

# Type 0698Q

## Quick Acting Radial Lead Micro Fuse Series

HF  0698Q Series

RoHS 2 Compliant

### Description

Radial lead, quick act type, with enhanced voltage ratings (350VAC; 140VDC) and Breaking Capacity. Designed and Certified to UL 248-14.

### Features

- Enhanced breaking capacity
- Enhanced operating rated voltage-350VAC; 140VDC
- AEC-Q Compliant
- RoHS 2 compliant
- Halogen Free
- Lead Free
- Meets Bel automotive qualification\*
- \* - Largely based on internal AEC-Q test plan

### Applications

Provide individual protection for components or internal circuits.

- Lighting appliance
- Telecom products
- Battery charger
- Power supply
- Monitors
- Adapter

LEAD FREE =   
HALOGEN FREE = 



**AEC-Q Compliant**

### Physical Specifications

|           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Materials | Base and Cover : Black thermoplastic, UL 94-V0                                                                                                                                                                                                                                                                                                                                                                                                                     |
|           | Pins : Matte Tin Plated Copper                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Marking   | On Fuse :                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|           | "bel", "0698Q", "Current Rating", ".350V" & "                                                                                                                                                                                                                                            |
|           | On Label :                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|           | "bel", "0698Q", "Current Rating", "Voltage Rating", "Interrupting Rating", "   and "  ", "  "(China RoHS compliant). |

### Electrical Characteristics (UL / CSA STANDARD 248-14)

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

### Safety Agency Approvals

| Safety Agency                                                                       | Safety Agency Certificate | Voltage Rating (V)           | Ampere Range / Volt @ I.R. ability*           |
|-------------------------------------------------------------------------------------|---------------------------|------------------------------|-----------------------------------------------|
|  | E20624                    | 1.5A-6.3A/350V AC<br>140V DC | 1.5A-6.3A/350V AC @<br>100A<br>140V DC @ 150A |
| *I.R.= Interrupting Rating = Short Circuit Rating(Amps)                             |                           |                              |                                               |

## Environmental Specifications

|                           |                                                                        |
|---------------------------|------------------------------------------------------------------------|
| Vibration Resistance      | MIL-STD-202G, Method 201A (10-55 Hz X 3 axis / no load).               |
| Salt Spray Resistance     | MIL-STD-202G, Method 101E, Test Condition B (48 hrs.).                 |
| Solderability             | MIL-STD-202G, Method 208H                                              |
| Resistance to solder Heat | MIL-STD-202G, Method 210F, Test Condition C. Top Side. (260°C, 20 sec) |
| Moisture Resistance       | MIL-STD-202G, Method 202G, Method 106G                                 |
| Operating Temperature     | -55°C to +125°C                                                        |

|                              |                                                                           |
|------------------------------|---------------------------------------------------------------------------|
| High temperature storage     | MIL-STD-202 Method 108                                                    |
| Temperature cycling          | JESD22 Method JA-104, Test Condition B                                    |
| Biased humidity              | MIL-STD-202 Method 103, 85C/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                                                  |

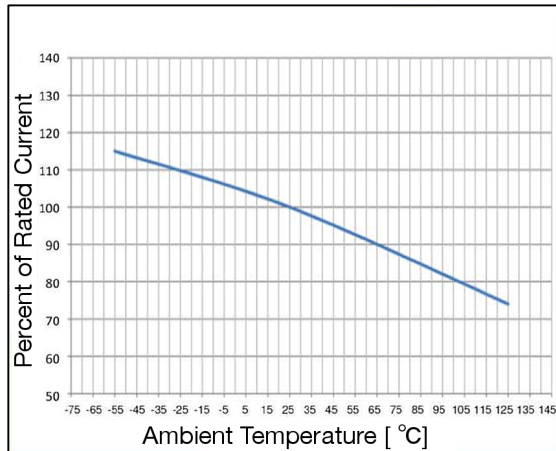
## Electrical Specifications

| Part Number  | Ampere Rating | Typical Cold Resistance (ohms) | Typical Volt-drop @100% In (Volt) max. | Voltage and Interrupting Ratings                                                        | Melting I <sup>2</sup> T <10 mSec (A <sup>2</sup> Sec) | Melting I <sup>2</sup> T @10 In (A <sup>2</sup> Sec) | Maximum Power Dissipation (W) | Agency Approvals |
|--------------|---------------|--------------------------------|----------------------------------------|-----------------------------------------------------------------------------------------|--------------------------------------------------------|------------------------------------------------------|-------------------------------|------------------|
| 0698Q1500-XX | 1.5A          | 0.057                          | 0.17                                   | See Table of Safety Approvals on Page 1 for Voltage and associated Interrupting Ratings | 0.64                                                   | 0.61                                                 | 0.18                          | Y                |
| 0698Q2000-XX | 2A            | 0.039                          | 0.15                                   |                                                                                         | 1.20                                                   | 1.30                                                 | 0.25                          | Y                |
| 0698Q2500-XX | 2.5A          | 0.028                          | 0.12                                   |                                                                                         | 2.59                                                   | 2.50                                                 | 0.25                          | Y                |
| 0698Q3150-XX | 3.15A         | 0.022                          | 0.11                                   |                                                                                         | 4.90                                                   | 4.96                                                 | 0.31                          | Y                |
| 0698Q4000-XX | 4A            | 0.016                          | 0.10                                   |                                                                                         | 3.95                                                   | 4.74                                                 | 0.35                          | Y                |
| 0698Q5000-XX | 5A            | 0.012                          | 0.098                                  |                                                                                         | 6.04                                                   | 7.25                                                 | 0.42                          | Y                |
| 0698Q6300-XX | 6.3A          | 0.009                          | 0.091                                  |                                                                                         | 12.66                                                  | 14.92                                                | 0.47                          | Y                |

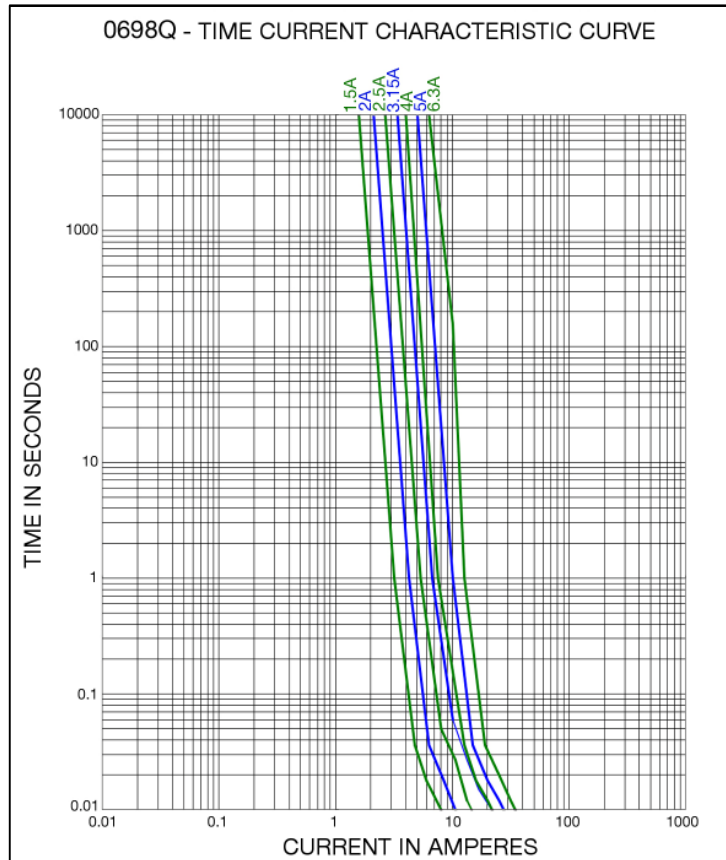
Consult manufacturer for other ratings

XX - Packaging code (see "ordering information")

## Temperature Derating Curve

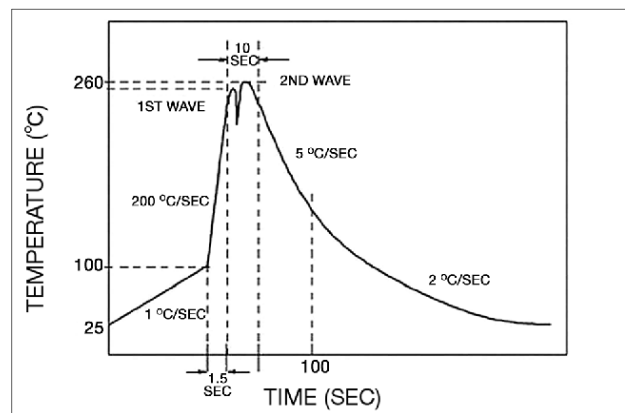


## Average Time Current Curve



## 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 T <sub>p</sub>                    | 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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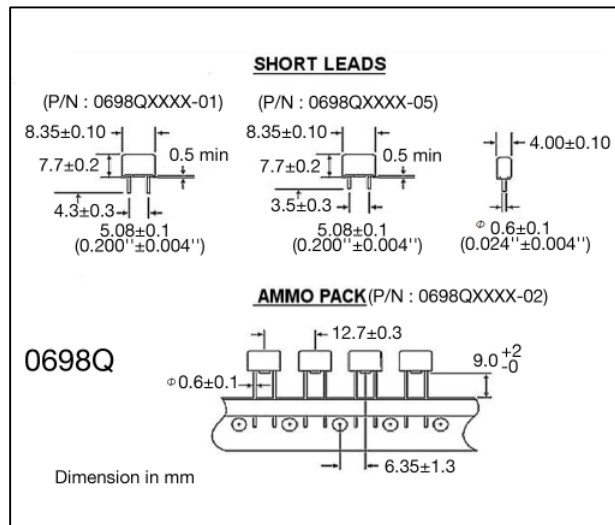
## Fuse FGNO Explanation

0698 Q [XXXX] X XX

0698Q=0698Q; [XXXX]=Ampere Rating; XX=See Ordering Information as below

| Fraction | Decimal | Amps | Bel FGNO[XXXX] |
|----------|---------|------|----------------|
| 1-1/2    | 1.50    | 1.5  | 1500           |
|          | 2.0     | 2    | 2000           |
| 2-1/2    | 2.5     | 2.5  | 2500           |
|          | 3.15    | 3.15 | 3150           |
|          | 4.0     | 4    | 4000           |
|          | 5.0     | 5    | 5000           |
|          | 6.3     | 6.3  | 6300           |

## Mechanical Dimensions



## Ordering Information

0698Q XXXX - XX

FUSE TYPE \_\_\_\_\_  
0698Q = 0698Q Series

AMPERE RATING \_\_\_\_\_  
Refer to fuse FGNO explanation table

QUANTITY & PACKAGING CODE \_\_\_\_\_  
01 = 4.3mm +/- 0.3mm lead length, 1000 pcs / Box, Bulk  
02 = 1000 pcs / Box, Ammo Pack  
05 = 3.5mm +/- 0.3mm lead length, 1000 pcs / Box, Bulk

## Packaging

| Packaging Option             | Packaging Specification | Quantity | Packaging Code |
|------------------------------|-------------------------|----------|----------------|
| Bulk / bag, 1000 / box       | N/A                     | 1000     | 01 , 05        |
| 12.7 mm pitch, On Tape / box | IEC-286-2               | 1000     | 02             |



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Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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