast-Acting Fuse



Description

The 464 Series fuse is a surface mount Nano²® fuse that conforms to IEC 60127-4. This IEC standard addresses Universal Modular Fuse-links (UMF) which are accepted world-wide without any additional country-specific deviations.

Features & Benefits

- Fast-Acting
- Listed to IEC 60127-4, Universal Modular Fuse-Links (UMF)
- 250VAC Voltage rating
- RoHS compliant and Halogen Free
- Conforms with Low Voltage Directive (LVD) and Electrical Equipment Safety Regulation
- Conforms to DENAN's Appendix 3

Additional Information

Resources | Accessories | Samples

Applications

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

Agency Approvals

Agency	Agency File Number	Ampere Range
PS E	NBK030205-E10480B	1A - 5A
	NBK101105-E184655	6.3A
M	E184655	0.25A - 6.3A
△	HU-003208	0.5A - 6.3A
CE	N/A	0.5A - 6.3A
UK CA	N/A	0.5A - 6.3A

Electrical Characteristics for Series

% of Ampere Rating	Opening Time
125%	1 hour, Minimum
200%	2 minutes, Maximum
1000%	0.001 sec., Min.; 0.01 sec., Max.

Electrical Specifications by Item

Ampere Rating (A)	Amp Code	Max Voltage Rating (V)	Interrupting Rating	Nominal Cold Resistance (Ohms)	Nominal Melting I²t (A²sec)	Nominal Voltage Drop (mV)	Agency Approvals				
							PS E	M	CE	UK CA	△
0.500	.500	250	100A@250VAC	0.2373	0.22	600	-	x	x	x	x
0.800	.800	250		0.1159	0.308	400	-	x	x	x	x
1.00	001.	250		0.0762	0.51	300	x	x	x	x	x
1.25	1.25	250		0.0580	0.98	300	x	x	x	x	x
1.60	01.6	250		0.0448	1.15	300	x	x	x	x	x
2.00	002.	250		0.0354	2.48	300	x	x	x	x	x
2.50	02.5	250		0.0288	3.99	300	x	x	x	x	x
3.15	3.15	250		0.0206	8.05	300	x	x	x	x	x
4.00	004.	250		0.0156	13.85	300	x	x	x	x	x
5.00	005.	250		0.0119	23.6	300	x	x	x	x	x
6.30	06.3	250		0.0093	35.912	300	x	x	x	x	x

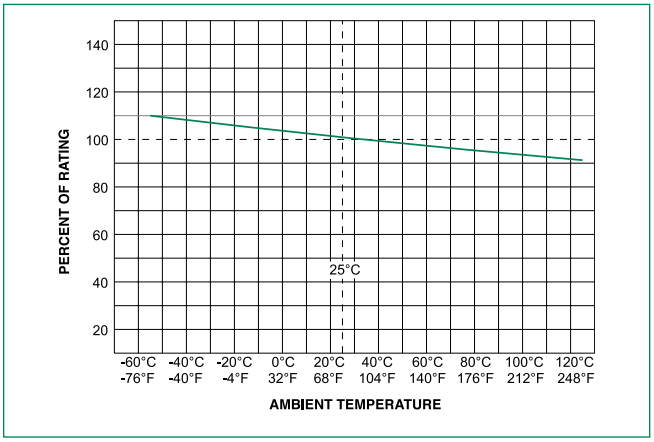
Notes:
- I²t calculated at 8ms.
- Resistance is measured at 10% of rated current, 25ºC
- For information and availability of additional ratings please contact Littelfuse

© 2023 Littelfuse, Inc.
Specifications are subject to change without notice.
Revised: GD. 06/01/23

464 Series

NANO²® > 250V UMF > Fast-Acting Fuse

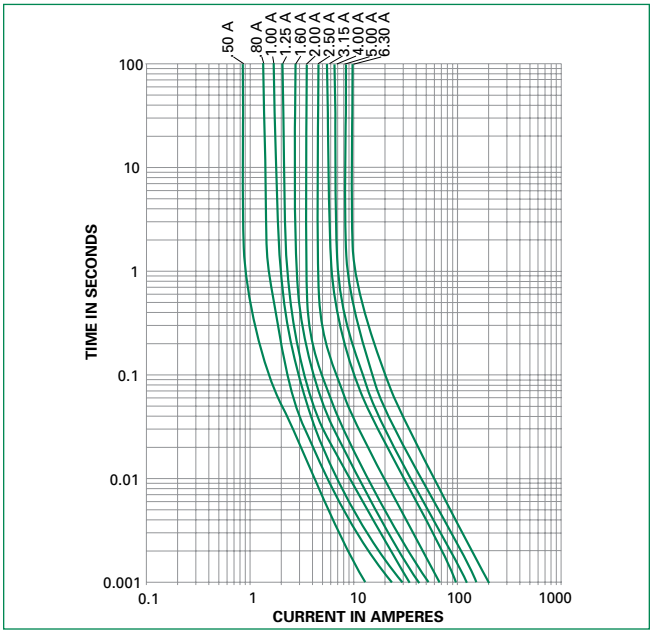
Temperature Re-rating Curve



Note:

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

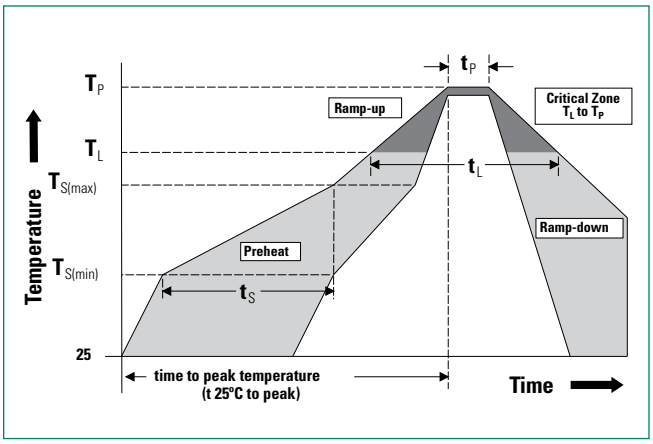
Average Time Current Curves



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 seconds
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, 10 seconds max.



© 2023 Littelfuse, Inc.
Specifications are subject to change without notice.

Revised: GD. 06/01/23

464 Series

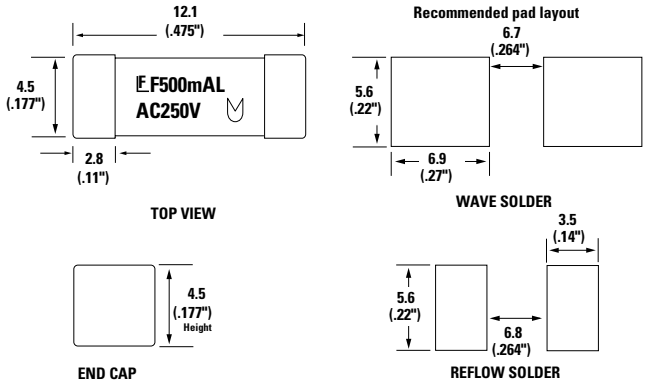
NANO²® > 250V UMF > Fast-Acting Fuse

Product Characteristics

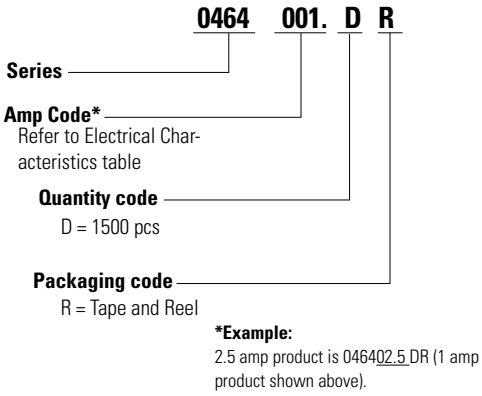
Materials	Body: Ceramic Terminations: Silver-plated Caps
Product Marking	Brand, Ampere Rating, Voltage Rating, UMF Logo
Operating Temperature	-55°C to 125°C
Moisture Sensitivity Level	Level 1, J-STD-020
Solderability	IEC 60127-4
Insulation Resistance (after Opening)	IEC 60127-4 (0.1Mohm min @ 500VDC)

Thermal Shock	MIL-STD-202, Method 107, Test Condition B, 5 cycles, -65°C / +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 mm(inches)



Part Numbering System



***Example:**
2.5 amp product is 046402.5 DR (1 amp product shown above).

Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code
24mm Tape and Reel	EIA RS-481-1 (IEC 286, part 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.

© 2023 Littelfuse, Inc.
Specifications are subject to change without notice.
Revised: GD. 06/01/23