

# C310FH

## 3.1 mm x 10 mm Fast-acting, axial lead ceramic tube fuses



### Product features

- Fast-acting
- High breaking capacity
- Designed to IEC60127-3/-7
- Nickel-plated brass single end cap construction
- 3.1 mm x 10 mm compact design utilizes less board space
- Epoxy coated option available

### Applications

Primary circuit protection:

- Power supplies
- LED and general lighting
- Consumer electronics
- Desktop, laptop and notebook
- Test equipment

### Agency information

- cURus Recognition file number: E19180, Guide JDYX2/JDYX8
- CCC: 2019010207248424
- KC-Mark: File SU05030-14001
- TUV: R50278944

### Ordering

- Use ordering number (see page 4 for details)

### Packaging suffixes

- -TR1 (1500 parts on tape and reel, tape width 60 mm)
- -TR2 (1500 parts on tape and reel, tape width 52 mm)
- E-TR1 (Epoxy coated fuse, 1500 parts on tape and reel, tape width 60 mm)

### Option code

- Blank (Standard fuse)
- E (Epoxy coated)

**Electrical characteristics**

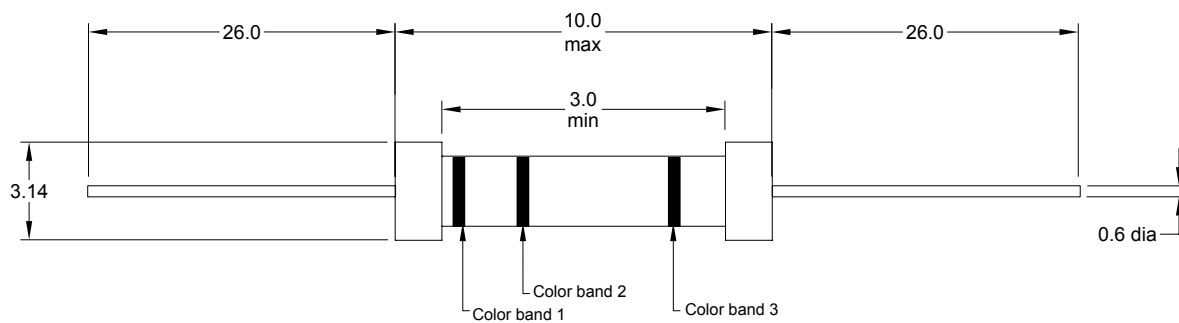
| $I_n$         | $1.5I_n$<br>min<br>hours | $2.1I_n$<br>max<br>minute | $2.75I_n$<br>min<br>ms | max<br>s | $4I_n$<br>min<br>ms | max<br>ms | $10I_n$<br>max<br>ms |
|---------------|--------------------------|---------------------------|------------------------|----------|---------------------|-----------|----------------------|
| 1.25 A- 2.0 A | 1.0                      | 30                        | 10                     | 3.0      | 3.0                 | 300       | 20                   |

**Product specifications**

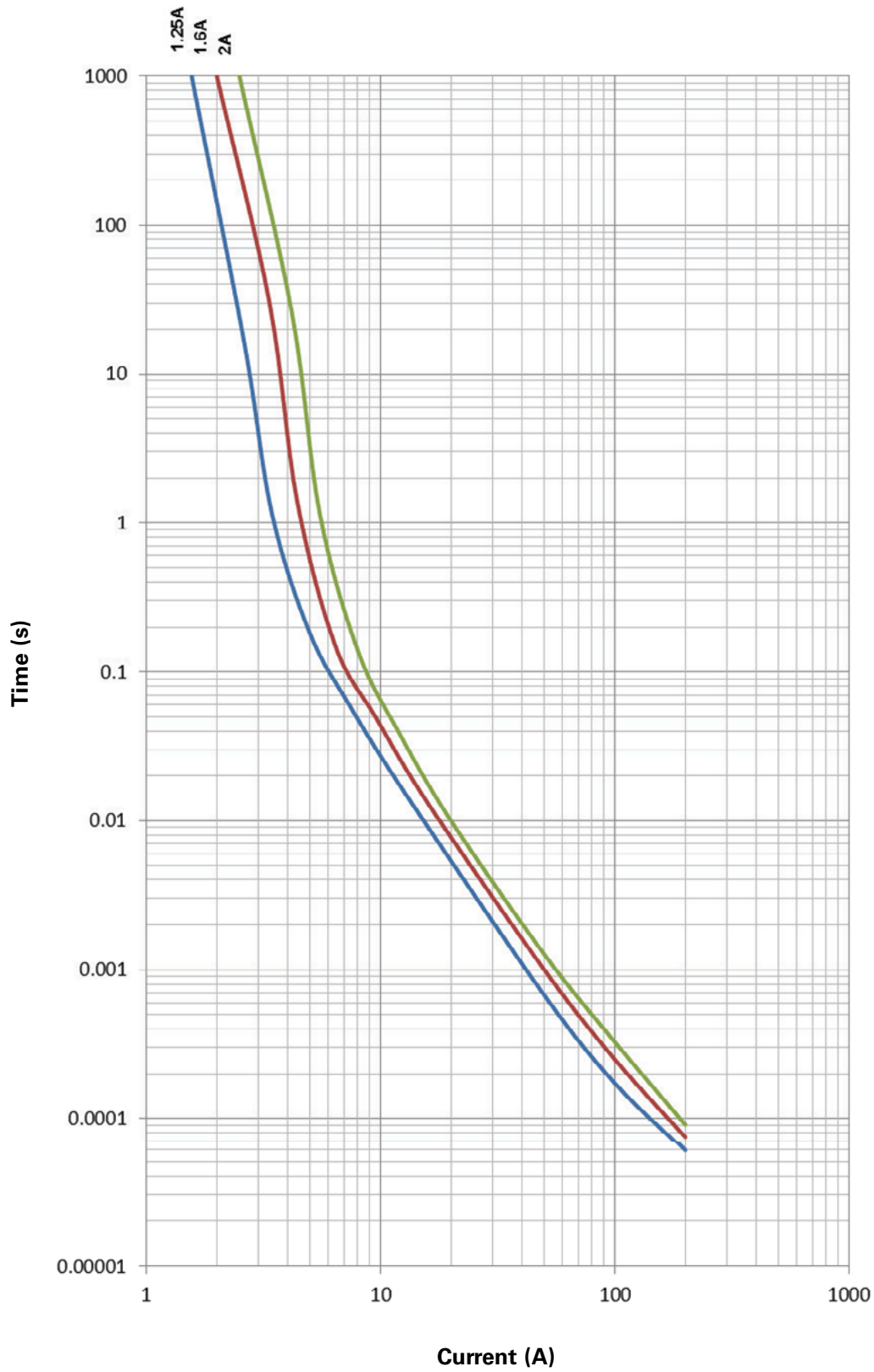
| Part number <sup>1</sup> | Current rating (A) | Voltage rating ( $V_{AC}$ ) | Interuppting rating at rated voltage (A) | Typical DC cold resistance ( $m\Omega$ ) | Typical melting $I^2t$ ( $A^2s$ ) | Maximum voltage drop (mV) | Color code band 1 | Color code band 2 | Color code band 3 |
|--------------------------|--------------------|-----------------------------|--|--|-----------------------------------|---------------------------|-------------------|-------------------|-------------------|
| C310FH-1.25-R            | 1.25               | 250                         | 150                                      | 60                                       | 2.7                               | 120                       | Brown             | Red               | Red               |
| C310FH-1.6-R             | 1.6                | 250                         | 150                                      | 55                                       | 3.0                               | 120                       | Brown             | Blue              | Red               |
| C310FH-2-R               | 2.0                | 250                         | 150                                      | 30                                       | 4.9                               | 120                       | Red               | Black             | Red               |

1. Part Number Definition: C310FH-xxx-R  
 C310FH = Product code  
 xxx = Ampere rating  
 -R suffix = RoHS compliant

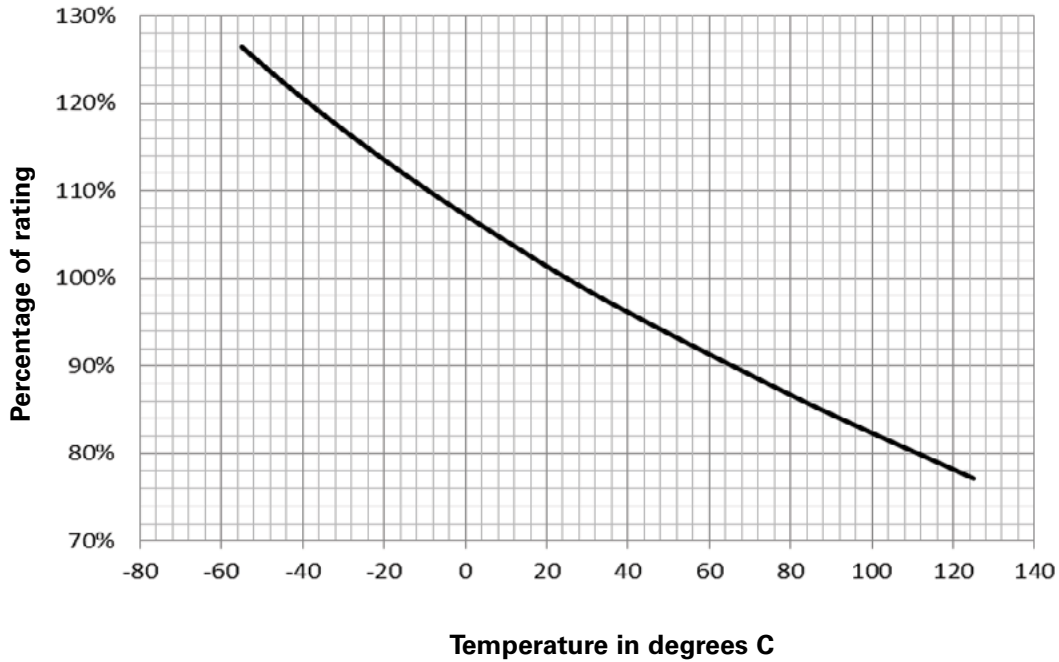
**Dimensions—mm**



Time vs. current curve



**Temperature derating curve**



**General specifications**

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Terminal strength: MIL-STD-202G, Method 211A, test condition A

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Thermal shock: MIL-STD- 202G, Method 107G, test condition (5 cycles -40 °C to +85 °C)

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Vibration: MIL-STD- 202G, Method 201A

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Life: MIL-STD- 202G, Method 108, (+70 °C at 60% rated current, 1000 hours)

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**Ordering codes**

The ordering code is the part number replacing the “” with a “-” plus adding the packaging suffix.

**Packaging suffixes**

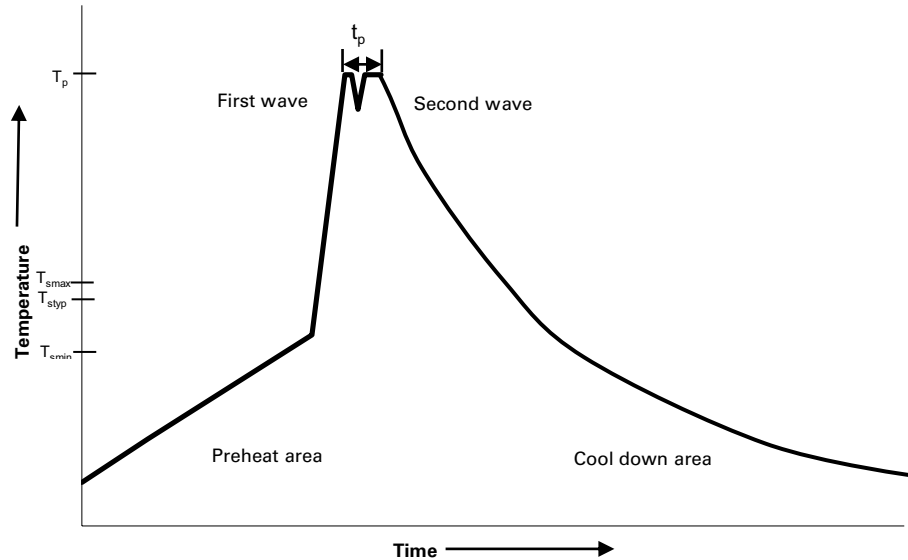
- -TR1 (1500 parts on tape and reel, tape width 60 mm)
- -TR2 (1500 parts on tape and reel, tape width 52 mm)
- E-TR1 (Epoxy coated fuse, 1500 parts on tape and reel, tape width 60 mm)

**Option code**

- Blank (Standard fuse)
- E (Epoxy coated)

| Part number   | Ordering codes    |                   |                    |
|---------------|-------------------|-------------------|--------------------|
|               | -TR1 option       | -TR2 option       | E-TR1 option       |
| C310FH-1.25-R | C310FH-1-25-R-TR1 | C310FH-1-25-R-TR2 | C310FH-1-25-RE-TR1 |
| C310FH-1.6-R  | C310FH-1-6-R-TR1  | C310FH-1-6-R-TR2  | C310FH-1-6-RE-TR1  |
| C310FH-2-R    | C310FH-2-R-TR1    | C310FH-2-R-TR2    | C310FH-2-RE-TR1    |

**Wave solder profile**



**Reference EN 61760-1:2006**

| Profile feature                               | Standard SnPb solder                      | Lead (Pb) free solder                     |
|---|---|---|
| Preheat                                       |   |   |
| • Temperature min. ( $T_{smin}$ )             | 100 °C                                    | 100 °C                                    |
| • Temperature typ. ( $T_{styp}$ )             | 120 °C                                    | 120 °C                                    |
| • Temperature max. ( $T_{smax}$ )             | 130 °C                                    | 130 °C                                    |
| • Time ( $T_{smin}$ to $T_{smax}$ ) ( $t_s$ ) | 70 seconds                                | 70 seconds                                |
| $\Delta$ preheat to max Temperature           | 150 °C max.                               | 150 °C max.                               |
| Peak temperature ( $T_p$ )*                   | 235 °C – 260 °C                           | 250 °C – 260 °C                           |
| Time at peak temperature ( $t_p$ )            | 10 seconds max<br>5 seconds max each wave | 10 seconds max<br>5 seconds max each wave |
| Ramp-down rate                                | ~ 2 K/s min<br>~3.5 K/s typ<br>~5 K/s max | ~ 2 K/s min<br>~3.5 K/s typ<br>~5 K/s max |
| Time 25 °C to 25 °C                           | 4 minutes                                 | 4 minutes                                 |

**Manual solder**

+350 °C (4-5 seconds by soldering iron), generally manual/hand soldering is not recommended

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