## Radial Leaded PTC Resettable Fuse







### Specifications:

Lead Material : Tin plated copper

Soldering Characteristic : MIL-DTD-202, Method 208E
Insulating Coating : Flame retardant epoxy
Operating Current : 100mA to 3.75A

Max. Voltage : Up to 90V

Max. Voltage : Up to 90V
Temperature Range : -40°C to 85°C

Applications : Telecom and wide variety of electronic equipment Product features : Low hold current, Solid state, Radial leaded product

ideal for up to 90V

Agency Recognition : UL File E345437

#### **Electrical Characteristics (23°C)**

| Part Number | Hold<br>Current | Trip<br>Current | Max. Time<br>to Trip | Max.<br>Current | Rated<br>Voltage | Typical<br>Power | Resistance |       |
|-------------|-----------------|-----------------|----------------------|-----------------|------------------|------------------|------------|-------|
|             |                 |                 |                      |                 |                  |                  | RMIN       | R1max |
|             | Ін, А           | Іт, А           | at 5 × Iн            | IMAX, A         | VMAX,V DC        | Pd, W            | Ω          | Ω     |
| MC36184     | 0.1             | 0.2             | 4                    |                 | 72/90            | 0.38             | 2.5        | 7.5   |
| MC36185     | 0.15            | 0.35            | 10                   |                 |                  | 0.7              | 2.4        | 7     |
| MC36186     | 0.17            | 0.34            | 3                    | 40              |                  | 0.48             | 2          | 8     |
| MC33171     | 0.2             | 0.4             | 2.2                  |                 |                  | 0.41             | 1.83       | 4.4   |
| MC33172     | 0.25            | 0.5             | 2.5                  |                 |                  | 0.45             | 1.25       | 3     |
| MC33173     | 0.3             | 0.6             | 3                    |                 |                  | 0.49             | 0.88       | 2.1   |
| MC36190     | 0.35            | 0.75            | 10                   |                 |                  | 1.3              | 0.7        | 2.5   |
| MC33174     | 0.4             | 0.8             | 3.8                  |                 |                  | 0.56             | 0.55       | 1.29  |
| MC33175     | 0.5             | 1               | 4                    |                 |                  | 0.77             | 0.5        | 1.17  |
| MC36193     | 0.55            | 1.2             | 10                   |                 |                  | 1.5              | 0.4        | 1.5   |
| MC33176     | 0.65            | 1.3             | 5.3                  |                 |                  | 0.88             | 0.31       | 0.72  |
| MC33177     | 0.75            | 1.5             | 6.3                  |                 |                  | 0.92             | 0.25       | 0.6   |
| MC33178     | 0.9             | 1.8             | 7.2                  |                 |                  | 0.99             | 0.2        | 0.47  |
| MC33179     | 1.1             | 2.2             | 8.2                  |                 |                  | 1.5              | 0.15       | 0.38  |
| MC33180     | 1.35            | 2.7             | 9.6                  |                 |                  | 1.7              | 0.12       | 0.3   |
| MC33181     | 1.6             | 3.2             | 11.4                 |                 |                  | 1.9              | 0.09       | 0.22  |
| MC33182     | 1.85            | 3.7             | 12.6                 |                 |                  | 2.1              | 0.08       | 0.19  |
| MC33183     | 2.5             | 5               | 15.6                 |                 |                  | 2.5              | 0.05       | 0.13  |
| MC33184     | 3               | 6               | 19.8                 |                 |                  | 2.8              | 0.04       | 0.1   |
| MC33185     | 3.75            | 7.5             | 24                   |                 |                  | 3.2              | 0.03       | 0.08  |

 $\ensuremath{\text{I}}_{\text{H}}$  = Hold current-maximum current at which the device will not trip at 23°C still air

l<sub>T</sub> = Trip current-minimum current at which the device will always trip at 23°C still air

V<sub>MAX</sub> =Maximum voltage device can withstand without damage at its rated current I<sub>MAX</sub> = Maximum fault current device can withstand without damage at rated voltage (V MAX)

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

RMIN = Minimum device resistance at 23°C

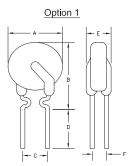
R1MAX = Maximum device resistance at 23°C, 1 hour after tripping



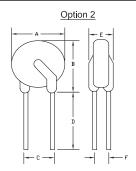
# Radial Leaded PTC Resettable Fuse



#### **Dimensions**



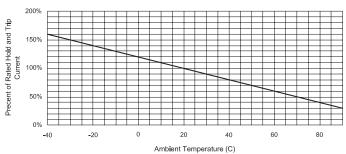
Lead Size : 24AWG Ø0.51mm Diameter



Lead Size : 20AWG Ø0.81mm Diameter

| Part Number | A<br>Max. | B<br>Max. | C<br>Typical | D<br>Min.  | E<br>Max. | F<br>Typical | Drawing Option |
|-------------|-----------|-----------|--------------|------------|-----------|--------------|----------------|
| MC36184     |           |           |              |            |           |              |                |
| MC36185     |           |           |              |            |           |              |                |
| MC36186     |           | 12.7      |              |            |           |              |                |
| MC33171     | 7.4       |           |              |            |           |              |                |
| MC33172     |           |           |              |            |           |              |                |
| MC33173     |           | 13        | 1            |            |           | 1.1          | Option 1       |
| MC36190     | 1         | 12.7      | 1            |            |           |              |                |
| MC33174     | 7.6       | 13.5      | 1            | 5.1<br>7.6 | 0.4       |              |                |
| MC33175     | 7.9       | 13.7      | 5.1          |            |           |              |                |
| MC36193     | 9.7       | 14        |              |            |           |              |                |
| MC33176     | 9.7       | 14.5      | 1            |            | 3.1       |              |                |
| MC33177     | 10.4      | 15.2      | 1            |            |           |              |                |
| MC33178     | 11.7      | 15.8      | 1            |            |           |              |                |
| MC33179     | 13        | 18        |              | İ İ        |           |              |                |
| MC33180     | 14.5      | 19.6      | 1            |            |           | 1.4          | Option 2       |
| MC33181     | 16.3      | 21.3      | 1            |            |           |              |                |
| MC33182     | 17.8      | 22.9      | 1            |            |           |              |                |
| MC33183     | 21.3      | 26.4      |              |            |           |              |                |
| MC33184     | 24.9      | 30        | 10.2         |            |           |              |                |
| MC33185     | 28.5      | 33.5      | 1            |            |           |              |                |

### **Thermal Derating Curve**



www.element14.com www.farnell.com www.newark.com

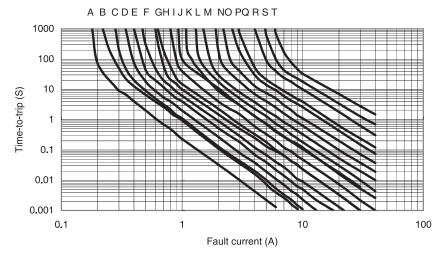


Dimensions: Millimetres

## Radial Leaded PTC Resettable Fuse



#### Typical Time-To-Trip at 23°C



| = MC36184 | K  | = MC33176  |
|-----------|--|--|
| = MC36185 | L  | = MC33177  |
| = MC36186 | M  | = MC33178  |
| = MC33171 | N  | = MC33179  |
| = MC33172 | 0  | = MC33180  |
| = MC33173 | Р  | = MC33181  |
| = MC36190 | Q  | = MC33182  |
| = MC33174 | R  | = MC33183  |
| = MC33175 | S  | = MC33184  |
| = MC36193 | Т  | = MC33185  |
|           | = MC36185<br>= MC36186<br>= MC33171<br>= MC33172<br>= MC33173<br>= MC36190<br>= MC33174<br>= MC33175 | = MC36185 L<br>= MC36186 M<br>= MC33171 N<br>= MC33172 O<br>= MC33173 P<br>= MC36190 Q<br>= MC33174 R<br>= MC33175 S |

#### **Part Number Table**

| Description                             | Part Number |
|---|-------------|
| 100mA Radial Leaded PTC Resettable Fuse | MC36184     |
| 150mA Radial Leaded PTC Resettable Fuse | MC36185     |
| 170mA Radial Leaded PTC Resettable Fuse | MC36186     |
| 200mA Radial Leaded PTC Resettable Fuse | MC33171     |
| 250mA Radial Leaded PTC Resettable Fuse | MC33172     |
| 300mA Radial Leaded PTC Resettable Fuse | MC33173     |
| 350mA Radial Leaded PTC Resettable Fuse | MC36190     |
| 400mA Radial Leaded PTC Resettable Fuse | MC33174     |
| 500mA Radial Leaded PTC Resettable Fuse | MC33175     |
| 550mA Radial Leaded PTC Resettable Fuse | MC36193     |
| 650mA Radial Leaded PTC Resettable Fuse | MC33176     |
| 750mA Radial Leaded PTC Resettable Fuse | MC33177     |
| 900mA Radial Leaded PTC Resettable Fuse | MC33178     |
| 1.1A Radial Leaded PTC Resettable Fuse  | MC33179     |
| 1.35A Radial Leaded PTC Resettable Fuse | MC33180     |
| 1.6A Radial Leaded PTC Resettable Fuse  | MC33181     |
| 1.85A Radial Leaded PTC Resettable Fuse | MC33182     |
| 2.5A Radial Leaded PTC Resettable Fuse  | MC33183     |
| 3A Radial Leaded PTC Resettable Fuse    | MC33184     |
| 3.75A Radial Leaded PTC Resettable Fuse | MC33185     |

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