

Features

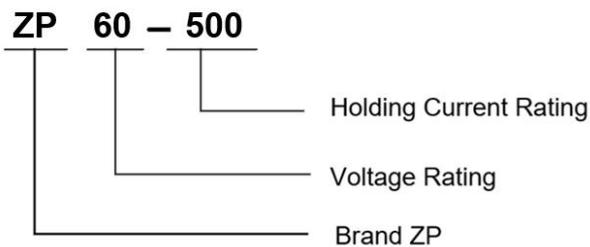
- ◆ Radial leaded devices
- ◆ Over-current protection
- ◆ High voltage surge capabilities
- ◆ Available in lead-free version
- ◆ Meets MSL level 1, per J-STD-020
- ◆ Flame retardant epoxy polymer insulating material meets UL94 V-0 requirement
- ◆ Operating Temperature: -40°C~+85°C



Applications

- ◆ USB hubs, ports and peripherals
- ◆ IT equipment
- ◆ Access network equipment
- ◆ Central office equipment
- ◆ ISDN and xDSL equipments
- ◆ Phone set and fax machine
- ◆ LAN/WAN and VOIP cards

Part Number Code and Making



Dimensions (unit:mm)

| Symbol | Dimension | |
|--------|-------------|------|
| | Millimeters | |
| | Min. | Max. |
| A | -- | 26.0 |
| B | -- | 29.5 |
| C | 9.7 | 10.7 |
| D | -- | 3.1 |
| Lead | 0.8 | |

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

| Part Number | I_H (A) | I_T (A) | U_{Max} (V) | I_{Max} (A) | P_{DTYP} (W) | Time-To-trip | | R_{Min} (Ω) | R_{Max} (Ω) | R_{1Max} (Ω) |
|-------------|--------------|--------------|------------------|------------------|-------------------|----------------|---------------|---------------------------|---------------------------|----------------------------|
| | | | | | | I_{Trip} (A) | T_{Max} (S) | | | |
| ZP60-500 | 5.0 | 10.0 | 60 | 40 | 3.2 | 15 | 25 | 0.025 | 0.05 | 0.06 |

I_H = Hold current: maximum current device will pass without tripping in 25°C still air.

I_T = Trip current minimum current at which the device will trip in 25°C still air.

U_{Max} = Maximum voltage device can withstand without damage at rated current (I_{max}).

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

P_{DTYP} = Typical Power dissipated from device when in the tripped state at 25°C still air.

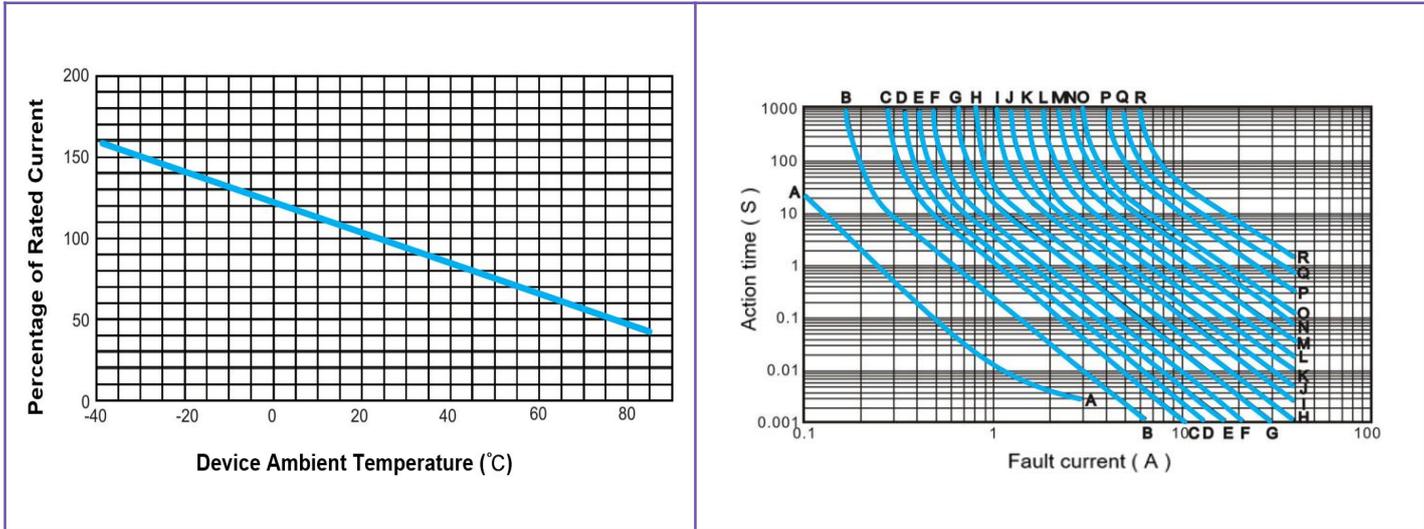
R_{min} = Minimum resistance of device in initial (un-soldered) state.

R_{Max} = Maximum resistance of device in initial (un-soldered) state.

R_{1max} = Maximum resistance of device at 25°C measured one hour after tripping or reflow soldering of 260°C for 20 sec.

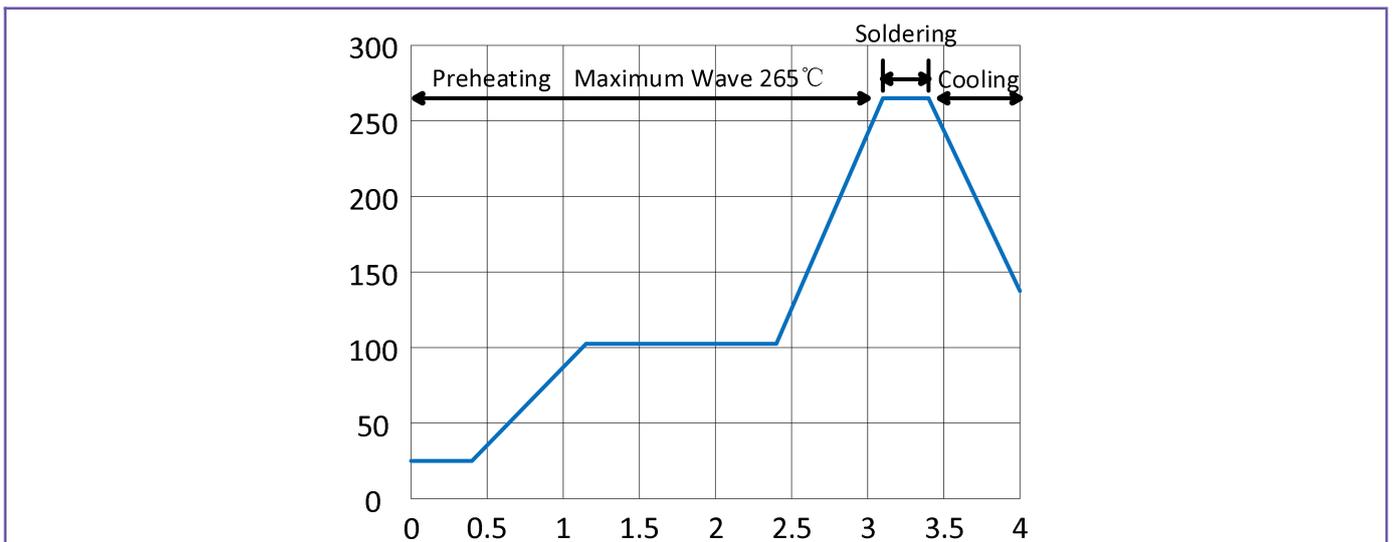
Ratings and Characteristic Curves ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Figure 1. Thermal Derating Curve Figure 2. Typical action time curve



| Part Number | Ambient Operation Temperature | | | | | | | | |
|-------------|-------------------------------|-------|------|------|------|------|------|------|------|
| | -40°C | -20°C | 0°C | 25°C | 40°C | 50°C | 60°C | 70°C | 85°C |
| ZP60-500 | 7.75 | 6.80 | 5.95 | 5.00 | 4.05 | 3.60 | 3.15 | 2.70 | 2.00 |

Wave Soldering Parameters



| Condition | Lead-free Assembly |
|------------------|--------------------|
| Peak Temperature | 265°C |
| Dipping Time | 10 seconds |
| Soldering | 1 time |