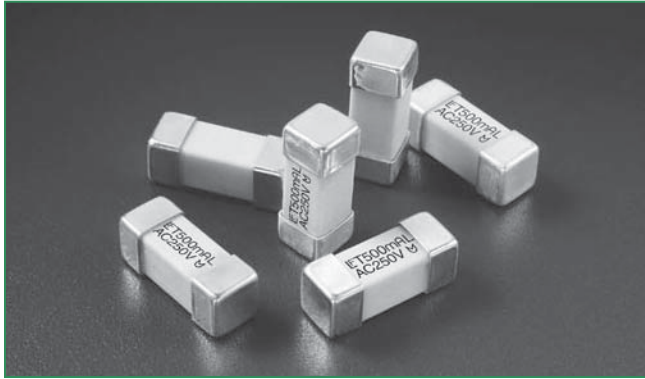


RoHS HF 465 Series Fuse



Description

The Surface Mount Nano² 250V UMF product family complies with IEC Publication IEC60127-4-Universal Modular Fuse-Links [UMF]. This IEC standard has been accepted by UL/CSA making it the first global fuse standard.

Features

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

Agency Approvals

AGENCY	AGENCY FILE NUMBER	AMPERE RANGE
	NBK030205-E108480B	1A - 6.3A
	E184655A,B	250mA - 6.3A

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.

Applications

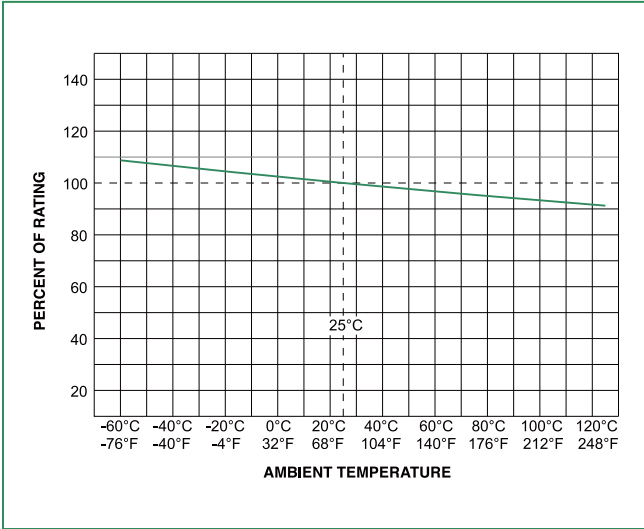
- Power supply
- Industrial equipment
- Lighting system
- Medical equipment
- White goods

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	
1.00	001.	250	100 amperes @250VAC	0.1070	2.8	x	x
1.25	1.25	250		0.0830	5.6	x	x
1.60	01.6	250		0.0560	9.2	x	x
2.00	002.	250		0.0390	14.9	x	x
2.50	02.5	250		0.0260	21.0	x	x
3.15	3.15	250		0.0210	31.7	x	x
4.00	004.	250		0.0160	48.4	x	x
5.00	005.	250		0.0130	87.0	x	x
6.30	06.3	250		0.0088	144.4	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

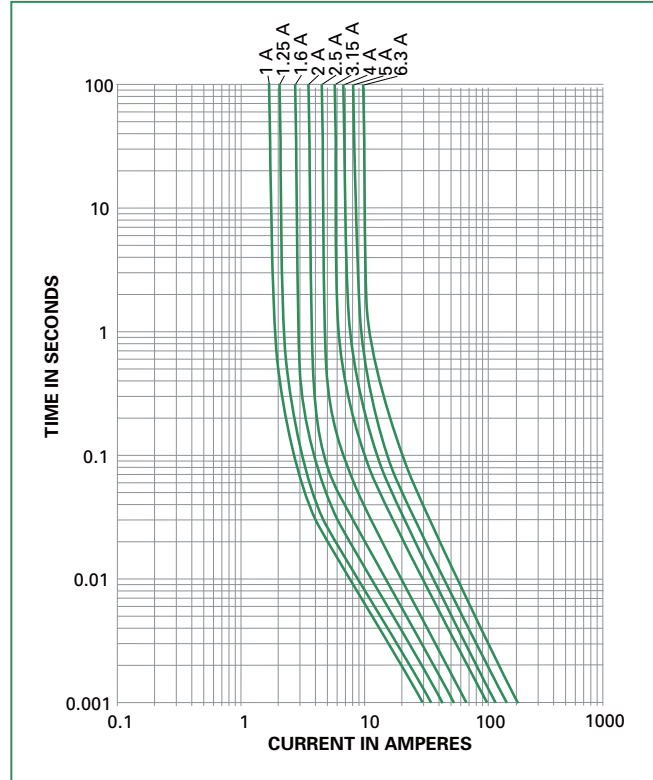
Temperature Derating Curve



Note:

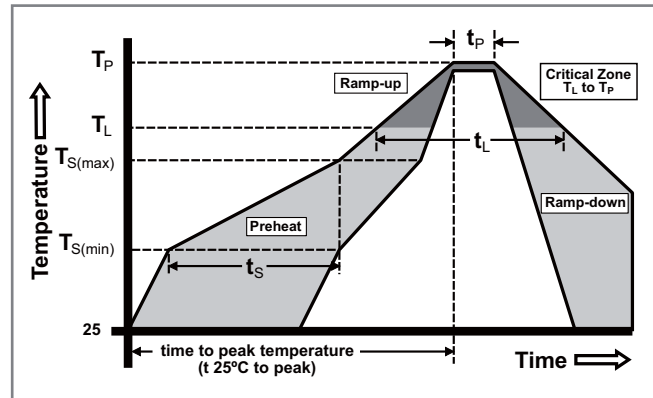
- Derating depicted in this curve is in addition to the standard derating of 15% for continuous operation.

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 – 120 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 – 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	
Wave Soldering Parameters	260°C Peak Temperature, 3 seconds max.	

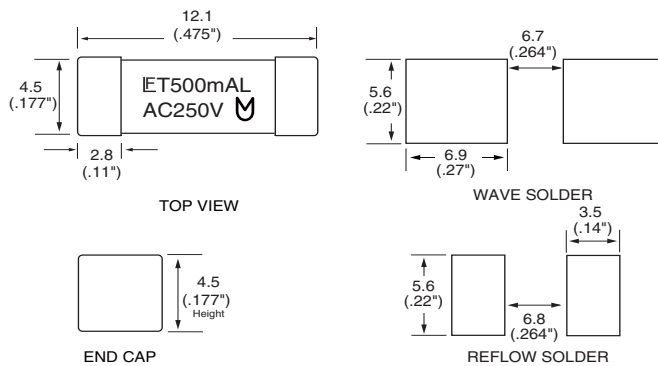


Product Characteristics

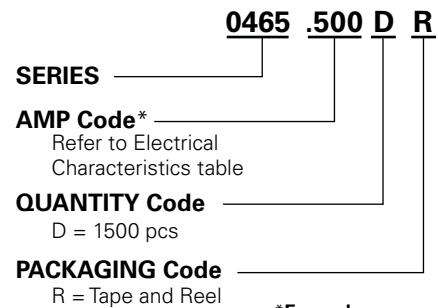
Materials	Body: High Performance Ceramic Terminations: Silver plated brass.
Product Marketing	Brand, Ampere Rating, Voltage Rating, UMF Logo
Operating Temperature	-55°C to 125°C.
Moisture Sensitivity Level	Level 1, J-STD-020C
Solderability	IEC60127-4
Insulation Resistance (after opening)	IEC 60127-4 (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



***Example:**
2.5 amp product is 046502.5DR
(0.5 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

