# Type 0697W

## Time Lag Radial Lead Micro Fuse Series

HF Pb 0697W Series RoHS 2 Compliant

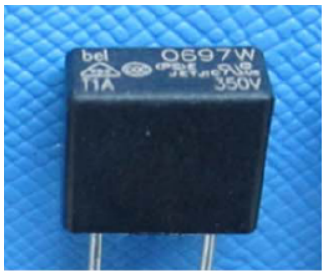
## Description

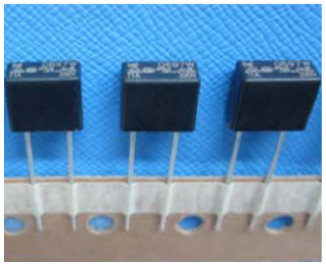
Sub-miniature, time lag type, 350VAC, 72VDC rated fuses designed, approved and complied with IEC 60127-3, standard sheet 4.

## Features

- Time lag (350 VAC, 72 VDC)
- Meet IEC standard 60127-3, sheet 4
- Wide operating temperature range
- Bulk and Tape & Reel packing available
- AEC-Q Compliant
- RoHS 2 compliant
- Halogen Free and Lead Free
- Meets Bel automotive qualification*

  * - Largely based on internal AEC-Q test plan



**AEC-Q Compliant**

## Applications

Provide individual protection for components or internal circuits.

- Power supplies
- Battery chargers
- Consumer electronics
- Adapter
- Industrial controllers

LEAD FREE = Pb
HALOGEN FREE = HF

## Physical Specifications

| | |
|---|---|
| Materials | Base and Cover : Black thermoplastic, UL 94-V0 |
| | Pins : 100% Matte Tin Plated Copper |
| Marking | On Fuse : |
| | "bel", "0697W", "Current Rating", "350V" & "Appropriate Safety Logos" |
| | On Label : |
| | "bel", "0697W", "Current Rating", "Voltage Rating", "Interrupting Rating", "Appropriate Safety Logos" and " RoHS ", " e "(China RoHS compliant). |

## Electrical Characteristics (IEC-127-3 STANDARD SHEET 4)

| Rated Current | 1.5In | 2.1In | 2.75In | | 4In | | 10In | |
|---|---|---|---|---|---|---|---|---|
| | Min | Max | Min | Max | Min | Max | Min | Max |
| 1A to 6.3A inclusive | 1 | 2 | 400 | 10 | 150 | 3 | 20 | 150 |
| | hour | min. | ms | sec | ms | sec | ms | ms |

## Safety Agency Approvals

| Safety Agency | Safety Agency Certificate | Voltage Rating (V) | Ampere Range / Volt @ I.R. ability* |
|---|---|---|---|
| VDE | 40039412 | 1A-6.3A/350Vac 72Vdc | 1A-1.6A/350V ac @ 50A<br>2A-6.3A/350V ac @ 65A<br>1A-6.3A/250V ac @ 65A<br>1A-6.3A/72V dc @ 100A |
| cqc PSE | PSE14020757<br>PSE14020758 | | 1A-2A/350V ac @ 50A<br>2.5A-6.3A/350V ac @ 100A<br>1A-6.3A/72V dc @ 100A |
| c UL us | E20624 | | 1A-2A/350V ac @65A<br>2.5A-6.3A/350V ac @ 100A<br>1A-1.6A/72V dc @ 65A<br>2A-6.3A/72V dc @ 100A |
| CQC | CQC140121053677 | | 1A-2A/350V ac @ 50A<br>2.5A-6.3A/350V ac @ 100A<br>1A-6.3A/72V dc @ 100A |

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

Specifications subject to change without notice

## 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 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℃,20 sec) |
| Moisture Resistance | MIL-STD-202G, Method 202G, Method 106G |
| Operating Temperature | -55℃ to +125℃ |

| | |
|---|---|
| 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) | Volt-drop @100% In (Volt) max. | Voltage and Interrupting Ratings | Melting I²T <10 mSec (A² Sec) | Melting I²T @10 In (A² Sec) | Maximum Power Dissipation (W) | Agency Approvals | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | c UL us | VDE | cqc PSE | cqc |
| 0697W1000-XX | 1A | 0.082 | 0.115 | See Table of Safety Approvals on Page 1 for Voltage and associated Interrupting Ratings | 6.6 | 9.2 | 0.44 | Y | Y | Y | Y |
| 0697W1250-XX | 1.25A | 0.064 | 0.110 | | 10.5 | 12.0 | 0.56 | Y | Y | Y | Y |
| 0697W1600-XX | 1.6A | 0.044 | 0.100 | | 16 | 18 | 0.60 | Y | Y | Y | Y |
| 0697W2000-XX | 2A | 0.032 | 0.090 | | 26 | 30 | 0.63 | Y | Y | Y | Y |
| 0697W2500-XX | 2.5A | 0.025 | 0.087 | | 45 | 51 | 0.70 | Y | Y | Y | Y |
| 0697W3150-XX | 3.15A | 0.018 | 0.083 | | 66 | 75 | 0.88 | Y | Y | Y | Y |
| 0697W4000-XX | 4A | 0.014 | 0.080 | | 101 | 118 | 0.92 | Y | Y | Y | Y |
| 0697W5000-XX | 5A | 0.009 | 0.075 | | 111 | 117 | 0.70 | Y | Y | Y | Y |
| 0697W6300-XX | 6.3A | 0.007 | 0.075 | | 104 | 115 | 0.98 | Y | Y | Y | Y |

Consult manufacturer for other ratings

XX - Packaging code (see “ordering information”)



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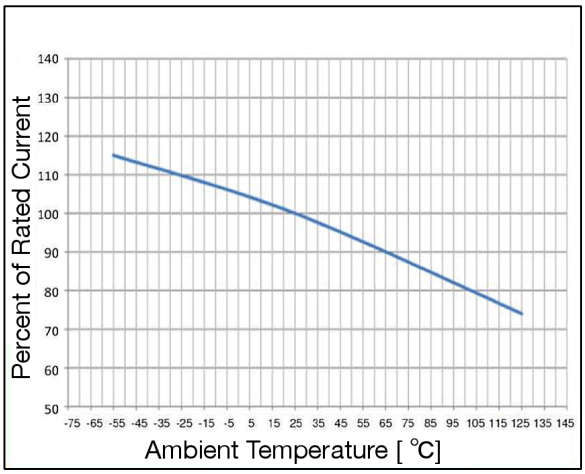
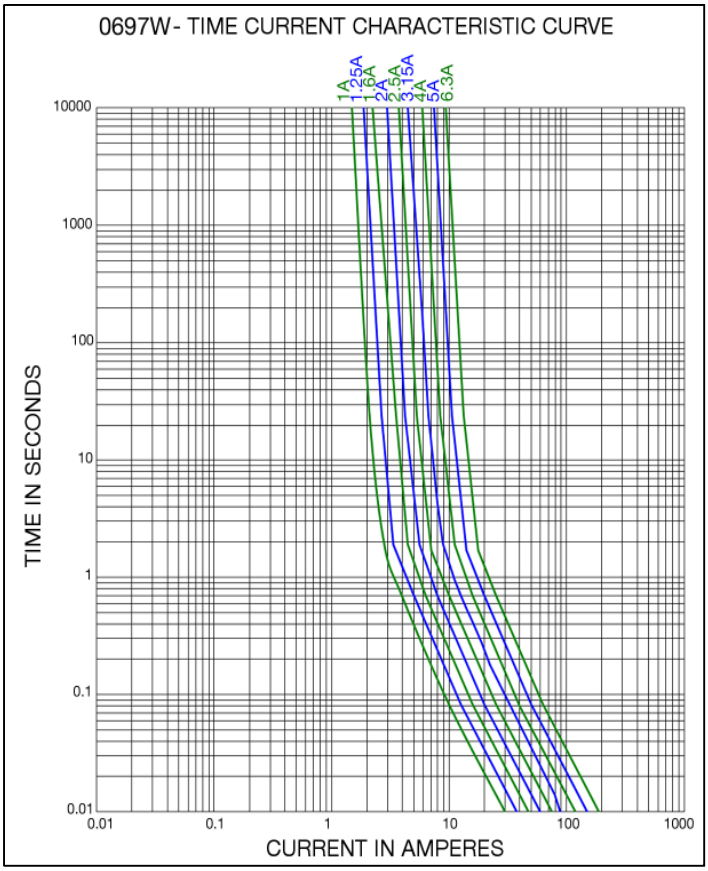
## Temperature Derating Curve

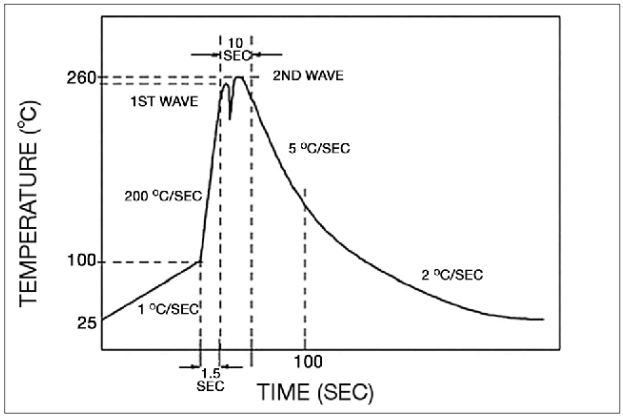



## Average Time Current Curve




## Soldering Parameters

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



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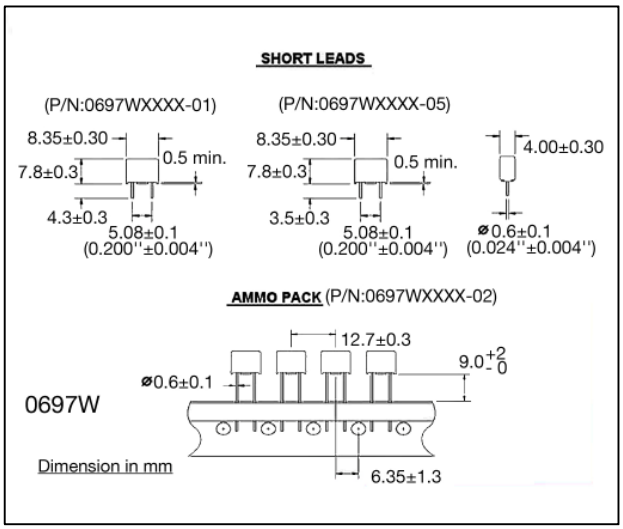
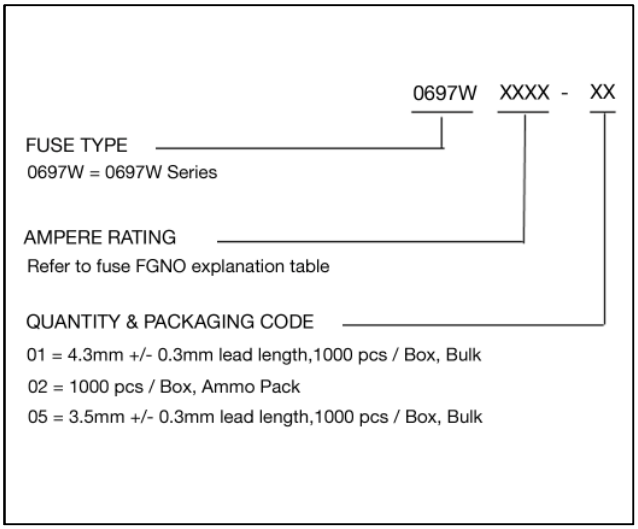
## Fuse FGNO Explanation
## 0697 W [XXXX] X XX
## 0697W=0697W; [XXXX]=Ampere Rating; XX=See Ordering Information as below

| Fraction | Decimal | Amps | Bel FGNO[XXXX] |
|---|---|---|---|
| | 1.0 | 1 | 1000 |
| 1-1/4 | 1.25 | 1.25 | 1250 |
| | 1.60 | 1.6 | 1600 |
| | 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




## 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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- 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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