

# Type 0603C

## Fast Blow Fuse Series

HF Pb 0603C Series, 6.3x32mm Ceramic Tube Fast Blow Fuse

RoHS Compliant

### Description

6.3x32mm Fast Blow, Ceramic tube body cartridge fuse designed, approved and complied with UL and CSA standard 248-14.

### Features

- Meet UL and CSA standard 248-14
- Wide operating temperature range
- Bulk packing available
- Full compliance with EU Directive 2011/65/EU and amending directive 2015/863
- Halogen Free
- Lead Free

### Applications

Provide individual protection for components or internal circuits.

- Power supplies
- Battery charger
- Monitor
- Adapter

LEAD FREE =



HALOGEN FREE =



### Physical Specifications

|           |                                                                                                                                                                                                                                                                                                                         |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Materials | Body : Ceramic                                                                                                                                                                                                                                                                                                          |
|           | Cap : Nickel Plated Brass Caps                                                                                                                                                                                                                                                                                          |
|           | Leads : Tinned Copper Wire                                                                                                                                                                                                                                                                                              |
| Marking   | On Fuse :                                                                                                                                                                                                                                                                                                               |
|           | "Current Rating", "Voltage Rating",                                                                                                                                                                                                                                                                                     |
|           | "be", "Appropriate Safety Logos"                                                                                                                                                                                                                                                                                        |
|           | On Label :                                                                                                                                                                                                                                                                                                              |
|           | "be", "0603C", "Current Rating", "Voltage Rating", "Interrupting Rating",<br>"Appropriate Safety Logos" and "  ", "  "(China RoHS compliant). |

### Electrical Characteristics (UL/CSA STD.248-14) Safety Agency Approvals

| Testing Current | Blow Time |         |
|-----------------|-----------|---------|
|                 | Minimum   | Maximum |
| 100%            | 4 hrs.    | N/A     |
| 135%            | N/A       | 1 hr.   |
| 200%            | N/A       | 5 sec   |

| Safety Agency                                                                       | Safety Agency Certificate | Ampere Rating/ Voltage Rating           | Ampere Range / Volt @ I.R. ability*                      |
|-------------------------------------------------------------------------------------|---------------------------|-----------------------------------------|----------------------------------------------------------|
|  | E506667                   | 1A-20A /250V AC<br>/125V AC<br>/150V DC | 1A-20A/250V AC@1500A<br>/125V AC@1500A<br>/150V DC@1000A |

\*I.R.= Interrupting Rating = Short Circuit Rating(Amps)

## Environmental Specifications

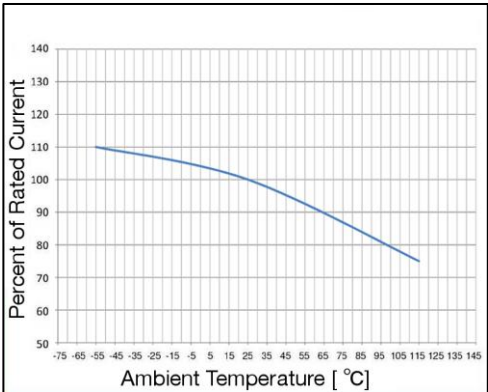
|                           |                                                                                                  |
|---------------------------|--------------------------------------------------------------------------------------------------|
| Shock Resistance          | MIL-STD-202G, Method 213B, Test Condition 1 (100 G's peak for 6 milliseconds; Sawtooth waveform) |
| Vibration Resistance      | MIL-STD-202G, Method 201A (10-55 Hz, 0.06 inch, total excursion).                                |
| Salt Spray Resistance     | MIL-STD-202G, Method 101E, Test Condition B (48 hrs).                                            |
| Insulation Resistance     | MIL-STD-202G, Method 302, Test Condition A (After Opening) 10,000 ohms minimum.                  |
| Solderability             | MIL-STD-202G, Method 208H                                                                        |
| Resistance to solder Heat | MIL-STD-202G, Method 210F, Test Condition B (260+/-5°C, 10+/-1 sec)                              |
| Thermal Shock             | MIL-STD-202G, Method 107G, Test Condition B (-65°C to +125°C).                                   |
| Operating Temperature     | -55°C to +125°C                                                                                  |
| Terminal Strength         | IEC-68-2-21                                                                                      |

## Electrical Specifications

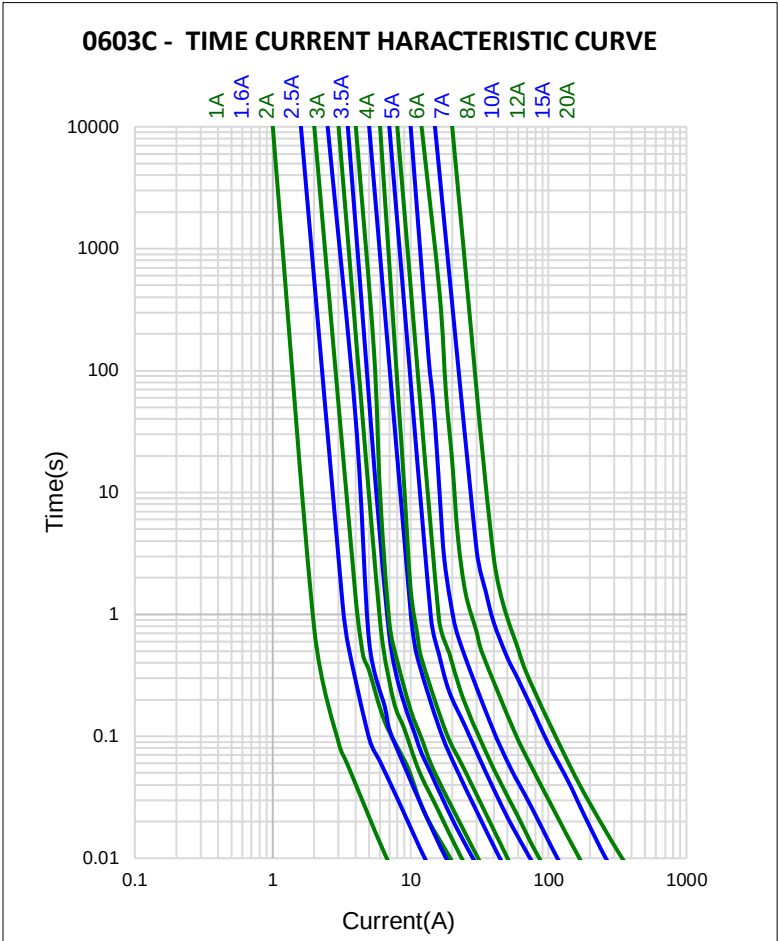
| Part Number  | Ampere Rating | Typical Cold Resistance (ohms) | Volt-drop @100%In (Volt) max. | Voltage and Interrupting Ratings                                                        | I²T (A² Sec) | Maximum Power Dissipation (W) | Agency Approvals                                                                    |
|--------------|---------------|--------------------------------|-------------------------------|-----------------------------------------------------------------------------------------|--------------|-------------------------------|-------------------------------------------------------------------------------------|
|              |               |                                |                               |                                                                                         |              |                               |  |
| 0603C1000-XX | 1A            | 0.406                          | 0.650                         | See Table of Safety Approvals on Page 1 for Voltage and associated Interrupting Ratings | 0.456        | 0.65                          | Y                                                                                   |
| 0603C1250-XX | 1.25A         | 0.312                          | 0.650                         |                                                                                         | 0.960        | 0.83                          | Y                                                                                   |
| 0603C1600-XX | 1.6A          | 0.241                          | 0.550                         |                                                                                         | 1.59         | 0.88                          | Y                                                                                   |
| 0603C2000-XX | 2A            | 0.155                          | 0.450                         |                                                                                         | 3.75         | 0.90                          | Y                                                                                   |
| 0603C2500-XX | 2.5A          | 0.090                          | 0.400                         |                                                                                         | 3.30         | 1.00                          | Y                                                                                   |
| 0603C3000-XX | 3A            | 0.075                          | 0.400                         |                                                                                         | 5.50         | 1.20                          | Y                                                                                   |
| 0603C3500-XX | 3.5A          | 0.062                          | 0.400                         |                                                                                         | 8.02         | 1.40                          | Y                                                                                   |
| 0603C4000-XX | 4A            | 0.056                          | 0.400                         |                                                                                         | 9.54         | 1.60                          | Y                                                                                   |
| 0603C5000-XX | 5A            | 0.040                          | 0.400                         |                                                                                         | 19.87        | 2.00                          | Y                                                                                   |
| 0603C6000-XX | 6A            | 0.035                          | 0.400                         |                                                                                         | 25.50        | 2.40                          | Y                                                                                   |
| 0603C7000-XX | 7A            | 0.025                          | 0.350                         |                                                                                         | 53.90        | 2.45                          | Y                                                                                   |
| 0603C8000-XX | 8A            | 0.022                          | 0.350                         |                                                                                         | 73.60        | 2.80                          | Y                                                                                   |
| 0603C9100-XX | 10A           | 0.015                          | 0.350                         |                                                                                         | 133.92       | 3.50                          | Y                                                                                   |
| 0603C9120-XX | 12A           | 0.010                          | 0.250                         |                                                                                         | 281.60       | 3.00                          | Y                                                                                   |
| 0603C9150-XX | 15A           | 0.0065                         | 0.250                         |                                                                                         | 676          | 3.75                          | Y                                                                                   |
| 0603C9200-XX | 20A           | 0.0060                         | 0.250                         |                                                                                         | 1176         | 5.00                          | Y                                                                                   |

Consult manufacturer for other ratings

Temperature Derating Curve

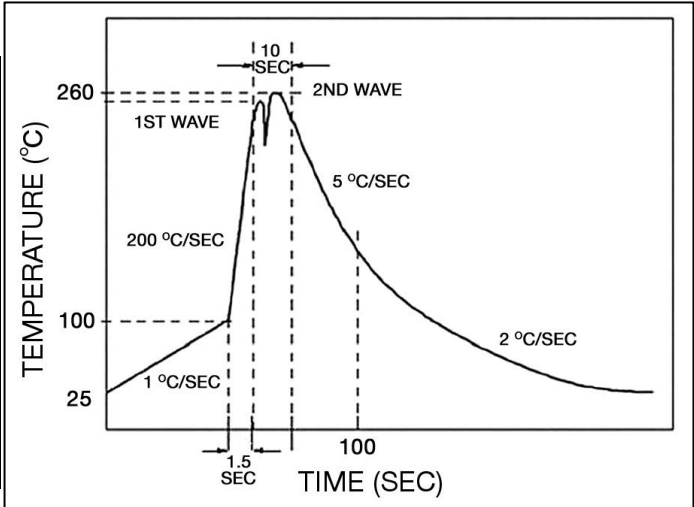


Average Time Current Curve



Soldering Parameters

| Lead-free Wave Soldering Profile                   |                                              |
|----------------------------------------------------|----------------------------------------------|
| Wave Soldering Parameter                           |                                              |
| Average ramp-up rate                               | 200°C / second                               |
| Heating rate during preheat                        | typical 1 - 2°C / second<br>Max 4°C / second |
| Final preheat temperature                          | within 125°C of soldering temperature        |
| Peak temperature Tp                                | 260°C                                        |
| Time within +0°C / -5°C of actual peak temperature | 10 seconds                                   |
| Ramp-down rate                                     | 5°C / second max.                            |



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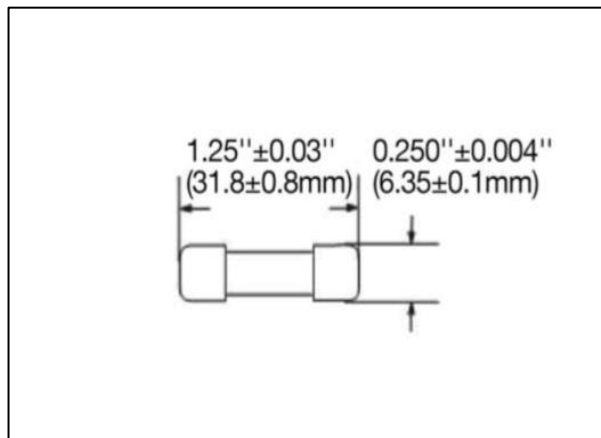
## Fuse FGNO Explanation

0603 X [XXXX] -XX

0603C=0603C; [XXXX]=Ampere Rating; XX=See Ordering Information as below

| Fraction | Decimal | Amps | Bel FGNO[XXXX] |
|----------|---------|------|----------------|
|          | 1.0     | 1    | 1000           |
|          | 1.60    | 1.6  | 1600           |
|          | 2.0     | 2    | 2000           |
| 2-1/2    | 2.5     | 2.5  | 2500           |
|          | 3.0     | 3    | 3000           |
| 3-1/2    | 3.5     | 3.5  | 3500           |
|          | 4.0     | 4    | 4000           |
|          | 5.0     | 5    | 5000           |
|          | 6.0     | 6    | 6000           |
|          | 7.0     | 7    | 7000           |
|          | 8.0     | 8    | 8000           |
|          |         | 10   | 9100           |
|          |         | 12   | 9120           |
|          |         | 15   | 9150           |
|          |         | 20   | 9200           |

## Mechanical Dimensions



## Ordering Information

|                                      |      |   |      |   |    |
|--------------------------------------|------|---|------|---|----|
|                                      | 0603 | X | XXXX | - | XX |
| FUSE TYPE                            |      |   |      |   |    |
| 0603= 0603 Series                    |      |   |      |   |    |
| Mounting Tab Style                   |      |   |      |   |    |
| C = For Cartridge Version            |      |   |      |   |    |
| AMPERE RATING                        |      |   |      |   |    |
| Refer to fuse FGNO explanation table |      |   |      |   |    |
| PACKAGING&QUANTITY CODE              |      |   |      |   |    |
| 33 = Bulk 1000/box                   |      |   |      |   |    |

## Packaging

| Packaging Option            | Packaging Specification | Quantity | Packaging Code | Inside Tape Spacing |
|-----------------------------|-------------------------|----------|----------------|---------------------|
| Bulk(For Cartridge Version) | N/A                     | 1000     | 33             | N/A                 |

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