

# Type K10B

## Thermal Cutoff

### (Temperature rated Fuse)

### 10Amp Axial Leaded



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(619) 593-5050

#### Ratings:

Ampere Rating: 10A Axial Leaded

Voltage Rating: 250V AC

#### Agency Standards and Listings:



| Part Number | (A)<br>Rated Funct. Temp.<br>$T_F \cdot T_r$ (°C) | (B)<br>Cut-Off Temp.<br>(°C) | (C)<br>Holding Temp.<br>$T_H \cdot T_h \cdot T_C$ (°C) | (D)<br>Max. Temp Limit<br>$T_M \cdot T_m$ (°C) | Electrical Ratings |             |   |   |   |   |   |   |
|-------------|---------------------------------------------------|------------------------------|--------------------------------------------------------|------------------------------------------------|--------------------|-------------|---|---|---|---|---|---|
|             |                                                   |                              |                                                        |                                                | Current (A)        | Voltage (V) |   |   |   |   |   |   |
| K10B-077    | 77                                                | 74±2                         | 48                                                     | 200                                            | 10A                | 250V        | • | • | • | • | • | • |
| K10B-087    | 87                                                | 81±2                         | 52                                                     | 200                                            | 10A                | 250V        | • | • | • | • | • | • |
| K10B-094    | 94                                                | 91±2                         | 62                                                     | 160                                            | 10A                | 250V        | • | • | • | • | • | • |
| K10B-099    | 99                                                | 96±2                         | 68                                                     | 200                                            | 10A                | 250V        | • | • | • | • | • | • |
| K10B-103    | 103                                               | 97±2.5                       | 68                                                     | 200                                            | 10A                | 250V        | • | • | • | • | • | • |
| K10B-113    | 113                                               | 108±2                        | 81                                                     | 200                                            | 10A                | 250V        | • | • | • | • | • | • |
| K10B-116    | 116                                               | 111±2.5                      | 83                                                     | 200                                            | 10A                | 250V        | • | • | • | • | • | • |
| K10B-121    | 121                                               | 118.5±2.5                    | 86                                                     | 200                                            | 10A                | 250V        | • | • | • | • | • | • |
| K10B-128    | 128                                               | 126±2                        | 100                                                    | 250                                            | 10A                | 250V        | • | • | • | • | • | • |
| K10B-139    | 139                                               | 135±2                        | 109                                                    | 200                                            | 10A                | 250V        | • | • | • | • | • | • |
| K10B-142    | 142                                               | 135±2                        | 110                                                    | 200                                            | 10A                | 250V        | • | • | • | • | • | • |
| K10B-147    | 147                                               | 142±2                        | 117                                                    | 250                                            | 10A                | 250V        | • | • | • | • | • | • |
| K10B-152    | 152                                               | 150±2                        | 122                                                    | 250                                            | 10A                | 250V        | • | • | • | • | • | • |
| K10B-169    | 169                                               | 164±2                        | 139                                                    | 300                                            | 10A                | 250V        | • | • | • | • | • | • |
| K10B-184    | 184                                               | 181.5±2                      | 154                                                    | 300                                            | 10A                | 250V        | • | • | • | • | • | • |
| K10B-216    | 216                                               | 213±2                        | 186                                                    | 300                                            | 10A                | 250V        | • | • | • | • | • | • |
| K10B-240    | 240                                               | 236±2                        | 200                                                    | 300                                            | 10A                | 250V        | • | • | • | • | • | • |

#### Term Explanation:

(A) - **Rated Functioning Temp** = ( $T_F \cdot T_r$ ) -The temperature at which a thermal cutoff changes its state of conductivity to open a circuit with detection current of 10mA or less as the only load. The temperature tolerance is +0, -10°C.

(B) - **Cut-off Temp.** = Is the actual operating temp. range when the thermal cut-off is made to operate inside a constant temp. oven whose temp. is raised at the rate of 0.5 to 1°C/min, while a detection current of 10mA or lower is applied.

(C) - **Holding Temp** = ( $T_H \cdot T_h \cdot T_C$ ) -The maximum temp. at which a thermal cut-off can be maintained while conducting rated current for 168 hours without functioning.

(D) - **Maximum Temp. Limit** = ( $T_M \cdot T_m$ ) -The maximum temp at which mechanical and electrical properties of a thermal cut-off can be maintained for 10 minutes without resuming conductivity after functioning.

**Rated Current** = (**Ir**) -Rated current is the maximum current that thermal cut-offs allow to carry and are able to cut-off the circuit in safety.

**Rated Voltage** = (**Ur**) -Rated voltage is the maximum voltage that is allowed to apply to the circuit in which the thermal cut-off is used.

#### Electrical Characteristics:

**Insulation Resistance** = The insulation resistance is to be measured with a DC voltage of twice the rated voltage, and at least 0.2M  $\Omega$ . across the disconnection.

**Dielectric Voltage - Withstand Test** = A thermal cut-off shall withstand double the rated voltage for 1 minute without breakdown.

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## Mechanical Strength:

**Pull** = The thermal cut-off is to be supported in any convenient manner so as not to damage it and a pull force as 4.0P(17.8N) to each lead for 10 minutes.

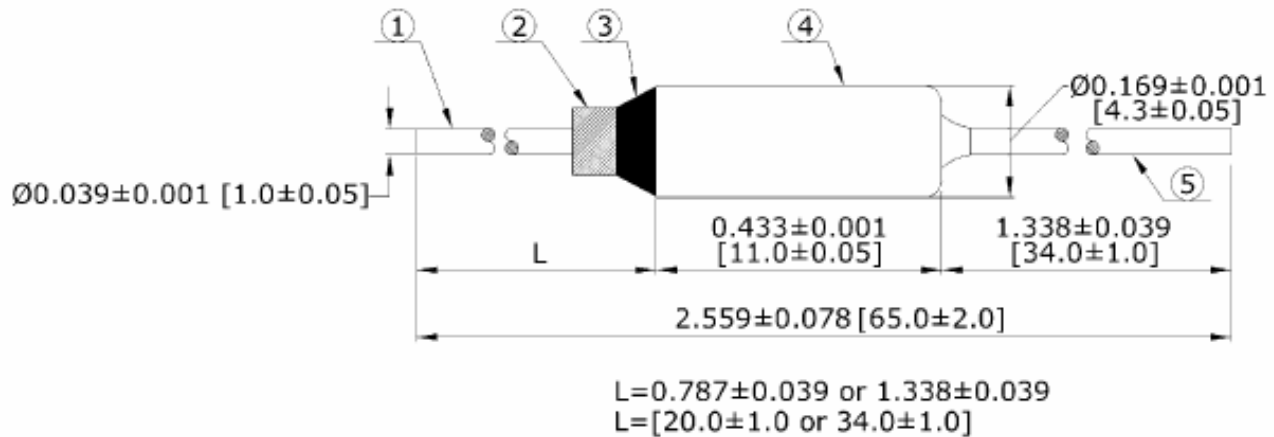
**Push** = The thermal cut-off is to be supported in any convenient manner so as not to damage it and a push force as 1.0P(4.4N) to each lead for 10 minutes.

**Twist** = The thermal cut-off is to be rigidly supported so as not to damage it. Each lead is to be bent through 90 degrees at a location 10mm from the body of thermal cut-off and then twisted through 180 degrees.

## Packing:

(Bulk 100 fuses / poly bag) (10 poly bags / box, altogether 1000 fuses)

## Mechanical Dimensions: Inches [mm]



| NO. | Component      | Material      | Plating     | Quantity |
|-----|----------------|---------------|-------------|----------|
| 1   | Lead           | Copper        | Silver (Ag) | 1        |
| 2   | Isolation Tube | Black Ceramic |             | 1        |
| 3   | Sealing Resin  | Epoxy Resin   |             |          |
| 4   | Casing         | Brass         | Silver (Ag) | 1        |
| 5   | Lead           | Copper        | Tin (Sn)    | 1        |

## Physical Characteristics:

### Soldering Parameters

| Temp        | Distance | 10mm | 15mm | 20mm | Soldering Conditions                                                  |
|-------------|----------|------|------|------|-----------------------------------------------------------------------|
| 94° C       |          | 1sec | 2sec | 3sec | Welding iron<br>(bathroom)<br>Temperature: 300°C<br>Tin solder: 60%Sn |
| 94°C~100°C  |          | 2sec | 3sec | 4sec |                                                                       |
| 101°C~130°C |          | 3sec | 4sec | 5sec |                                                                       |
| 130°C       |          | 4sec | 5sec | 5sec |                                                                       |

## Warning:



-Operation beyond the specified maximum ratings or improper use may result in damage and possible electrical arcing and/or flame.  
 -Device are intended for occasional overcurrent protection. Application for repeated overcurrent condition and/or prolonged trip are not anticipated.  
 -Avoid contact of device with chemical solvent. Prolonged contact will damage the device performance.

Note: All specifications subject to change without notice.

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Code W01-01H