

# Type RS120

## Resettable Fuse (PTC's)

### Radial Leaded



www.optifuse.com (619) 593-5050

#### Application:

Wide variety of electronic equipment

#### Product Features:

Low hold current, Solid State

Radial-leaded product ideal for up to 135V<sub>AC/DC</sub>

**Operation Current:** 100mA~3.75A

**Maximum Operating Voltage:** 120V<sub>AC/DC</sub>

**Maximum Interrupt Voltage:** 135V<sub>AC/DC</sub>

**Temperature Range:** -40°C to 85°C

#### Agency Standards and Listings:



#### Electrical Characteristics (23°C)

| Part Number | Hold Current | Trip Current | Max. Time To Trip | Maximum Current | Rated Voltage        | Max. Int. Voltage      | Typical Power | Resistance Tolerance |            |
|-------------|--------------|--------------|-------------------|-----------------|----------------------|------------------------|---------------|----------------------|------------|
|             | $I_H, A$     | $I_T, A$     | at $5xI_H, S$     | $I_{MAX}, A$    | $V_{MAX}, V_{AC/DC}$ | $V_{I-MAX}, V_{AC/DC}$ |               | $R_{MIN}$            | $R_{1MAX}$ |
|             | $\Omega$     | $\Omega$     |                   |                 |                      |                        | Pd, W         |                      |            |
| RS120-010   | 0.10         | 0.20         | 10.0              | 2.0             | 120                  | 135                    | 0.84          | 3.00                 | 7.50       |
| RS120-017   | 0.17         | 0.34         | 10.0              | 2.0             | 120                  | 135                    | 0.84          | 2.00                 | 7.00       |
| RS120-020   | 0.20         | 0.40         | 9.0               | 2.0             | 120                  | 135                    | 1.08          | 1.83                 | 4.40       |
| RS120-025   | 0.25         | 0.50         | 7.5               | 3.0             | 120                  | 135                    | 1.08          | 1.25                 | 3.00       |
| RS120-030   | 0.30         | 0.60         | 8.5               | 3.0             | 120                  | 135                    | 1.44          | 0.88                 | 2.10       |
| RS120-040   | 0.40         | 0.80         | 6.5               | 3.0             | 120                  | 135                    | 1.44          | 0.55                 | 1.29       |
| RS120-050   | 0.50         | 1.00         | 6.0               | 3.0             | 120                  | 135                    | 1.56          | 0.50                 | 1.17       |
| RS120-065   | 0.65         | 1.30         | 5.7               | 5.0             | 120                  | 135                    | 1.68          | 0.31                 | 0.72       |
| RS120-070   | 0.75         | 1.50         | 6.3               | 5.0             | 120                  | 135                    | 1.80          | 0.25                 | 0.60       |
| RS120-075   | 0.75         | 1.50         | 15.0              | 7.5             | 120                  | 135                    | 2.64          | 0.25                 | 0.69       |
| RS120-090   | 0.90         | 1.80         | 7.2               | 5.0             | 120                  | 135                    | 1.80          | 0.20                 | 0.47       |
| RS120-100   | 1.00         | 2.00         | 15.0              | 10.0            | 120                  | 135                    | 2.64          | 0.18                 | 0.47       |
| RS120-110   | 1.10         | 2.20         | 8.2               | 8.0             | 120                  | 135                    | 2.28          | 0.15                 | 0.38       |
| RS120-125   | 1.25         | 2.50         | 20.0              | 12.5            | 120                  | 135                    | 2.88          | 0.11                 | 0.33       |
| RS120-130   | 1.35         | 2.70         | 9.6               | 10.0            | 120                  | 135                    | 2.64          | 0.12                 | 0.30       |
| RS120-135   | 1.35         | 2.70         | 20.0              | 13.5            | 120                  | 135                    | 3.12          | 0.11                 | 0.30       |
| RS120-160   | 1.60         | 3.20         | 11.4              | 12.0            | 120                  | 135                    | 3.12          | 0.09                 | 0.22       |
| RS120-185   | 1.85         | 3.70         | 12.6              | 12.0            | 120                  | 135                    | 3.36          | 0.08                 | 0.19       |
| RS120-200   | 2.00         | 4.20         | 36.0              | 20.0            | 120                  | 135                    | 4.32          | 0.08                 | 0.21       |
| RS120-250   | 2.50         | 5.00         | 15.6              | 15.0            | 120                  | 135                    | 4.44          | 0.05                 | 0.13       |
| RS120-300   | 3.00         | 6.00         | 19.8              | 17.0            | 120                  | 135                    | 4.56          | 0.04                 | 0.10       |
| RS120-375   | 3.75         | 7.50         | 24.0              | 20.0            | 120                  | 135                    | 4.80          | 0.03                 | 0.08       |

$I_H$  = Hold Current – Maximum current at which the device will not trip at 23°C still air.

$I_T$  = Trip Current – Minimum current at which the device will always trip at 23°C still air.

$V_{MAX}$  = Maximum voltage device can withstand without damage at it's rated current.

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

Pd = Maximum power dissipated from device when in the tripped state in 23°C still air environment.

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

$R_{1MAX}$  = Maximum device resistance at 23°C, 1 hour after tripping.

Note: All specifications subject to change without notice.

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# Type RS120 Resettable Fuse (PTC's) Radial Leaded

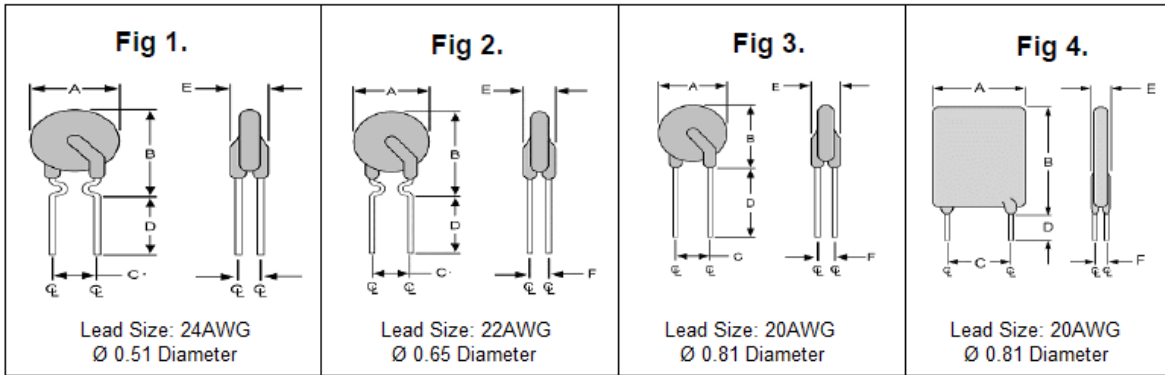


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## Physical Specifications:

- Lead Material:** Tin plated copper, 24AWG, 22 AWG, 20AWG.
- Soldering Characteristics:** MIL-STD-202, method 208E.
- Insulating Coating:** Flame retardant epoxy, meet UL-94V-0 requirement.

## RS120 Product Dimensions (millimeters)



| Part Number | Figure | A       | B       | C       | D       | E       | F       |
|-------------|--------|---------|---------|---------|---------|---------|---------|
|             |        | Maximum | Maximum | Typical | Minimum | Maximum | Typical |
| RS120-010   | 1      | 7.9     | 13.0    | 5.1     | 7.6     | 3.8     | 2.2     |
| RS120-017   | 1      | 7.9     | 13.0    | 5.1     | 7.6     | 3.8     | 2.2     |
| RS120-020   | 2      | 7.9     | 13.0    | 5.1     | 7.6     | 3.8     | 2.2     |
| RS120-025   | 2      | 7.9     | 13.0    | 5.1     | 7.6     | 3.8     | 2.2     |
| RS120-030   | 2      | 7.9     | 13.0    | 5.1     | 7.6     | 3.8     | 2.2     |
| RS120-040   | 2      | 8.2     | 14.2    | 5.1     | 7.6     | 3.8     | 2.2     |
| RS120-050   | 2      | 9.2     | 14.9    | 5.1     | 7.6     | 3.8     | 2.2     |
| RS120-065   | 2      | 9.7     | 14.9    | 5.1     | 7.6     | 3.8     | 2.2     |
| RS120-070   | 2      | 10.6    | 15.5    | 5.1     | 7.6     | 3.8     | 2.2     |
| RS120-075   | 4      | 10.9    | 17.0    | 5.1     | 7.6     | 4.1     | 2.2     |
| RS120-090   | 2      | 11.9    | 15.9    | 5.1     | 7.6     | 3.8     | 2.2     |
| RS120-100   | 4      | 11.5    | 20.1    | 5.1     | 7.6     | 4.1     | 2.2     |
| RS120-110   | 3      | 13.3    | 18.3    | 5.1     | 7.6     | 4.1     | 2.2     |
| RS120-125   | 4      | 14.0    | 21.7    | 5.1     | 7.6     | 4.1     | 2.2     |
| RS120-130   | 3      | 15.5    | 20.6    | 5.1     | 7.6     | 4.1     | 2.2     |
| RS120-135   | 4      | 16.3    | 21.7    | 5.1     | 7.6     | 4.1     | 2.2     |
| RS120-160   | 3      | 17.5    | 22.5    | 5.1     | 7.6     | 4.1     | 2.2     |
| RS120-185   | 3      | 19.9    | 24.9    | 5.1     | 7.6     | 4.1     | 2.2     |
| RS120-200   | 4      | 23.5    | 27.9    | 5.1     | 7.6     | 4.1     | 2.2     |
| RS120-250   | 3      | 22.5    | 27.5    | 10.2    | 7.6     | 4.1     | 2.2     |
| RS120-300   | 3      | 22.5    | 30.0    | 10.2    | 7.6     | 4.1     | 2.2     |
| RS120-375   | 3      | 25.5    | 34.0    | 10.2    | 7.6     | 4.1     | 2.2     |

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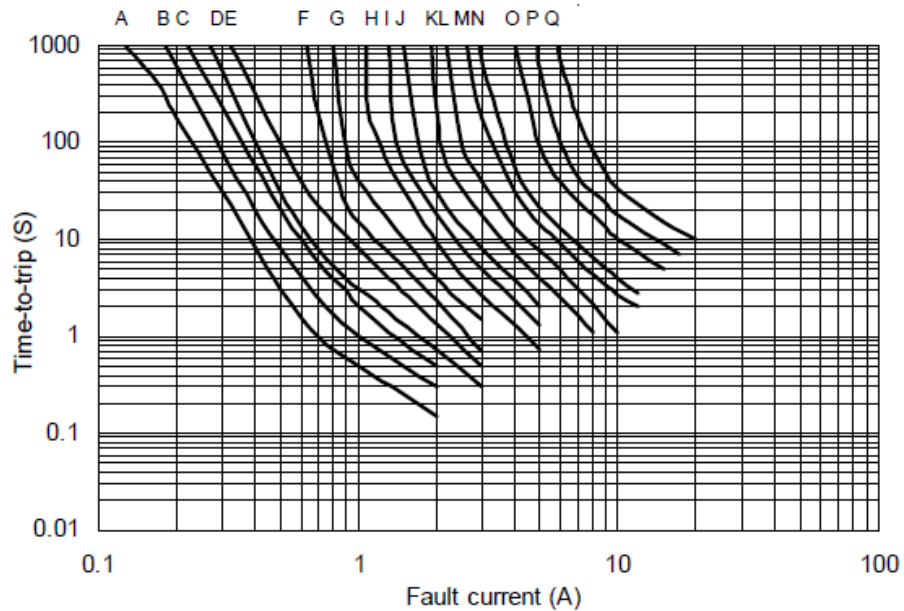
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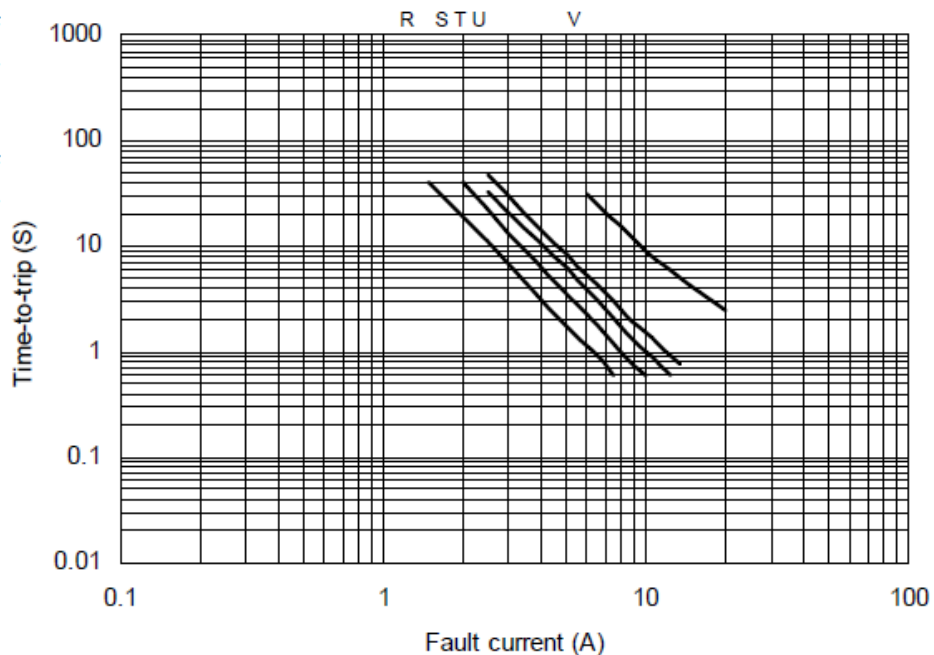
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## Typical Time-To-Trip at 23°C

- A = RS120-010
- B = RS120-017
- C = RS120-020
- D = RS120-025
- E = RS120-030
- F = RS120-040
- G = RS120-050
- H = RS120-065
- I = RS120-070
- J = RS120-090
- K = RS120-110
- L = RS120-130
- M = RS120-160
- N = RS120-185
- O = RS120-250
- P = RS120-300
- Q = RS120-375



- R = RS120-075
- S = RS120-100
- T = RS120-125
- U = RS120-135
- V = RS120-200



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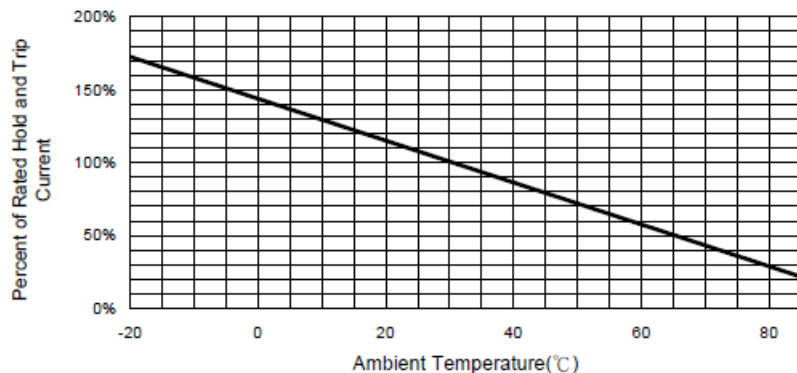
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## Thermal Derating Curve – RS120 Series



## Standard Package

| Part Number | Pcs/Bag | Reel/Tape |
|-------------|---------|-----------|
| RS120-010   | 500     | 2.0K      |
| RS120-017   | 500     | 2.0K      |
| RS120-020   | 500     | 2.0K      |
| RS120-025   | 500     | 2.0K      |
| RS120-030   | 500     | 2.0K      |
| RS120-040   | 500     | 2.0K      |
| RS120-050   | 500     | 2.0K      |
| RS120-065   | 300     | 1.5K      |
| RS120-070   | 300     | 1.5K      |
| RS120-075   | 300     | 1.5K      |
| RS120-090   | 300     | 2.0K      |

| Part Number | Pcs/Bag | Reel/Tape |
|-------------|---------|-----------|
| RS120-100   | 300     | 1.5K      |
| RS120-110   | 300     | 1.5K      |
| RS120-125   | 200     | 1.0K      |
| RS120-130   | 200     | 1.0K      |
| RS120-135   | 200     | 1.0K      |
| RS120-160   | 200     | ----      |
| RS120-185   | 100     | ----      |
| RS120-200   | 100     | ----      |
| RS120-250   | 100     | ----      |
| RS120-300   | 100     | ----      |
| RS120-375   | 100     | ----      |

### Warning:



-Operation beyond the specified maximum ratings or improper use may result in damage and possible electrical arcing and/or flame.  
 -PPTC device are intended for occasional overcurrent protection. Application for repeated overcurrent condition and/or prolonged trip are not anticipated.  
 -Avoid contact of PPTC device with chemical solvent. Prolonged contact will damage the device performance.

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