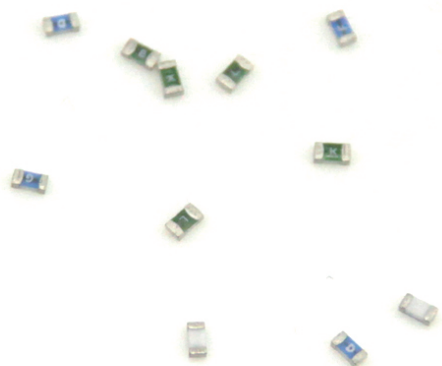


为 您 的 产 品 保 驾 护 航

PRODUCT DATASHEET

Nano Fuses · Surface Mount

**JFC0603FS FAST ACTING FUSE**



## Descriptions

JFC0603FS Series are fast acting fuse, The chip fuses set the industry standard for performance, reliability and quality. The solder-free design provides excellent on-off and temperature cycling characteristics and also makes our chip fuses more heat and shock tolerant than typical subminiature fuses.

## Features

- Compatible with reflow and wave solder
- Excellent environmental integrity
- One time positive disconnect
- Lead Free and Halogen free material

## Agency Approvals

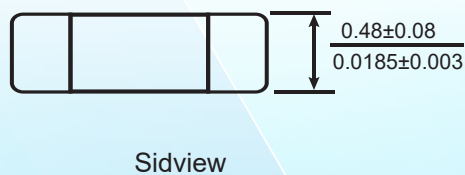
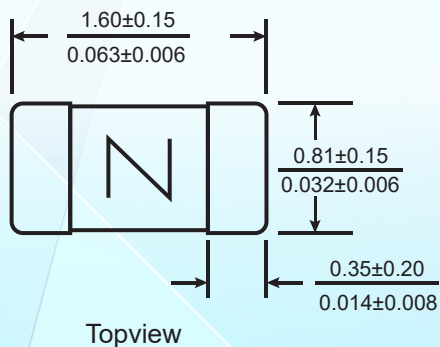
| AGENCY                                                                             | AGENCY FILE NUMBER |
|------------------------------------------------------------------------------------|--------------------|
|  | E486200            |

## Electrical Characteristics

| Rated Current | 1.0Ih      | 2.5Ih     |
|---------------|------------|-----------|
| 250mA~8A      | 4 hour min | 5 sec max |

## Dimensions

Drawing not to scale (Unit:mm/inch)



### Performance Specification

| Part No.       | Rated Voltage DC | Rated Current (A) | Breaking Capacity* | Typical Cold Resistance (mΩ)** | Typical Voltage Drop (mV) | Typical Pre-Arching I <sup>2</sup> t (A <sup>2</sup> Sec)*** | Aplha Marking |
|----------------|------------------|-------------------|--------------------|--------------------------------|---------------------------|--------------------------------------------------------------|---------------|
| JFC0603-0250FS | 63V              | 0.250             | 50A                | 3250                           | 893                       | 0.00042                                                      | D             |
| JFC0603-0375FS |                  | 0.375             |                    | 1800                           | 587                       | 0.00093                                                      | E             |
| JFC0603-0500FS |                  | 0.500             |                    | 1070                           | 582                       | 0.001                                                        | F             |
| JFC0603-0750FS |                  | 0.750             |                    | 470                            | 427                       | 0.009                                                        | G             |
| JFC0603-1100FS | 32V              | 1                 |                    | 250                            | 335                       | 0.011                                                        | B             |
| JFC0603-1150FS |                  | 1.5               |                    | 150                            | 270                       | 0.045                                                        | H             |
| JFC0603-1200FS |                  | 2                 |                    | 78                             | 160                       | 0.115                                                        | K             |
| JFC0603-1250FS |                  | 2.5               |                    | 49                             | 145                       | 0.14                                                         | L             |
| JFC0603-1300FS | 32V              | 3                 |                    | 35                             | 130                       | 0.21                                                         | O             |
| JFC0603-1350FS |                  | 3.5               |                    | 28                             | 130                       | 0.50                                                         | R             |
| JFC0603-1400FS |                  | 4                 |                    | 18                             | 120                       | 0.56                                                         | S             |
| JFC0603-1500FS |                  | 5                 |                    | 14                             | 110                       | 1.2                                                          | T             |
| JFC0603-1600FS |                  | 6                 |                    | 11                             | 110                       | 1.7                                                          | V             |
| JFC0603-1700FS |                  | 7                 |                    | 9.5                            | 80                        | 2.3                                                          | X             |
| JFC0603-1800FS |                  | 8                 |                    | 7.0                            | 75                        | 3.0                                                          | Z             |

\* DC Interrupting Rating (Measured at rated voltage, time constant of less than 50 microseconds, battery source)

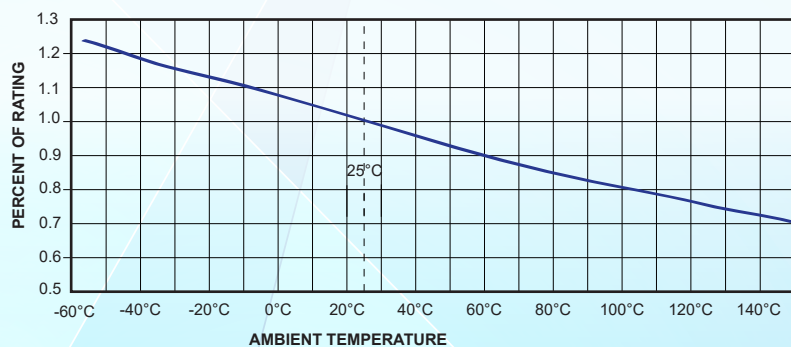
\*\* DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25degrees

\*\*\*Typical Pre-arching I<sup>2</sup>t are measured at 10In Current

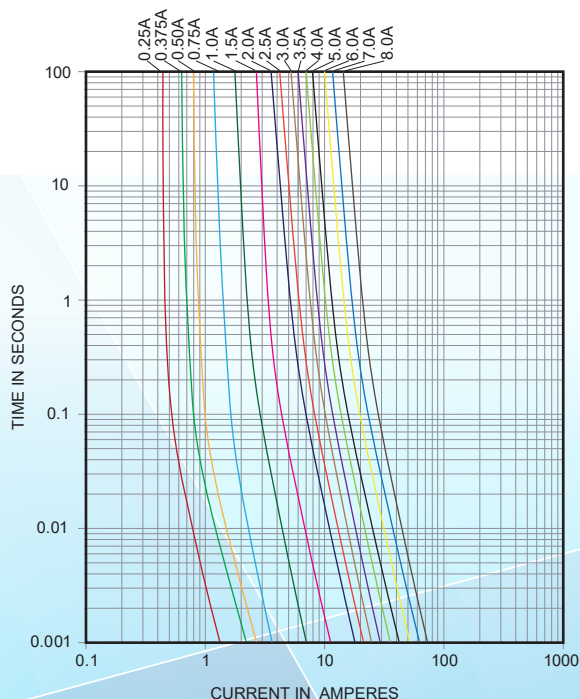
### Environmental Characteristic

- Normal ambient temperature: 23+/-3°C
- Operating temperature: -55°C ~ 150°C, with proper correction factor applied

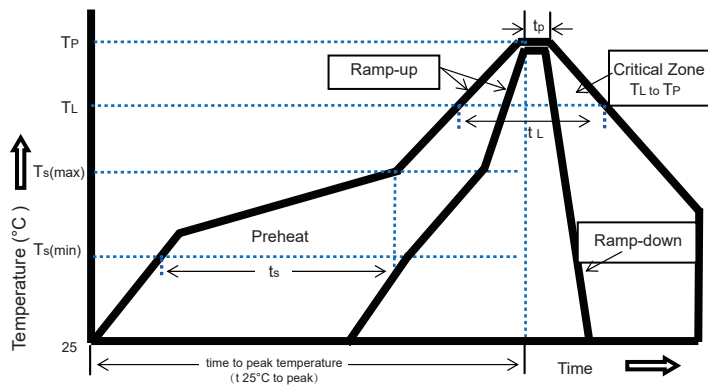
#### Temperature Derating Curve



#### Average Time-Current Curve



### Recommended Soldering Parameters

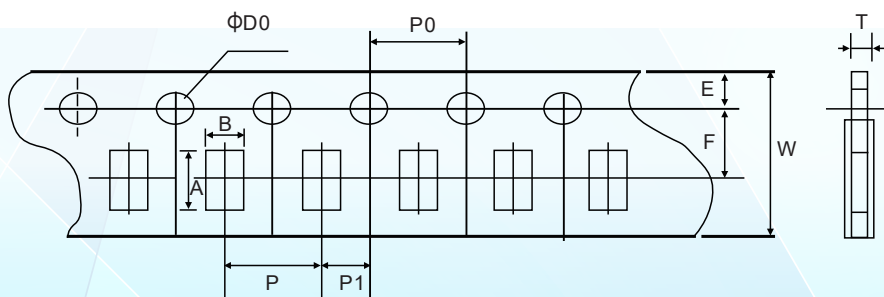


| Soldering Method |                       | Parameter   |
|------------------|-----------------------|-------------|
| Wave solder      | Reservoir temperature | 260°C       |
|                  | Time in reservoir     | 10 Secs max |
| Infrared reflow  | Temperature           | 260°C       |
|                  | Time                  | 30 Secs max |

| Profile Feature                                                                |                                            | Lead(Pb) free solder |
|--------------------------------------------------------------------------------|--------------------------------------------|----------------------|
| Preheat and soak                                                               | Temperature min ( $T_{smin}$ )             | 150°C                |
|                                                                                | Temperature max ( $T_{smax}$ )             | 200°C                |
|                                                                                | Time ( $T_{smin}$ to $T_{smax}$ )( $t_s$ ) | 60-120 Secs          |
| Average ramp up rate $T_{smax}$ to $T_p$                                       |                                            | 3°C/Secs Max         |
| Liquidous temperature( $T_L$ )                                                 |                                            | 217°C                |
| Time at liquidous( $t_L$ )                                                     |                                            | 60-150 Secs          |
| Peak package body temperature ( $T_p$ )                                        |                                            | 260°C                |
| Time ( $t_p$ ) within 5°C of the specified classification temperature( $T_c$ ) |                                            | 30 Secs              |
| Average ramp-down rate ( $T_p$ to $T_{smax}$ )                                 |                                            | 6°C/Secs Max         |
| Time (25°C to Peak Temperature)                                                |                                            | 8 Minutes Max        |

### Packing

| No.       | Quantity &Packaging Code                                                           |
|-----------|------------------------------------------------------------------------------------|
| JFC0603FS | 5000 fuses/reel<br>8mm tape-and-reel on a 7 inch (178mm) reel per EIA Standard 481 |

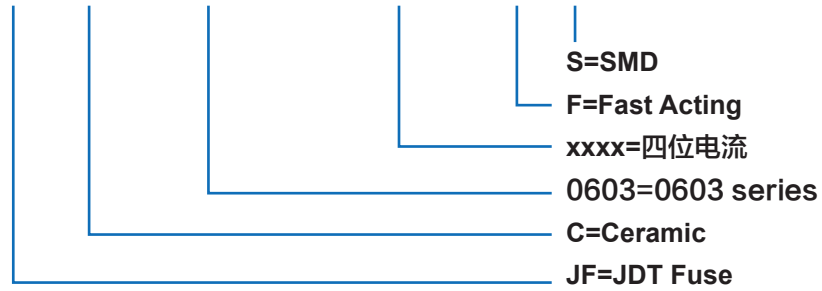


| Type | A         | B         | W         | F         | E         |
|------|-----------|-----------|-----------|-----------|-----------|
| Spec | 1.85±0.10 | 1.10±0.10 | 8.00±0.10 | 3.50±0.05 | 1.75±0.10 |
| Type | P         | P0        | P1        | D0        | T         |
| Spec | 4.00±0.10 | 4.00±0.10 | 2.00±0.05 | 1.50±0.10 | 0.65±0.10 |

(Unit: mm)

### Part Numbering System

**JF C 0603 - xxxx F S**



### Others

- If in use beyond the requirements of the specifications, must pass through the mutual confirmation !
- If the specification is not appropriate, must through consultation between the two sides and by the company to modify.
- It could be in conformance with another file which made by our company.