

Type 0697W

Time Lag Radial Lead Micro Fuse Series

HF  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

Applications

Provide individual protection for components or internal circuits.

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

LEAD FREE = 
 HALOGEN FREE = 



AEC-Q Compliant

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 "  ", "  " (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 | 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* |
|---|----------------------------|-------------------------|--|
|  | 40039412 | 1A-6.3A/350Vac 72Vdc | 1A-1.6A/350V ac @ 50A 2A-6.3A/350V ac @ 65A 1A-6.3A/250V ac @ 65A 1A-6.3A/72V dc @ 100A |
|  | PSE14020757 PSE14020758 | | 1A-2A/350V ac @ 50A 2.5A-6.3A/350V ac @ 100A 1A-6.3A/72V dc @ 100A |
|  | E20624 | | 1A-2A/350V ac @ 65A 2.5A-6.3A/350V ac @ 100A 1A-1.6A/72V dc @ 65A 2A-6.3A/72V dc @ 100A |
|  | CQC140121053677 | | 1A-2A/350V ac @ 50A 2.5A-6.3A/350V ac @ 100A 1A-6.3A/72V dc @ 100A |

*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 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) | Volt-drop @100% In (Volt) max. | Voltage and Interrupting Ratings | Melting I ² T <10 mSec (A ² Sec) | Melting I ² T @10 In (A ² Sec) | Maximum Power Dissipation (W) | Agency Approvals | | | | |
|--------------|---------------|--------------------------------|--------------------------------|---|--|--|-------------------------------|---|---|---|---|---|
| | | | | | | | |  |  |  |  |  |
| 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")



Specifications subject to change without notice

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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°C / second |
| Heating rate during preheat | typical 1 - 2°C / second Max 4°C / second |
| Final preheat temperature | within 125°C of soldering temperature |
| Peak temperature T _p | 260°C |
| Time within +0°C / -5°C of actual peak temperature | 10 seconds |
| Ramp-down rate | 5°C / second max. |



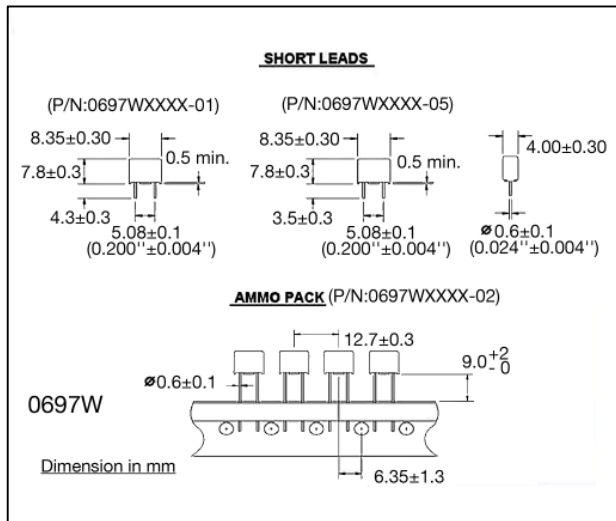
Fuse FGNO Explanation

0697 W [XXXX] X XX

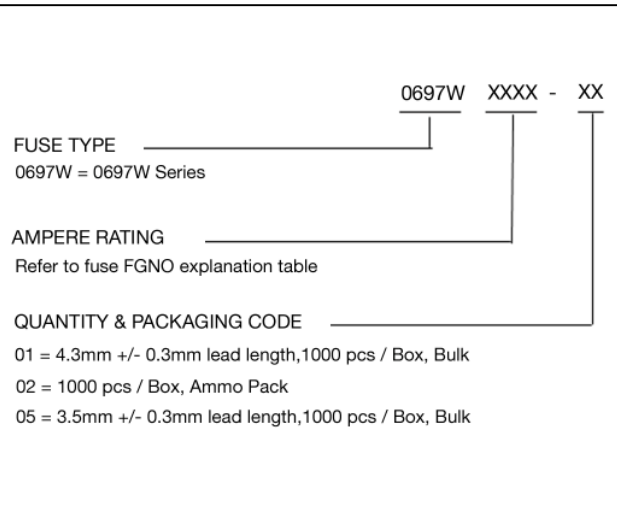
0697W=0697W; [XXXX]=Ampere Rating; XX=See Ordering Information as below

| 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 |