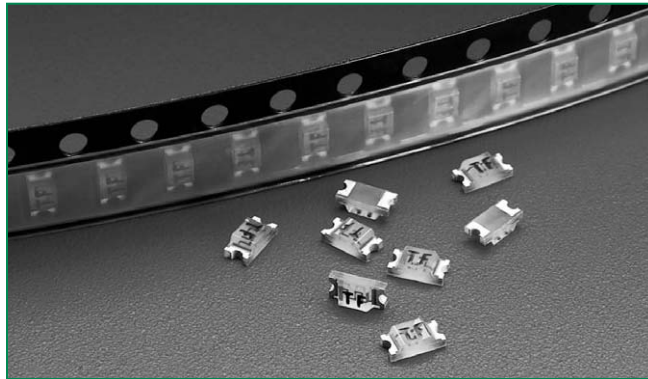


430 Series Fuse



Description

The 430 series time-lag (Slo-Blo) surface mount fuse series is a small (1206 size) thin-film device designed for secondary protection of circuits used in space constrained applications such as hand-held portable electronic devices.

For RoHS compliant and lead-free design, please refer to the Littelfuse 468 series thin film fuse.

Features

- For RoHS compliant and Lead-Free designs use 468 series
- Time delay feature withstands high in-rush currents and prevents nuisance openings.
- Package is visually distinct from fast-acting version for easy identification.
- Top side marking allows visual verification of amperage rating.

Agency Approvals

| Agency | Agency File Number | Ampere Range |
|--------|--------------------|--------------|
| | E10480 | 500mA - 3A |
| | LR29862 | 500mA - 3A |

Electrical Characteristics for Series

| % of Ampere Rating | Opening Time at 25°C |
|--------------------|----------------------------------|
| 100% | 4 hours, Minimum |
| 200% | 1 sec., Min.; 120 sec., Max. |
| 300% | 0.1 sec., Min.; 3 sec., Max |
| 800% | 0.002 sec., Min.; .05 sec., Max. |

Applications

Secondary protection for space constrained applications such as:

- Cell phones
- Battery packs
- Digital cameras
- DVD players
- Hard disk drives.

Electrical Specifications by Item

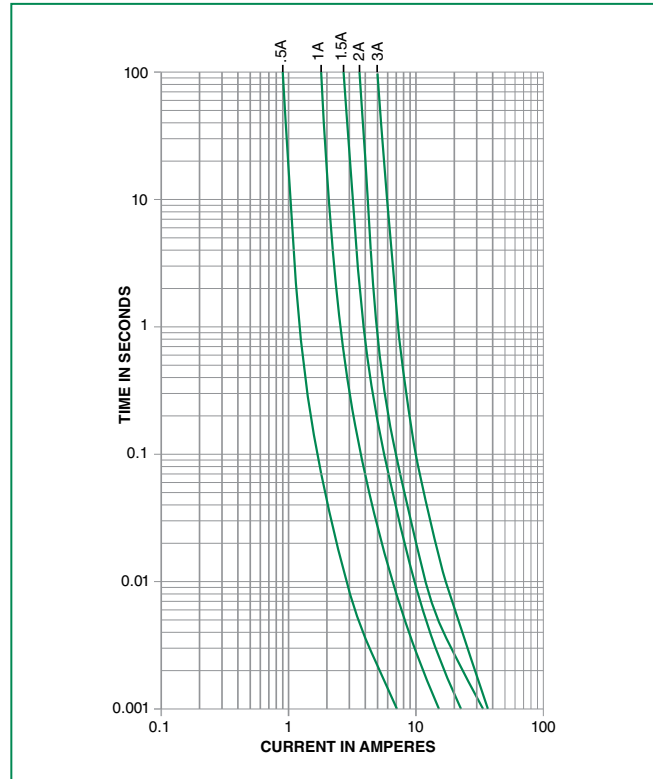
| Ampere Rating (A) | Amp Code | Max Voltage Rating (V) | Interrupting Rating | Nominal Cold Resistance (Ohms) | Nominal Melting I ² t (A ² sec) | Agency Approvals | |
|-------------------|----------|------------------------|--------------------------|--------------------------------|---|------------------|---|
| | | | | | | | |
| 0.500 | .500 | 63 | 50 amperes at 63 VAC/VDC | 0.2500 | 0.0305 | x | x |
| 1.00 | 001. | 63 | | 0.09700 | 0.1440 | x | x |
| 1.50 | 01.5 | 63 | | 0.05600 | 0.2980 | x | x |
| 2.00 | 002. | 63 | 35 amperes at 63 VAC/VDC | 0.03900 | 0.4940 | x | x |
| 3.15 | 003. | 32 | 50 amperes at 63 VAC/VDC | 0.02000 | 1.3300 | x | x |

1. Measured at 10% of rated current, 25°C.
2. Measured at rated voltage.

Temperature Derating Curve

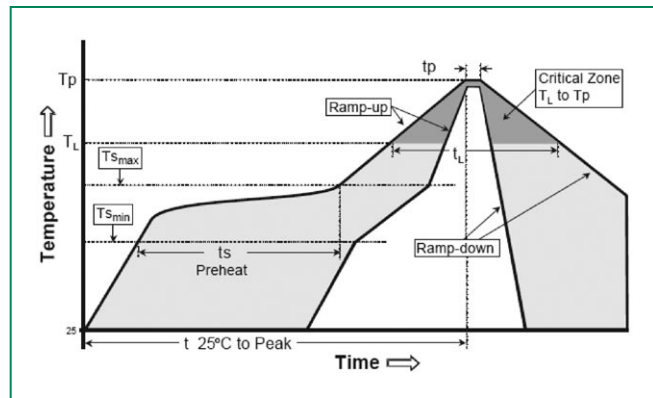


Average Time Current Curves



Soldering Parameters - Wave 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 – 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) | | 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 |

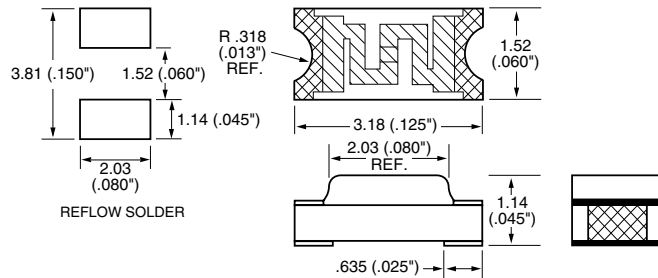


Product Characteristics

| | |
|------------------------------|--|
| Materials | Body: Epoxy Substrate Terminations: 95% Tin / 5% Lead over Nickel over Copper Element Cover Coat: Conformal Coating |
| Operating Temperature | - 55°C to 90°C. Consult temperature derating curve chart. For operation above 90°C contact Littelfuse. |
| Humidity | MIL-STD-202F Method 103B Condition D |
| Thermal Shock | Withstands 5 cycles of - 55°C to 125°C |

| | |
|--|---|
| Vibration | Withstands 10-55 Hz per MIL-STD-202F, Method 201A and 10-2000 Hz at 20 G's per MIL-STD-202F, Method 204D, Condition D |
| Insulation Resistance (After Opening) | Greater than 10,000 ohms |
| Resistance to Soldering Heat | Withstands 60 seconds above 200°C and up to 260°C, maximum |

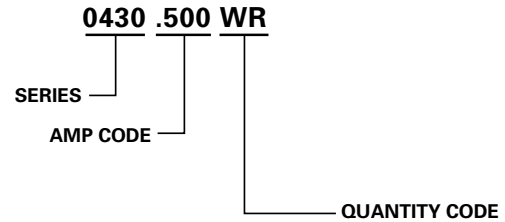
Dimensions



Part Marking System

| Amp Code | Marking Code |
|----------|--------------|
| .500 | F |
| 001. | H |
| 01.5 | K |
| 002. | N |
| 003. | P |

Part Numbering System



Packaging

| Packaging Option | Packaging Specification | Quantity | Quantity & Packaging Code |
|-------------------|--------------------------------|----------|---------------------------|
| 8mm Tape and Reel | EIA RS-481-2 (IEC 286, part 3) | 3000 | WR |