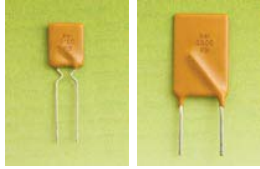


0ZRB1007D

Radial Leaded PTC
0ZRB Series

RoHS6 Compliant



Application

Electronic applications

Product Features

Low DCR Resistance, High Hold Currents

Operating (Hold Current) Range

900mA ~ 9A

Maximum Voltage

30V

Temperature Range

-40°C to 85°C

Agency Approval

TUV (Std. EN60738-1-1, Cert. R50102187)

UL Component (Std. UL1434, File E305051)

UL Conditions of Acceptability:

1. These devices have been investigated for use in safety circuits and are suitable as a limiting device.

Electrical Characteristics (23°C)

| | Part Number (Bulk) | Hold Current | Trip Current | Max Time to Trip @ 5xI _H | Max Current | Rated Voltage | Typical Power Pd, W | Resistance Tolerance | | |
|---|--------------------|--------------------|--------------------|-------------------------------------|----------------------|------------------------------------|---------------------|-----------------------|-----------------------|------------------------|
| | | I _H , A | I _T , A | Seconds | I _{max} , A | V _{max} , V _{dc} | | R _{min} Ohms | R _{max} Ohms | R _{1max} Ohms |
| A | 0ZRB0090FF1C | 0.90 | 1.8 | 5.9 | 40 | 30 | 0.6 | 0.07 | 0.160 | 0.22 |
| B | 0ZRB0110FF1C | 1.10 | 2.2 | 6.6 | 40 | 30 | 0.7 | 0.05 | 0.140 | 0.17 |
| C | 0ZRB0135FF1E | 1.35 | 2.7 | 7.3 | 40 | 30 | 0.8 | 0.04 | 0.095 | 0.13 |
| D | 0ZRB0160FF1E | 1.60 | 3.2 | 8.0 | 40 | 30 | 0.9 | 0.03 | 0.080 | 0.11 |
| E | 0ZRB0185FF1E | 1.85 | 3.7 | 8.7 | 40 | 30 | 1.0 | 0.03 | 0.070 | 0.09 |
| F | 0ZRB0250FF1E | 2.50 | 5.0 | 10.3 | 40 | 30 | 1.2 | 0.02 | 0.050 | 0.07 |
| G | 0ZRB0300FF1A | 3.00 | 6.0 | 10.8 | 40 | 30 | 2.0 | 0.02 | 0.050 | 0.08 |
| H | 0ZRB0400FF1A | 4.00 | 8.0 | 12.7 | 40 | 30 | 2.5 | 0.01 | 0.035 | 0.05 |
| I | 0ZRB0500FF1A | 5.00 | 10.0 | 14.5 | 40 | 30 | 3.0 | 0.01 | 0.022 | 0.05 |
| J | 0ZRB0600FF1A | 6.00 | 12.0 | 16.0 | 40 | 30 | 3.5 | 0.005 | 0.018 | 0.04 |
| K | 0ZRB0700FF1A | 7.00 | 14.0 | 17.5 | 40 | 30 | 3.8 | 0.005 | 0.015 | 0.03 |
| L | 0ZRB0800FF1A | 8.00 | 16.0 | 18.8 | 40 | 30 | 4.0 | 0.005 | 0.012 | 0.02 |
| M | 0ZRB0900FF1A | 9.00 | 18.0 | 20.0 | 40 | 30 | 4.2 | 0.005 | 0.011 | 0.02 |

Product Dimensions

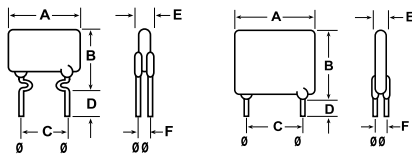


Fig 1 All dimensions in mm

Fig 2

| Part Number | Fig | Lead Size | A | B | C | D | E | F |
|-------------|-----|-----------|------|------|---------|-----|-----|---------|
| | | ∅ | Max | Max | Typical | Min | Max | Typical |
| 0ZRB0090FF | 1 | 0.51 | 7.4 | 12.2 | 5.1 | 7.6 | 3 | 0.9 |
| 0ZRB0110FF | 1 | 0.51 | 7.4 | 14.2 | 5.1 | 7.6 | 3 | 0.9 |
| 0ZRB0135FF | 1 | 0.51 | 8.9 | 13.5 | 5.1 | 7.6 | 3 | 0.9 |
| 0ZRB0160FF | 1 | 0.51 | 8.9 | 15.2 | 5.1 | 7.6 | 3 | 0.9 |
| 0ZRB0185FF | 1 | 0.51 | 10.2 | 15.7 | 5.1 | 7.6 | 3 | 0.9 |
| 0ZRB0250FF | 1 | 0.51 | 11.4 | 18.3 | 5.1 | 7.6 | 3 | 0.9 |
| 0ZRB0300FF | 2 | 0.81 | 11.4 | 17.3 | 5.1 | 7.6 | 3 | 1.2 |
| 0ZRB0400FF | 2 | 0.81 | 14.0 | 20.1 | 5.1 | 7.6 | 3 | 1.2 |
| 0ZRB0500FF | 2 | 0.81 | 14.0 | 24.9 | 10.2 | 7.6 | 3 | 1.2 |
| 0ZRB0600FF | 2 | 0.81 | 16.5 | 24.9 | 10.2 | 7.6 | 3 | 1.2 |
| 0ZRB0700FF | 2 | 0.81 | 19.1 | 26.7 | 10.2 | 7.6 | 3 | 1.2 |
| 0ZRB0800FF | 2 | 0.81 | 21.6 | 29.2 | 10.2 | 7.6 | 3 | 1.2 |
| 0ZRB0900FF | 2 | 0.81 | 24.1 | 29.7 | 10.2 | 7.6 | 3 | 1.2 |

Standard Package

| P/N | Bulk | | Reel/Tape | |
|-------------------|---------|----------|-----------|----------|
| | Pcs/Box | P/N Code | Pcs/Reel | P/N Code |
| 0ZRB0090FF-0110FF | 2000 | 1C | 3000 | 2E |
| 0ZRB0135FF-0250FF | 3000 | 1E | 3000 | 2E |
| 0ZRB0300FF-0400FF | 1000 | 1A | 1500 | 2B |
| 0ZRB0500FF-0900FF | 1000 | 1A | n/a | n/a |

- 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 (V_{max}).
- V_{max}** Maximum voltage device can withstand without damage at its rated current.
- P_d** Typical power dissipated by device when in tripped state in 23°C still air environment.
- R_{min}** Minimum device resistance at 23°C.
- R_{max}** Maximum device resistance at 23°C.
- R_{1max}** Maximum device resistance at 23°C, 1 hour after initial device trip.

Physical specifications

Lead material

0ZRB0090 ~ 0ZRB0250 - Tin plated copper clad steel, 24 AWG.

0ZRB0300 ~ 0ZRB0900 - Tin plated copper, 20 AWG.

Soldering characteristics

MIL-STD-202, Method 208E.

Insulating coating

Flame retardant epoxy, meets UL-94-V-0 requirements.

PTC Marking

“bel” or “b”, I_H code and “RB”.

Specifications subject to change without notice

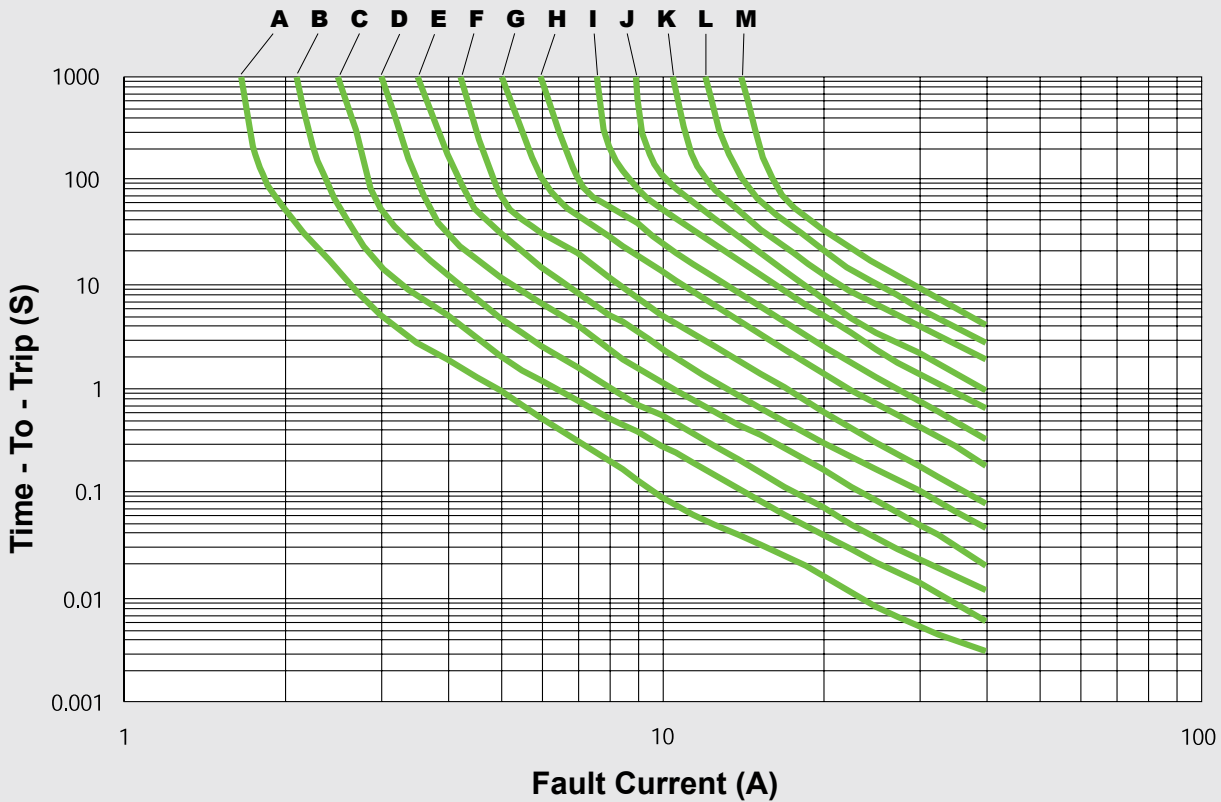
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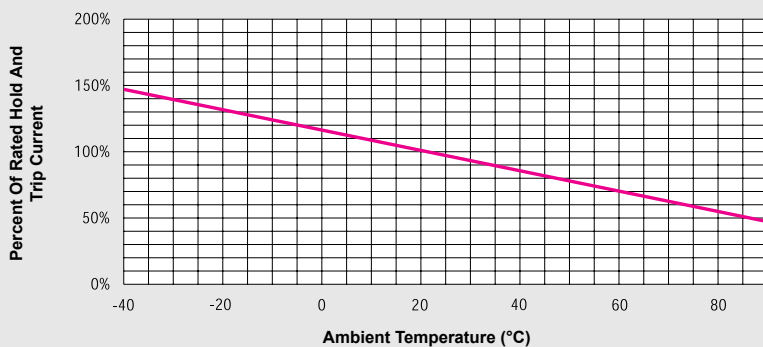
0ZRB1007C

Typical Time - To - Trip at 23°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.

Specifications subject to change without notice

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