

Description

Sub-miniature, time lag type, 250V rated fuses designed, approved and complied with IEC 60127-3, standard sheet 4.

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

| Rated Current | 1.5 In | | 2.1 In | | 2.75 In | | 4 In | | 10 In | |
|------------------------|--------|--------|--------|--------|---------|-------|-------|--------|-------|-----|
| | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX |
| 80mA to 6.3A inclusive | 1 hr. | 2 min. | 400 ms | 10 sec | 150 ms | 3 sec | 20 ms | 150 ms | | |

In clause 9.2, the test voltage for MRT ratings from 80mA to 6.3A is 64VDC.

Features

- Time lag (250VAC)
- Meet IEC standard 60127-3, Sheet 4
- Wide operating temperature range
- Bulk and Tape & Reel packing available
- RoHS6 compliant
- Halogen Free
- Leadfree

Safety Agency Approvals

| SAFETY AGENCY | SAFETY AGENCY CERTIFICATE NUMBER | AMPERE RANGE / VOLT @ I.R.ABILITY |
|---------------|----------------------------------|---|
| | 910555;917227;910556 | 80mA - 6.3A / 250V AC @ 35A or 10 In whichever is greater |
| | 139937;40001000 | |
| | LR39772 | 80mA - 6.3A / 250V AC @50A |
| | E20624 | 80mA - 6.3A / 277V AC @100A |
| | JET 1037-31007-1001 | 1A - 5A / 250V AC @100A |
| | 2002010207021532 | 80mA - 6.3A / 250V AC @ 35A or 10 In whichever is greater |
| | | 80mA - 6.3A / 277V AC @100A |

Specifications Subject to change without notice.

Applications

Provide individual protection for components or internal circuits.

- Power Supplies
- Battery chargers
- Consumer Electronics
- Adapter
- Industrial Controllers

LEAD FREE =

HALOGEN FREE =

Physical Specifications

| | |
|------------------|--|
| Materials | Base and Cover : Black thermoplastic, UL 94-V0 |
| | Pins: 100% Matte Tin Plated Copper Alloy |
| Marking | On Fuse: |
| | "bel" , "T ," Current Rating", "250V", & "Appropriate Safety Logos" |
| | On label: |
| | "bel" , "MRT", "Current Rating", "Voltage Rating", "Interrupting Rating", "Appropriate Safety Logos" and , (China RoHS compliant). |

Type MRT

Time Lag Radial Lead Micro Fuse Series

RoHS 6 Compliant



MRT Apr2013D

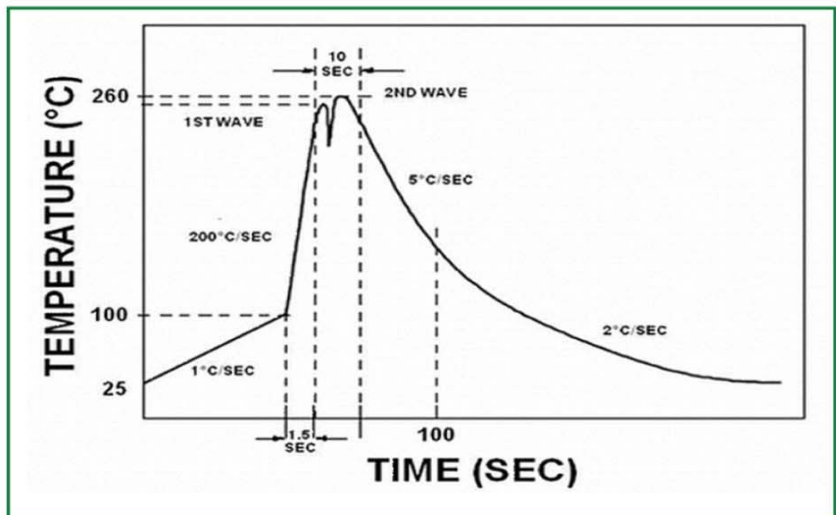
Electrical Specifications

| Catalog Number | Ampere Rating | Typical Cold Resistance (ohm) | Volt-drop @100% In (Volt) Max. | Voltage Rating (V) | Interrupting Rating | Melting I ² T <10 m Sec (A ² Sec) | Melting I ² T @ 10 In (A ² Sec) | Maximum Power Dissipation (W) | Agency Approvals | | | | | | |
|----------------|---------------|-------------------------------|--------------------------------|--------------------|---|---|---|-------------------------------|------------------|----|---|-----|-----|------|----|
| | | | | | | | | | UL | SP | S | D'E | CCC | PS E | CE |
| MRT 80 | 80mA | 3.5 | 0.398 | 250 | 80mA - 6.3A / 250V AC @ 35A or 10 In whichever is greater | 0.01 | 0.01 | 0.10 | Y | Y | Y | Y | Y | | Y |
| MRT 100 | 100mA | 2.3 | 0.329 | 250 | | 0.02 | 0.02 | 0.11 | Y | Y | Y | Y | Y | | Y |
| MRT 125 | 125mA | 1.6 | 0.295 | 250 | | 0.04 | 0.04 | 0.13 | Y | Y | Y | Y | Y | | Y |
| MRT 160 | 160mA | 1.1 | 0.252 | 250 | | 0.07 | 0.06 | 0.15 | Y | Y | Y | Y | Y | | Y |
| MRT 200 | 200mA | 0.73 | 0.200 | 250 | | 0.12 | 0.11 | 0.17 | Y | Y | Y | Y | Y | | Y |
| MRT 250 | 250mA | 0.55 | 0.188 | 250 | | 0.38 | 0.41 | 0.19 | Y | Y | Y | Y | Y | | Y |
| MRT 315 | 315mA | 0.36 | 0.152 | 250 | | 0.6 | 0.66 | 0.22 | Y | Y | Y | Y | Y | | Y |
| MRT 400 | 400mA | 0.25 | 0.129 | 250 | | 0.9 | 1.0 | 0.25 | Y | Y | Y | Y | Y | | Y |
| MRT 500 | 500mA | 0.18 | 0.114 | 250 | | 1.5 | 1.7 | 0.29 | Y | Y | Y | Y | Y | | Y |
| MRT 630 | 630mA | 0.13 | 0.109 | 250 | | 2.4 | 2.6 | 0.33 | Y | Y | Y | Y | Y | | Y |
| MRT 800 | 800mA | 0.095 | 0.103 | 250 | | 3.7 | 4.2 | 0.38 | Y | Y | Y | Y | Y | | Y |
| MRT 1 | 1A | 0.070 | 0.090 | 250 | | 6 | 7 | 0.44 | Y | Y | Y | Y | Y | Y | Y |
| MRT 1.25 | 1.25A | 0.053 | 0.087 | 250 | | 9 | 11 | 0.51 | Y | Y | Y | Y | Y | Y | Y |
| MRT 1.6 | 1.6A | 0.038 | 0.085 | 250 | | 15 | 17 | 0.58 | Y | Y | Y | Y | Y | Y | Y |
| MRT 2 | 2A | 0.029 | 0.084 | 250 | | 23 | 27 | 0.67 | Y | Y | Y | Y | Y | Y | Y |
| MRT 2.5 | 2.5A | 0.022 | 0.084 | 250 | | 37 | 43 | 0.77 | Y | Y | Y | Y | Y | Y | Y |
| MRT 3.15 | 3.15A | 0.017 | 0.074 | 250 | | 58 | 69 | 0.88 | Y | Y | Y | Y | Y | Y | Y |
| MRT 4 | 4A | 0.013 | 0.073 | 250 | | 92 | 110 | 1.02 | Y | Y | Y | Y | Y | Y | Y |
| MRT 5 | 5A | 0.010 | 0.073 | 250 | | 145 | 175 | 1.17 | Y | Y | Y | Y | Y | Y | Y |
| MRT 6.3 | 6.3A | 0.008 | 0.072 | 250 | | 230 | 281 | 1.34 | Y | Y | Y | Y | Y | | Y |

Consult manufacturer for other ratings

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. |



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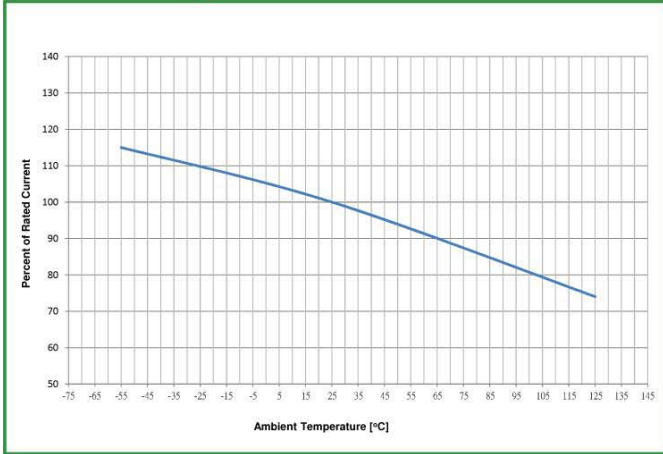
Type MRT
Time Lag Radial Lead Fuse Series

RoHS 6 Compliant

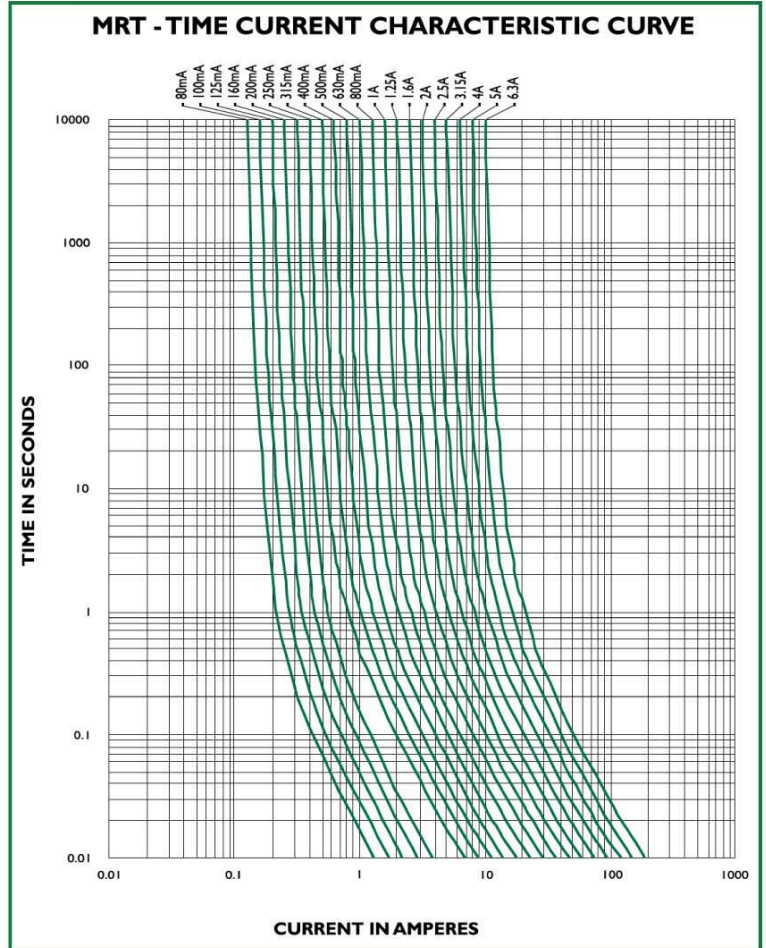


MRT Apr2013C

Temperature Derating Curve



Average Time Current Curve



Environmental Specifications

| | |
|----------------------------------|--|
| Shock Resistance | MIL-STD-202G, Method 213B, Test Condition I (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 |



RoHS 6 Compliant



MRT Apr2013D

Type MRT

Time Lag Radial Lead Micro Fuse Series

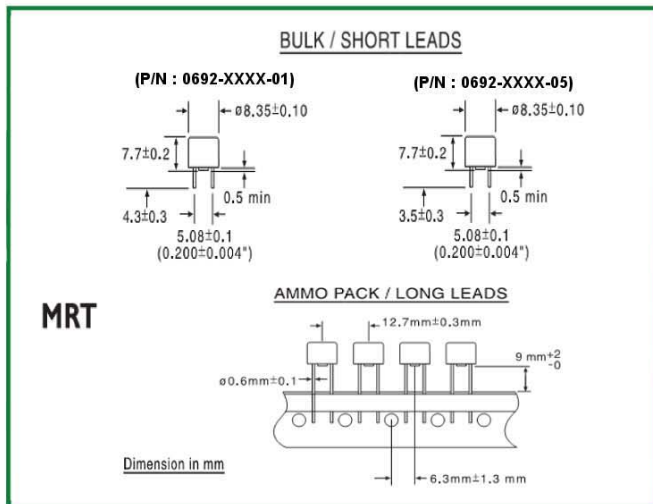
Fuse FGNO Explanation

06XX-[XXXX]-XX, [XXXX]=Ampere Rating

| Fraction | Decimal | Milliamps | Bel FGNO[XXXX] |
|----------|---------|-----------|----------------|
| 1/32 | 0.032 | 32 | 0032 |
| 1/25 | .040 | 40 | 0040 |
| 1/20 | .050 | 50 | 0050 |
| 1/16 | .063 | 63 | 0063 |
| 8/100 | .080 | 80 | 0080 |
| 1/10 | .100 | 100 | 0100 |
| 1/8 | .125 | 125 | 0125 |
| 15/100 | .150 | 150 | 0150 |
| | .160 | 160 | 0160 |
| 2/10 | .200 | 200 | 0200 |
| 1/4 | .250 | 250 | 0250 |
| 3/10 | .300 | 300 | 0300 |
| | .315 | 315 | 0315 |
| 3/8 | .375 | 375 | 0375 |
| 4/10 | .400 | 400 | 0400 |
| 1/2 | .500 | 500 | 0500 |
| 6/10 | .600 | 600 | 0600 |
| | .630 | 630 | 0630 |
| 7/10 | .700 | 700 | 0700 |
| 3/4 | .750 | 750 | 0750 |
| 8/10 | .800 | 800 | 0800 |

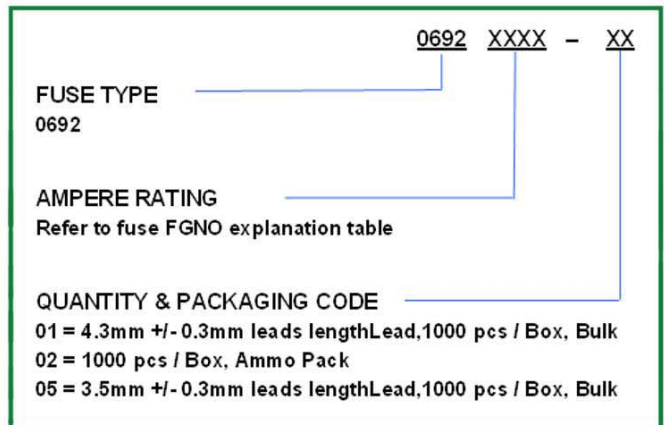
| Fraction | Decimal | Amps | Bel FGNO[XXXX] |
|----------|---------|------|----------------|
| | 1.0 | 1 | 1000 |
| 1-1/4 | 1.25 | 1.25 | 1250 |
| 1-1/2 | 1.50 | 1.5 | 1500 |
| | 1.60 | 1.6 | 1600 |
| | 2.0 | 2 | 2000 |
| 2-1/4 | 2.25 | 2.25 | 2250 |
| 2-1/2 | 2.5 | 2.5 | 2500 |
| | 3.0 | 3 | 3000 |
| | 3.15 | 3.15 | 3150 |
| 3-1/2 | 3.5 | 3.5 | 3500 |
| | 4.0 | 4 | 4000 |
| | 5.0 | 5 | 5000 |
| | 6.0 | 6 | 6000 |
| | 6.3 | 6.3 | 6300 |
| | 7.0 | 7 | 7000 |
| 7-1/2 | 7.5 | 7.5 | 7500 |
| | 8.0 | 8 | 8000 |
| | | 10 | 9100 |
| | | 12 | 9120 |
| | | 15 | 9150 |
| | | 20 | 9200 |
| | | 25 | 9250 |
| | | 30 | 9300 |

Mechanical Dimensions



Specifications subject to change without notice.

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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