

# 808 Series

## TE5® Fast-Acting Fuse



### Additional Information



Resources



Accessories



Samples

### Description

The 808 TE5® Fast-acting Fuse is designed to enable compliance with the RoHS Directive. This product is fully compatible with lead-free solder alloy and is UL Recognized for protecting components or internal circuits against overcurrent conditions at high DC voltages.

### Features & Benefits

- Reduced PCB space requirements
- Direct solderable or plug-in versions
- Low internal resistance
- Halogen-free, lead-free, and RoHS-compliant
- Shock safe casing
- Vibration resistant
- Antimony-free
- Ideal for high voltage DC applications
- Very high breaking capacity of 10kA at rated DC voltage
- Recognized to UL/CSA/NMX 248-1 and UL/CSA/NMX 248-14
- Conforms to DENAN's Appendix 3

### Applications

- DC/DC Converter
- Transformer-less AC/DC Circuit
- Data Centers
- Telecom/Datacom Central Offices

### Agency Approvals

| Agency | Agency File Number | Ampere Range  |
|--------|--------------------|---------------|
|        | NBK240118-E67006   | 2.00A - 5.00A |
|        | E67006             | 2.00A - 5.00A |
|        | NA                 | 2.00A - 5.00A |
|        | NA                 | 2.00A - 5.00A |

### Electrical Characteristics

| % of Ampere Rating | Opening Time        |
|--------------------|---------------------|
| 100%               | 4 Hours, Minimum    |
| 200%               | 10 Seconds, Maximum |

### Electrical Characteristics

| Ampere Rating (A) | Amp Code | Max Voltage Rating (V) |     | Interrupting Rating <sup>1</sup> | Nominal Cold Resistance <sup>2</sup> (Ohms) | Nominal Melting I <sup>2</sup> t 10xI <sub>N</sub> (A <sup>2</sup> sec) | Max Voltage Drop 1.0xI <sub>N</sub> (mV) | Agency Approval |       |       |      |
|-------------------|----------|------------------------|-----|----------------------------------|---------------------------------------------|-------------------------------------------------------------------------|------------------------------------------|-----------------|-------|-------|------|
|                   |          | AC                     | DC  |                                  |                                             |                                                                         |                                          | CE              | UK CA | cULus | PS E |
| 2.00              | 1200     | 250                    | 450 | 200A to 10kA @ 250VAC            | 0.069                                       | 0.0610                                                                  | 342                                      | x               | x     | x     | x    |
| 2.50              | 1250     | 250                    | 450 | 300A to 10kA@450VDC              | 0.054                                       | 0.0898                                                                  | 300                                      | x               | x     | x     | x    |
| 3.00              | 1300     | 250                    | 350 | 200A@250VAC                      | 0.042                                       | 0.2007                                                                  | 276                                      | x               | x     | x     | x    |
| 3.15              | 1315     | 250                    | 350 | 300A to 10kA@350VDC              | 0.038                                       | 0.2191                                                                  | 270                                      | x               | x     | x     | x    |
| 4.00              | 1400     | 250                    | 250 | 200A@250VAC                      | 0.027                                       | 0.5445                                                                  | 240                                      | x               | x     | x     | x    |
| 5.00              | 1500     | 250                    | 250 | 300A to 10kA@250VDC              | 0.022                                       | 1.1584                                                                  | 215                                      | x               | x     | x     | x    |

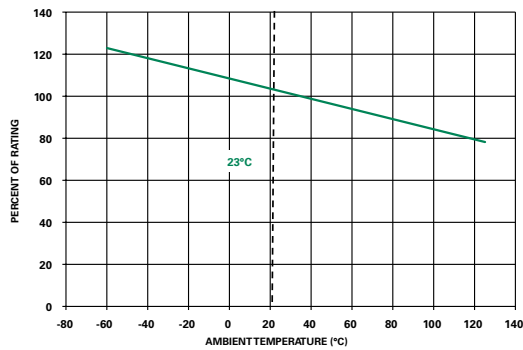
#### Notes:

1. This fuse is not recommended for use in DC circuits where the available prospective short-circuit current is less than 300A at rated voltage.
2. Cold resistance measured at less than 10% of rated current at 23°C.
3. An operating current of 80% or less of rated current is recommended, with further derating required at elevated ambient temperature.
4. Have special electrical characteristic needs? Contact Littelfuse to learn more about application specific options.

# 808 Series

## TE5® Fast-Acting Fuse

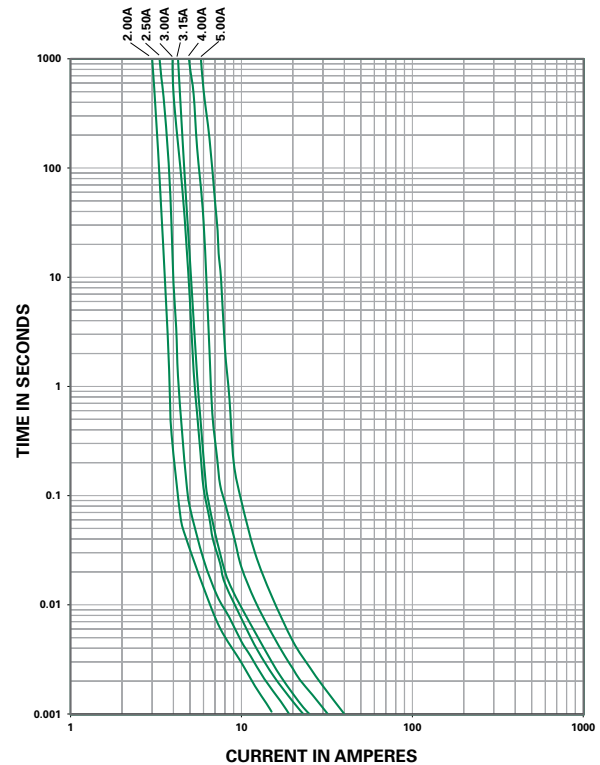
### Temperature Re-rating Curve



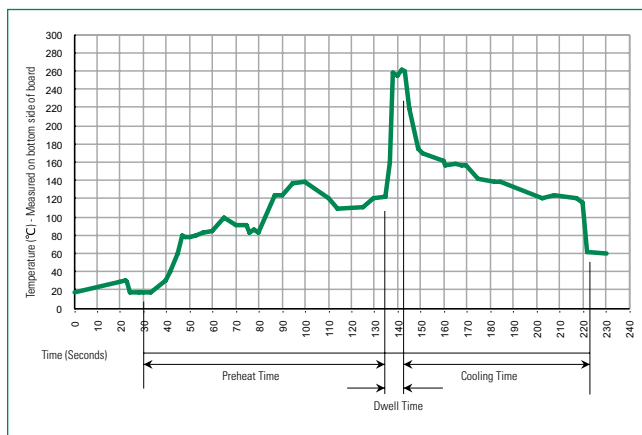
#### Note:

1. Derating depicted in this curve is in addition to the standard derating of 20% for continuous operation.

### Average Time Current Curves



### Soldering Parameters - Wave Soldering



Recommended Process Parameters:

| Wave Parameter                                       | Lead-Free Recommendation          |
|------------------------------------------------------|-----------------------------------|
| Preheat:<br>(Depends on Flux Activation Temperature) | (Typical Industry Recommendation) |
| Temperature Minimum:                                 | 100°C                             |
| Temperature Maximum:                                 | 150°C                             |
| Preheat Time:                                        | 60-180 seconds                    |
| Solder Pot Temperature:                              | 260°C Maximum                     |
| Solder Dwell Time:                                   | 2-5 seconds                       |

Recommended Hand-Solder Parameters:

Solder Iron Temperature: 350°C +/- 5°C  
Heating Time: 5 seconds max.

**Note:** These devices are not recommended for IR or Convection Reflow process.

# 808 Series

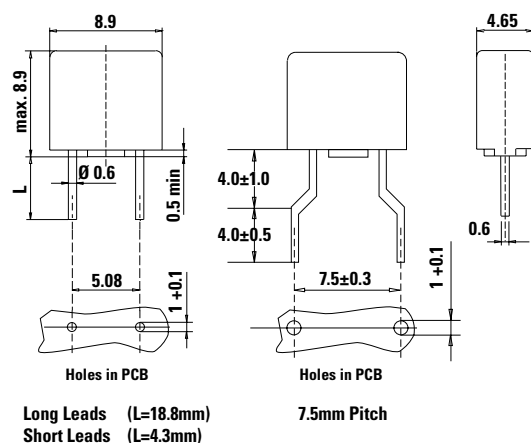
## TE5® Fast-Acting Fuse

### Product Characteristics

|                        |                                                                                                    |
|------------------------|----------------------------------------------------------------------------------------------------|
| <b>Materials</b>       | Base/Cap: Black Thermoplastic<br>Polyphenylene Sulfide, UL 94 V-0<br>Round Pins: Copper, Sn-plated |
| <b>Product Marking</b> | Body: Brand Logo, Current Rating<br>Rated Voltage,<br>Characteristic "F"                           |
| <b>Solderability</b>   | 260°C, ≤ 3s. (Wave)<br>350°C, ≤ 1s. (Soldering Iron)                                               |
| <b>Thermal Shock</b>   | 50 cycles, 15 minutes at -65°C/15 minutes at 125°C (MIL-STD-202, Method 107)                       |

|                              |                                                                                                                                                   |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Operating Temperature</b> | -65°C to +125°C (Consider re-rating)                                                                                                              |
| <b>Moisture Resistance</b>   | 10 cycles, 65°C at 90-98% R.H. over 150 minutes, 180 minutes holding time, Reduce temperature to 23 – 35°C over 150 minutes, 8 hours holding time |
| <b>Vibration Resistance</b>  | 24 cycles at 5 min. each (IEC60068-2-6)<br>10-60Hz at 0.75mm amplitude<br>60-2000Hz at 10G's acceleration                                         |

### Dimensions (mm)



### Part Numbering System

|                       |                                                              |             |             |
|-----------------------|--------------------------------------------------------------|-------------|-------------|
| <b>Series</b>         | <b>808</b>                                                   | <b>xxxx</b> | <b>0000</b> |
| <b>Amp Code</b>       | Refer to Amp Code column of Electrical Characteristics Table |             |             |
| <b>Packaging Code</b> |                                                              |             |             |
| 0000                  | Tape/Ampopack                                                | (1,000 pcs) |             |
| 0440                  | Short leads - Bulk                                           | (1,000 pcs) |             |
| 0075                  | 7.5mm pitch - Bulk                                           | (1,000 pcs) |             |

### Packaging

| Packaging Option  | Packaging Specification | Quantity | Quantity & Packaging Code | Taping Width |
|-------------------|-------------------------|----------|---------------------------|--------------|
| <b>808 Series</b> |                         |          |                           |              |
| Tape & Ampopack   | N/A                     | 1,000    | 0000                      | N/A          |
| Short Leads       | N/A                     | 1,000    | 0440                      | N/A          |
| 7.5 mm Pitch      | N/A                     | 1,000    | 0075                      | N/A          |

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