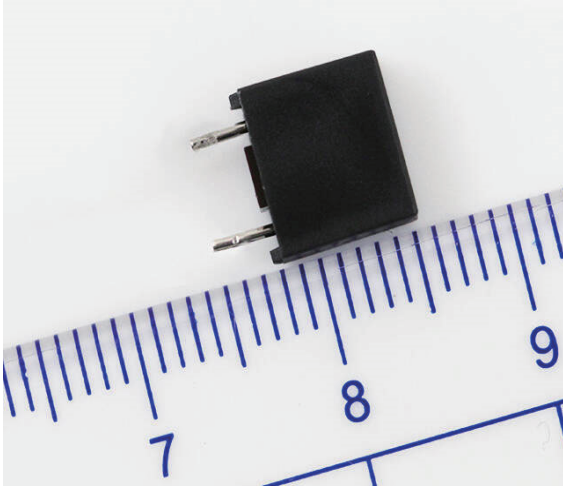


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PRODUCT DATASHEET

Miniature Fuse

**JFS Series, Time-Lag Fuse**



## Description

JFS series is Time-Lag type, 250V rated, designed in accordance to IEC 60127-3. This product is suitable for various kinds of electronic machines to work for over current protection.

## Features

- One time positive disconnect
- Time-Lag for excessive current
- Shock safe casing
- Vibration resistant
- Direct solderable or plug-in versions
- Conflict free metals
- RoHS compliant and Halogen free material
- Operating temperature:- 40 °C to +125 °C

## Agency Approvals

| AGENCY                                                                              | AGENCY FILE NUMBER |
|-------------------------------------------------------------------------------------|--------------------|
|  | J50678260          |
|  | E486200            |

## Applications

- Battery Chargers
- Consumer Electronics
- Power supplies
- Industrial Controllers

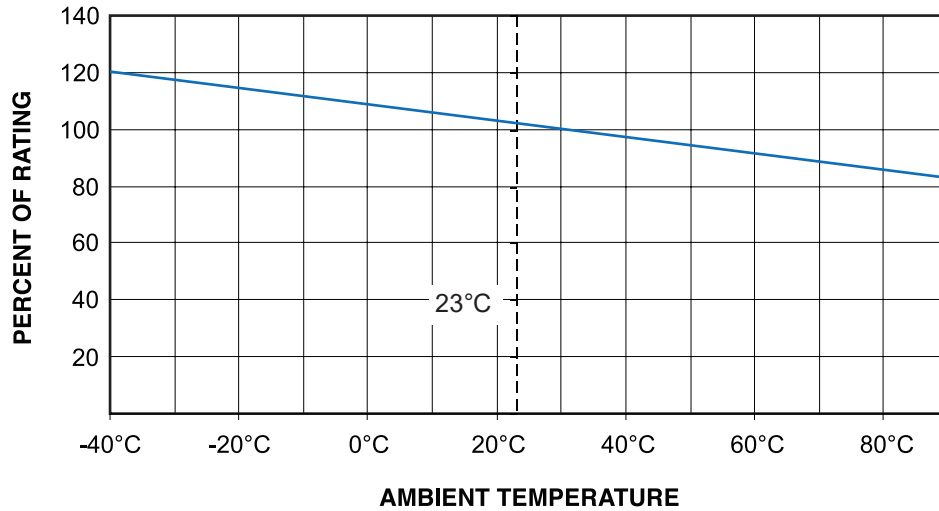
## Electrical Characteristics

| % of Ampere Rating | Opening Time  |
|--------------------|---------------|
| 210%               | 2 min Max.    |
| 275%               | 400 ms~10 s   |
| 400%               | 150 ms~3 s    |
| 1000%              | 20 ms~150 ms, |

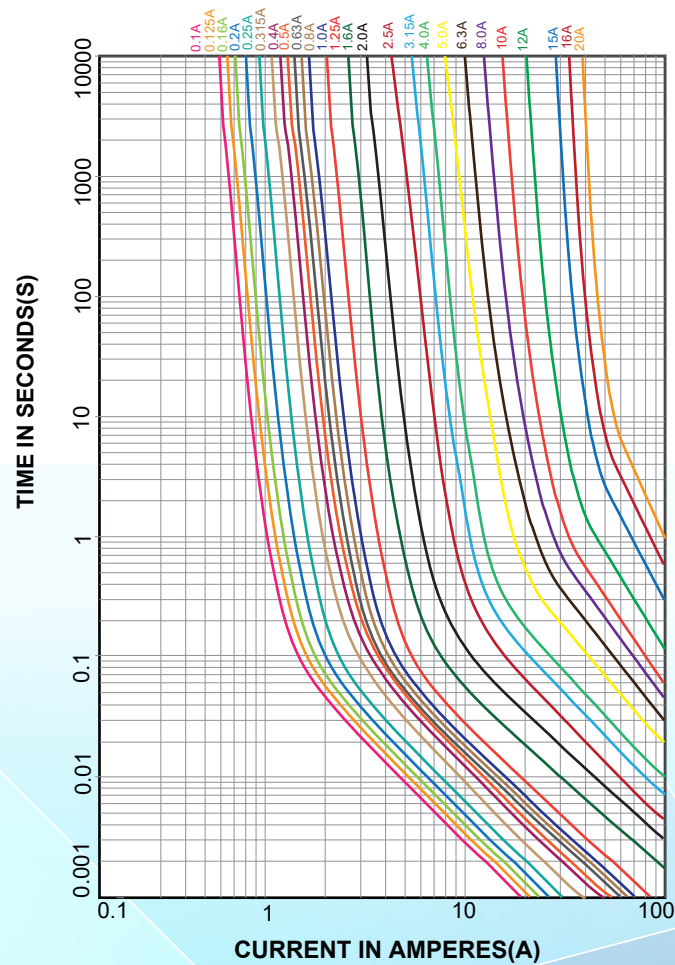
## Performance Specification

| Amp Code        | Rated Current (A) | Voltage Rating (V) | Breaking Capacity | Voltage Drop $1.0 \times I_N$ max. (mV) | Power Dissipation $1.5 \times I_N$ max. (mW) | Melting Integral $10 \times I_N$ min. (A <sup>2</sup> s) | Nominal Cold Resistance (Ohms) |
|-----------------|-------------------|--------------------|-------------------|-----------------------------------------|----------------------------------------------|----------------------------------------------------------|--------------------------------|
| JFS0100TR-4.3MM | 0.10              | 250                | 100A/250 VAC      | 400                                     | 93                                           | 0.0061                                                   | 4.50                           |
| JFS0125TR-4.3MM | 0.125             | 250                | 100A/250 VAC      | 385                                     | 106                                          | 0.008                                                    | 3.80                           |
| JFS0160TR-4.3MM | 0.16              | 250                | 100A/250 VAC      | 350                                     | 132                                          | 0.013                                                    | 2.60                           |
| JFS0200TR-4.3MM | 0.20              | 250                | 100A/250 VAC      | 325                                     | 158                                          | 0.024                                                    | 1.20                           |
| JFS0250TR-4.3MM | 0.25              | 250                | 25A/250 VAC       | 260                                     | 180                                          | 0.036                                                    | 0.2047                         |
| JFS0315TR-4.3MM | 0.315             | 250                | 25A/250 VAC       | 210                                     | 205                                          | 0.047                                                    | 0.1836                         |
| JFS0400TR-4.3MM | 0.40              | 250                | 25A/250 VAC       | 190                                     | 220                                          | 0.065                                                    | 0.1625                         |
| JFS0500TR-4.3MM | 0.50              | 250                | 25A/250 VAC       | 170                                     | 240                                          | 0.083                                                    | 0.1453                         |
| JFS0630TR-4.3MM | 0.63              | 250                | 25A/250 VAC       | 150                                     | 260                                          | 0.119                                                    | 0.1240                         |
| JFS0800TR-4.3MM | 0.80              | 250                | 25A/250 VAC       | 110                                     | 280                                          | 3.80                                                     | 0.0960                         |
| JFS1100TR-4.3MM | 1.00              | 250                | 25A/250 VAC       | 115                                     | 400                                          | 5.80                                                     | 0.0715                         |
| JFS1125TR-4.3MM | 1.25              | 250                | 25A/250 VAC       | 100                                     | 500                                          | 9.75                                                     | 0.0569                         |
| JFS1160TR-4.3MM | 1.60              | 250                | 25A/250 VAC       | 95                                      | 600                                          | 13.5                                                     | 0.0400                         |
| JFS1200TR-4.3MM | 2.00              | 250                | 25A/250 VAC       | 90                                      | 700                                          | 21                                                       | 0.0298                         |
| JFS1250TR-4.3MM | 2.50              | 250                | 25A/250 VAC       | 85                                      | 750                                          | 32                                                       | 0.0240                         |
| JFS1315TR-4.3MM | 3.15              | 250                | 32A/250 VAC       | 80                                      | 1100                                         | 55                                                       | 0.0170                         |
| JFS1400TR-4.3MM | 4.00              | 250                | 40A/250 VAC       | 75                                      | 1200                                         | 100                                                      | 0.0128                         |
| JFS1500TR-4.3MM | 5.00              | 250                | 50A/250 VAC       | 70                                      | 1000                                         | 90                                                       | 0.0101                         |
| JFS1630TR-4.3MM | 6.30              | 250                | 63A/250 VAC       | 65                                      | 1200                                         | 126                                                      | 0.0077                         |
| JFS1800TR-4.3MM | 8.00              | 250                | 80A/250 VAC       | 40                                      | 1500                                         | 150                                                      | 0.0051                         |
| JFS2100TR-4.3MM | 10.0              | 250                | 100A/250 VAC      | 35                                      | 2000                                         | 205                                                      | 0.0048                         |
| JFS2120TR-4.3MM | 12.0              | 250                | 100A/250 VAC      | 30                                      | 2300                                         | 218                                                      | 0.0040                         |
| JFS2150TR-4.3MM | 15.0              | 250                | 100A/250 VAC      | 25                                      | 2500                                         | 226                                                      | 0.0035                         |
| JFS2160TR-4.3MM | 16.0              | 250                | 100A/250 VAC      | 18                                      | 2650                                         | 243                                                      | 0.0028                         |
| JFS2200TR-4.3MM | 20.0              | 250                | 100A/250 VAC      | 20                                      | 2700                                         | 268                                                      | 0.0021                         |

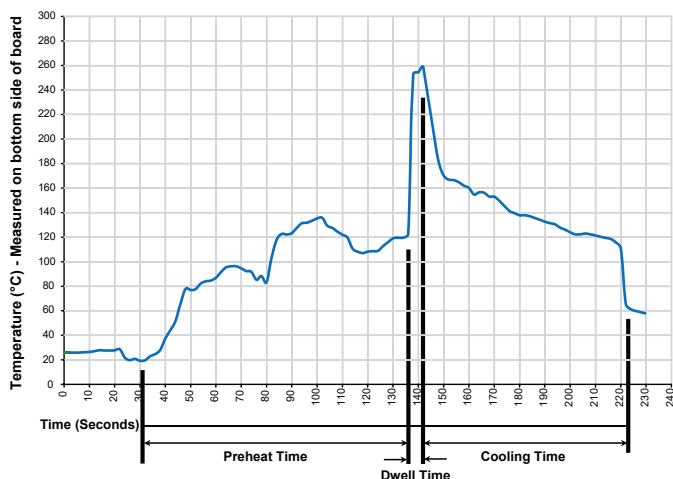
### Temperature Derating Curve



### Time-Current Characteristics



## Soldering Parameters



### Recommended Process Parameters:

| Wave Parameter                                       | Lead-Free Recommendation          |
|------------------------------------------------------|-----------------------------------|
| Preheat:<br>(Depends on Flux Activation Temperature) | (Typical Industry Recommendation) |
| Temperature Min.                                     | 100° C                            |
| Temperature Max.                                     | 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.

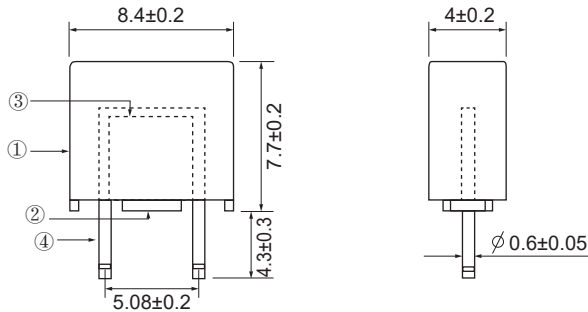
**Note: These devices are not recommended for IR or Convection Reflow process.**

## Product Characteristics

|                       |                                                                                                                                                                           |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lead Pull Strength    | 10 N (EN 60068-2-21)                                                                                                                                                      |
| Solderability         | 260°C, ≤ 3s. (Wave); 350°C, ≤ 1s. (Soldering Iron)                                                                                                                        |
| Soldering Heat        | 260°C, 10s. (IEC 60068-2-20)                                                                                                                                              |
| Resistance            | 350°C, 3s. (Soldering Iron)                                                                                                                                               |
| Operating Temperature | *-40°C to +125°C (consider de-rating)                                                                                                                                     |
| Climatic Category     | -40°C to +85°C /21 days (EN 60068-1,-2-1,-2-2,-2-78)                                                                                                                      |
| Stock Conditions      | +10°C to +60°C<br>RH ≤ 75% yearly average, without dew, maximum value for 30 days—95%                                                                                     |
| Vibration Resistance  | 24 cycles at 15 min. each(EN 60068-2-6)<br>10 - 60 Hz at 0.75 mm amplitude; 60 - 2000 Hz at 10 g acceleration<br>* Internal test conditions from thermal cycling at 125°C |

### Dimensions

Unit: mm



### Material Details

| No. | Part Name    | Material                       |
|-----|--------------|--------------------------------|
| ①   | Case         | Thermoplastic Nylon            |
| ②   | Base         | Thermoplastic Nylon            |
| ③   | Fuse element | Alloy                          |
| ④   | Lead wire    | Tinned copper wire             |
| ⑤   | Solder       | Solder wire( Sn:99.3%;Cu:0.7%) |

### Part Number System

**JFS    xxxx    T R   - 4.3MM**

**Lead length**  
4.3mm

**Suffix**  
T=time-Lag    R=Radial Leaded

**AMP Code**  
Refer to Amp Code column of Electrical Characteristics Table

**Series**  
JF=JDT Fuse    S=Square

### Packaging

| Packaging Option | Quantity/Packaging Code |
|------------------|-------------------------|
| Bag              | 1,000 pcs/bag           |