



Features

- Radial Leaded Devices
- Cured, flame retardant epoxy polymer insulating material meets UL 94V-0 requirements
- Bulk packaging, or tape and reel available on most models

Applications

- Almost anywhere there is a low voltage power supply, up to DC60V and a load to be protected, including:
- Security and fire alarm systems
 - Analog and digital line cards
 - Modems and DSL

Electrical Properties

| Model | I _{hold} (A) | I _{trip} (A) | V _{max} Operating (Vdc) | V _{max} Interrupt (Vrms) | I _{max} (A) | Maximum Time To Trip | | Resistance | | Agency Approval | |
|--------------|--------------------------|--------------------------|--|---|-------------------------|----------------------|------------|-----------------------------------|-----------------------------------|-----------------|-----|
| | | | | | | Current (A) | Time (Sec) | R _i _{min} (Ω) | R _i _{max} (Ω) | UL | TUV |
| Bp030-250 | 0.03 | 0.06 | 60 | 250 | 1 | 0.09 | 15.0 | 35.0 | 90.0 | | |
| Bp040-250 | 0.04 | 0.08 | 60 | 250 | 1 | 0.12 | 15.0 | 27.0 | 65.0 | | |
| Bp050-250 | 0.05 | 0.10 | 60 | 250 | 1 | 0.15 | 15.0 | 20.0 | 45.0 | | |
| Bp060-250 | 0.06 | 0.12 | 60 | 250 | 3 | 0.35 | 2.0 | 20.0 | 45.0 | | |
| Bp080-250 | 0.08 | 0.16 | 60 | 250 | 3 | 0.35 | 3.0 | 10.0 | 22.0 | ✓ | |
| Bp090-250 | 0.09 | 0.18 | 60 | 250 | 3 | 0.35 | 4.0 | 7.0 | 17.5 | ✓ | |
| Bp110-250 | 0.11 | 0.22 | 60 | 250 | 3 | 1.00 | 1.1 | 6.0 | 12.0 | ✓ | |
| Bp120-250 | 0.12 | 0.24 | 60 | 250 | 3 | 1.00 | 1.5 | 6.5 | 10.5 | ✓ | |
| Bp145-250 | 0.15 | 0.29 | 60 | 250 | 3 | 1.00 | 2.5 | 3.5 | 6.5 | ✓ | |
| Bp180-250 | 0.18 | 0.54 | 60 | 250 | 10 | 1.00 | 18.0 | 1.4 | 3.0 | ✓ | |
| Bp200-250 | 0.20 | 0.40 | 60 | 250 | 10 | 1.00 | 15.0 | 3.0 | 6.0 | ✓ | |
| Bp400-250 | 0.40 | 0.80 | 60 | 250 | 10 | 1.00 | 30.0 | 1.4 | 3.0 | ✓ | |
| Bp600-250 | 0.60 | 1.20 | 60 | 250 | 10 | 2.00 | 10.0 | 1.0 | 2.0 | | |
| Bp800-250 | 0.80 | 1.60 | 60 | 250 | 10 | 3.00 | 12.0 | 0.5 | 1.0 | | |
| BpA01.00-250 | 1.00 | 2.00 | 60 | 250 | 10 | 3.00 | 40.0 | 0.4 | 0.8 | | |
| BpA01.50-250 | 1.50 | 3.00 | 60 | 250 | 10 | 4.50 | 60.0 | 0.3 | 0.6 | | |
| BpA02.00-250 | 2.00 | 4.00 | 60 | 250 | 10 | 6.00 | 60.0 | 0.2 | 0.4 | | |

I_{hold} = Hold Current. Maximum current device will not trip in 25°C still air.

I_{trip} = Trip Current. Minimum current at which the device will always trip in 25°C still air.

V_{max} Operating = Maximum operating voltage (Vdc) device can withstand without damage at rated current.

V_{max} Interrupt = Maximum interrupt voltage(Vac) device can withstand without damage at rated current .

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

R_i_{min/max} = Minimum/Maximum device resistance prior to tripping at 25°C

R_i_{max} = Maximum device resistance one hour after it is tripped at 25°C.

CAUTION : Operation beyond the specified ratings may result in damage and possible arcing and flame.

Environmental Specifications

| Test | Conditions |
|---|-----------------------------|
| Passive aging | +85°C, 1000 hrs. |
| Humidity aging | +85°C, 85% R.H. , 1000 hrs. |
| Thermal shock | +125°C to -55°C, 10 times |
| Resistance to solvent | MIL-STD-202,Method 215F |
| | MIL-STD-202,Method 201 |
| Ambient operating /storage conditions : - | 40 °C to +85 °C |
| Maximum surface temperature of the device in the tripped state is | 125 °C |

Agency Approvals :



Regulation/Standard: 2002/95/EC



EN14582

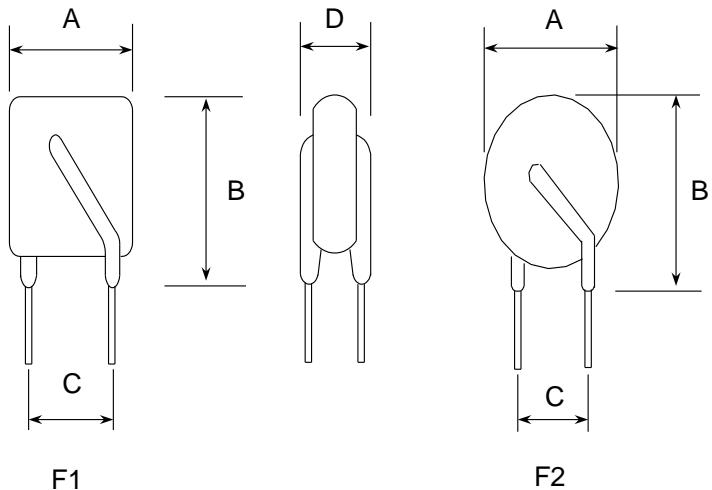


Physical Dimensions (Unit: mm)

| Model | A Max. | B Max. | C Typ. | D Min. | Lead TYP | Lead Style |
|--------------|-----------|-----------|-----------|-----------|-------------|---------------|
| Bp030-250 | 6.0 | 8.0 | 5.1 | 4.6 | F2 | Straight |
| Bp040-250 | 6.0 | 8.0 | 5.1 | 4.6 | F2 | Straight |
| Bp050-250 | 6.0 | 8.0 | 5.1 | 4.6 | F2 | Straight |
| Bp060-250 | 6.5 | 9.0 | 5.1 | 4.6 | F2 | Straight |
| Bp080-250 | 6.5 | 9.0 | 5.1 | 4.6 | F2 | Straight |
| Bp090-250 | 6.5 | 9.0 | 5.1 | 4.6 | F2 | Straight |
| Bp110-250 | 7.0 | 9.5 | 5.1 | 4.6 | F1 | Kink |
| Bp120-250 | 7.0 | 9.5 | 5.1 | 4.6 | F1 | Kink |
| Bp145-250 | 7.0 | 9.5 | 5.1 | 4.6 | F1 | Kink |
| Bp180-250 | 10.5 | 13.5 | 5.1 | 4.6 | F2 | Straight |
| Bp200-250 | 10.5 | 13.5 | 5.1 | 4.6 | F2 | Straight |
| Bp400-250 | 11.2 | 14.2 | 5.1 | 4.6 | F1 | Kink |
| Bp600-250 | 12.6 | 15.6 | 5.1 | 4.6 | F1 | Kink |
| Bp800-250 | 15.0 | 19.5 | 5.1 | 4.6 | F1 | Kink |
| BpA01.00-250 | 21.1 | 23.6 | 10.2 | 4.6 | F2 | Straight |
| BpA01.50-250 | 21.0 | 27.5 | 10.2 | 4.6 | F1 | Kink |
| BpA02.00-250 | 26.2 | 32.8 | 10.2 | 4.6 | F1 | Kink |

Unit:mm

Dimensions



Physical Characteristics

Lead Material :

Bp030-250~Bp090-250: Tin-plated copper, 24AWG, $\Phi 0.51\text{mm}(0.020\text{ in})$.

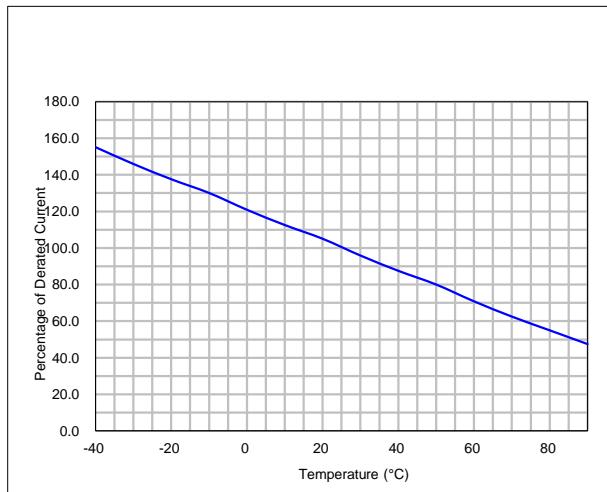
Bp110-250~Bp200-250: Tin-plated copper, 22AWG, $\Phi 0.65\text{mm}(0.026\text{ in})$.

Bp400-250~BpA02.00-250: Tin-plated copper, 20AWG, $\Phi 0.81\text{mm}(0.032\text{ in})$.

Lead Solderability : MIL-STD-202, Method 208E



Thermal Derating Curve



I_{hold} Versus Temperature

| Model | Maximum ambient operating temperature (T_{mao}) vs. hold current (I_{hold}) | | | | | | | | |
|--------------|---|-------|-------|-------|-------|-------|-------|-------|-------|
| | -40°C | -20°C | 0°C | 25°C | 40°C | 50°C | 60°C | 70°C | 85°C |
| Bp030-250 | 0.047 | 0.041 | 0.036 | 0.030 | 0.026 | 0.024 | 0.021 | 0.019 | 0.015 |
| Bp040-250 | 0.062 | 0.055 | 0.048 | 0.040 | 0.035 | 0.032 | 0.028 | 0.025 | 0.021 |
| Bp050-250 | 0.078 | 0.069 | 0.060 | 0.050 | 0.044 | 0.040 | 0.035 | 0.031 | 0.026 |
| Bp060-250 | 0.093 | 0.083 | 0.072 | 0.060 | 0.053 | 0.048 | 0.042 | 0.038 | 0.031 |
| Bp080-250 | 0.124 | 0.110 | 0.097 | 0.080 | 0.070 | 0.064 | 0.057 | 0.050 | 0.041 |
| Bp090-250 | 0.140 | 0.124 | 0.109 | 0.090 | 0.079 | 0.072 | 0.064 | 0.056 | 0.046 |
| Bp110-250 | 0.171 | 0.151 | 0.133 | 0.110 | 0.096 | 0.088 | 0.078 | 0.069 | 0.056 |
| Bp120-250 | 0.186 | 0.165 | 0.145 | 0.120 | 0.105 | 0.096 | 0.085 | 0.075 | 0.062 |
| Bp145-250 | 0.225 | 0.199 | 0.175 | 0.145 | 0.127 | 0.116 | 0.103 | 0.091 | 0.074 |
| Bp180-250 | 0.279 | 0.248 | 0.217 | 0.180 | 0.158 | 0.144 | 0.127 | 0.113 | 0.092 |
| Bp200-250 | 0.310 | 0.275 | 0.242 | 0.200 | 0.175 | 0.160 | 0.142 | 0.125 | 0.103 |
| Bp400-250 | 0.620 | 0.550 | 0.483 | 0.400 | 0.350 | 0.320 | 0.283 | 0.250 | 0.205 |
| Bp600-250 | 0.930 | 0.825 | 0.725 | 0.600 | 0.525 | 0.480 | 0.425 | 0.375 | 0.308 |
| Bp800-250 | 1.240 | 1.100 | 0.967 | 0.800 | 0.700 | 0.640 | 0.567 | 0.500 | 0.410 |
| BpA01.00-250 | 1.550 | 1.375 | 1.208 | 1.000 | 0.875 | 0.800 | 0.708 | 0.625 | 0.513 |
| BpA01.50-250 | 1.860 | 1.650 | 1.450 | 1.200 | 1.050 | 0.960 | 0.850 | 0.750 | 0.615 |
| BpA02.00-250 | 3.100 | 2.750 | 2.417 | 2.000 | 1.750 | 1.600 | 1.417 | 1.250 | 1.025 |

WARNING:

- Use PPTC beyond the maximum ratings or improper use may result in device damage and possible electrical arcing and flame.
- PPTC are intended for protection against occasional over current or over temperature fault conditions and should not be used when repeated fault conditions or prolonged trip events are anticipated.
- Device performance can be impacted negatively if devices are handled in a manner inconsistent with recommended electronic, thermal, and mechanical procedures for electronic components.
- Use PPTC with a large inductance in circuit will generate a circuit voltage ($L di/dt$) above the rated voltage of the PPTC.
- Avoid impact PPTC device its thermal expansion like placed under pressure or installed in limited space.