

## Features

- ♦ Compact design, 0603 size, surface mount type
- ♦ Low-profile
- ♦ Fast response for fault protection
- ♦ Low thermal derating factor
- ♦ RoHS compliant <sup>[1]</sup>
- ♦ Halogen free <sup>[2]</sup>

## Applications

- ♦ Resettable fault protection of general electronics equipment

## Electrical Performance

| Vmax<br>(Vdc) | Imax<br>(Amperes) | Current Rating** |       | Time to Trip**          | Resistance |        | Tripped State Power Dissipation** |
|---------------|-------------------|------------------|-------|-------------------------|------------|--------|-----------------------------------|
|               |                   | Amperes @25°C    |       | Seconds @25°C 0.20A Max | Ohms @25°C |        | Watts @25°C 30.0Vdc Max           |
|               |                   | Ihold            | Itrip |                         | Rmin       | R1max* |                                   |
| 30.0          | 40.0              | 0.03             | 0.09  | 1.00                    | 6.000      | 50.000 | 0.5                               |

\*Maximum Resistance is measured 1 hour after reflow

\*\*Values specified were determined using PCB's with 0.020"x1.5oz copper traces.

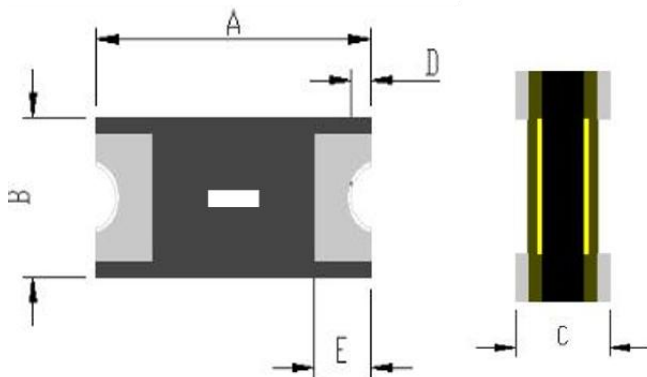
## Thermal Derating--Hold current (A) at Ambient Temperature (°C) (for reference only)

| Ambient Operation Temperature(°C) | -40°C | -20°C | 0°C   | +25°C | +40°C | +50°C | +60°C | +70°C | +85°C |
|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Hold Current (A)                  | 0.046 | 0.041 | 0.036 | 0.030 | 0.026 | 0.024 | 0.021 | 0.019 | 0.015 |

## Environmental Characteristics

| Test                                                | Test Conditions                       | Accept/Reject Criteria          |
|-----------------------------------------------------|---------------------------------------|---------------------------------|
| Operating Temperature                               | -40°C to +85°C                        |                                 |
| Recommended Storage                                 | +40°C max/70% R.H. max                |                                 |
| Maximum Device Surface Temperature in Tripped State | 125°C                                 |                                 |
| Passive Aging                                       | +85°C, 1000 hours                     | +/-5% typical resistance change |
| Humidity Aging                                      | +85°C, 85% R.H., 100 hours            | +/-5% typical resistance change |
| Thermal Shock                                       | +85°C/-40°C 20 times                  | -30% typical resistance change  |
| Solvent Resistance                                  | MIL-STD-202, Method 215               | No change                       |
| Vibration                                           | MIL-STD-883, Method 2007, Condition A | No change                       |
| Moisture Sensitivity Level                          | J-STD-020                             | Level 1                         |

## Dimensions



| Dimensions MM (INCH) |                 |                 |
|----------------------|-----------------|-----------------|
| Dimension            | Min             | Max             |
| A                    | 1.40<br>(0.055) | 1.80<br>(0.071) |
| B                    | 0.60<br>(0.026) | 1.00<br>(0.039) |
| C                    | 0.40<br>(0.016) | 1.00<br>(0.039) |
| D                    | --<br>(--)      | 0.40<br>(0.016) |
| E                    | 0.10<br>(0.004) | 0.50<br>(0.020) |

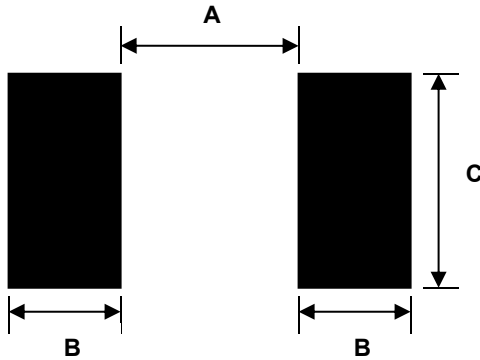
### Terminal Material:

100% Matte Tin with Nickel Underplate

### Lead Solderability:

Meets ANSI/J-STD-002, Category 3.

**Pads Layout (Recommended)**



| Recommended Pad Layout Figures |         |         |         |
|--------------------------------|---------|---------|---------|
|                                | A       | B       | C       |
|                                | NOM     | NOM     | NOM     |
| mm:                            | 1.00    | 1.00    | 0.80    |
| inch                           | (0.039) | (0.039) | (0.031) |

Can be soldered using standard Pb-free reflow profile.



**Warnings:**

- Electrical performance can differ according to installation condition of the device. Users shall independently assess the suitability of the device under actual using condition.
- Operation beyond the stated maximum ratings could result in damage to the devices and lead to electrical arcing and/or flame.
- These devices are intended to protect against the effects of temporary overcurrent or over-temperature fault conditions and are not intended to perform as protective devices where such conditions are expected to be repetitive or prolonged in duration.
- Avoid the exposure to silicon-based oils, solvents, electrolytes, acids, and similar materials.
- These devices undergo thermal expansion under fault conditions, and thus shall be provided with adequate space and be protected against mechanical stresses.
- Circuits with inductance may generate a voltage ( $L di/dt$ ) above the rated voltage of the PTCs device.