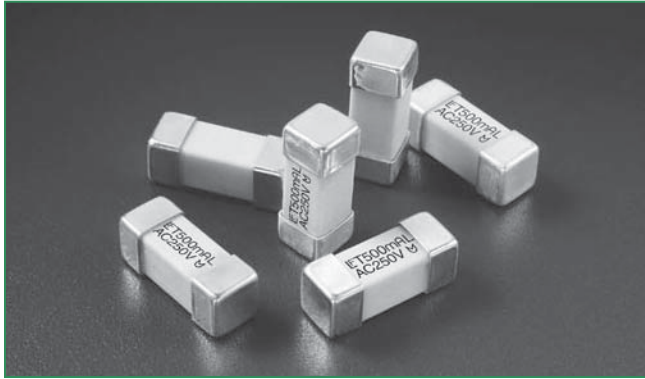


RoHS HF 465 Series Fuse



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

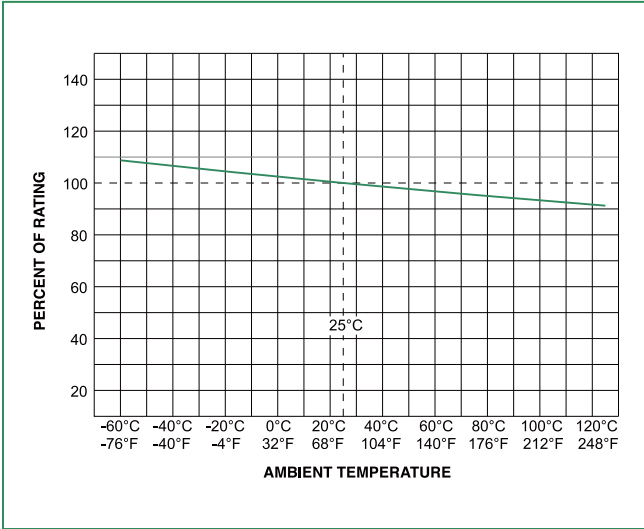
- Power supply
- Industrial equipment
- Lighting system
- Medical equipment
- White goods

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

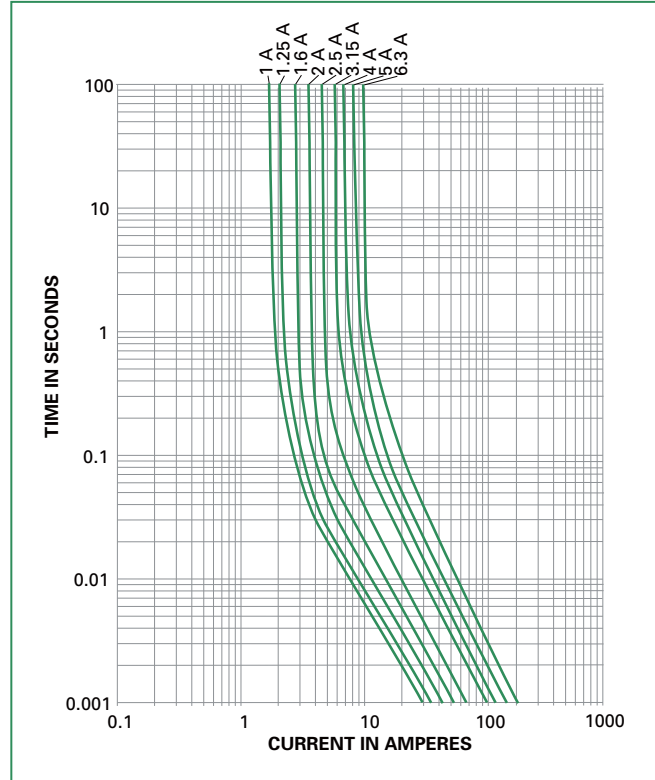
Temperature Derating Curve



Note:

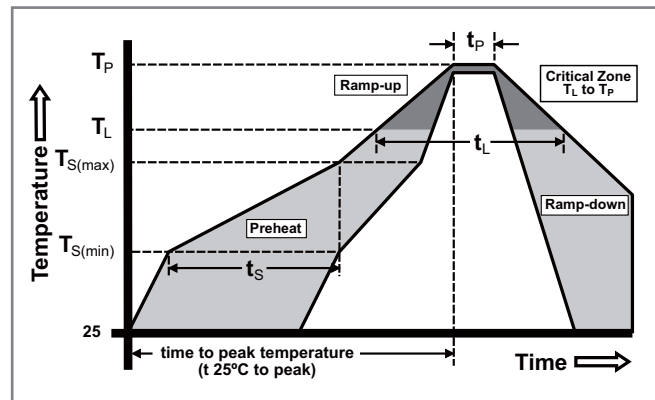
1. Derating depicted in this curve is in addition to the standard derating of 15% for continuous operation.

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. | |

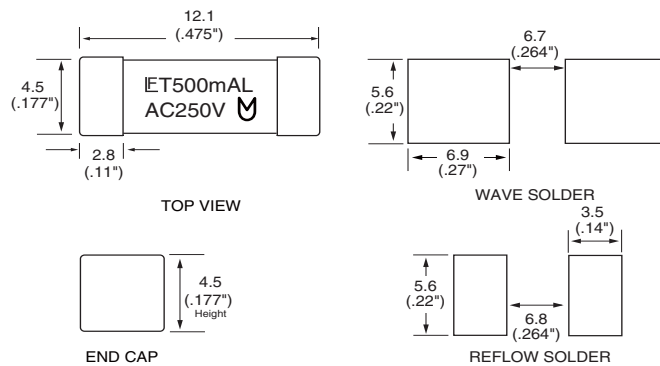


Product Characteristics

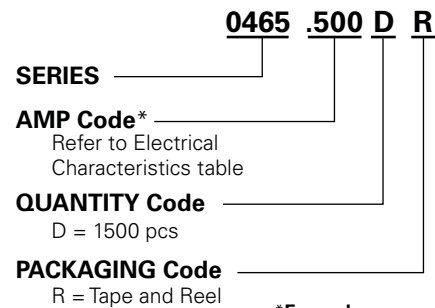
| | |
|--|--|
| Materials | Body: High Performance Ceramic Terminations: Silver plated brass. |
| Product Marketing | Brand, Ampere Rating, Voltage Rating, UMF Logo |
| Operating Temperature | -55°C to 125°C. |
| Moisture Sensitivity Level | Level 1, J-STD-020C |
| Solderability | IEC60127-4 |
| Insulation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

