RoHS 2002/9

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# Surface Mount PTC

## 0ZCC Series

1812 Chip

*RoHS6 Compliant*

**0ZCC1006D**

***Application***

All high-density boards

***Product Features***

1812 Chip Size, Fast Trip Time, Low DCR Resistance

***Operating (Hold Current) Range***

500mA ~ 1.1A

***Maximum Voltage***

6 ~ 16V (per table)

***Temperature Range***

-40°C to 85°C

***Agency Approval***

UL Component (E305051)

## Electrical Characteristics (23 °C)

| | Part Number | Hold Current | Trip Current | Max Time to Trip | | Max Current | Rated Voltage | Typical Power | Resistance Tolerance | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | $I_H$, A | $I_T$, A | Current, A | Seconds | $I_{max}$, A | $V_{max}$, $V_{dc}$ | $P_d$, W | $R_{min}$ Ohms | $R_{max}$ Ohms | $R1_{max}$ Ohms |
| A | 0ZCC0050 | 0.50 | 1.0 | 8 | 0.15 | 40 | 16 | 0.8 | 0.15 | 0.57 | 1.00 |
| B | 0ZCC0075 | 0.75 | 1.5 | 8 | 0.02 | 40 | 16 | 0.8 | 0.11 | 0.27 | 0.45 |
| C | 0ZCC0110 | 1.10 | 2.2 | 8 | 0.30 | 40 | 6 | 0.8 | 0.04 | 0.11 | 0.21 |

$I_H$ Hold current-maximum current at which the device will not trip in still air at 23°C.

$I_T$ Trip current-minimum current at which the device will always trip in still air at 23°C.

$I_{max}$ Maximum fault current device can withstand without damage at rated voltage (Vmax).

$V_{max}$ Maximum voltage device can withstand without damage at its rated current.

$P_d$ Typical power dissipated from device when in the tripped state in 23°C still air environment.

$R_{min}$ Minimum device resistance at 23°C.

$R_{max}$ Maximum device resistance at 23°C.

$R1_{max}$ Maximum device resistance at 23°C, 1 hour after initial device trip.

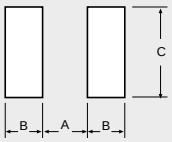
## Termination pad characteristics

***Termination pad materials***

Tin-plated copper

## Pad Layout, Solder Reflow and Rework Recommendations

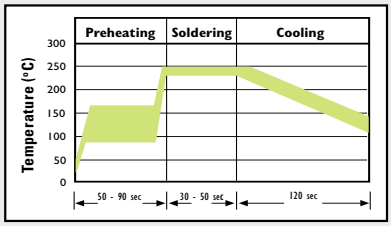
The dimensions in the table below provide the recommended pad layout for each 0ZCC device




| A Nominal | | B Nominal | | C Nominal | |
|---|---|---|---|---|---|
| mm | inch | mm | inch | mm | inch |
| 3.45 | 0.1358 | 1.78 | 0.0701 | 3.50 | 0.1378 |

***Solder Reflow***

*** Due to "lead free/RoHS6" construction of these PTC devices, the required Temperature and Dwell Time in the "Soldering" zone of the reflow profile are greater than those used for non-RoHS devices.**




1. Recommended reflow methods; IR , vapor phase oven, hot air oven.
2. The 0ZCC Series is suitable for wave solder application methods.
3. Recommended maximum paste thickness is 0.25mm.
4. Devices are compatible with standard industry cleaning solvents and methods.

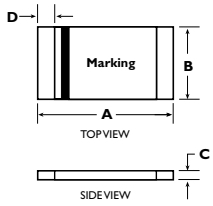
***Caution***

**If reflow temperature/dwell times exceed the recommended Profile, the electrical performance of the PTC may be affected.**

***Rework***

Use standard industry practices.

## Product Dimensions




All dimensions in mm

| Part Number | A | | B | | C | | D |
|---|---|---|---|---|---|---|---|
| | Min | Max | Min | Max | Min | Max | Min |
| 0ZCC0050 | 4.37 | 4.73 | 3.07 | 3.41 | 0.35 | 0.65 | 0.3 |
| 0ZCC0075 | 4.37 | 4.73 | 3.07 | 3.41 | 0.35 | 0.65 | 0.3 |
| 0ZCC0110 | 4.37 | 4.73 | 3.07 | 3.41 | 0.25 | 0.55 | 0.3 |

## Standard Package

2,000 fuses in 7 inches dia. reel, 8mm wide tape, 4mm pitch, per EIA-481 (equivalent IEC-286 part 3). P/N code - 2C.

## PTC Marking

**"bel"** or **"b"**, $I_H$ code.

*Specifications subject to change without notice*

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# Surface Mount PTC

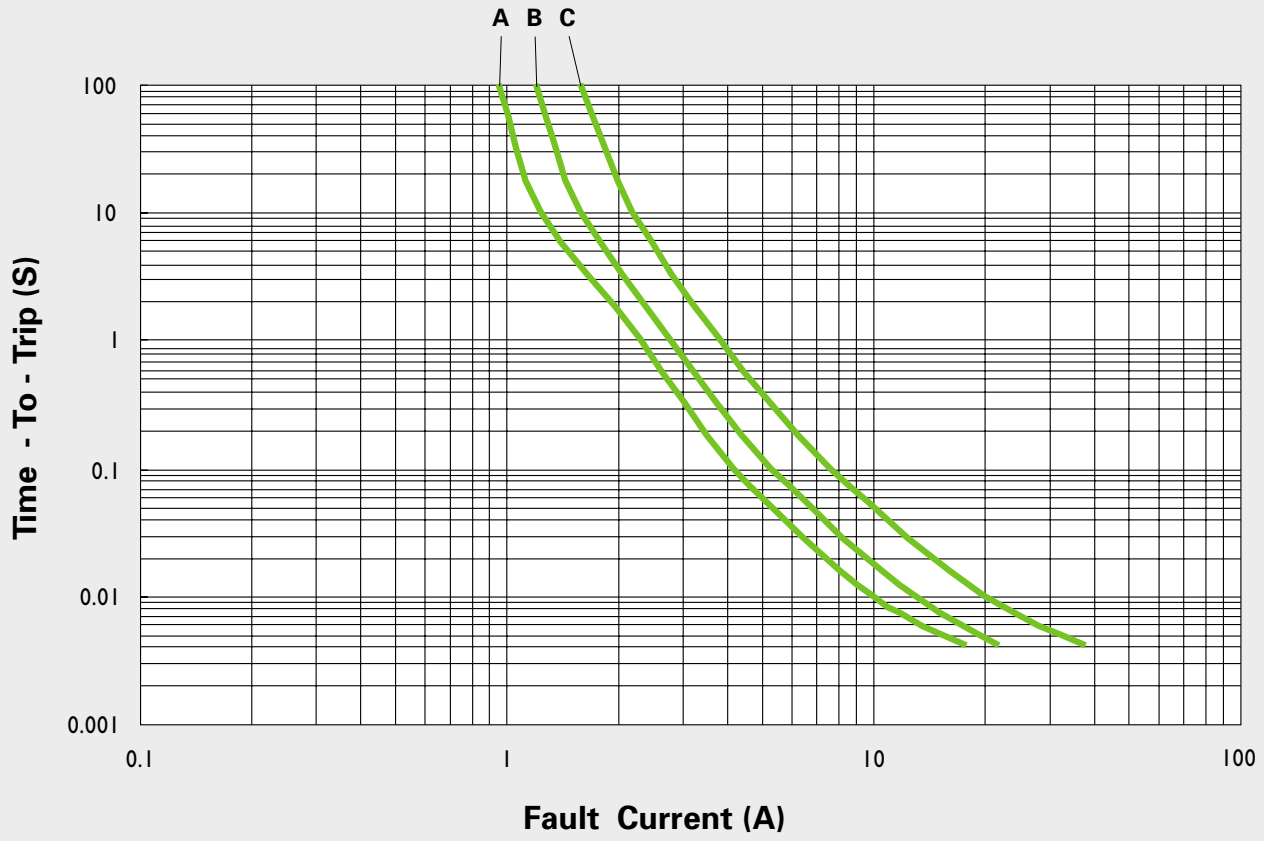
## 0ZCC Series

1812 Chip
RoHS6 Compliant

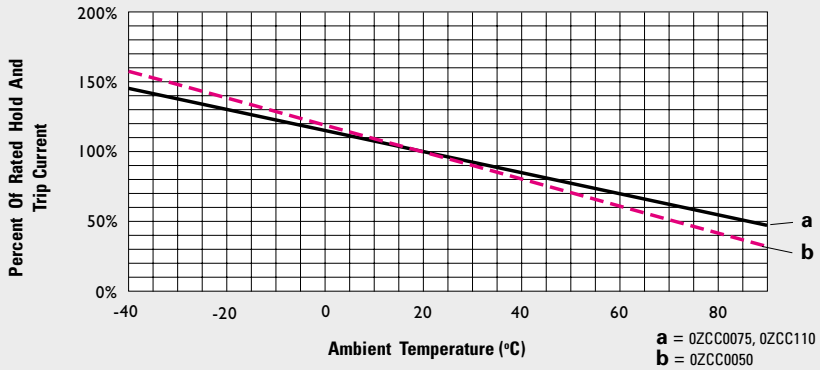
0ZCC1006C

## Typical Time -To - Trip at 23 $^0$ C

*(See Elec. Characteristics Table for P/N - Curve Correlation)*




## Thermal Derating Curve




### Cautionary Notes

1. Operation beyond the specified maximum ratings or improper use may result in damage and possible electrical arcing and/or flame.
2. These Polymer PTC (PPTC) devices are intended for protection against occasional overcurrent/ overtemperature fault conditions and may not be suitable for use in applications where repeated and/ or prolonged fault conditions are anticipated.
3. Avoid contact of PTC device with chemical solvent. Prolonged contact may adversely impact the PTC performance.
4. These PTC devices may not be suitable for use in circuits with a large inductance, as the PTC trip can generate circuit voltage spikes above the PTC rated voltage.



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