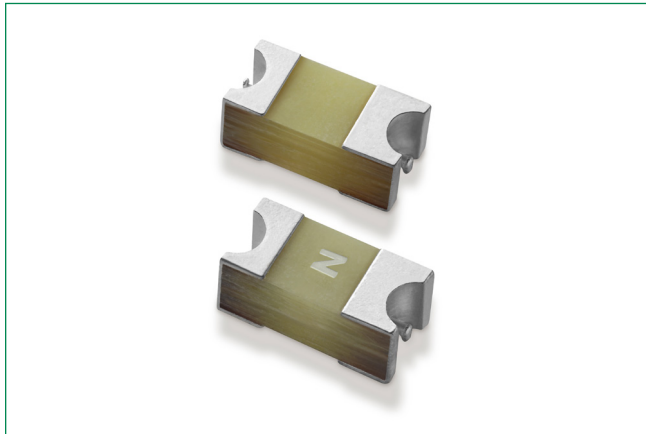


# Surface Mount Fuses

Thin Film Fuse > Fast Acting > 483A Series



## Description

Littelfuse 483A Series AEC-Q200 qualified fuses are to cater to secondary circuit protection needs of compact auto electronics applications. The general design ensures excellent temperature stability and performance reliability.

This high I<sup>2</sup>t fuse series is designed to have ultra high inrush current withstand capability to avoid nuisance fuse open.

## Features

- Operating Temperature from -55 °C to 125 °C
- 100% Lead-free, Halogen-Free and RoHS compliant
- AEC-Q200 Qualified
- Very Small 1206 Footprint
- Ultra high I<sup>2</sup>t values
- Fast Acting
- Recognized to UL/CSA/NMX 248-1 and UL/CSA/NMX 248-14

## Agency Approvals

| Agency | Agency File Number | Ampere Range |
|--------|--------------------|--------------|
|        | E10480             | 0.750-2 A    |

## Electrical Characteristics

| % of Ampere Rating | Opening Time       |
|--------------------|--------------------|
| 100%               | 4 Hours, Minimum   |
| 250%               | 5 Seconds, Maximum |

## Benefits

- Single fuse solution for high current application
- Suitable for a wide variety of voltage requirements and applications

## Applications

- Li-Ion Battery
- LED Lighting
- Automotive Navigation System
- Battery Management System (BMS)
- Cluster

## Additional Information



Resources



Accessories



Samples

## Electrical Specifications

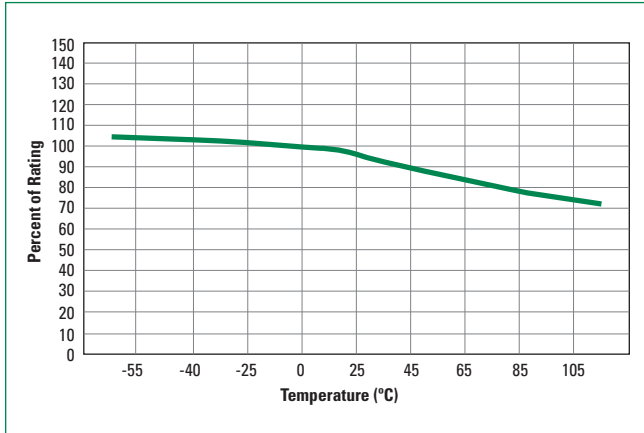
| Ampere Rating (A) | Amp Code | Max Voltage Rating (V) | Interrupting Rating | Nominal Cold Resistance (Ohms) | Nominal Melting I <sup>2</sup> t (A <sup>2</sup> sec.) | Agency Approvals |
|-------------------|----------|------------------------|---------------------|--------------------------------|--|------------------|
| 0.750             | 0.750    | 75V                    | 50A @ 75VDC/VAC     | 0.235                          | 0.144  | X                |
| 1.00              | 001.     | 75V                    |                     | 0.165                          | 0.286  | X                |
| 2.00              | 002.     | 75V                    |                     | 0.073                          | 1.420  | X                |

Note: I<sup>2</sup>t values stated for 1 msec opening time.

# Surface Mount Fuses

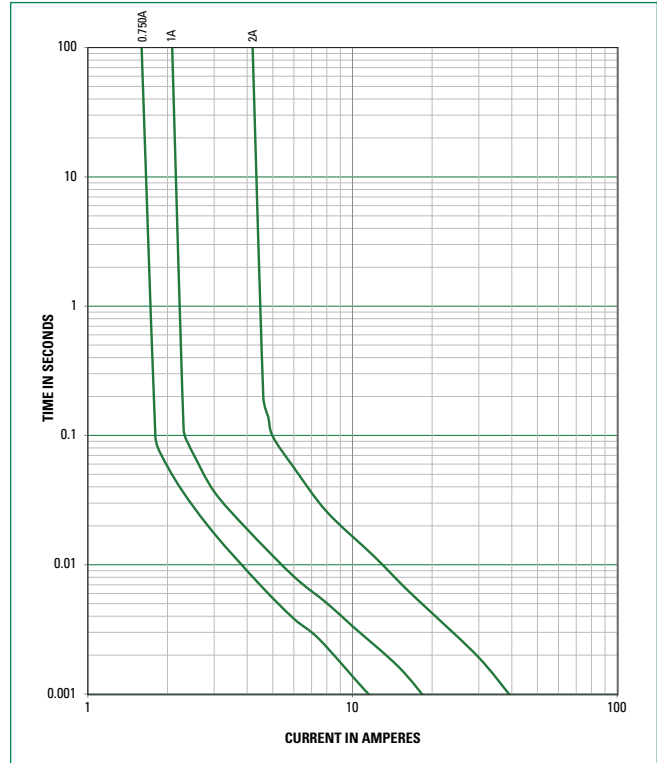
Thin Film Fuse > Fast Acting > 483A Series

## Temperature Re-rating Curve



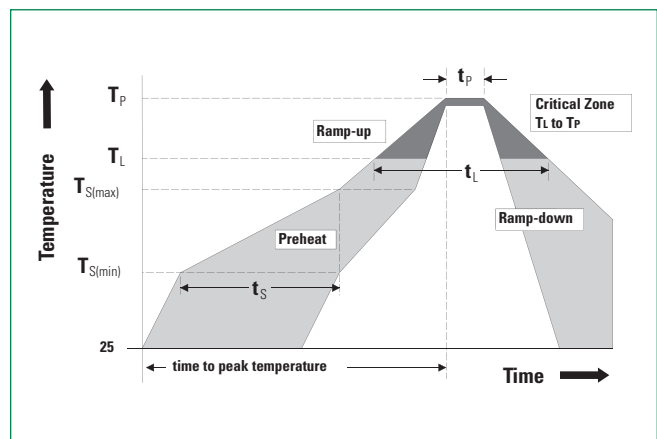
**Note**  
Derating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

## Average Time Current Curves



## Soldering Parameters

|  |                                    |                    |
|--|------------------------------------|--------------------|
| <b>Reflow Condition</b>  |                                    | Pb – Free assembly |
| <b>Pre Heat</b>  | - Temperature Min ( $T_{s(min)}$ ) | 150 °C             |
|  | - Temperature Max ( $T_{s(max)}$ ) | 200 °C             |
|  | - Time (Min to Max) ( $t_s$ )      | 60–180 secs        |
| <b>Average ramp up rate (Liquidus Temp (<math>T_L</math>) to peak)</b> |                                    | 5 °C/second max.   |
| <b><math>T_{s(max)}</math> to <math>T_L</math> - Ramp-up Rate</b>      |                                    | 5 °C/second max.   |
| <b>Reflow</b>  | - Temperature ( $T_L$ ) (Liquidus) | 217 °C             |
|  | - Temperature ( $t_L$ )            | 60–150 secs        |
| <b>Peak Temperature (<math>T_p</math>)</b>                             |                                    | 260+0/-5 °C        |
| <b>Time within 5 °C of actual peak Temperature (<math>t_p</math>)</b>  |                                    | 20–40 seconds      |
| <b>Ramp-down Rate</b>  |                                    | 5 °C / second max. |
| <b>Time 25 °C to peak Temperature (<math>T_p</math>)</b>               |                                    | 8 minutes max.     |
| <b>Do not exceed</b>   |                                    | 260 °C             |



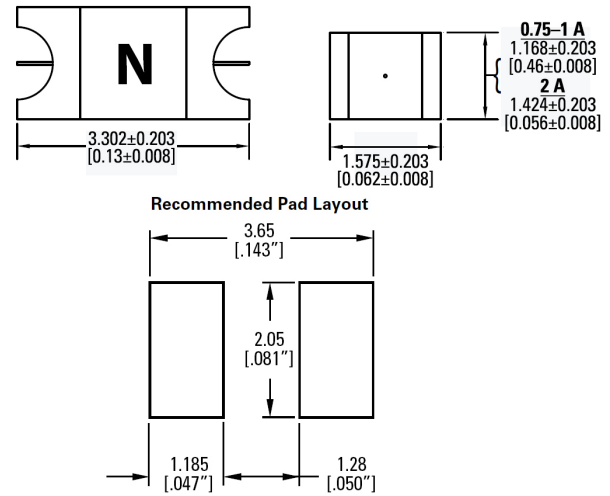
# Surface Mount Fuses

## Thin Film Fuse > Fast Acting > 483A Series

### Product Characteristics

|  |  |
|--|--|
| <b>Materials</b>                         | <b>Body:</b> Glass-Reinforced Epoxy<br><b>Terminations:</b> Cu/Ni/Sn<br>(100% Pb-free) |
| <b>Moisture Sensitivity Level</b>        | IPC/JEDEC J-STD-020, Level 1   |
| <b>Thermal Shock</b>                     | JESD22-A104C   |
| <b>Biased Humidity</b>                   | MIL-STD-202, Method 103,<br>Test Condition D w/ exemptions                             |
| <b>High Temperature Storage</b>          | MIL-STD-202, Method 108<br>Test Condition D w/ exemptions                              |
| <b>High Temperature Operational Life</b> | MIL-STD-202, Method 108, Test<br>Condition D   |
| <b>Mechanical Shock</b>                  | MIL-STD-202, Method 213  |
| <b>High Frequency Vibration</b>          | MIL-STD-202, Method 204  |
| <b>Resistance to Solvents</b>            | MIL-STD-202, Method 215  |
| <b>Resistance to Soldering Heat</b>      | MIL-STD-202, Method 210  |
| <b>Salt Fog</b>                          | MIL-STD-202, Method 101  |
| <b>Moisture Resistance</b>               | MIL-STD-202, Method 106  |
| <b>Terminal Strength</b>                 | AEC-Q200-006   |
| <b>Board Flex</b>                        | AEC-Q200-005   |
| <b>Solderability</b>                     | JESD22-B102E Method 1  |
| <b>Pulse Testing</b>                     | Device Specification   |
| <b>Electrical Characterization</b>       | Conducted at minimum, ambient and<br>maximum temperatures                              |

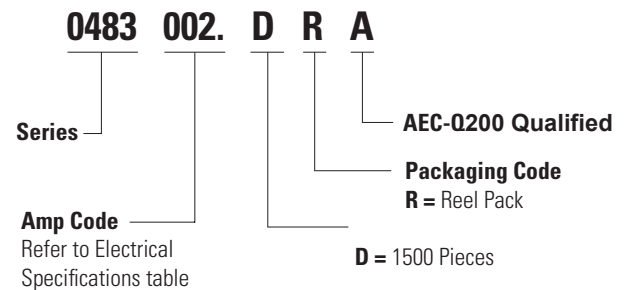
### Dimensions mm [inch]



### Part Marking System

| Amp Code | Marking Code |
|----------|--------------|
| .750     | G            |
| 001.     | H            |
| 002.     | N            |

### Part Numbering System



### Packaging

| Packaging Option   | Packaging Specification | Quantity | Quantity & Packaging Code | Reel Size |
|--------------------|-------------------------|----------|---------------------------|-----------|
| 8 mm Tape and Reel | EIA-481                 | 1500     | DR                        | N / A     |

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