

RoHS Compliant

LEAD FREE = 

HALOGEN FREE = 

| Testing Current | Blow Time |         |
|-----------------|-----------|---------|
|                 | Minimum   | Maximum |
| 100%            | 4 Hrs.    | N/A     |
| 200%            | N/A       | 5 Sec   |
| 300%            | N/A       | 0.2 Sec |

| Safety Agency                                                                       | Safety Agency Certificate | Ampere Rating/<br>Voltage Rating             | Ampere Range / Volt<br>@ I.R. ability* |
|-------------------------------------------------------------------------------------|---------------------------|----------------------------------------------|----------------------------------------|
|  | LR39772                   | 250mA-5A/125V AC<br>63V DC<br>7A/63V AC & DC | 250mA-5A/125V AC@100A<br>63V DC@50A    |
|  | E506667                   |                                              | 7A/63V AC&DC@50A                       |
|  | E506667                   |                                              |                                        |

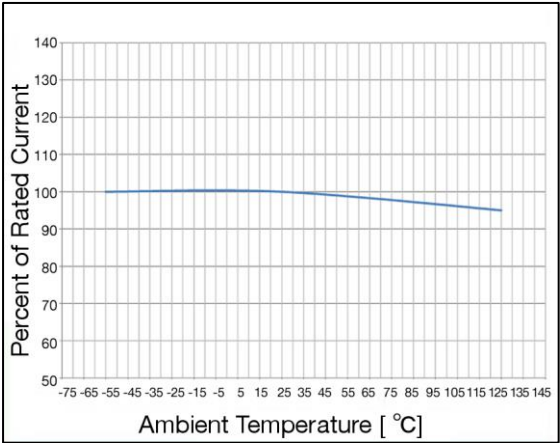
\*I.R.= Interrupting Rating = Short Circuit Rating(Amps)

|           |                                                                                                                                                                                                                                                                                                                |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Materials | Body : Ceramic Substrate                                                                                                                                                                                                                                                                                       |
|           | Terminations : Ag / Ni / Sn (100% Lead-free)                                                                                                                                                                                                                                                                   |
|           | Element Cover Coating : Lead-free Glass                                                                                                                                                                                                                                                                        |
| Marking   | On Fuse :                                                                                                                                                                                                                                                                                                      |
|           | None                                                                                                                                                                                                                                                                                                           |
|           | On Label :                                                                                                                                                                                                                                                                                                     |
|           | "beI", "C1Q", "Current Rating", "Voltage Rating", "Interrupting Rating", "Appropriate Safety Logos" and<br> "  " (China RoHS compliant). |

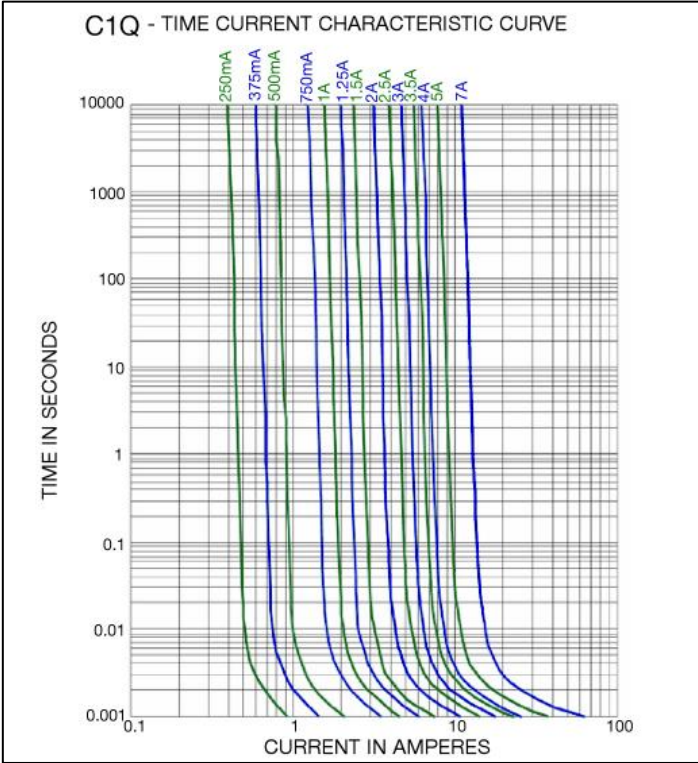
# Type C1Q

2 / 4

Temperature Derating Curve



Average Time Current Curve



Electrical Specifications

| Catalog Number | Ampere Rating (A) | Nominal Cold Resistance (ohms) | Nominal Volt-drop @100% In (Volt) | Voltage and Interrupting Ratings                                                        | Melting I²T @10 In (A² Sec) | Nominal Power Dissipation @100% In (W) | Agency Approvals |   |   |
|----------------|-------------------|--------------------------------|-----------------------------------|-----------------------------------------------------------------------------------------|-----------------------------|----------------------------------------|------------------|---|---|
|                |                   |                                |                                   |                                                                                         |                             |                                        |                  |   |   |
| C1Q 250        | 250mA             | 0.85                           | 0.250                             | See Table of Safety Approvals on Page 1 for Voltage and associated Interrupting Ratings | 0.00003                     | 0.06                                   | Y                |   | Y |
| C1Q 375        | 375mA             | 0.48                           | 0.222                             |                                                                                         | 0.00006                     | 0.08                                   | Y                |   | Y |
| C1Q 500        | 500mA             | 0.32                           | 0.195                             |                                                                                         | 0.00011                     | 0.10                                   | Y                |   | Y |
| C1Q 750        | 750mA             | 0.175                          | 0.163                             |                                                                                         | 0.00042                     | 0.12                                   | Y                |   | Y |
| C1Q 1          | 1A                | 0.124                          | 0.156                             |                                                                                         | 0.00096                     | 0.16                                   | Y                |   | Y |
| C1Q 1.25       | 1.25A             | 0.092                          | 0.149                             |                                                                                         | 0.0020                      | 0.19                                   | Y                |   | Y |
| C1Q 1.5        | 1.5A              | 0.075                          | 0.142                             |                                                                                         | 0.0024                      | 0.21                                   | Y                |   | Y |
| C1Q 2          | 2A                | 0.054                          | 0.140                             |                                                                                         | 0.005                       | 0.28                                   | Y                |   | Y |
| C1Q 2.5        | 2.5A              | 0.042                          | 0.138                             |                                                                                         | 0.008                       | 0.35                                   | Y                |   | Y |
| C1Q 3          | 3A                | 0.035                          | 0.136                             |                                                                                         | 0.020                       | 0.41                                   | Y                |   | Y |
| C1Q 3.5        | 3.5A              | 0.030                          | 0.140                             |                                                                                         | 0.029                       | 0.49                                   | Y                |   | Y |
| C1Q 4          | 4A                | 0.028                          | 0.144                             |                                                                                         | 0.038                       | 0.58                                   | Y                |   | Y |
| C1Q 5          | 5A                | 0.022                          | 0.154                             |                                                                                         | 0.075                       | 0.77                                   | Y                |   | Y |
| C1Q 7          | 7A                | 0.015                          | 0.160                             |                                                                                         | 0.116                       | 1.12                                   |                  | Y |   |

Consult manufacturer for other ratings

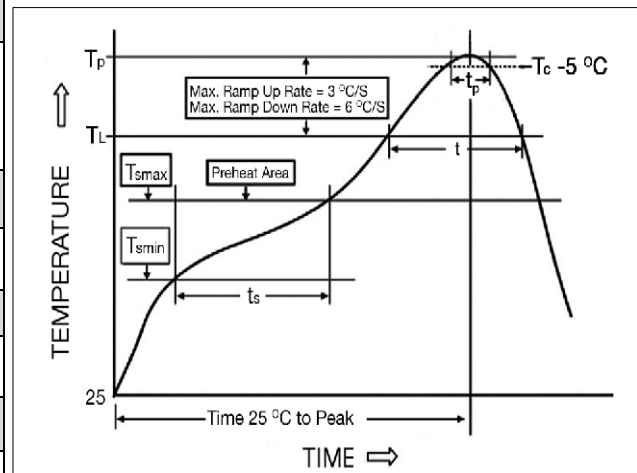
## Environmental Specifications

|                            |                                                                                                                                                 |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 C. Top Side(260°C, 20 sec)<br>MIL-STD-202G, Method 210F, Test Condition D. Bottom Side(260°C, 10 sec) |
| Thermal Shock              | MIL-STD-202G, Method 107G, Test Condition B (-65°C to +125°C).                                                                                  |
| Operating Temperature      | -55°C to +125°C                                                                                                                                 |
| Moisture Sensitivity Level | 1 (According to IPC J-Std-020)                                                                                                                  |

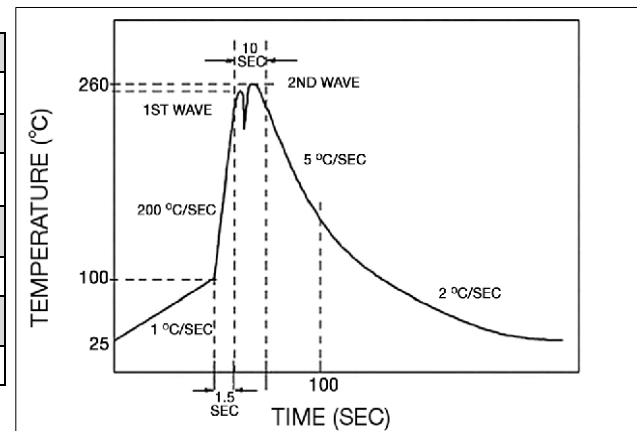
|                              |                                                                            |
|------------------------------|----------------------------------------------------------------------------|
| High temperature storage     | MIL-STD-202 Method 108                                                     |
| Temperature cycling          | JESD22 Method JA-104, Test Condition B                                     |
| Biased humidity              | MIL-STD-202 Method 103, 85°C/85% RH with 10% operating power for 1000 hrs. |
| Operational life             | MIL-STD-202 Method 108, Test Condition D                                   |
| Resistance to solvents       | MIL-STD-202 Method 215                                                     |
| Mechanical shock             | MIL-STD-202 Method 213, Test Condition C                                   |
| Vibration                    | MIL-STD-202 Method 204                                                     |
| Resistance to soldering heat | MIL-STD-202 Method 210, Test condition B                                   |
| Thermal shock                | MIL-STD-202 Method 107                                                     |
| Solderability                | J-STD-002                                                                  |
| Board flex(SMD)              | AEC-Q200-005                                                               |
| Terminal strength            | AEC-Q200-006                                                               |
| Electrical characterization  | 3 temperature electrical                                                   |

## Soldering Parameters

| IR Reflow Profile (IPC/JEDEC J-STD-020D)                                                        |                 |
|-------------------------------------------------------------------------------------------------|-----------------|
| <b>Preheat &amp; Soak</b>                                                                       |                 |
| Temperature min (T <sub>min</sub> )                                                             | 150°C           |
| Temperature max (T <sub>max</sub> )                                                             | 200°C           |
| Time (T <sub>min</sub> to T <sub>max</sub> ) (t <sub>s</sub> )                                  | 60-120 seconds  |
| Average ramp-up rate (T <sub>max</sub> to T <sub>p</sub> )                                      | 3°C/second max. |
| Liquidous temperature (T <sub>L</sub> )                                                         | 217°C           |
| Time at liquidous (t <sub>L</sub> )                                                             | 60-150 seconds  |
| Peak temperature (T <sub>p</sub> )                                                              | 260°C max       |
| Time (t <sub>p</sub> ) within 5°C of the specified classification temperature (T <sub>c</sub> ) | 30 seconds      |
| Average ramp-down rate (T <sub>p</sub> to T <sub>max</sub> )                                    | 6°C/second max. |
| Time 25°C to peak temperature                                                                   | 8 minutes max.  |



| 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.                            |



Specifications subject to change without notice

# Type C1Q

## Fuse FGNO Explanation

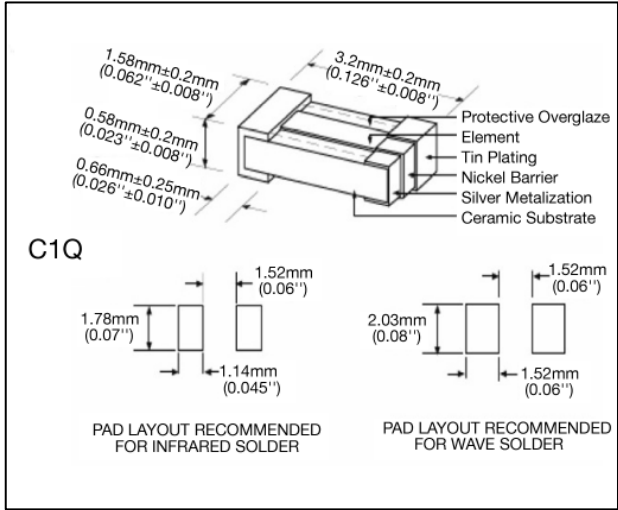
0685 - [XXXX] -XX

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

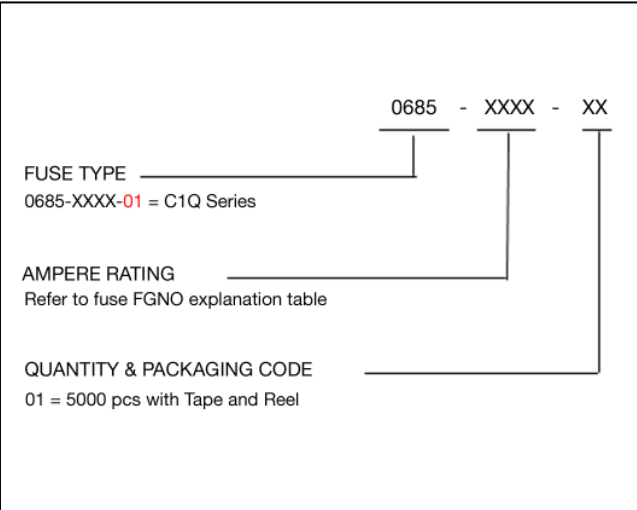
| Fraction | Decimal | Milliamps | Bel FGNO[XXXX] |
|----------|---------|-----------|----------------|
| 1/4      | 0.250   | 250       | 0250           |
| 3/8      | .375    | 375       | 0375           |
| 1/2      | .500    | 500       | 0500           |
| 3/4      | .750    | 750       | 0750           |
|          |         |           |                |
|          |         |           |                |
|          |         |           |                |
|          |         |           |                |
|          |         |           |                |
|          |         |           |                |

| Fraction | Decimal | Amps | Bel FGNO[XXXX] |
|----------|---------|------|----------------|
|          | 1.0     | 1    | 1000           |
| 1-1/4    | 1.25    | 1.25 | 1250           |
| 1-1/2    | 1.50    | 1.5  | 1500           |
|          | 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           |
|          | 7.0     | 7    | 7000           |

## Mechanical Dimensions



## Ordering Information



## Packaging

| Packaging Tape & Reel                      | Packaging Specification | Quantity | Quantity & Packaging Code |
|--------------------------------------------|-------------------------|----------|---------------------------|
| 8 mm wide tape with 7 inches Diameter reel | EIA Standard 481-E      | 5000     | 0685-XXXX-01              |