# Time-Lag Cartridge Fuses
## 5mm × 20mm

RoHS Compliant

### Description

The time-lag fuse with low breaking capacity for use with printed circuit boards is used in a large variety of applications. This 5mm × 20mm device is constructed of a glass tube with electro-plated brass end caps. It is with 250V AC rating and 35A or 10In Ampere breaking capacity, offers excellent quality and is 100% tested for cold resistance and precise length

The time-lag fuse is ideal for supplementary protection in electrical appliances and equipment to provide excellent protection for components or circuits.

### Features

- Miniature fuse with fast-acting, low breaking capacity
- ø5mm × 20mm physical dimensions
- Glass tube, encapsulated design with nickel - plated brass end caps
- Optional axial leads are Φ0.65mm × 38mm @ 0.5A to 2A
- Protection against harmful over-currents in primary and secondary applications
- Lead-free and Halogen-free
- Designed compliant to IEC 60127-2/II

### Specifications

| | |
|---|---|
| Operating Temperature | : -55°C to +125°C |
| Stock Temperature | : +10°C to +60°C<br>Relative humidity:≤75% yearly average without dew, maximum 30 days at 95% |
| Vibration Resistance | : 24 cycles at 15 min. each (60068-6)<br>10-60Hz at 0.75mm amplitude<br>60-2000Hz at 10g acceleration |

### Electrical Characteristics

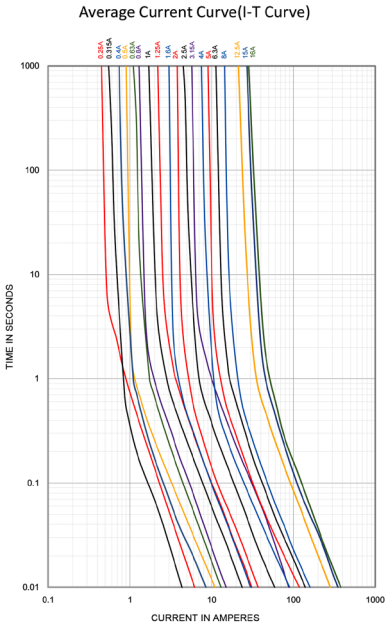
**Time vs Current Characteristics Table**

(measured with constant current power supply)

| Time vs Current Characteristics | | | |
|---|---|---|---|
| **Rated current** | **150%** | **210%** | **275%** |
| 0.1A | >1h | <2min | 200ms-10s |
| 0.125A~10A | >1h | <2min | 600ms~10s |
| 12A~16A | >30min | <5min | 600ms~15s |

| Time vs Current Characteristics | | |
|---|---|---|
| **Rated current** | **400%** | **1000%** |
| 0.1A | 40ms-3s | 10ms~300ms |
| 0.125A~10A | 150ms~3s | 20ms~300ms |
| 12A~16A | 150ms~5s | 20ms~400ms |

### Average Time Current (I-T) Curves



# Time-Lag Cartridge Fuses
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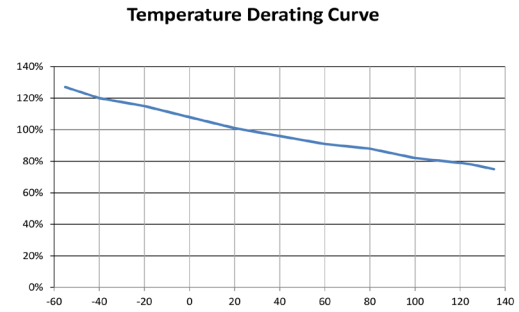
## Electrical Characteristics at 25°C

| Amp Code | Rated Current | Rated Voltage DC | Max. Voltage Drop (mV) | Max. Power Dissipation (W) | Nominal Melting $I^2t$($A^2$sec) | Typ. Cold Resistance (mΩ) | Breaking Capacity |
|---|---|---|---|---|---|---|---|
| 0500 | 0.5A | 250V AC | 900 | 1.6 | 1.21 | 185.3 | 35A or 10In@250V AC |
| 1100 | 1A | | 150 | 1.6 | 5.52 | 71 | |
| 1160 | 1.6A | | 150 | 1.6 | 9 | 42 | |
| 1200 | 2A | | 150 | 1.6 | 13.7 | 32 | |
| 1250 | 2.5A | | 120 | 1.6 | 36 | 41.5 | |
| 1400 | 4 | | 100 | 1.6 | 81 | 14.3 | |
| 1630 | 6.3 | | 100 | 1.6 | 196 | 8.2 | |
| 1800 | 8 | | 100 | 4 | 256 | 6.5 | |
| 2100 | 10 | | 100 | 4 | 435 | 5.3 | |

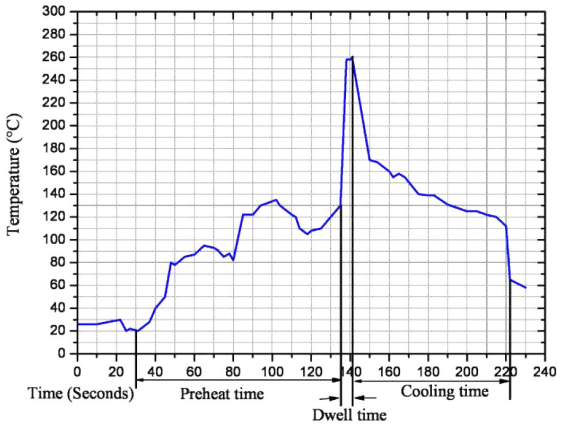
**Note:**
(1) Permissible continuous operating current is 100% at ambient temperature of 23°C (73.4°F)
(2) The current values used for calculating $I^2T$ should be within the standard range of 8ms ~ 10ms.

## Temperature Derating Curve




$$\text{Calculation for ideal fuse selection} = \frac{\text{Operating Current (A)}}{\text{Rating (\%×0.75)}}$$

## Soldering Parameters




260°C ≤5 sec (Wave Soldering)
350°C ≤3 sec (Hand Soldering)
Soldering Peak:
260°C - 10 sec (IEC 60068-20)

# Time-Lag Cartridge Fuses
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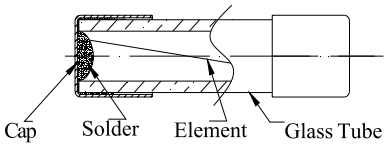
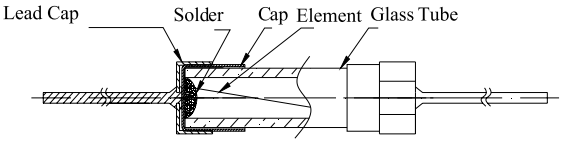
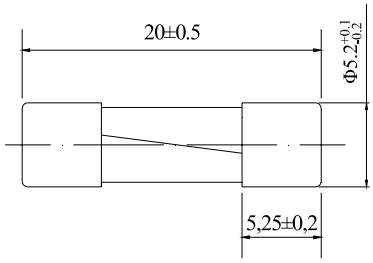
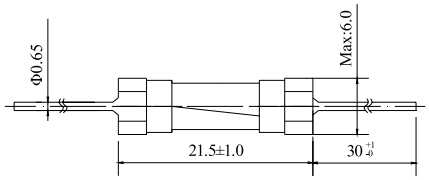
## Construction




## Diagram




## Part Number Table

| Description | Part Number |
|---|---|
| Cartridge Fuse, Time-Lag, 0.5A, 250V AC, 5mm × 20mm | MP006248 |
| Cartridge Fuse, Time-Lag, 1A, 250V AC, 5mm × 20mm | MP006247 |
| Cartridge Fuse, Time-Lag, 1.6A, 250V AC, 5mm × 20mm | MP007124 |
| Cartridge Fuse, Time-Lag, 2A, 250V AC, 5mm × 20mm | MP006249 |
| Cartridge Fuse, Time-Lag, 2A, 250V AC, 5mm x 20mm | MP007119 |
| Cartridge Fuse, Time-Lag, 2.5A, 250V AC, 5mm x 20mm | MP007125 |
| Cartridge Fuse, Time-Lag, 4A, 250V AC, 5mm x 20mm | MP007120 |
| Cartridge Fuse, Time-Lag, 6.3A, 250V AC, 5mm x 20mm | MP007121 |
| Cartridge Fuse, Time-Lag, 8A, 250V AC, 5mm x 20mm | MP007122 |
| Cartridge Fuse, Time-Lag, 10A, 250V AC, 5mm x 20mm | MP007123 |

Dimensions : Millimetres