

## PSF

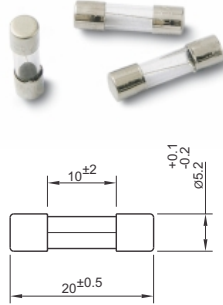
### 5 x 20mm Miniature Glass Fuse Links – Fast Acting

|                       |                                   |
|-----------------------|-----------------------------------|
| Applicable Standards  | IEC 60127-2 Std. Sheet 2          |
| Rated Voltage         | 250V                              |
| Breaking Capacity(AC) | 35A or 10 In whichever is greater |

#### Time Current Characteristic

| Rated Current (In) | Overload | Min  | Max    |
|--------------------|----------|------|--------|
| All                | 2.1 In   | –    | 30 min |
| 100mA              | 2.75 In  | 10ms | 500ms  |
| >100mA             |          | 50ms | 2s     |
| 100mA              | 4.00 In  | 3ms  | 100ms  |
| >100mA             |          | 10ms | 300ms  |
| All                | 10.00 In | –    | 20ms   |

Characteristic Curves available on request



#### Current Ratings

|       |       |       |       |
|-------|-------|-------|-------|
| 100mA | 125mA | 160mA | 200mA |
| 250mA | 315mA | 400mA | 500mA |
| 630mA | 800mA | 1A    | 1.25A |
| 1.6A  | 2A    | 2.5A  | 3.15A |
| 4A    | 5A    | 6.3A  | 8A*   |
| 10A*  |       |       |       |

\* Not covered in IEC.

Approvals : LCSO, CACT, CDOT,

#### Ordering Part No.

PSF...mA (In ≤ 800mA) or  
PSF...A (In ≥ 1A)

## PSFC

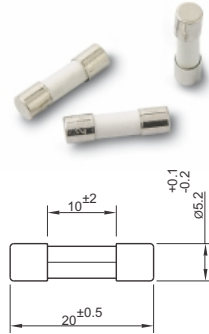
### 5 x 20mm Miniature Ceramic Fuse Links – Fast Acting

|                      |                            |
|----------------------|----------------------------|
| Applicable Standards | IEC 60127-2 Std. Sheet 1   |
| Rated Voltage        | 250V                       |
| Breaking Capacity    | 1500 A when tested with AC |

#### Time Current Characteristic

| Rated Current (In) | Overload | Min  | Max    |
|--------------------|----------|------|--------|
| 100mA – 6.3A       | 2.1 In   | –    | 30 min |
| 100mA – 3.15A      | 2.75 In  | 10ms | 2s     |
| 4A – 6.3A          | –        | 10ms | 3s     |
| 100mA – 6.3A       | 4.0 In   | 3ms  | 300ms  |
| 100mA – 6.3A       | 10.0 In  | –    | 20ms   |

Characteristic Curves available on request



#### Current Ratings

|       |       |       |       |
|-------|-------|-------|-------|
| 100mA | 125mA | 160mA | 200mA |
| 250mA | 315mA | 400mA | 500mA |
| 630mA | 800mA | 1A    | 1.25A |
| 1.6A  | 2A    | 2.5A  | 3.15A |
| 4A    | 5A    | 6.3A  |       |

Approvals :

#### Ordering Part No.

PSFC...mA (In ≤ 800mA) or  
PSFC...A (In ≥ 1A)

## PST

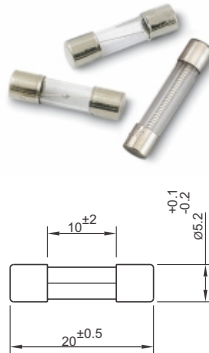
### 5 x 20mm Miniature Glass Fuse Links – Slow Blow

|                       |                                   |
|-----------------------|-----------------------------------|
| Applicable Standards  | IEC 60127-2 Std. Sheet 3          |
| Rated Voltage         | 250V                              |
| Breaking Capacity(AC) | 35A or 10 In whichever is greater |

#### Time Current Characteristic

| Rated Current (In) | Overload | Min   | Max   |
|--------------------|----------|-------|-------|
| 100mA              | 2.1 In   | –     | 2 min |
| >100mA             |          |       | 2 min |
| 100mA              | 2.75 In  | 200ms | 10s   |
| >100mA             |          | 600ms | 10s   |
| 100mA              | 4.0 In   | 40ms  | 3s    |
| >100mA             |          | 150ms | 3s    |
| 100mA              | 10.0 In  | 10ms  | 300ms |
| >100mA             |          | 20ms  | 300ms |

Characteristic Curves available on request



#### Current Ratings

|       |       |       |       |
|-------|-------|-------|-------|
| 100mA | 125mA | 160mA | 200mA |
| 250mA | 315mA | 400mA | 500mA |
| 630mA | 800mA | 1A    | 1.25A |
| 1.6A  | 2A    | 2.5A  | 3.15A |
| 4A    | 5A    | 6.3A  | 8A*   |
| 10A*  |       |       |       |

\* Not covered in IEC.

Approvals : LCSO, CACT, CDOT,

#### Ordering Part No.

PST...mA (In ≤ 800mA) or  
PST...A (In ≥ 1A)

## PSTC

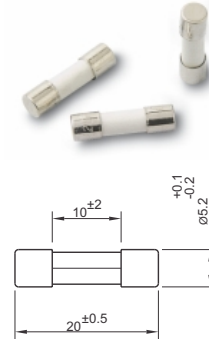
### 5 x 20mm Miniature Ceramic Fuse Links – Slow Blow

|                      |                           |
|----------------------|---------------------------|
| Applicable Standards | IEC 60127-2 Std. Sheet 5  |
| Rated Voltage        | 250V                      |
| Breaking Capacity    | 1500A when tested with AC |

#### Time Current Characteristic

| Rated Current (In) | Overload | Min   | Max   |
|--------------------|----------|-------|-------|
| 1A – 6.3A          | 2.1 In   | –     | 30min |
| 1A – 6.3A          | 2.75 In  | 1s    | 80s   |
| 1A – 3.15A         | 4.0 In   | 95ms  | 5s    |
| 4A – 6.3A          |          | 150ms | 5s    |
| 1A – 3.15A         | 10.0 In  | 10ms  | 100ms |
| 4A – 6.3A          |          | 20ms  | 100ms |

Characteristic Curves available on request



#### Current Ratings

|      |       |      |    |
|------|-------|------|----|
| 1A   | 1.25A | 1.6A | 2A |
| 2.5A | 3.15A | 4A   | 5A |
| 6.3A |       |      |    |

Approvals :

#### Ordering Part No.

PSTC...A

## PAF

### 6.35 x 32mm Miniature Glass Fuse Links – Fast Acting

|                        |                                   |
|------------------------|-----------------------------------|
| Applicable Standards   | IEC 60127-2 Std. Sheet 4          |
| Rated Voltage          | 250V                              |
| Breaking Capacity (AC) | 35A or 10 In whichever is greater |

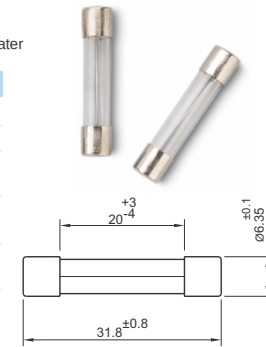
#### Time Current Characteristic

| Rated Current (In) | Overload | Min  | Max    |
|--------------------|----------|------|--------|
| All                | 2.0 In   | –    | 20s    |
| 100mA              | 2.75 In  | 2ms  | 200ms  |
| >100mA             |          | 20ms | 1500ms |
| 100mA              | 4.0 In   | 1ms  | 30ms   |
| >100mA             |          | 8ms  | 400ms  |
| 100mA              | 10.0 In  | –    | 5ms    |
| >100mA             |          |      | 80ms   |

Characteristic Curves available on request

\*150V rated voltage according to standard.

\*\* 60V rated voltage according to standard.



#### Current Ratings

|       |       |        |        |
|-------|-------|--------|--------|
| 100mA | 125mA | 160mA  | 200mA  |
| 250mA | 315mA | 400mA  | 500mA  |
| 630mA | 800mA | 1A     | 1.25A  |
| 1.6A  | 2A    | 2.5A*  | 3.15A* |
| 4A*   | 5A**  | 6.3A** | 8A**   |
| 10A** |       |        |        |

#### Ordering Part No.

PAF...mA (In ≤ 800mA) or  
PAF...A (In ≥ 1A)

## PAFC

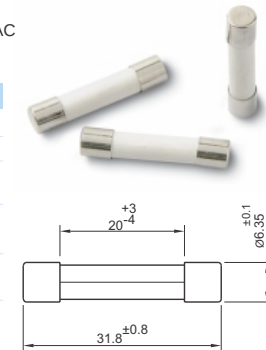
### 6.35 x 32mm Miniature Ceramic Fuse Links – Fast Acting

|                   |                           |
|-------------------|---------------------------|
| Rated Voltage     | 250V                      |
| Breaking Capacity | 1500A when tested with AC |

#### Time Current Characteristic

| Rated Current (In) | Overload | Min   | Max    |
|--------------------|----------|-------|--------|
| 100mA – 10A        | 2.1 In   | –     | 60 min |
| 100mA – 4A         | 2.75 In  | 70ms  | 5s     |
| 5A – 10A           | –        | 150ms | 2s     |
| 100mA – 4A         | 4.0 In   | 10ms  | 150ms  |
| 5A – 10A           |          | 25ms  | 200ms  |
| 100mA – 4A         | 10.0 In  | –     | 10ms   |
| 5A – 10A           |          |       | 20ms   |

Characteristic Curves available on request



#### Current Ratings

|       |       |       |       |
|-------|-------|-------|-------|
| 100mA | 125mA | 160mA | 200mA |
| 250mA | 315mA | 400mA | 500mA |
| 630mA | 800mA | 1A    | 1.25A |
| 1.6A  | 2A    | 2.5A  | 3.15A |
| 4A    | 5A    | 6.3A  | 8A    |
| 10A   |       |       |       |

#### Ordering Part No.

PAFC...mA (In ≤ 800mA) or  
PAFC...A (In ≥ 1A)

## PSF

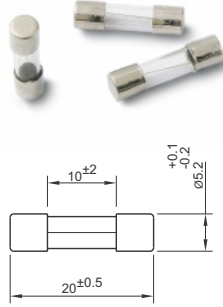
### 5 x 20mm Miniature Glass Fuse Links – Fast Acting

|                       |                                   |
|-----------------------|-----------------------------------|
| Applicable Standards  | IEC 60127-2 Std. Sheet 2          |
| Rated Voltage         | 250V                              |
| Breaking Capacity(AC) | 35A or 10 In whichever is greater |

#### Time Current Characteristic

| Rated Current (In) | Overload | Min  | Max    |
|--------------------|----------|------|--------|
| All                | 2.1 In   | –    | 30 min |
| 100mA              | 2.75 In  | 10ms | 500ms  |
| >100mA             |          | 50ms | 2s     |
| 100mA              | 4.00 In  | 3ms  | 100ms  |
| >100mA             |          | 10ms | 300ms  |
| All                | 10.00 In | –    | 20ms   |

Characteristic Curves available on request



#### Current Ratings

|       |       |       |       |
|-------|-------|-------|-------|
| 100mA | 125mA | 160mA | 200mA |
| 250mA | 315mA | 400mA | 500mA |
| 630mA | 800mA | 1A    | 1.25A |
| 1.6A  | 2A    | 2.5A  | 3.15A |
| 4A    | 5A    | 6.3A  | 8A*   |
| 10A*  |       |       |       |

\* Not covered in IEC.

Approvals : LCSO, CACT, CDOT,

#### Ordering Part No.

PSF...mA (In ≤ 800mA) or  
PSF...A (In ≥ 1A)

## PSFC

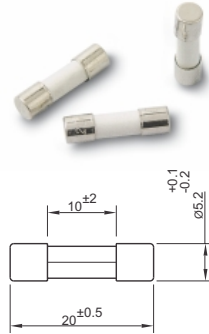
### 5 x 20mm Miniature Ceramic Fuse Links – Fast Acting

|                      |                            |
|----------------------|----------------------------|
| Applicable Standards | IEC 60127-2 Std. Sheet 1   |
| Rated Voltage        | 250V                       |
| Breaking Capacity    | 1500 A when tested with AC |

#### Time Current Characteristic

| Rated Current (In) | Overload | Min  | Max    |
|--------------------|----------|------|--------|
| 100mA – 6.3A       | 2.1 In   | –    | 30 min |
| 100mA – 3.15A      | 2.75 In  | 10ms | 2s     |
| 4A – 6.3A          | –        | 10ms | 3s     |
| 100mA – 6.3A       | 4.0 In   | 3ms  | 300ms  |
| 100mA – 6.3A       | 10.0 In  | –    | 20ms   |

Characteristic Curves available on request



#### Current Ratings

|       |       |       |       |
|-------|-------|-------|-------|
| 100mA | 125mA | 160mA | 200mA |
| 250mA | 315mA | 400mA | 500mA |
| 630mA | 800mA | 1A    | 1.25A |
| 1.6A  | 2A    | 2.5A  | 3.15A |
| 4A    | 5A    | 6.3A  |       |

Approvals :

#### Ordering Part No.

PSFC...mA (In ≤ 800mA) or  
PSFC...A (In ≥ 1A)

## PST

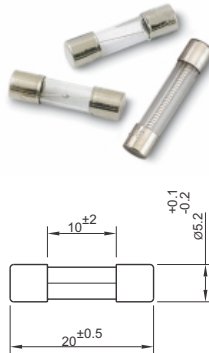
### 5 x 20mm Miniature Glass Fuse Links – Slow Blow

|                       |                                   |
|-----------------------|-----------------------------------|
| Applicable Standards  | IEC 60127-2 Std. Sheet 3          |
| Rated Voltage         | 250V                              |
| Breaking Capacity(AC) | 35A or 10 In whichever is greater |

#### Time Current Characteristic

| Rated Current (In) | Overload | Min   | Max   |
|--------------------|----------|-------|-------|
| 100mA              | 2.1 In   | –     | 2 min |
| >100mA             |          |       | 2 min |
| 100mA              | 2.75 In  | 200ms | 10s   |
| >100mA             |          | 600ms | 10s   |
| 100mA              | 4.0 In   | 40ms  | 3s    |
| >100mA             |          | 150ms | 3s    |
| 100mA              | 10.0 In  | 10ms  | 300ms |
| >100mA             |          | 20ms  | 300ms |

Characteristic Curves available on request



#### Current Ratings

|       |       |       |       |
|-------|-------|-------|-------|
| 100mA | 125mA | 160mA | 200mA |
| 250mA | 315mA | 400mA | 500mA |
| 630mA | 800mA | 1A    | 1.25A |
| 1.6A  | 2A    | 2.5A  | 3.15A |
| 4A    | 5A    | 6.3A  | 8A*   |
| 10A*  |       |       |       |

\* Not covered in IEC.

Approvals : LCSO, CACT, CDOT,

#### Ordering Part No.

PST...mA (In ≤ 800mA) or  
PST...A (In ≥ 1A)

## PSTC

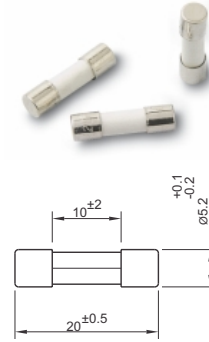
### 5 x 20mm Miniature Ceramic Fuse Links – Slow Blow

|                      |                           |
|----------------------|---------------------------|
| Applicable Standards | IEC 60127-2 Std. Sheet 5  |
| Rated Voltage        | 250V                      |
| Breaking Capacity    | 1500A when tested with AC |

#### Time Current Characteristic

| Rated Current (In) | Overload | Min   | Max   |
|--------------------|----------|-------|-------|
| 1A – 6.3A          | 2.1 In   | –     | 30min |
| 1A – 6.3A          | 2.75 In  | 1s    | 80s   |
| 1A – 3.15A         | 4.0 In   | 95ms  | 5s    |
| 4A – 6.3A          |          | 150ms | 5s    |
| 1A – 3.15A         | 10.0 In  | 10ms  | 100ms |
| 4A – 6.3A          |          | 20ms  | 100ms |

Characteristic Curves available on request



#### Current Ratings

|      |       |      |    |
|------|-------|------|----|
| 1A   | 1.25A | 1.6A | 2A |
| 2.5A | 3.15A | 4A   | 5A |
| 6.3A |       |      |    |

Approvals :

#### Ordering Part No.

PSTC...A

## PAF

### 6.35 x 32mm Miniature Glass Fuse Links – Fast Acting

|                        |                                   |
|------------------------|-----------------------------------|
| Applicable Standards   | IEC 60127-2 Std. Sheet 4          |
| Rated Voltage          | 250V                              |
| Breaking Capacity (AC) | 35A or 10 In whichever is greater |

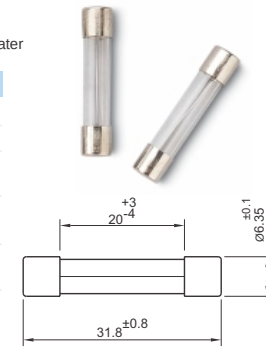
#### Time Current Characteristic

| Rated Current (In) | Overload | Min  | Max    |
|--------------------|----------|------|--------|
| All                | 2.0 In   | –    | 20s    |
| 100mA              | 2.75 In  | 2ms  | 200ms  |
| >100mA             |          | 20ms | 1500ms |
| 100mA              | 4.0 In   | 1ms  | 30ms   |
| >100mA             |          | 8ms  | 400ms  |
| 100mA              | 10.0 In  | –    | 5ms    |
| >100mA             |          |      | 80ms   |

Characteristic Curves available on request

\*150V rated voltage according to standard.

\*\* 60V rated voltage according to standard.



#### Current Ratings

|       |       |        |        |
|-------|-------|--------|--------|
| 100mA | 125mA | 160mA  | 200mA  |
| 250mA | 315mA | 400mA  | 500mA  |
| 630mA | 800mA | 1A     | 1.25A  |
| 1.6A  | 2A    | 2.5A*  | 3.15A* |
| 4A*   | 5A**  | 6.3A** | 8A**   |
| 10A** |       |        |        |

#### Ordering Part No.

PAF...mA (In ≤ 800mA) or  
PAF...A (In ≥ 1A)

## PAFC

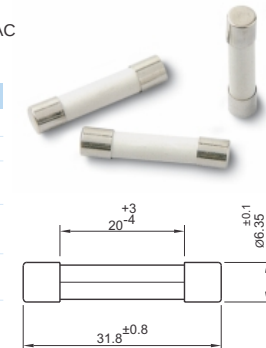
### 6.35 x 32mm Miniature Ceramic Fuse Links – Fast Acting

|                   |                           |
|-------------------|---------------------------|
| Rated Voltage     | 250V                      |
| Breaking Capacity | 1500A when tested with AC |

#### Time Current Characteristic

| Rated Current (In) | Overload | Min   | Max    |
|--------------------|----------|-------|--------|
| 100mA – 10A        | 2.1 In   | –     | 60 min |
| 100mA – 4A         | 2.75 In  | 70ms  | 5s     |
| 5A – 10A           | –        | 150ms | 2s     |
| 100mA – 4A         | 4.0 In   | 10ms  | 150ms  |
| 5A – 10A           |          | 25ms  | 200ms  |
| 100mA – 4A         | 10.0 In  | –     | 10ms   |
| 5A – 10A           |          |       | 20ms   |

Characteristic Curves available on request



#### Current Ratings

|       |       |       |       |
|-------|-------|-------|-------|
| 100mA | 125mA | 160mA | 200mA |
| 250mA | 315mA | 400mA | 500mA |
| 630mA | 800mA | 1A    | 1.25A |
| 1.6A  | 2A    | 2.5A  | 3.15A |
| 4A    | 5A    | 6.3A  | 8A    |
| 10A   |       |       |       |

#### Ordering Part No.

PAFC...mA (In ≤ 800mA) or  
PAFC...A (In ≥ 1A)

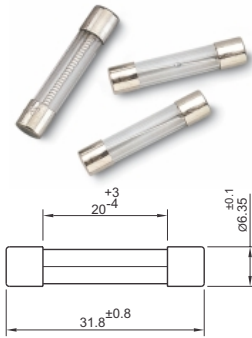
**PAT 6.35 x 32mm Miniature Glass Fuse Links – Slow Blow**

Rated Voltage 250V  
Breaking Capacity 35A AC or 10 In whichever is greater

**Time Current Characteristic**

| Rated Current (In) | Overload | Min   | Max   |
|--------------------|----------|-------|-------|
| 200mA – 10A        | 2.1 In   | –     | 120s  |
| 200mA – 10A        | 2.75 In  | 200ms | 10s   |
| 200mA – 10A        | 4.0 In   | 100ms | 3s    |
| 200mA – 10A        | 10.0 In  | 20ms  | 300ms |

Characteristic Curves available on request



**Current Ratings**

|       |       |       |       |
|-------|-------|-------|-------|
| 200mA | 250mA | 315mA | 400mA |
| 510mA | 630mA | 800mA | 1A    |
| 1.25A | 1.6A  | 2A    | 2.5A  |
| 3.15A | 4A    | 5A    | 6.3A  |
| 8A    | 10A   |       |       |

**Ordering Part No.**

PAT...mA (In ≤ 800mA) or  
PAT...A (In ≥ 1A)

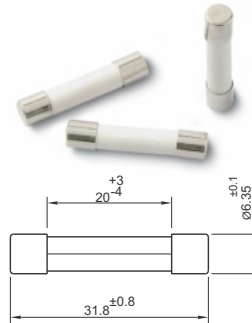
**PATC 6.35 x 32 mm Miniature Ceramic Fuse Links – Slow Blow**

Rated Voltage 250V  
Breaking Capacity 1500 A when tested with AC

**Time Current Characteristic**

| Rated Current (In) | Overload | Min   | Max   |
|--------------------|----------|-------|-------|
| 100mA – 10A        | 2.1 In   | –     | 120s  |
| 100mA – 10A        | 2.75 In  | 200ms | 10s   |
| 100mA – 10A        | 4.0 In   | 100ms | 3s    |
| 100mA – 10A        | 10.0 In  | 20ms  | 300ms |

Characteristic Curves available on request



**Current Ratings**

|       |       |       |       |
|-------|-------|-------|-------|
| 100mA | 125mA | 160mA | 200mA |
| 250mA | 315mA | 400mA | 500mA |
| 630mA | 800mA | 1A    | 1.25A |
| 1.6A  | 2A    | 2.5A  | 3.15A |
| 4A    | 5A    | 6.3A  | 8A    |
| 10A   |       |       |       |

**Ordering Part No.**

PATC...mA (In ≤ 800mA) or  
PATC...A (In ≥ 1A)

**PXF... VU 6.35x30mm, Glass Fuse links-Fast acting**

Rated Voltage 32V  
Breaking Capacity 35A AC or 10 In  
Whichever is greater

**Time Current Characteristic**

| Rated Current (In) | Overload | Min | Max  |
|--------------------|----------|-----|------|
| 7A - 20A           | 1.1 In   | –   | 2Hrs |
| 7A - 20A           | 1.35 In  | –   | 180s |
| 7A - 20A           | 1.5 In   | –   | 15s  |

Characteristic Curves available on request



**Current Ratings**

7A, 7.5A, 10A, 15A, 20A

**Ordering Part No.**

PXF...A VU (In ≥ 7A)  
FOR ROHS PXF ....A VU-R

**PXF... VK 6.3x25mm, Glass Fuse links-Fast acting**

Rated Voltage 32V  
Breaking Capacity 35A AC or 10 In  
Whichever is greater

**Time Current Characteristic**

| Rated Current (In) | Overload | Min | Max  |
|--------------------|----------|-----|------|
| 4A - 20A           | 1.1 In   | –   | 2Hrs |
| 4A - 20A           | 1.35 In  | –   | 180s |
| 4A - 20A           | 1.5 In   | –   | 15s  |

Characteristic Curves available on request



**Current Ratings**

4A, 5A, 6A, 7A, 10A, 15A, 20A

**Ordering Part No.**

PXF...VK A (In ≥ 4A)  
FOR ROHS PXF ....A VK-R

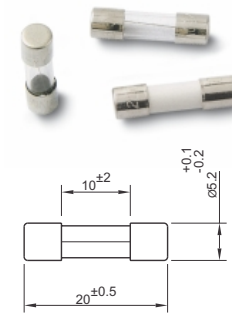
**PPF / PPFC 5 x 20 mm Miniature Glass/Ceramic Fuse Links – Fast Acting [UL Standards]**

Applicable Standards UL248-1 & 14 (198G)  
Rated Voltage 250V  
Interrupting Rating (AC) ≤1A 35A  
1.125A–3.5A 100A  
4A–6.25A 200A

**Time Current Characteristic**

| Rated Current (In) | Overload | Min  | Max    |
|--------------------|----------|------|--------|
| 100mA – 6.25A      | 1.1 In   | 4hrs | –      |
| 100mA – 6.25A      | 1.35 In  | –    | 60 min |
| 100mA – 6.25A      | 2.0 In   | –    | 5s     |

Characteristic Curves available on request



**Current Ratings**

|       |        |       |       |
|-------|--------|-------|-------|
| 100mA | 150mA  | 200mA | 300mA |
| 400mA | 500mA  | 600mA | 800mA |
| 1A    | 1.125A | 1.25A | 1.4A  |
| 1.6A  | 1.8A   | 2A    | 2.25A |
| 2.5A  | 2.8A   | 3A    | 3.2A  |
| 3.5A  | 4A     | 4.5A  | 5A    |
| 5.6A  | 6A     | 6.25A |       |

**Ordering Part No.**

PPF...mA (In ≤ 800mA) or  
PPF...A (In ≥ 1A) for Glass Fuses

PPFC...mA (In ≤ 800mA) or  
PPFC...A (In ≥ 1A) for Ceramic Fuses

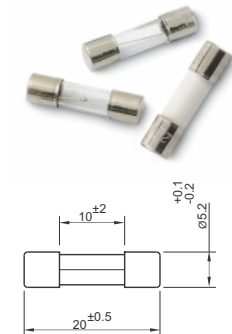
**PPT / PPTC 5 x 20 mm Miniature Glass/Ceramic Fuse Links – Slow Blow [UL Standards]**

Applicable Standards UL248-1 & 14 (198G)  
Rated Voltage 250V  
Interrupting Rating (AC) ≤1A 35A  
1.125A–3.5A 100A  
4A–6.25A 200A

**Time Current Characteristic**

| Rated Current (In) | Overload | Min  | Max    |
|--------------------|----------|------|--------|
| 100mA – 6.25A      | 1.1 In   | 4hrs | –      |
| 100mA – 6.25A      | 1.35 In  | –    | 60 min |
| 100mA – 6.25A      | 2.0 In   | 5s   | 2min   |

Characteristic Curves available on request



**Current Ratings**

|       |        |       |       |
|-------|--------|-------|-------|
| 100mA | 150mA  | 200mA | 300mA |
| 400mA | 500mA  | 600mA | 800mA |
| 1A    | 1.125A | 1.25A | 1.4A  |
| 1.6A  | 1.8A   | 2A    | 2.25A |
| 2.5A  | 2.8A   | 3A    | 3.2A  |
| 3.5A  | 4A     | 4.5A  | 5A    |
| 5.6A  | 6A     | 6.25A |       |

**Ordering Part No.**

PPT...mA (In ≤ 800mA) or  
PPT...A (In ≥ 1A) for Glass Fuses

PPTC...mA (In ≤ 800mA) or  
PPTC...A (In ≥ 1A) for Ceramic Fuses

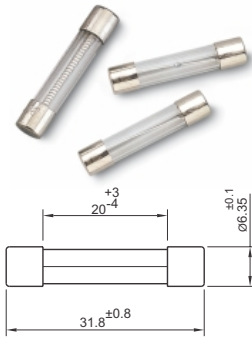
**PAT 6.35 x 32mm Miniature Glass Fuse Links – Slow Blow**

Rated Voltage 250V  
Breaking Capacity 35A AC or 10 In whichever is greater

**Time Current Characteristic**

| Rated Current (In) | Overload | Min   | Max   |
|--------------------|----------|-------|-------|
| 200mA – 10A        | 2.1 In   | –     | 120s  |
| 200mA – 10A        | 2.75 In  | 200ms | 10s   |
| 200mA – 10A        | 4.0 In   | 100ms | 3s    |
| 200mA – 10A        | 10.0 In  | 20ms  | 300ms |

Characteristic Curves available on request



**Current Ratings**

|       |       |       |       |
|-------|-------|-------|-------|
| 200mA | 250mA | 315mA | 400mA |
| 510mA | 630mA | 800mA | 1A    |
| 1.25A | 1.6A  | 2A    | 2.5A  |
| 3.15A | 4A    | 5A    | 6.3A  |
| 8A    | 10A   |       |       |

**Ordering Part No.**

PAT...mA (In ≤ 800mA) or  
PAT...A (In ≥ 1A)

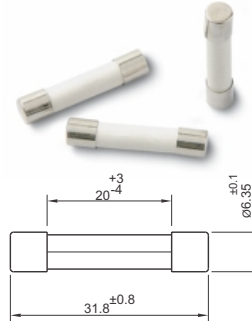
**PATC 6.35 x 32 mm Miniature Ceramic Fuse Links – Slow Blow**

Rated Voltage 250V  
Breaking Capacity 1500 A when tested with AC

**Time Current Characteristic**

| Rated Current (In) | Overload | Min   | Max   |
|--------------------|----------|-------|-------|
| 100mA – 10A        | 2.1 In   | –     | 120s  |
| 100mA – 10A        | 2.75 In  | 200ms | 10s   |
| 100mA – 10A        | 4.0 In   | 100ms | 3s    |
| 100mA – 10A        | 10.0 In  | 20ms  | 300ms |

Characteristic Curves available on request



**Current Ratings**

|       |       |       |       |
|-------|-------|-------|-------|
| 100mA | 125mA | 160mA | 200mA |
| 250mA | 315mA | 400mA | 500mA |
| 630mA | 800mA | 1A    | 1.25A |
| 1.6A  | 2A    | 2.5A  | 3.15A |
| 4A    | 5A    | 6.3A  | 8A    |
| 10A   |       |       |       |

**Ordering Part No.**

PATC...mA (In ≤ 800mA) or  
PATC...A (In ≥ 1A)

**PXF... VU 6.35x30mm, Glass Fuse links-Fast acting**

Rated Voltage 32V  
Breaking Capacity 35A AC or 10 In  
Whichever is greater

**Time Current Characteristic**

| Rated Current (In) | Overload | Min | Max  |
|--------------------|----------|-----|------|
| 7A - 20A           | 1.1 In   | –   | 2Hrs |
| 7A - 20A           | 1.35 In  | –   | 180s |
| 7A - 20A           | 1.5 In   | –   | 15s  |

Characteristic Curves available on request



**Current Ratings**

7A, 7.5A, 10A, 15A, 20A

**Ordering Part No.**

PXF...A VU (In ≥ 7A)  
FOR ROHS PXF ....A VU-R

**PXF... VK 6.3x25mm, Glass Fuse links-Fast acting**

Rated Voltage 32V  
Breaking Capacity 35A AC or 10 In  
Whichever is greater

**Time Current Characteristic**

| Rated Current (In) | Overload | Min | Max  |
|--------------------|----------|-----|------|
| 4A - 20A           | 1.1 In   | –   | 2Hrs |
| 4A - 20A           | 1.35 In  | –   | 180s |
| 4A - 20A           | 1.5 In   | –   | 15s  |

Characteristic Curves available on request



**Current Ratings**

4A, 5A, 6A, 7A, 10A, 15A, 20A

**Ordering Part No.**

PXF...VK A (In ≥ 4A)  
FOR ROHS PXF ....A VK-R

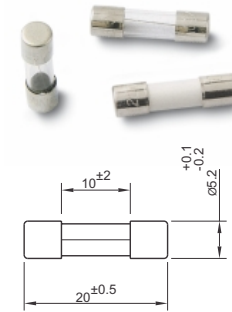
**PPF / PPFC 5 x 20 mm Miniature Glass/Ceramic Fuse Links – Fast Acting [UL Standards]**

Applicable Standards UL248-1 & 14 (198G)  
Rated Voltage 250V  
Interrupting Rating (AC) ≤1A 35A  
1.125A–3.5A 100A  
4A–6.25A 200A

**Time Current Characteristic**

| Rated Current (In) | Overload | Min  | Max    |
|--------------------|----------|------|--------|
| 100mA – 6.25A      | 1.1 In   | 4hrs | –      |
| 100mA – 6.25A      | 1.35 In  | –    | 60 min |
| 100mA – 6.25A      | 2.0 In   | –    | 5s     |

Characteristic Curves available on request



**Current Ratings**

|       |        |       |       |
|-------|--------|-------|-------|
| 100mA | 150mA  | 200mA | 300mA |
| 400mA | 500mA  | 600mA | 800mA |
| 1A    | 1.125A | 1.25A | 1.4A  |
| 1.6A  | 1.8A   | 2A    | 2.25A |
| 2.5A  | 2.8A   | 3A    | 3.2A  |
| 3.5A  | 4A     | 4.5A  | 5A    |
| 5.6A  | 6A     | 6.25A |       |

**Ordering Part No.**

PPF...mA (In ≤ 800mA) or  
PPF...A (In ≥ 1A) for Glass Fuses

PPFC...mA (In ≤ 800mA) or  
PPFC...A (In ≥ 1A) for Ceramic Fuses

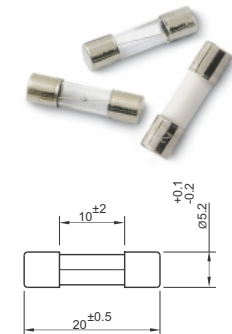
**PPT / PPTC 5 x 20 mm Miniature Glass/Ceramic Fuse Links – Slow Blow [UL Standards]**

Applicable Standards UL248-1 & 14 (198G)  
Rated Voltage 250V  
Interrupting Rating (AC) ≤1A 35A  
1.125A–3.5A 100A  
4A–6.25A 200A

**Time Current Characteristic**

| Rated Current (In) | Overload | Min  | Max    |
|--------------------|----------|------|--------|
| 100mA – 6.25A      | 1.1 In   | 4hrs | –      |
| 100mA – 6.25A      | 1.35 In  | –    | 60 min |
| 100mA – 6.25A      | 2.0 In   | 5s   | 2min   |

Characteristic Curves available on request



**Current Ratings**

|       |        |       |       |
|-------|--------|-------|-------|
| 100mA | 150mA  | 200mA | 300mA |
| 400mA | 500mA  | 600mA | 800mA |
| 1A    | 1.125A | 1.25A | 1.4A  |
| 1.6A  | 1.8A   | 2A    | 2.25A |
| 2.5A  | 2.8A   | 3A    | 3.2A  |
| 3.5A  | 4A     | 4.5A  | 5A    |
| 5.6A  | 6A     | 6.25A |       |

**Ordering Part No.**

PPT...mA (In ≤ 800mA) or  
PPT...A (In ≥ 1A) for Glass Fuses

PPTC...mA (In ≤ 800mA) or  
PPTC...A (In ≥ 1A) for Ceramic Fuses

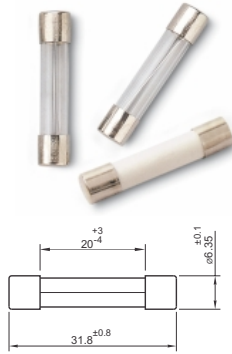
**PQF / PQFC 6.35 x 32 mm Miniature Glass/Ceramic Fuse Links – Fast Acting [UL Standards]**

|                          |                     |      |  |
|--------------------------|---------------------|------|--|
| Applicable Standards     | UL248-1 & 14 (198G) |      |  |
| Rated Voltage            | 250V                |      |  |
| Interrupting Rating (AC) | ≤1A                 | 35A  |  |
|                          | 1.125A–3.5A         | 100A |  |
|                          | 4A–10A              | 200A |  |

**Time Current Characteristic**

| Rated Current (In) | Overload | Min  | Max    |
|--------------------|----------|------|--------|
| 100mA – 10A        | 1.1 In   | 4hrs | –      |
| 100mA – 10A        | 1.35 In  | –    | 60 min |
| 100mA – 10A        | 2.0 In   | –    | 5s     |

Characteristic Curves available on request



**Current Ratings**

|       |        |       |       |
|-------|--------|-------|-------|
| 100mA | 150mA  | 200mA | 300mA |
| 400mA | 500mA  | 600mA | 800mA |
| 1A    | 1.125A | 1.25A | 1.4A  |
| 1.6A  | 1.8A   | 2A    | 2.25A |
| 2.5A  | 2.8A   | 3A    | 3.2A  |
| 3.5A  | 4A     | 4.5A  | 5A    |
| 5.6A  | 6A     | 6.25A | 7A    |
| 8A    | 9A     | 10A   |       |

**Ordering Part No.**

PQF...mA (In ≤ 800mA) or  
PQF...A (In ≥ 1A) For Glass Fuses  
PQFC...mA (In ≤ 800mA) or  
PQFC...A (In ≥ 1A) For Ceramic Fuses

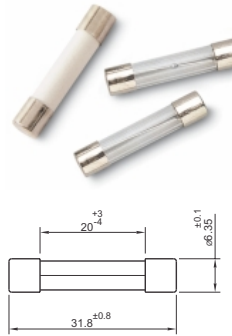
**PQT / PQTC 6.35 x 32 mm Miniature Glass/Ceramic Fuse Links – Slow Blow [UL Standards]**

|                          |                     |      |  |
|--------------------------|---------------------|------|--|
| Applicable Standards     | UL248-1 & 14 (198G) |      |  |
| Rated Voltage            | 250V                |      |  |
| Interrupting Rating (AC) | ≤1A                 | 35A  |  |
|                          | 1.125A–3.5A         | 100A |  |
|                          | 4A–10A              | 200A |  |

**Time Current Characteristic**

| Rated Current (In) | Overload | Min  | Max    |
|--------------------|----------|------|--------|
| 100mA – 10A        | 1.1 In   | 4hrs | –      |
| 100mA – 10A        | 1.35 In  | –    | 60 min |
| 100mA – 3A         | 2.0 In   | 5s   | 2 min  |
| 3.2A – 10A         |          | 12s  |        |

Characteristic Curves available on request



**Current Ratings**

|       |        |       |       |
|-------|--------|-------|-------|
| 100mA | 150mA  | 200mA | 300mA |
| 400mA | 500mA  | 600mA | 800mA |
| 1A    | 1.125A | 1.25A | 1.4A  |
| 1.6A  | 1.8A   | 2A    | 2.25A |
| 2.5A  | 2.8A   | 3A    | 3.2A  |
| 3.5A  | 4A     | 4.5A  | 5A    |
| 5.6A  | 6A     | 6.25A | 7A    |
| 8A    | 9A     | 10A   |       |

**Ordering Part No.**

PQT...mA (In ≤ 800mA) or  
PQT...A (In ≥ 1A) For Glass Fuses  
PQTC...mA (In ≤ 800mA) or  
PQTC...A (In ≥ 1A) For Ceramic Fuses

**Cartridge Fuse Links With Plug Leads**

|               |                     |
|---------------|---------------------|
| Lead diameter | 0.6 or 0.8 mm       |
| Lead length   | 25 mm minimum       |
| Cap           | Brass nickel plated |
| Lead wire     | Copper tinned       |

Cartridge Fuse -links of the following series are available with plugged leads.

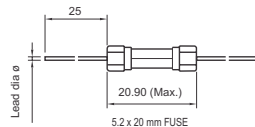
PSF, PST, PAF, PAT, PSFC, PSTC, PAF, PATC, PPF, PPFC, PPT, PPTC, PQF, PQFC, PQT & PQTC

Applicable specification as per data sheet

**Ordering Part No.**

| Fuse Series | With 0.6ø Plug Lead   | With 0.8ø Plug Lead   |
|-------------|-----------------------|-----------------------|
| PSF/PSFC    | PSF...A6P/PSFC...A6P  | PSF...A8P/PSFC...A8P  |
| PST/PSTC    | PST...A6P/PSTC...A6P  | PST...A8P/PSTC...A8P  |
| PAT / PATC  | PAT...A6P/PATC ...A6P | PAT...A8P/PATC ...A8P |
| PAF / PAFC  | PAF...A6P/PAFC ...A6P | PAF...A8P/PAFC ...A8P |
| PQT/PQTC    | PQT...A6P/PQTC...A6P  | PQT...A8P/PQTC...A8P  |

Fuses can also be supplied with soldered leads. Please contact factory for details



**PRTL ø 8.5 mm Sub-Miniature Low Breaking Capacity Round Fuse Links, Radial Leded – Slow Blow**

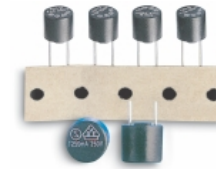
|                      |                                         |  |
|----------------------|-----------------------------------------|--|
| Applicable Standards | IEC 60127-3 Std. Sheet 4                |  |
| Rated Voltage        | 250V                                    |  |
| Breaking Capacity    | 35A AC or 10 In<br>whichever is greater |  |

•Bulk packing or tape packing is available

**Time Current Characteristic**

| Rated Current (In) | Overload | Min   | Max   |
|--------------------|----------|-------|-------|
| 100mA – 4A         | 1.5 In   | 1hr   |       |
| 100mA – 4A         | 2.1 In   | –     | 2 min |
| 100mA – 4A         | 2.75 In  | 400ms | 10s   |
| 100mA – 4A         | 4 In     | 150ms | 3s    |
| 100mA – 4A         | 10 In    | 20ms  | 150ms |

Characteristic Curves available on request



**Current Ratings**

|       |       |       |       |
|-------|-------|-------|-------|
| 100mA | 125mA | 160mA | 200mA |
| 250mA | 315mA | 400mA | 500mA |
| 630mA | 800mA | 1A    | 1.25A |
| 1.6A  | 2A    | 2.5A  | 3.15A |
| 4A    |       |       |       |

**Ordering Part No.**

for bulk packing :  
PRTL...mA (In ≤ 800mA) or  
PRTL...A (In ≥ 1A)

for tape packing :  
PRTL...mA (In ≤ 800mA) or  
PRTL...A (In ≥ 1A)

**PRTH ø 8.5 mm Sub-Miniature High Breaking Capacity Round Fuse Links, Radial Leded – Slow Blow**

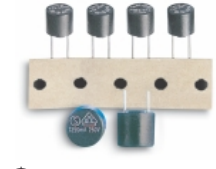
|                      |               |  |
|----------------------|---------------|--|
| Applicable Standards | IEC 60127-3   |  |
| Rated Voltage        | 250V          |  |
| Breaking Capacity    | 250A, 250V AC |  |

•Bulk packing or tape packing is available

**Time Current Characteristic**

| Rated Current (In) | Overload | Min   | Max   |
|--------------------|----------|-------|-------|
| 100mA – 4A         | 1.5 In   | 1hr   |       |
| 100mA – 4A         | 2.1 In   | –     | 2 min |
| 100mA – 4A         | 2.75 In  | 400ms | 10s   |
| 100mA – 4A         | 4 In     | 150ms | 3s    |
| 100mA – 4A         | 10 In    | 20ms  | 150ms |

Characteristic Curves available on request



**Current Ratings**

|       |       |       |       |
|-------|-------|-------|-------|
| 100mA | 125mA | 160mA | 200mA |
| 250mA | 315mA | 400mA | 500mA |
| 630mA | 800mA | 1A    | 1.25A |
| 1.6A  | 2A    | 2.5A  | 3.15A |
| 4A    |       |       |       |

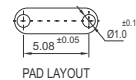
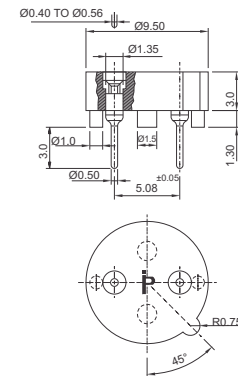
**Ordering Part No.**

for bulk packing :  
PRTHB...mA (In ≤ 800mA) or  
PRTHB...A (In ≥ 1A)

for tape packing :  
PRTHT...mA (In ≤ 800mA) or  
PRTHT...A (In ≥ 1A)

**P8050R**

Ordering P/N P805R-02-11-1



PAD LAYOUT

|                        |                    |
|------------------------|--------------------|
| Body                   | Polyester UL 94V-0 |
| Contact (Outer Sleeve) | Brass, Tin Plated  |
| Inner Clip             | BeCu, Gold Plated  |

**Electrical Parameters**

|                       |           |
|-----------------------|-----------|
| Rating                | 6.3A 250V |
| Insulation Resistance | ≥ 5000M Ω |
| Contact Resistance    | < 5m Ω    |
| Breaking Voltage      | 600V AC   |



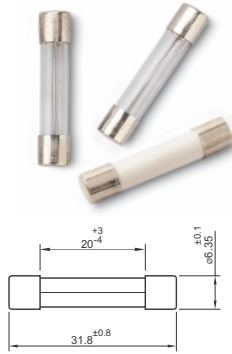
**PQF / PQFC 6.35 x 32 mm Miniature Glass/Ceramic Fuse Links – Fast Acting [UL Standards]**

|                          |                     |      |  |
|--------------------------|---------------------|------|--|
| Applicable Standards     | UL248-1 & 14 (198G) |      |  |
| Rated Voltage            | 250V                |      |  |
| Interrupting Rating (AC) | ≤1A                 | 35A  |  |
|                          | 1.125A–3.5A         | 100A |  |
|                          | 4A–10A              | 200A |  |

**Time Current Characteristic**

| Rated Current (In) | Overload | Min  | Max    |
|--------------------|----------|------|--------|
| 100mA – 10A        | 1.1 In   | 4hrs | –      |
| 100mA – 10A        | 1.35 In  | –    | 60 min |
| 100mA – 10A        | 2.0 In   | –    | 5s     |

Characteristic Curves available on request



**Current Ratings**

|       |        |       |       |
|-------|--------|-------|-------|
| 100mA | 150mA  | 200mA | 300mA |
| 400mA | 500mA  | 600mA | 800mA |
| 1A    | 1.125A | 1.25A | 1.4A  |
| 1.6A  | 1.8A   | 2A    | 2.25A |
| 2.5A  | 2.8A   | 3A    | 3.2A  |
| 3.5A  | 4A     | 4.5A  | 5A    |
| 5.6A  | 6A     | 6.25A | 7A    |
| 8A    | 9A     | 10A   |       |

**Ordering Part No.**

PQF...mA (In ≤ 800mA) or  
PQF...A (In ≥ 1A) For Glass Fuses  
PQFC...mA (In ≤ 800mA) or  
PQFC...A (In ≥ 1A) For Ceramic Fuses

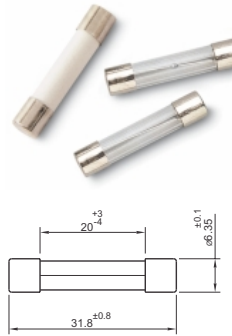
**PQT / PQTC 6.35 x 32 mm Miniature Glass/Ceramic Fuse Links – Slow Blow [UL Standards]**

|                          |                     |      |  |
|--------------------------|---------------------|------|--|
| Applicable Standards     | UL248-1 & 14 (198G) |      |  |
| Rated Voltage            | 250V                |      |  |
| Interrupting Rating (AC) | ≤1A                 | 35A  |  |
|                          | 1.125A–3.5A         | 100A |  |
|                          | 4A–10A              | 200A |  |

**Time Current Characteristic**

| Rated Current (In) | Overload | Min  | Max    |
|--------------------|----------|------|--------|
| 100mA – 10A        | 1.1 In   | 4hrs | –      |
| 100mA – 10A        | 1.35 In  | –    | 60 min |
| 100mA – 3A         | 2.0 In   | 5s   | 2 min  |
| 3.2A – 10A         |          | 12s  |        |

Characteristic Curves available on request



**Current Ratings**

|       |        |       |       |
|-------|--------|-------|-------|
| 100mA | 150mA  | 200mA | 300mA |
| 400mA | 500mA  | 600mA | 800mA |
| 1A    | 1.125A | 1.25A | 1.4A  |
| 1.6A  | 1.8A   | 2A    | 2.25A |
| 2.5A  | 2.8A   | 3A    | 3.2A  |
| 3.5A  | 4A     | 4.5A  | 5A    |
| 5.6A  | 6A     | 6.25A | 7A    |
| 8A    | 9A     | 10A   |       |

**Ordering Part No.**

PQT...mA (In ≤ 800mA) or  
PQT...A (In ≥ 1A) For Glass Fuses  
PQTC...mA (In ≤ 800mA) or  
PQTC...A (In ≥ 1A) For Ceramic Fuses

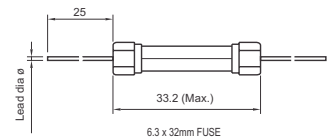
**Cartridge Fuse Links With Plug Leads**

|               |                     |
|---------------|---------------------|
| Lead diameter | 0.6 or 0.8 mm       |
| Lead length   | 25 mm minimum       |
| Cap           | Brass nickel plated |
| Lead wire     | Copper tinned       |

Cartridge Fuse -links of the following series are available with plugged leads.

PSF, PST, PAF, PAT, PSFC, PSTC, PAF, PATC, PPF, PPFC, PPT, PPTC, PQF, PQFC, PQT & PQTC

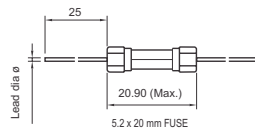
Applicable specification as per data sheet



**Ordering Part No.**

| Fuse Series | With 0.6ø Plug Lead   | With 0.8ø Plug Lead   |
|-------------|-----------------------|-----------------------|
| PSF/PSFC    | PSF...A6P/PSFC...A6P  | PSF...A8P/PSFC...A8P  |
| PST/PSTC    | PST...A6P/PSTC...A6P  | PST...A8P/PSTC...A8P  |
| PAT / PATC  | PAT...A6P/PATC ...A6P | PAT...A8P/PATC ...A8P |
| PAF / PAFC  | PAF...A6P/PAFC ...A6P | PAF...A8P/PAFC ...A8P |
| PQT/PQTC    | PQT...A6P/PQTC...A6P  | PQT...A8P/PQTC...A8P  |

Fuses can also be supplied with soldered leads. Please contact factory for details



**PRTL ø 8.5 mm Sub-Miniature Low Breaking Capacity Round Fuse Links, Radial Leded – Slow Blow**

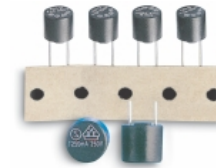
|                      |                                         |  |
|----------------------|-----------------------------------------|--|
| Applicable Standards | IEC 60127-3 Std. Sheet 4                |  |
| Rated Voltage        | 250V                                    |  |
| Breaking Capacity    | 35A AC or 10 In<br>whichever is greater |  |

•Bulk packing or tape packing is available

**Time Current Characteristic**

| Rated Current (In) | Overload | Min   | Max   |
|--------------------|----------|-------|-------|
| 100mA – 4A         | 1.5 In   | 1hr   |       |
| 100mA – 4A         | 2.1 In   | –     | 2 min |
| 100mA – 4A         | 2.75 In  | 400ms | 10s   |
| 100mA – 4A         | 4 In     | 150ms | 3s    |
| 100mA – 4A         | 10 In    | 20ms  | 150ms |

Characteristic Curves available on request



**Current Ratings**

|       |       |       |       |
|-------|-------|-------|-------|
| 100mA | 125mA | 160mA | 200mA |
| 250mA | 315mA | 400mA | 500mA |
| 630mA | 800mA | 1A    | 1.25A |
| 1.6A  | 2A    | 2.5A  | 3.15A |
| 4A    |       |       |       |

**Ordering Part No.**

for bulk packing :  
PRTL...mA (In ≤ 800mA) or  
PRTL...A (In ≥ 1A)

for tape packing :  
PRTL...mA (In ≤ 800mA) or  
PRTL...A (In ≥ 1A)

**PRTH ø 8.5 mm Sub-Miniature High Breaking Capacity Round Fuse Links, Radial Leded – Slow Blow**

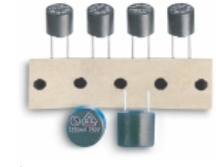
|                      |               |  |
|----------------------|---------------|--|
| Applicable Standards | IEC 60127-3   |  |
| Rated Voltage        | 250V          |  |
| Breaking Capacity    | 250A, 250V AC |  |

•Bulk packing or tape packing is available

**Time Current Characteristic**

| Rated Current (In) | Overload | Min   | Max   |
|--------------------|----------|-------|-------|
| 100mA – 4A         | 1.5 In   | 1hr   |       |
| 100mA – 4A         | 2.1 In   | –     | 2 min |
| 100mA – 4A         | 2.75 In  | 400ms | 10s   |
| 100mA – 4A         | 4 In     | 150ms | 3s    |
| 100mA – 4A         | 10 In    | 20ms  | 150ms |

Characteristic Curves available on request



**Current Ratings**

|       |       |       |       |
|-------|-------|-------|-------|
| 100mA | 125mA | 160mA | 200mA |
| 250mA | 315mA | 400mA | 500mA |
| 630mA | 800mA | 1A    | 1.25A |
| 1.6A  | 2A    | 2.5A  | 3.15A |
| 4A    |       |       |       |

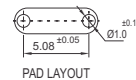
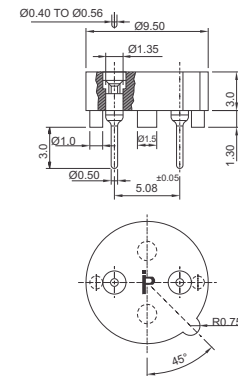
**Ordering Part No.**

for bulk packing :  
PRTHB...mA (In ≤ 800mA) or  
PRTHB...A (In ≥ 1A)

for tape packing :  
PRTHT...mA (In ≤ 800mA) or  
PRTHT...A (In ≥ 1A)

**P8050R**

Ordering P/N P805R-02-11-1



PAD LAYOUT

|                        |                    |
|------------------------|--------------------|
| Body                   | Polyester UL 94V-0 |
| Contact (Outer Sleeve) | Brass, Tin Plated  |
| Inner Clip             | BeCu, Gold Plated  |

**Electrical Parameters**

|                       |           |
|-----------------------|-----------|
| Rating                | 6.3A 250V |
| Insulation Resistance | ≥ 5000M Ω |
| Contact Resistance    | < 5m Ω    |
| Breaking Voltage      | 600V AC   |

## PSM 12

## (1206) Moulded Surface Mount Fuses

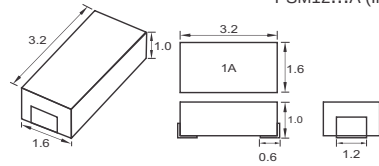
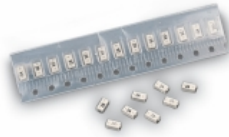
### Appearance

- Super micro size 1206, low profile (1.6Wx1.0Hx3.2L mm)
- No possibility of continuity fail during solder reflow operation
- No breaking, no encapsulation peeling, anti-vibration, higher interrupting rating
- 400°C resistive plastic body
- Super higher I-t characteristics. Best for battery packs
- Taped and reeled for SMD process

|                       |           |             |
|-----------------------|-----------|-------------|
| Interrupting Capacity | 1A & Less | 50A AC / DC |
|                       | 1.5A - 7A | 35A AC / DC |
| Rated Voltage         | 63V       | 0.5A-1A     |
|                       | 32V       | 1.5A-7A     |

### Time Current Characteristic

| Rated Current (In) | Overload | Min  | Max |
|--------------------|----------|------|-----|
| 500mA – 7A         | 1In      | 4hrs | –   |
| 500mA – 7A         | 2In      | –    | 60s |
| 500mA – 7A         | 3In      | –    | 3s  |



### Current Ratings

|       |       |       |      |
|-------|-------|-------|------|
| 500mA | 630mA | 750mA | 1A   |
| 1.5A  | 2A    | 2.5A  | 3A   |
| 3.5A  | 4A    | 5A    | 6.3A |
| 7A    |       |       |      |

### Ordering Part No.

PSM12...mA (In ≤ 750mA) or  
PSM12...A (In ≥ 1A)

## PTF 200

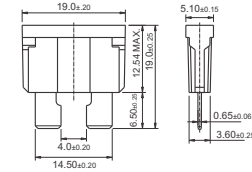
## Medium size Blade Fuse plug-in type

|                |            |
|----------------|------------|
| Rated Voltage  | 32V        |
| Construction   | Zinc Alloy |
| Insulator Body | PC/Nylon   |

### Time Current Characteristic

| Rated Current (In) | Overload | Min        | Max   |
|--------------------|----------|------------|-------|
| 3 - 40A            | 1.1 In   | 100Hrs min |       |
| 3 - 40A            | 1.35 In  | 750ms      | 1800s |
| 3 - 40A            | 2 In     | 150ms      | 5s    |
| 3 - 40A            | 3.5 In   | 40ms       | 500ms |
| 3 - 40A            | 6 In     | 20ms       | 150ms |

UL / ARAI APPROVED



### Current Ratings

PC: 3A, 4A, 5A, 6A, 7.5A, 10A, 15A, 20A

Nylon: 25A-N, 30A-N, 35A-N, 40A-N

### Ordering Part No.

PTF 200 .....A(3A TO 20A)  
PTF 200 .....A-N(25A TO 40A)

| Nominal Current Range (In) | Body Colour | Part Number   |
|----------------------------|-------------|---------------|
| 3A                         | Violet      | PTF 200 3A    |
| 4A                         | Pink        | PTF 200 4A    |
| 5A                         | Tan         | PTF 200 5A    |
| 7.5A                       | Brown       | PTF 200 7.5A  |
| 10A                        | Red         | PTF 200 10A   |
| 15A                        | Blue        | PTF 200 15A   |
| 20A                        | Yellow      | PTF 200 20A   |
| 25A                        | Natural     | PTF 200 25A-N |
| 30A                        | Green       | PTF 200 30A-N |
| 35A                        | Blue Green  | PTF 200 35A-N |
| 40A                        | Orange      | PTF 200 40A-N |

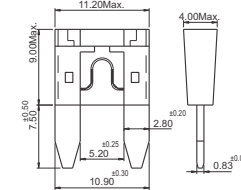
## PTF 300

## Mini size Blade Fuse plug-in type

|                |            |
|----------------|------------|
| Rated Voltage  | 32V        |
| Construction   | Zinc Alloy |
| Insulator Body | PC/Nylon   |

### Time Current Characteristic

| Rated Current (In) | Overload | Min        | Max   |
|--------------------|----------|------------|-------|
| 2 - 30A            | 1.1 In   | 100Hrs min |       |
| 2 - 30A            | 1.35 In  | 750ms      | 1800s |
| 2 - 30A            | 2 In     | 150ms      | 5s    |
| 2 - 30A            | 3.5 In   | 80ms       | 500ms |
| 2 - 30A            | 6 In     | 30ms       | 150ms |



### Current Ratings

PC: 2A, 3A, 4A, 5A, 7.5A, 10A, 15A, 20A

Nylon: 25A-N, 30A-N

### Ordering Part No.

PTF 300 .....A

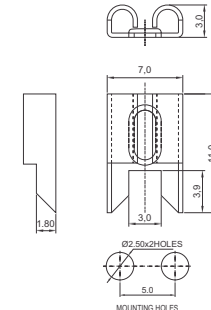
| Nominal Current Range (In) | Body Colour | Part Number  |
|----------------------------|-------------|--------------|
| 2A                         | Grey        | PTF 300 2A   |
| 3A                         | Violet      | PTF 300 3A   |
| 4A                         | Pink        | PTF 300 4A   |
| 5A                         | Tan         | PTF 300 5A   |
| 7.5A                       | Brown       | PTF 300 7.5A |
| 10A                        | Red         | PTF 300 10A  |
| 15A                        | Blue        | PTF 300 15A  |
| 20A                        | Yellow      | PTF 300 20A  |
| 25A                        | Natural     | PTF 300 25A  |
| 30A                        | Green       | PTF 300 30A  |

## PCB Mount Clip for Blade Fuse

|                    |              |
|--------------------|--------------|
| Material           | Copper Alloy |
| Material Thickness | 0.40 mm      |
| Finish             | Tin Plated   |



Ordering P/N P8039-01



## PSM 12

## (1206) Moulded Surface Mount Fuses

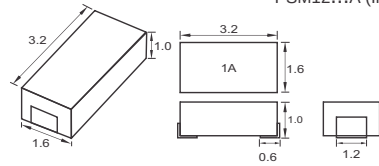
### Appearance

- Super micro size 1206, low profile (1.6Wx1.0Hx3.2L mm)
- No possibility of continuity fail during solder reflow operation
- No breaking, no encapsulation peeling, anti-vibration, higher interrupting rating
- 400°C resistive plastic body
- Super higher I-t characteristics. Best for battery packs
- Taped and reeled for SMD process

|                       |           |             |
|-----------------------|-----------|-------------|
| Interrupting Capacity | 1A & Less | 50A AC / DC |
|                       | 1.5A - 7A | 35A AC / DC |
| Rated Voltage         | 63V       | 0.5A-1A     |
|                       | 32V       | 1.5A-7A     |

### Time Current Characteristic

| Rated Current (In) | Overload | Min  | Max |
|--------------------|----------|------|-----|
| 500mA – 7A         | 1In      | 4hrs | –   |
| 500mA – 7A         | 2In      | –    | 60s |
| 500mA – 7A         | 3In      | –    | 3s  |



### Current Ratings

|       |       |       |      |
|-------|-------|-------|------|
| 500mA | 630mA | 750mA | 1A   |
| 1.5A  | 2A    | 2.5A  | 3A   |
| 3.5A  | 4A    | 5A    | 6.3A |
| 7A    |       |       |      |

### Ordering Part No.

PSM12...mA (In ≤ 750mA) or  
PSM12...A (In ≥ 1A)

## PTF 200

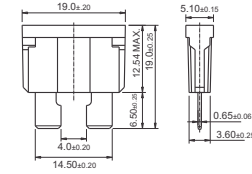
## Medium size Blade Fuse plug-in type

|                |            |
|----------------|------------|
| Rated Voltage  | 32V        |
| Construction   | Zinc Alloy |
| Insulator Body | PC/Nylon   |

### Time Current Characteristic

| Rated Current (In) | Overload | Min        | Max   |
|--------------------|----------|------------|-------|
| 3 - 40A            | 1.1 In   | 100Hrs min |       |
| 3 - 40A            | 1.35 In  | 750ms      | 1800s |
| 3 - 40A            | 2 In     | 150ms      | 5s    |
| 3 - 40A            | 3.5 In   | 40ms       | 500ms |
| 3 - 40A            | 6 In     | 20ms       | 150ms |

UL / ARAI APPROVED



### Current Ratings

PC: 3A, 4A, 5A, 6A, 7.5A, 10A, 15A, 20A

Nylon: 25A-N, 30A-N, 35A-N, 40A-N

### Ordering Part No.

PTF 200 .....A(3A TO 20A)  
PTF 200 .....A-N(25A TO 40A)

| Nominal Current Range (In) | Body Colour | Part Number   |
|----------------------------|-------------|---------------|
| 3A                         | Violet      | PTF 200 3A    |
| 4A                         | Pink        | PTF 200 4A    |
| 5A                         | Tan         | PTF 200 5A    |
| 7.5A                       | Brown       | PTF 200 7.5A  |
| 10A                        | Red         | PTF 200 10A   |
| 15A                        | Blue        | PTF 200 15A   |
| 20A                        | Yellow      | PTF 200 20A   |
| 25A                        | Natural     | PTF 200 25A-N |
| 30A                        | Green       | PTF 200 30A-N |
| 35A                        | Blue Green  | PTF 200 35A-N |
| 40A                        | Orange      | PTF 200 40A-N |

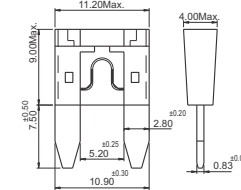
## PTF 300

## Mini size Blade Fuse plug-in type

|                |            |
|----------------|------------|
| Rated Voltage  | 32V        |
| Construction   | Zinc Alloy |
| Insulator Body | PC/Nylon   |

### Time Current Characteristic

| Rated Current (In) | Overload | Min        | Max   |
|--------------------|----------|------------|-------|
| 2 - 30A            | 1.1 In   | 100Hrs min |       |
| 2 - 30A            | 1.35 In  | 750ms      | 1800s |
| 2 - 30A            | 2 In     | 150ms      | 5s    |
| 2 - 30A            | 3.5 In   | 80ms       | 500ms |
| 2 - 30A            | 6 In     | 30ms       | 150ms |



### Current Ratings

PC: 2A, 3A, 4A, 5A, 7.5A, 10A, 15A, 20A

Nylon: 25A-N, 30A-N

### Ordering Part No.

PTF 300 .....A

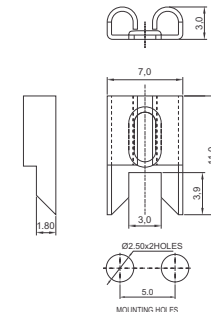
| Nominal Current Range (In) | Body Colour | Part Number  |
|----------------------------|-------------|--------------|
| 2A                         | Grey        | PTF 300 2A   |
| 3A                         | Violet      | PTF 300 3A   |
| 4A                         | Pink        | PTF 300 4A   |
| 5A                         | Tan         | PTF 300 5A   |
| 7.5A                       | Brown       | PTF 300 7.5A |
| 10A                        | Red         | PTF 300 10A  |
| 15A                        | Blue        | PTF 300 15A  |
| 20A                        | Yellow      | PTF 300 20A  |
| 25A                        | Natural     | PTF 300 25A  |
| 30A                        | Green       | PTF 300 30A  |

## PCB Mount Clip for Blade Fuse

|                    |              |
|--------------------|--------------|
| Material           | Copper Alloy |
| Material Thickness | 0.40 mm      |
| Finish             | Tin Plated   |



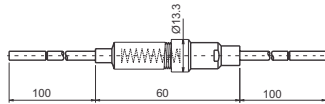
Ordering P/N P8039-01





## P8027-A Inline Fuse Holder For 5 x 20 mm & 6.35 x 32 mm Fuses

### SCREW TYPE



Body Nylon (FR), Black  
Contacts & Cable Brass terminals crimped with PVC Cable

#### Electrical Parameters

Rating 20A  
Insulation Resistance 100M  $\Omega$  Min  
Contact Resistance 5m  $\Omega$  at 1A DC  
Breaking Voltage 1500V AC Min  
Locking Threaded coupling

Supplied with Red PVC Cable, 0.2/24 conductor as standard

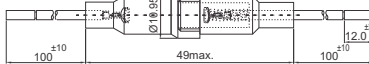
#### Ordering Part No.

P8027-A1 for 5 x 20mm Screw type holder  
P8027-A2 for 6.35mm x 32mm Screw type holder

\* Can be supplied in different body colors, wire colors & wire sizes

## P8027A Baby Inline Fuse Holder For 5 x 20mm Fuses

### SCREW TYPE



Body Nylon (FR), Black  
Contacts & Cable Brass Terminals Crimped With PVC Cable

#### Electrical Parameters

Rating 20A  
Insulation Resistance 100M  $\Omega$  Min  
Contact Resistance 5m  $\Omega$  at 1A DC  
Breaking Voltage 1500V AC Min  
Locking Threaded Coupling

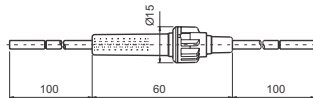
Supplied with Red PVC Cable, 0.2/16 conductor as standard

#### Ordering Part No.

P8027A-A1-9-3

## P8027-B Inline Fuse Holder For 5 x 20 mm & 6.35 x 32 mm Fuses

### BAYONET TYPE



Body Thermoplastic UL94V-0 Natural Colour  
Contacts & Cable Brass terminals crimped with the PVC Cable

#### Electrical Parameters

Rating 20A  
Insulation Resistance 100M  $\Omega$  Min  
Contact Resistance 5m  $\Omega$  at 1A DC  
Breaking Voltage 1500V AC Min  
Locking Bayonet coupling

Supplied with Red PVC Cable, 0.2/24 conductor as standard

#### Ordering Part No.

P8027-B1 for 5 x 20mm Bayonet type holder  
P8027-B2 for 6.35 x 32mm Bayonet type holder

\* Can be supplied in different body colors, wire colors & wire sizes

## P8031B Press fit Type Inline Fuse Holder

Body Nylon FR Grade, UL94V-0, Black color  
Terminals Brass

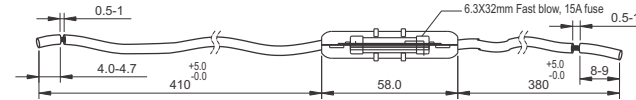
#### Electrical Parameters

Current Rating 15A Max  
Contact Resistance 5m  $\Omega$  Max  
Insulation Resistance 100M  $\Omega$  Min. @ 500V DC  
Breaking Voltage 1500V AC Min for 60sec

Wire 48/0.2Ø PVC cable, Red color

#### Ordering Part No.

P8031B-XXXXXX



## P8039-15 Inline Fuse Holder For Blade Fuse

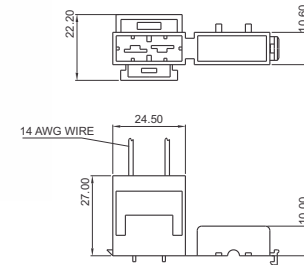
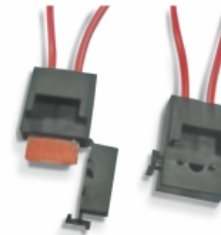
Molded Parts Nylon  
Terminals Brass

#### Electrical Parameters

Current Rating 20A Max  
Contact Resistance 5m  $\Omega$  Max @ 1A DC  
Insulation Resistance 100M  $\Omega$  Min. @ 500V DC  
Breaking Voltage 1500V AC Min for 60sec  
Type Interlock Type  
Wire 14AWG 8" Loop

#### Ordering Part No.

P8039-15



## P8039-17 Inline Fuse Holder For Blade Fuse

Molded Parts PVC  
Terminals Brass

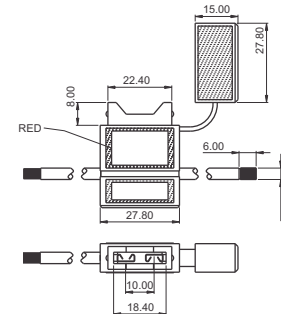
#### Electrical Parameters

Current Rating 20A Max  
Contact Resistance 5m  $\Omega$  Max @ 1A DC  
Insulation Resistance 100M  $\Omega$  Min @ 500V DC  
Breaking Voltage 1500V AC Min for 60sec  
Type Water Resistant Type

Wire 12AWG 12" Loop

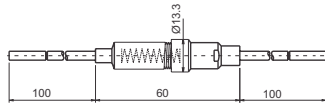
#### Ordering Part No.

P8039-17



## P8027-A Inline Fuse Holder For 5 x 20 mm & 6.35 x 32 mm Fuses

### SCREW TYPE



Body Nylon (FR), Black  
Contacts & Cable Brass terminals crimped with PVC Cable

#### Electrical Parameters

Rating 20A  
Insulation Resistance 100M  $\Omega$  Min  
Contact Resistance 5m  $\Omega$  at 1A DC  
Breaking Voltage 1500V AC Min  
Locking Threaded coupling

Supplied with Red PVC Cable, 0.2/24 conductor as standard

#### Ordering Part No.

P8027-A1 for 5 x 20mm Screw type holder  
P8027-A2 for 6.35mm x 32mm Screw type holder

\* Can be supplied in different body colors, wire colors & wire sizes

## P8027A Baby Inline Fuse Holder For 5 x 20mm Fuses

### SCREW TYPE



Body Nylon (FR), Black  
Contacts & Cable Brass Terminals Crimped With PVC Cable

#### Electrical Parameters

Rating 20A  
Insulation Resistance 100M  $\Omega$  Min  
Contact Resistance 5m  $\Omega$  at 1A DC  
Breaking Voltage 1500V AC Min  
Locking Threaded Coupling

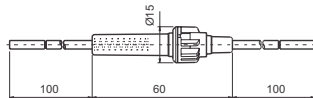
Supplied with Red PVC Cable, 0.2/16 conductor as standard

#### Ordering Part No.

P8027A-A1-9-3

## P8027-B Inline Fuse Holder For 5 x 20 mm & 6.35 x 32 mm Fuses

### BAYONET TYPE



Body Thermoplastic UL94V-0 Natural Colour  
Contacts & Cable Brass terminals crimped with the PVC Cable

#### Electrical Parameters

Rating 20A  
Insulation Resistance 100M  $\Omega$  Min  
Contact Resistance 5m  $\Omega$  at 1A DC  
Breaking Voltage 1500V AC Min  
Locking Bayonet coupling

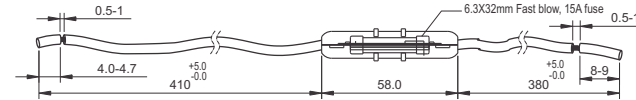
Supplied with Red PVC Cable, 0.2/24 conductor as standard

#### Ordering Part No.

P8027-B1 for 5 x 20mm Bayonet type holder  
P8027-B2 for 6.35 x 32mm Bayonet type holder

\* Can be supplied in different body colors, wire colors & wire sizes

## P8031B Press fit Type Inline Fuse Holder



Body Nylon FR Grade, UL94V-0, Black color  
Terminals Brass

#### Electrical Parameters

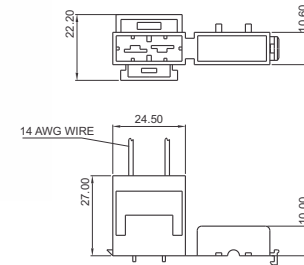
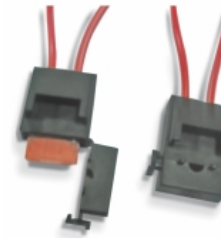
Current Rating 15A Max  
Contact Resistance 5m  $\Omega$  Max  
Insulation Resistance 100M  $\Omega$  Min. @ 500V DC  
Breaking Voltage 1500V AC Min for 60sec

Wire 48/0.2Ø PVC cable, Red color

#### Ordering Part No.

P8031B-XXXXXX

## P8039-15 Inline Fuse Holder For Blade Fuse



Molded Parts Nylon  
Terminals Brass

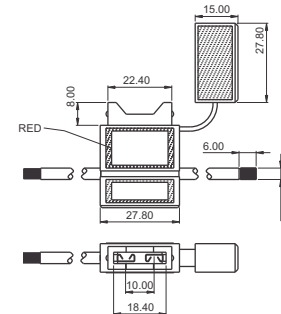
#### Electrical Parameters

Current Rating 20A Max  
Contact Resistance 5m  $\Omega$ Max @ 1A DC  
Insulation Resistance 100M  $\Omega$  Min. @ 500V DC  
Breaking Voltage 1500V AC Min for 60sec  
Type Interlock Type  
Wire 14AWG 8" Loop

#### Ordering Part No.

P8039-15

## P8039-17 Inline Fuse Holder For Blade Fuse



Molded Parts PVC  
Terminals Brass

#### Electrical Parameters

Current Rating 20A Max  
Contact Resistance 5m  $\Omega$ Max @ 1A DC  
Insulation Resistance 100M  $\Omega$  Min @ 500V DC  
Breaking Voltage 1500V AC Min for 60sec  
Type Water Resistant Type

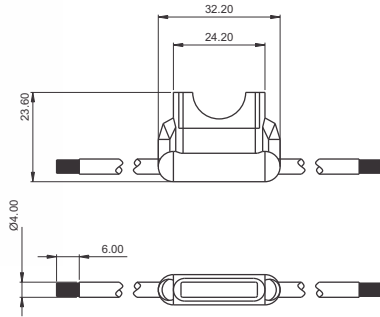
Wire 12AWG 12" Loop

#### Ordering Part No.

P8039-17

**P8039-18**

**Inline Fuse Holder For Blade Fuse**



Molded Parts PVC  
Terminals Brass

**Electrical Parameters**

Current Rating 10A Max  
Contact Resistance 5m ΩMax @ 1A DC  
Insulation Resistance 100M Ω Min. @ 500V DC  
Breaking Voltage 1500V AC Min for 60sec

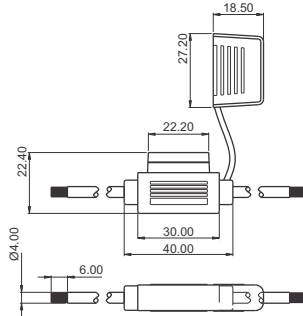
Wire 16AWG 6" Each End

**Ordering Part No.**

P8039-18

**P8039-19**

**Inline Fuse Holder For Blade Fuse**



Molded Parts PVC  
Terminals Brass

**Electrical Parameters**

Current Rating 20A Max  
Contact Resistance 5m ΩMax @ 1A DC  
Insulation Resistance 100M Ω Min. @ 500V DC  
Breaking Voltage 1500V AC Min for 60sec  
Type Water Resistant Type

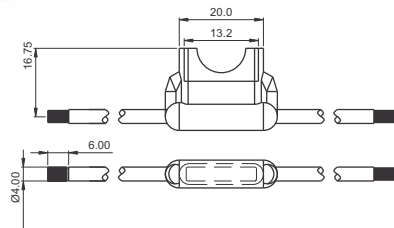
Wire 12AWG 6" Each End

**Ordering Part No.**

P8039 -19

**P8041-18**

**Inline Fuse Holder For Mini-Blade Fuse**



Molded Parts PVC  
Terminals Brass

**Electrical Parameters**

Current Rating 20A Max  
Contact Resistance 5m ΩMax @ 1A DC  
Insulation Resistance 100M Ω Min. @ 500V DC  
Breaking Voltage 1000V AC Min for 60sec

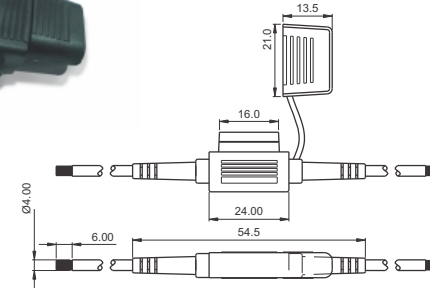
Wire 12AWG 6" Each End

**Ordering Part No.**

P8041-18

**P8041-19**

**Inline Fuse Holder For Mini-Blade Fuse**



Molded Parts PVC  
Terminals Brass

**Electrical Parameters**

Current Rating 20A Max  
Contact Resistance 5m ΩMax @ 1A DC  
Insulation Resistance 100M Ω Min. @ 500V DC  
Breaking Voltage 1000V AC Min for 60sec  
Type Water Resistant Type

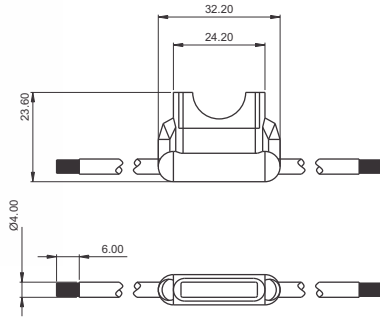
Wire 12AWG 6" Each End

**Ordering Part No.**

P8041-19

**P8039-18**

**Inline Fuse Holder For Blade Fuse**



Molded Parts PVC  
Terminals Brass

**Electrical Parameters**

Current Rating 10A Max  
Contact Resistance 5m ΩMax @ 1A DC  
Insulation Resistance 100M Ω Min. @ 500V DC  
Breaking Voltage 1500V AC Min for 60sec

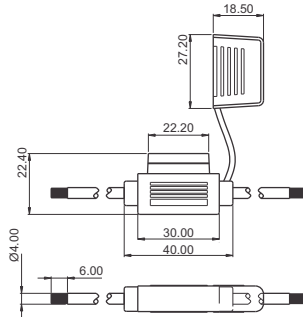
Wire 16AWG 6" Each End

**Ordering Part No.**

P8039-18

**P8039-19**

**Inline Fuse Holder For Blade Fuse**



Molded Parts PVC  
Terminals Brass

**Electrical Parameters**

Current Rating 20A Max  
Contact Resistance 5m ΩMax @ 1A DC  
Insulation Resistance 100M Ω Min. @ 500V DC  
Breaking Voltage 1500V AC Min for 60sec  
Type Water Resistant Type

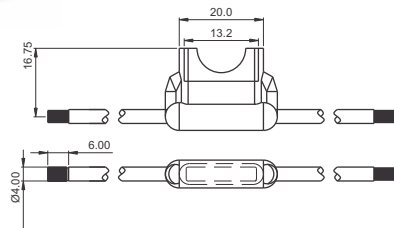
Wire 12AWG 6" Each End

**Ordering Part No.**

P8039 -19

**P8041-18**

**Inline Fuse Holder For Mini-Blade Fuse**



Molded Parts PVC  
Terminals Brass

**Electrical Parameters**

Current Rating 20A Max  
Contact Resistance 5m ΩMax @ 1A DC  
Insulation Resistance 100M Ω Min. @ 500V DC  
Breaking Voltage 1000V AC Min for 60sec

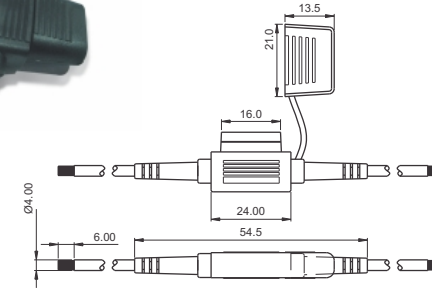
Wire 12AWG 6" Each End

**Ordering Part No.**

P8041-18

**P8041-19**

**Inline Fuse Holder For Mini-Blade Fuse**



Molded Parts PVC  
Terminals Brass

**Electrical Parameters**

Current Rating 20A Max  
Contact Resistance 5m ΩMax @ 1A DC  
Insulation Resistance 100M Ω Min. @ 500V DC  
Breaking Voltage 1000V AC Min for 60sec  
Type Water Resistant Type

Wire 12AWG 6" Each End

**Ordering Part No.**

P8041-19

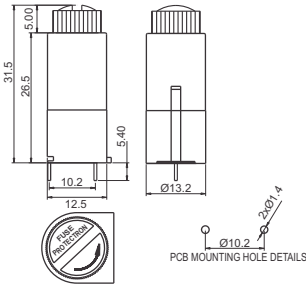






### P8029-16 (Vertical Mounting)

### P.C.B Mount Fuse Holder Screw Type For $\Phi$ 5 x 20mm Fuse



Body Nylon FR Grade , Black colour  
Contacts Brass , Tin plated

#### Electrical Parameters

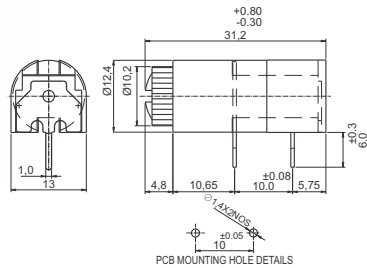
Rating 6.3A, 250V  
Insulation Resistance 100M  $\Omega$  min.@ 500V DC  
Breaking Voltage 1500V min.

#### Ordering Part No.

P8029-16

### P8029-17 (Horizontal Mounting, pitch=10.0mm)

### P.C.B Mount Fuse Holder Screw Type For $\Phi$ 5 x 20mm Fuse



Body Nylon FR Grade , Black colour  
Contacts Brass , Tin plated

#### Electrical Parameters

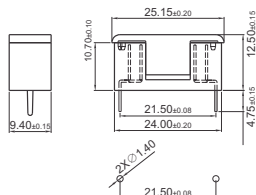
Rating 6.3A, 250V  
Insulation Resistance 100M  $\Omega$  min.@ 500V DC  
Breaking Voltage 1500V AC min.

#### Ordering Part No.

P8029-17

### P8029-18

### P.C.B Mount Fuse Holder Double Clip Box Type $\Phi$ For 5 x 20mm Fuse



Body Nylon FR Grade , Black colour  
Contacts Brass , Tin plated

#### Electrical Parameters

Rating 6.3A, 250V  
Insulation Resistance 100M  $\Omega$  min.@ 500V DC  
Breaking Voltage 500V AC min.

#### Ordering Part No.

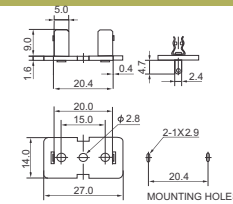
P8029-18

### PCB Mount Fuse Block

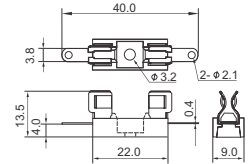
Contact Parts Copper Alloy 0.4mm thick  
Finish Tin plated  
Body Material Thermoplastic UL94V-0  
Rated Current 6.3A

### For 5.2 x 20mm Fuses

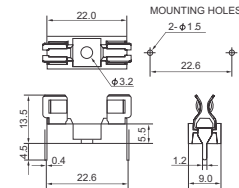
#### Ordering P/N P8029-01



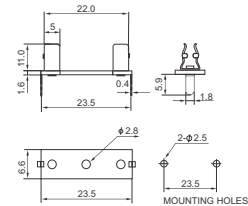
#### Ordering P/N P8029-02



#### Ordering P/N P8029-03

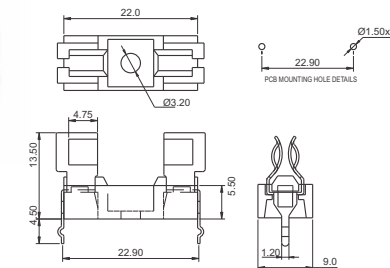


#### Ordering P/N P8029-04



### P8029-13 (WITH KINK)

### P.C.B Mount Fuse Block For $\Phi$ 5 x 20mm Fuse



Body Thermoplastic , UL 94V-0  
Contacts Phosphor bronze , Tin plated

#### Electrical Parameters

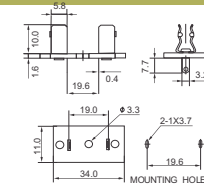
Rating 6.3A, 250V  
Insulation Resistance 100M  $\Omega$  min.@ 500V DC  
Breaking Voltage 1000V AC min.

#### Ordering Part No.

P8029-13

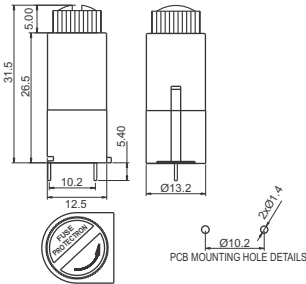
### For 6.35 x 32mm Fuses

#### Ordering P/N P8030-01



### P8029-16 (Vertical Mounting)

#### P.C.B Mount Fuse Holder Screw Type For $\Phi$ 5 x 20mm Fuse



Body Nylon FR Grade , Black colour  
Contacts Brass , Tin plated

#### Electrical Parameters

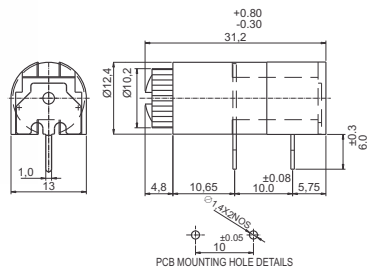
Rating 6.3A, 250V  
Insulation Resistance 100M  $\Omega$  min.@ 500V DC  
Breaking Voltage 1500V min.

#### Ordering Part No.

P8029-16

### P8029-17 (Horizontal Mounting, pitch=10.0mm)

#### P.C.B Mount Fuse Holder Screw Type For $\Phi$ 5 x 20mm Fuse



Body Nylon FR Grade , Black colour  
Contacts Brass , Tin plated

#### Electrical Parameters

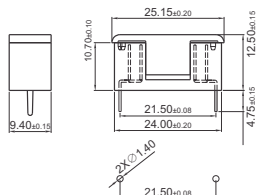
Rating 6.3A, 250V  
Insulation Resistance 100M  $\Omega$  min.@ 500V DC  
Breaking Voltage 1500V AC min.

#### Ordering Part No.

P8029-17

### P8029-18

#### P.C.B Mount Fuse Holder Double Clip Box Type $\Phi$ For 5 x 20mm Fuse



Body Nylon FR Grade , Black colour  
Contacts Brass , Tin plated

#### Electrical Parameters

Rating 6.3A, 250V  
Insulation Resistance 100M  $\Omega$  min.@ 500V DC  
Breaking Voltage 500V AC min.

#### Ordering Part No.

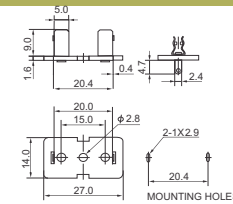
P8029-18

### PCB Mount Fuse Block

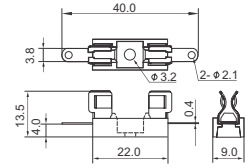
Contact Parts Copper Alloy 0.4mm thick  
Finish Tin plated  
Body Material Thermoplastic UL94V-0  
Rated Current 6.3A

#### For 5.2 x 20mm Fuses

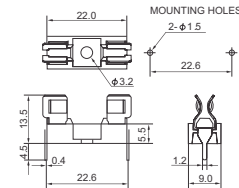
##### Ordering P/N P8029-01



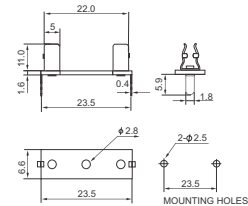
##### Ordering P/N P8029-02



##### Ordering P/N P8029-03

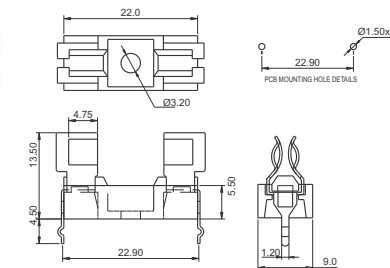


##### Ordering P/N P8029-04



### P8029-13 (WITH KINK)

#### P.C.B Mount Fuse Block For $\Phi$ 5 x 20mm Fuse



Body Thermoplastic , UL 94V-0  
Contacts Phosphor bronze , Tin plated

#### Electrical Parameters

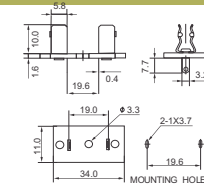
Rating 6.3A, 250V  
Insulation Resistance 100M  $\Omega$  min.@ 500V DC  
Breaking Voltage 1000V AC min.

#### Ordering Part No.

P8029-13

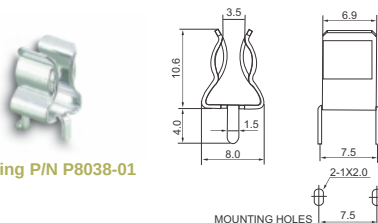
#### For 6.35 x 32mm Fuses

##### Ordering P/N P8030-01

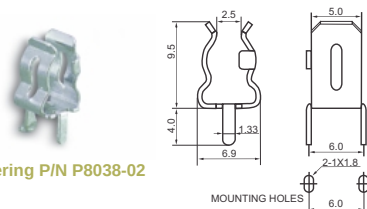


## PCB Mount Clips for Ø 6.35mm Fuses

Material Copper Alloy  
Material Thickness 0.5 mm  
Finish Tin Plated  
Rated Current 8A

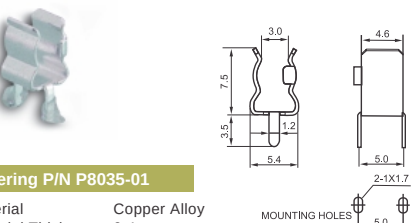


Ordering P/N P8038-01



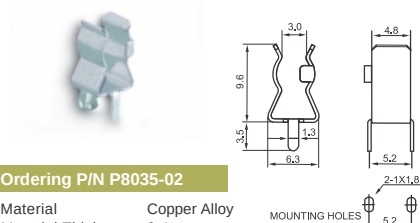
Ordering P/N P8038-02

## PCB Mount Clips for Ø 5.2mm Fuses



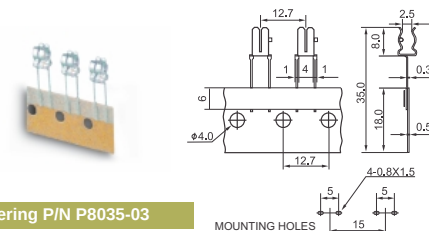
Ordering P/N P8035-01

Material Copper Alloy  
Material Thickness 0.4 mm  
Finish Tin Plated  
Rated Current 7A



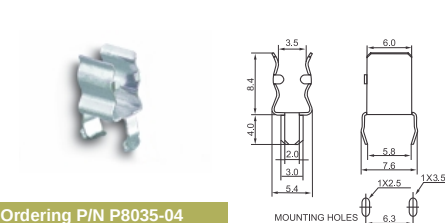
Ordering P/N P8035-02

Material Copper Alloy  
Material Thickness 0.4 mm  
Finish Tin Plated  
Rated Current 7A



Ordering P/N P8035-03

Material Copper Alloy  
Material Thickness 0.3 mm  
Finish Tin Plated  
Rated Current 5A  
Remarks Taping



Ordering P/N P8035-04

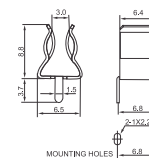
Material Copper Alloy  
Material Thickness 0.3 mm  
Finish Tin Plated  
Rated Current 5A

## PCB Mount Clips for Ø 5.2mm Fuses



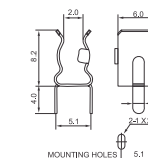
Ordering P/N P8035-05

Material Copper Alloy  
Material Thickness 0.4 mm  
Finish Tin Plated  
Rated Current 7A



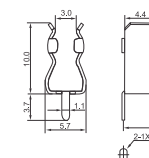
Ordering P/N P8035-06

Material Copper Alloy  
Material Thickness 0.3 mm  
Finish Tin Plated  
Rated Current 5A



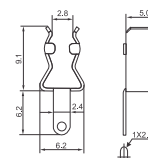
Ordering P/N P8035-07

Material Copper Alloy  
Material Thickness 0.4 mm  
Finish Tin Plated  
Rated Current 7A



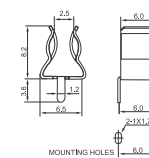
Ordering P/N P8035-08

Material Copper Alloy  
Material Thickness 0.4 mm  
Finish Tin Plated  
Rated Current 7A



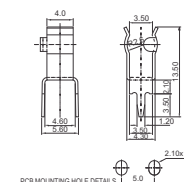
Ordering P/N P8035-09

Material Copper Alloy  
Material Thickness 0.4 mm  
Finish Tin Plated  
Rated Current 7A



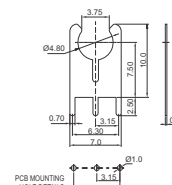
Ordering P/N P8035-10-29

Material Copper Alloy  
Material Thickness 0.4 mm  
Finish Tin Plated  
Rated Current 7A



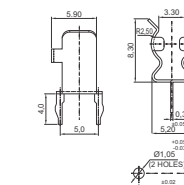
Ordering P/N P8035-11-18

Material Copper Alloy  
Material Thickness 0.8 mm  
Finish Tin Plated  
Rated Current 10A



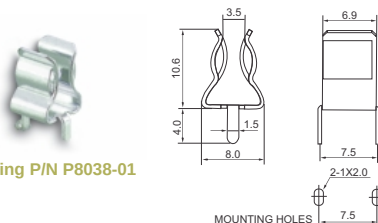
Ordering P/N P8035-12

Material Copper Alloy  
Material Thickness 0.3 mm  
Finish Tin Plated  
Rated Current 5A

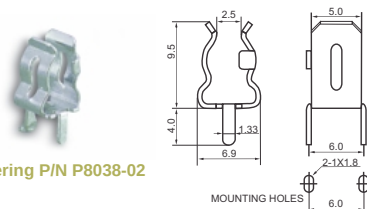


## PCB Mount Clips for Ø 6.35mm Fuses

Material Copper Alloy  
Material Thickness 0.5 mm  
Finish Tin Plated  
Rated Current 8A

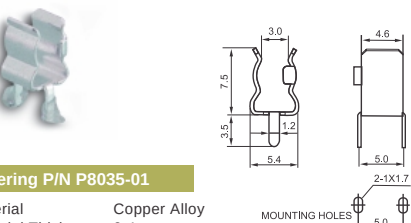


Ordering P/N P8038-01



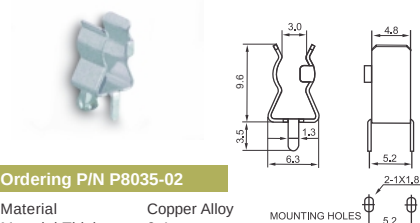
Ordering P/N P8038-02

## PCB Mount Clips for Ø 5.2mm Fuses



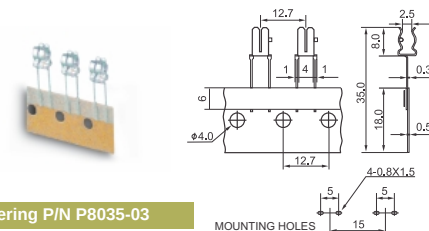
Ordering P/N P8035-01

Material Copper Alloy  
Material Thickness 0.4 mm  
Finish Tin Plated  
Rated Current 7A



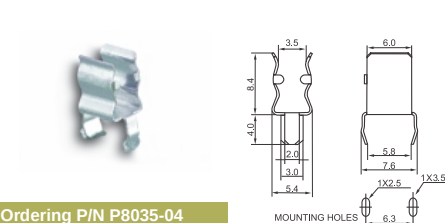
Ordering P/N P8035-02

Material Copper Alloy  
Material Thickness 0.4 mm  
Finish Tin Plated  
Rated Current 7A



Ordering P/N P8035-03

Material Copper Alloy  
Material Thickness 0.3 mm  
Finish Tin Plated  
Rated Current 5A  
Remarks Taping



Ordering P/N P8035-04

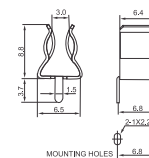
Material Copper Alloy  
Material Thickness 0.3 mm  
Finish Tin Plated  
Rated Current 5A

## PCB Mount Clips for Ø 5.2mm Fuses



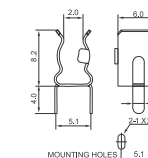
Ordering P/N P8035-05

Material Copper Alloy  
Material Thickness 0.4 mm  
Finish Tin Plated  
Rated Current 7A



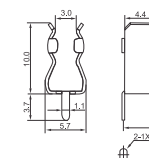
Ordering P/N P8035-06

Material Copper Alloy  
Material Thickness 0.3 mm  
Finish Tin Plated  
Rated Current 5A



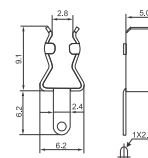
Ordering P/N P8035-07

Material Copper Alloy  
Material Thickness 0.4 mm  
Finish Tin Plated  
Rated Current 7A



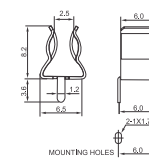
Ordering P/N P8035-08

Material Copper Alloy  
Material Thickness 0.4 mm  
Finish Tin Plated  
Rated Current 7A



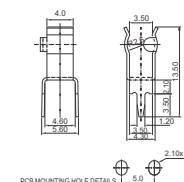
Ordering P/N P8035-09

Material Copper Alloy  
Material Thickness 0.4 mm  
Finish Tin Plated  
Rated Current 7A



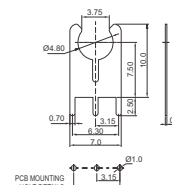
Ordering P/N P8035-10-29

Material Copper Alloy  
Material Thickness 0.4 mm  
Finish Tin Plated  
Rated Current 7A



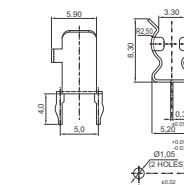
Ordering P/N P8035-11-18

Material Copper Alloy  
Material Thickness 0.8 mm  
Finish Tin Plated  
Rated Current 10A



Ordering P/N P8035-12

Material Copper Alloy  
Material Thickness 0.3 mm  
Finish Tin Plated  
Rated Current 5A





## Thermal Fuses

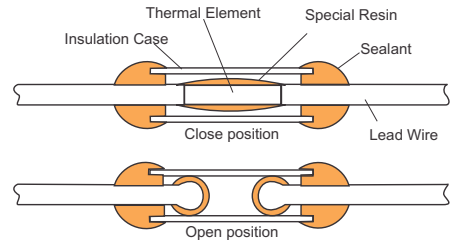
These fuses are used to prevent fires caused by abnormal heat generation from electrical circuits and other heat producing electrical products. Thermal fuses prevent these accidents and ensure safety of the equipment and the user. They are non-resettable thermal protectors attached to the heat generating section of electronic equipment and circuits. The thermal element senses temperature change and breaks the electrical circuit when the cutoff temperature is reached.

### Types

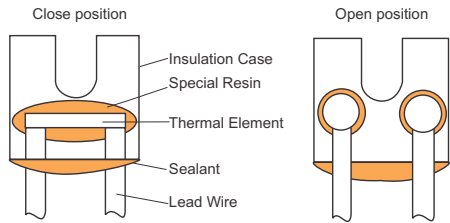
- ◆Element type
- ◆Pellet type

### Constructions / Operational Principles

#### Thermal Element Type - FTF - 1, 2, 3, 4



#### Thermal Element Type - FTF - R - U

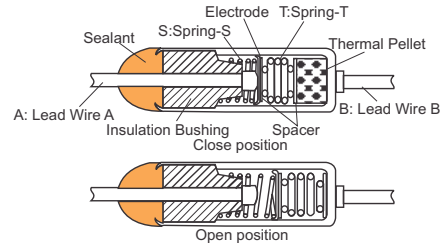


Thermal element senses the rise of the ambient temperature. When the temperature rises to the cutoff value, the surface tension of the special resin instantly cuts off the circuit.

- ◆Tf : Functioning Temperature. The temperature at which a thermal fuse changes its state of conductivity to open circuit with detection current of 10mA or less as the only load. The temperature tolerance for UL, CSA & VDE standards is +0, -10°C.
- ◆Th : Holding Temperature. The maximum temperature at which a thermal fuse can be maintained while conducting rated current for 168 hours from state of conductivity to open circuit.
- ◆Tm : Maximum Temperature. The maximum temperature at which a thermal fuse which has changed its state of conductivity can be maintained for 10 minutes during which time its mechanical and electrical properties will not be impaired.



#### Thermal Pellet Type - FTF - S



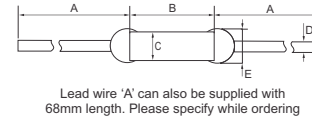
These FTF-S series fuses are approved by UL & CSA. (UL 10A only for S071)

Transmission of heat to the thermal pellet due to dangerous rise in temperature (opening temperature), causes melting/liquefaction of the thermal pellet, thereby cutting off and opening the contact of lead wire A and the electrode due to extension of spring -S which pushes the electrode away.

## FTF1, FTF2, FTF3 & FTF4 Series

These thermal element type fuses are designed to be compact and can be easily wound in generating portions of motors, transformers, etc.

### DIMENSIONS



|   | FTF-1/3     | FTF-2/4     |
|---|-------------|-------------|
| A | 49.0 ± 2    | 48.0 ± 2    |
| B | 6.4 ± 0.5   | 10.0 ± 0.5  |
| C | ø2.0 ± 0.1  | ø3.0 ± 0.1  |
| D | ø0.6 ± 0.05 | ø0.6 ± 0.05 |
| E | Within 2.3  | Within 3.3  |

All dimensions are in mm

### RATINGS

Applicable for FTF1, FTF2, FTF3 & FTF 4 Series.

#### FTF-1

| Type No. | Tf °C | Th °C | Tm °C   | Opening Temp. °C | Rating Current A | Rating Voltage V | Marking |
|----------|-------|-------|---------|------------------|------------------|------------------|---------|
| 198      | 102   | 70    | UL:200  | 98 ± 2           | 1                | 250              | Red     |
| 112      | 115   | 85    | CSA:155 | 112 ± 2          |                  |                  | Green   |
| 126      | 131   | 100   | VDE:200 | 126 ± 2          |                  |                  | Blue    |
| 146      | 150   | 120   |         | 146 ± 2          |                  |                  | Purple  |

#### FTF-2

| Type No. | Tf °C | Th °C | Tm °C   | Opening Temp. °C | Rating Current A | Rating Voltage V | Marking |
|----------|-------|-------|---------|------------------|------------------|------------------|---------|
| 298      | 102   | 70    | UL:200  | 98 ± 2           | 2                | 250              | Red     |
| 212      | 115   | 85    | CSA:155 | 112 ± 2          |                  |                  | Green   |
| 226      | 131   | 100   | VDE:200 | 126 ± 2          |                  |                  | Blue    |
| 246      | 150   | 120   |         | 146 ± 2          |                  |                  | Purple  |

#### FTF-3

| Type No. | Nominal Opening Temperature °C | Opening Accuracy °C | Rating Current A | Rating Voltage V | Marking |
|----------|--------------------------------|---------------------|------------------|------------------|---------|
| 379      | 79                             | ±2                  | 3                | 250              | Brown   |
| 398      | 98                             |                     |                  |                  | Red     |
| 312      | 112                            |                     |                  |                  | Green   |
| 326      | 126                            |                     |                  |                  | Blue    |
| 339      | 139                            |                     |                  |                  | Grey    |
| 346      | 146                            |                     |                  |                  | Purple  |

#### FTF-4

| Type No. | Nominal Opening Temperature °C | Opening Accuracy °C | Rating Current A | Rating Voltage V | Marking |
|----------|--------------------------------|---------------------|------------------|------------------|---------|
| 479      | 79                             | ±2                  | 5                | 250              | Brown   |
| 498      | 98                             |                     |                  |                  | Red     |
| 412      | 112                            |                     |                  |                  | Green   |
| 426      | 126                            |                     |                  |                  | Blue    |
| 439      | 139                            |                     |                  |                  | Grey    |
| 446      | 146                            |                     |                  |                  | Purple  |





## Thermal Fuses

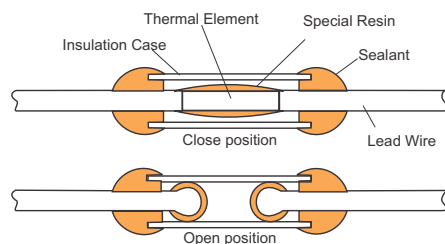
These fuses are used to prevent fires caused by abnormal heat generation from electrical circuits and other heat producing electrical products. Thermal fuses prevent these accidents and ensure safety of the equipment and the user. They are non-resettable thermal protectors attached to the heat generating section of electronic equipment and circuits. The thermal element senses temperature change and breaks the electrical circuit when the cutoff temperature is reached.

### Types

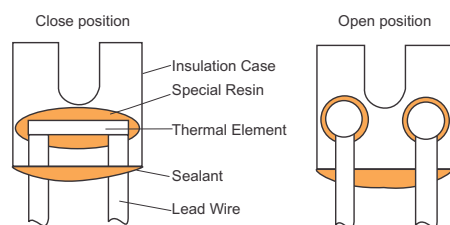
- ◆Element type
- ◆Pellet type

### Constructions / Operational Principles

#### Thermal Element Type - FTF - 1, 2, 3, 4



#### Thermal Element Type - FTF - R - U

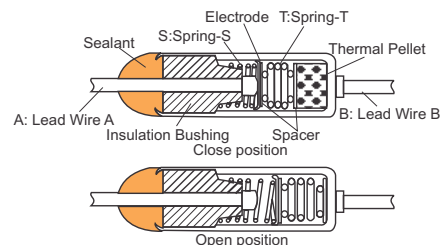


Thermal element senses the rise of the ambient temperature. When the temperature rises to the cutoff value, the surface tension of the special resin instantly cuts off the circuit.

- ◆Tf : Functioning Temperature. The temperature at which a thermal fuse changes its state of conductivity to open circuit with detection current of 10mA or less as the only load. The temperature tolerance for UL, CSA & VDE standards is +0, -10°C.
- ◆Th : Holding Temperature. The maximum temperature at which a thermal fuse can be maintained while conducting rated current for 168 hours from state of conductivity to open circuit.
- ◆Tm : Maximum Temperature. The maximum temperature at which a thermal fuse which has changed its state of conductivity can be maintained for 10 minutes during which time its mechanical and electrical properties will not be impaired.



#### Thermal Pellet Type - FTF - S



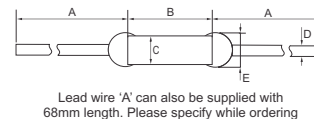
These FTF-S series fuses are approved by UL & CSA. (UL 10A only for S071)

Transmission of heat to the thermal pellet due to dangerous rise in temperature (opening temperature), causes melting/liquefaction of the thermal pellet, thereby cutting off and opening the contact of lead wire A and the electrode due to extension of spring -S which pushes the electrode away.

## FTF1, FTF2, FTF3 & FTF4 Series

These thermal element type fuses are designed to be compact and can be easily wound in generating portions of motors, transformers, etc.

### DIMENSIONS



|   | FTF-1/3     | FTF-2/4     |
|---|-------------|-------------|
| A | 49.0 ± 2    | 48.0 ± 2    |
| B | 6.4 ± 0.5   | 10.0 ± 0.5  |
| C | ø2.0 ± 0.1  | ø3.0 ± 0.1  |
| D | ø0.6 ± 0.05 | ø0.6 ± 0.05 |
| E | Within 2.3  | Within 3.3  |

All dimensions are in mm

### RATINGS

Applicable for FTF1, FTF2, FTF3 & FTF 4 Series.

#### FTF-1

| Type No. | Tf °C | Th °C | Tm °C   | Opening Temp. °C | Rating Current A | Rating Voltage V | Marking |
|----------|-------|-------|---------|------------------|------------------|------------------|---------|
| 198      | 102   | 70    | UL:200  | 98 ± 2           | 1                | 250              | Red     |
| 112      | 115   | 85    | CSA:155 | 112 ± 2          |                  |                  | Green   |
| 126      | 131   | 100   | VDE:200 | 126 ± 2          |                  |                  | Blue    |
| 146      | 150   | 120   |         | 146 ± 2          |                  |                  | Purple  |

#### FTF-2

| Type No. | Tf °C | Th °C | Tm °C   | Opening Temp. °C | Rating Current A | Rating Voltage V | Marking |
|----------|-------|-------|---------|------------------|------------------|------------------|---------|
| 298      | 102   | 70    | UL:200  | 98 ± 2           | 2                | 250              | Red     |
| 212      | 115   | 85    | CSA:155 | 112 ± 2          |                  |                  | Green   |
| 226      | 131   | 100   | VDE:200 | 126 ± 2          |                  |                  | Blue    |
| 246      | 150   | 120   |         | 146 ± 2          |                  |                  | Purple  |

#### FTF-3

| Type No. | Nominal Opening Temperature °C | Opening Accuracy °C | Rating Current A | Rating Voltage V | Marking |
|----------|--------------------------------|---------------------|------------------|------------------|---------|
| 379      | 79                             | ±2                  | 3                | 250              | Brown   |
| 398      | 98                             |                     |                  |                  | Red     |
| 312      | 112                            |                     |                  |                  | Green   |
| 326      | 126                            |                     |                  |                  | Blue    |
| 339      | 139                            |                     |                  |                  | Grey    |
| 346      | 146                            |                     |                  |                  | Purple  |

#### FTF-4

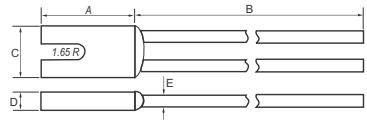
| Type No. | Nominal Opening Temperature °C | Opening Accuracy °C | Rating Current A | Rating Voltage V | Marking |
|----------|--------------------------------|---------------------|------------------|------------------|---------|
| 479      | 79                             | ±2                  | 5                | 250              | Brown   |
| 498      | 98                             |                     |                  |                  | Red     |
| 412      | 112                            |                     |                  |                  | Green   |
| 426      | 126                            |                     |                  |                  | Blue    |
| 439      | 139                            |                     |                  |                  | Grey    |
| 446      | 146                            |                     |                  |                  | Purple  |



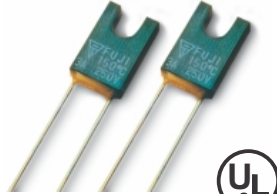
## FTF - R - U Series

FTF-R-U series thermal element type fuses are with radial lead wires. The upper part of the case is U-shaped and is designed so that it can be fixed by a screw directly to the heat generating portion like heat sink. FTF-R-U series fuses are very sensitive because their contact surfaces is stable and large enough to stick to the heat generating portion.

### DIMENSIONS



| FTF-R-U |             |
|---------|-------------|
| A       | 11.0 ± 0.2  |
| B       | 44.5 ± 0.3  |
| C       | 7.4 ± 0.2   |
| D       | 2.3 ± 0.2   |
| E       | ø0.6 ± 0.05 |

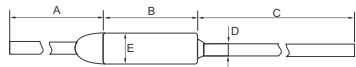


### RATINGS

| Type No. | Tf °C | Th °C | Tm °C   | Opening Temp. °C | Rating Current A | Rating Voltage V | Marking |
|----------|-------|-------|---------|------------------|------------------|------------------|---------|
| U098     | 102   | 76    | UL:200  | 98 ± 2           | 2                | 250              | Red     |
| U110     | 114   | 82    |         | 110 ± 2          |                  |                  | Orange  |
| U124     | 128   | 97    | CSA:155 | 124 ± 2          |                  |                  | Green   |
| U127     | 130   | 104   |         | 127 ± 2          |                  |                  | Blue    |
| U140     | 144   | 112   |         | 140 ± 2          |                  |                  | Purple  |
| U146     | 150   | 123   |         | 146 ± 2          |                  |                  | White   |

## FTF - S Series

### DIMENSIONS



Lead wire A can also be made with 35 mm length

|   | FTF-S & FTF-S 10A | FTF-S 15A   |
|---|-------------------|-------------|
| A | 19.0 ± 1.0        | 35.0 ± 1.0  |
| B | 10.0 ± 0.5        | 10.0 ± 0.5  |
| C | 35.0 ± 1.0        | 35.0 ± 1.0  |
| D | ø1.0 ± 0.05       | ø1.5 ± 0.05 |
| E | ø4.0 ± 0.1        | ø4.0 ± 0.1  |



### RATINGS

| Type No. | Tf °C | Th °C | Tm °C | Opening Temp. °C | Rating Current A | Rating Voltage V | Marking     |
|----------|-------|-------|-------|------------------|------------------|------------------|-------------|
| S071     | 75    | 50    | 105   | 70 + 3, -1       | 15               | 250              | Yellow      |
| S083     | 87    | 52    | 117   | 82 + 3, -1       |                  |                  | Brown       |
| S099     | 103   | 68    | 133   | 99 ± 2           |                  |                  | Dark Blue   |
| S112     | 116   | 81    | 146   | 109 + 4, -0      |                  |                  | Orange      |
| S117     | 121   | 86    | 151   | 119 + 0, -5      |                  |                  | Dark Green  |
| S127     | 131   | 96    | 161   | 126 ± 2          |                  |                  | Blue        |
| S132     | 136   | 101   | 166   | 132 ± 2          |                  |                  | Grey        |
| S143     | 147   | 112   | 177   | 142 ± 2          |                  |                  | Purple      |
| S154     | 158   | 123   | 188   | 154 + 1, -3      |                  |                  | Black       |
| S181     | 185   | 150   | 215   | 182 + 1, -3      |                  |                  | Light Green |
| S215     | 219   | 174   | 249   | 214 ± 2          |                  |                  | Dark Green  |
| S229     | 233   | 188   | 263   | 229 + 1, -3      |                  |                  | Dark Blue   |

## FTF - S 10A Series

### RATINGS

| Type No. | Nominal Opening Temperature °C | Opening Accuracy °C | Rating Current A | Rating Voltage V | Marking     |
|----------|--------------------------------|---------------------|------------------|------------------|-------------|
| S070J    | 70                             | +3, -1              | 10               | 250              | Yellow      |
| S076J    | 76                             | +1, -3              |                  |                  | Green       |
| S082J    | 82                             | +3, -1              |                  |                  | Brown       |
| S091J    | 91                             | ±2                  |                  |                  | Black       |
| S096J    | 96                             | ±2                  |                  |                  | Light Green |
| S099J    | 99                             | ±2                  |                  |                  | Dark Blue   |
| S109J    | 109                            | +4, -0              |                  |                  | Orange      |
| S119J    | 119                            | +0, -5              |                  |                  | Dark Green  |
| S126J    | 126                            | ±2                  |                  |                  | Blue        |
| S132J    | 132                            | ±2                  |                  |                  | Grey        |
| S139J    | 139                            | ±2                  |                  |                  | Red         |
| S142J    | 142                            | ±2                  |                  |                  | Purple      |
| S154J    | 154                            | +1, -3              |                  |                  | Black       |
| S169J    | 169                            | +0, -4              |                  |                  | Pink        |
| S182J    | 182                            | +1, -3              |                  |                  | Light Green |
| S192J    | 192                            | +1, -3              |                  |                  | Light Blue  |
| S214J    | 214                            | ±2                  |                  |                  | Dark Green  |
| S226J    | 226                            | ±2                  |                  |                  | Green       |
| S229J    | 229                            | +1, -3              |                  |                  | Dark Blue   |



## FTF - S 15A Series

These large capacity (250V-15A) thermal pellet type fuses are provided with big diameter lead wires.

### RATINGS

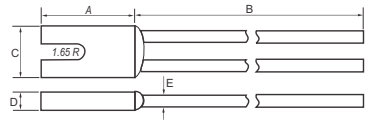
| Type No. | Nominal Opening Temperature °C | Opening Accuracy °C | Rating Current A | Rating Voltage V | Marking     |
|----------|--------------------------------|---------------------|------------------|------------------|-------------|
| S070J    | 70                             | +3, -1              | 15               | 250              | Yellow      |
| S076J    | 76                             | +1, -3              |                  |                  | Green       |
| S082J    | 82                             | +3, -1              |                  |                  | Brown       |
| S091J    | 91                             | ±2                  |                  |                  | Black       |
| S096J    | 96                             | ±2                  |                  |                  | Light Green |
| S099J    | 99                             | ±2                  |                  |                  | Dark Blue   |
| S109J    | 109                            | +4, -0              |                  |                  | Orange      |
| S119J    | 119                            | +0, -5              |                  |                  | Dark Green  |
| S126J    | 126                            | ±2                  |                  |                  | Blue        |
| S132J    | 132                            | ±2                  |                  |                  | Grey        |
| S139J    | 139                            | ±2                  |                  |                  | Red         |
| S142J    | 142                            | ±2                  |                  |                  | Purple      |
| S154J    | 154                            | +1, -3              |                  |                  | Black       |
| S169J    | 169                            | +0, -4              |                  |                  | Pink        |
| S182J    | 182                            | +1, -3              |                  |                  | Light Green |
| S192J    | 192                            | +1, -3              |                  |                  | Light Blue  |
| S214J    | 214                            | ±2                  |                  |                  | Dark Green  |
| S226J    | 226                            | ±2                  |                  |                  | Green       |
| S229J    | 229                            | +1, -3              |                  |                  | Dark Blue   |



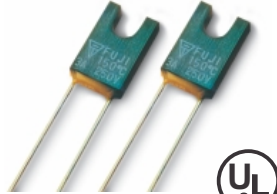
## FTF - R - U Series

FTF-R-U series thermal element type fuses are with radial lead wires. The upper part of the case is U-shaped and is designed so that it can be fixed by a screw directly to the heat generating portion like heat sink. FTF-R-U series fuses are very sensitive because their contact surfaces is stable and large enough to stick to the heat generating portion.

### DIMENSIONS



| FTF-R-U |             |
|---------|-------------|
| A       | 11.0 ± 0.2  |
| B       | 44.5 ± 0.3  |
| C       | 7.4 ± 0.2   |
| D       | 2.3 ± 0.2   |
| E       | ø0.6 ± 0.05 |

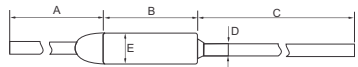


### RATINGS

| Type No. | Tf °C | Th °C | Tm °C   | Opening Temp. °C | Rating Current A | Rating Voltage V | Marking |
|----------|-------|-------|---------|------------------|------------------|------------------|---------|
| U098     | 102   | 76    | UL:200  | 98 ± 2           | 2                | 250              | Red     |
| U110     | 114   | 82    |         | 110 ± 2          |                  |                  | Orange  |
| U124     | 128   | 97    | CSA:155 | 124 ± 2          |                  |                  | Green   |
| U127     | 130   | 104   |         | 127 ± 2          |                  |                  | Blue    |
| U140     | 144   | 112   |         | 140 ± 2          |                  |                  | Purple  |
| U146     | 150   | 123   |         | 146 ± 2          |                  |                  | White   |

## FTF - S Series

### DIMENSIONS



Lead wire A can also be made with 35 mm length

|   | FTF-S & FTF-S 10A | FTF-S 15A   |
|---|-------------------|-------------|
| A | 19.0 ± 1.0        | 35.0 ± 1.0  |
| B | 10.0 ± 0.5        | 10.0 ± 0.5  |
| C | 35.0 ± 1.0        | 35.0 ± 1.0  |
| D | ø1.0 ± 0.05       | ø1.5 ± 0.05 |
| E | ø4.0 ± 0.1        | ø4.0 ± 0.1  |



### RATINGS

| Type No. | Tf °C | Th °C | Tm °C | Opening Temp. °C | Rating Current A | Rating Voltage V | Marking     |
|----------|-------|-------|-------|------------------|------------------|------------------|-------------|
| S071     | 75    | 50    | 105   | 70 + 3, -1       | 10               | 250              | Yellow      |
| S083     | 87    | 52    | 117   | 82 + 3, -1       | 15               |                  | Brown       |
| S099     | 103   | 68    | 133   | 99 ± 2           |                  |                  | Dark Blue   |
| S112     | 116   | 81    | 146   | 109 + 4, -0      |                  |                  | Orange      |
| S117     | 121   | 86    | 151   | 119 + 0, -5      |                  |                  | Dark Green  |
| S127     | 131   | 96    | 161   | 126 ± 2          |                  |                  | Blue        |
| S132     | 136   | 101   | 166   | 132 ± 2          |                  |                  | Grey        |
| S143     | 147   | 112   | 177   | 142 ± 2          |                  |                  | Purple      |
| S154     | 158   | 123   | 188   | 154 + 1, -3      |                  |                  | Black       |
| S181     | 185   | 150   | 215   | 182 + 1, -3      |                  |                  | Light Green |
| S215     | 219   | 174   | 249   | 214 ± 2          |                  |                  | Dark Green  |
| S229     | 233   | 188   | 263   | 229 + 1, -3      |                  |                  | Dark Blue   |

## FTF - S 10A Series

### RATINGS

| Type No. | Nominal Opening Temperature °C | Opening Accuracy °C | Rating Current A | Rating Voltage V | Marking     |
|----------|--------------------------------|---------------------|------------------|------------------|-------------|
| S070J    | 70                             | +3, -1              | 10               | 250              | Yellow      |
| S076J    | 76                             | +1, -3              |                  |                  | Green       |
| S082J    | 82                             | +3, -1              |                  |                  | Brown       |
| S091J    | 91                             | ±2                  |                  |                  | Black       |
| S096J    | 96                             | ±2                  |                  |                  | Light Green |
| S099J    | 99                             | ±2                  |                  |                  | Dark Blue   |
| S109J    | 109                            | +4, -0              |                  |                  | Orange      |
| S119J    | 119                            | +0, -5              |                  |                  | Dark Green  |
| S126J    | 126                            | ±2                  |                  |                  | Blue        |
| S132J    | 132                            | ±2                  |                  |                  | Grey        |
| S139J    | 139                            | ±2                  |                  |                  | Red         |
| S142J    | 142                            | ±2                  |                  |                  | Purple      |
| S154J    | 154                            | +1, -3              |                  |                  | Black       |
| S169J    | 169                            | +0, -4              |                  |                  | Pink        |
| S182J    | 182                            | +1, -3              |                  |                  | Light Green |
| S192J    | 192                            | +1, -3              |                  |                  | Light Blue  |
| S214J    | 214                            | ±2                  |                  |                  | Dark Green  |
| S226J    | 226                            | ±2                  |                  |                  | Green       |
| S229J    | 229                            | +1, -3              |                  |                  | Dark Blue   |



## FTF - S 15A Series

These large capacity (250V-15A) thermal pellet type fuses are provided with big diameter lead wires.

### RATINGS

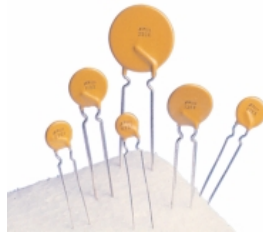
| Type No. | Nominal Opening Temperature °C | Opening Accuracy °C | Rating Current A | Rating Voltage V | Marking     |
|----------|--------------------------------|---------------------|------------------|------------------|-------------|
| S070J    | 70                             | +3, -1              | 15               | 250              | Yellow      |
| S076J    | 76                             | +1, -3              |                  |                  | Green       |
| S082J    | 82                             | +3, -1              |                  |                  | Brown       |
| S091J    | 91                             | ±2                  |                  |                  | Black       |
| S096J    | 96                             | ±2                  |                  |                  | Light Green |
| S099J    | 99                             | ±2                  |                  |                  | Dark Blue   |
| S109J    | 109                            | +4, -0              |                  |                  | Orange      |
| S119J    | 119                            | +0, -5              |                  |                  | Dark Green  |
| S126J    | 126                            | ±2                  |                  |                  | Blue        |
| S132J    | 132                            | ±2                  |                  |                  | Grey        |
| S139J    | 139                            | ±2                  |                  |                  | Red         |
| S142J    | 142                            | ±2                  |                  |                  | Purple      |
| S154J    | 154                            | +1, -3              |                  |                  | Black       |
| S169J    | 169                            | +0, -4              |                  |                  | Pink        |
| S182J    | 182                            | +1, -3              |                  |                  | Light Green |
| S192J    | 192                            | +1, -3              |                  |                  | Light Blue  |
| S214J    | 214                            | ±2                  |                  |                  | Dark Green  |
| S226J    | 226                            | ±2                  |                  |                  | Green       |
| S229J    | 229                            | +1, -3              |                  |                  | Dark Blue   |



## PTC Thermistors

### Radial Leaded PTC Devices (16V)

Positive Temperature coefficient (PTC) thermistors are designed for protecting electronic circuits against current, voltage and temperature overloads. The PTC device protects the circuit by going from a low resistance to high resistance state in response to an over current. This is called "tripping" the device. Once the overload is removed, the devices return to its low resistance value after cooling, thus needing no replacements. These are used for low voltage over current circuit protection of Computers, Peripherals, General Electronics, Battery, Telecommunication, Power supplies, Various motor protections and many more devices.



Application : Low voltage USB equipment  
 Product Features : Low resistance, Fast trip time, Lower Trip-to-hold Ratio  
 Operation Current : 750mA ~2.5A  
 Maximum Voltage : 16V/30V  
 Temperature Range : -40°C to 85°C

### Electrical Characteristics

| Part Number | I hold (A) | I trip (A) | V max (Vdc) | I max (A) | Pd max (W) | Maximum Time To Trip |            | Resistance |           |
|-------------|------------|------------|-------------|-----------|------------|----------------------|------------|------------|-----------|
|             |            |            |             |           |            | Current (A)          | Time (Sec) | R min (Ω)  | R1max (Ω) |
| RLD16P075B  | 0.75       | 1.30       | 16          | 40        | 0.3        | 8.0                  | 0.4        | 0.080      | 0.23      |
| RLD16P090B  | 0.90       | 1.80       | 16/30       | 40        | 0.6        | 4.5                  | 5.9        | 0.070      | 0.18      |
| RLD16P110B  | 1.10       | 2.20       | 16/30       | 40        | 0.7        | 5.5                  | 6.6        | 0.050      | 0.14      |
| RLD16P120B  | 1.20       | 2.00       | 16          | 40        | 0.6        | 8.0                  | 0.5        | 0.040      | 0.14      |
| RLD16P135B  | 1.35       | 2.70       | 16/30       | 40        | 0.8        | 6.8                  | 7.3        | 0.040      | 0.12      |
| RLD16P155B  | 1.55       | 2.70       | 16          | 40        | 0.7        | 8.0                  | 0.6        | 0.030      | 0.12      |
| RLD16P160B  | 1.60       | 3.20       | 16/30       | 40        | 0.9        | 8.0                  | 8.0        | 0.030      | 0.11      |
| RLD16P185B  | 1.85       | 3.70       | 16/30       | 40        | 1.0        | 9.3                  | 8.7        | 0.030      | 0.09      |
| RLD16P250B  | 2.50       | 5.00       | 16/30       | 40        | 1.2        | 12.5                 | 10.3       | 0.020      | 0.06      |

I<sub>H</sub> = Hold current-maximum current at which the device will not trip at 23°C still air.  
 I<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.  
 V<sub>1-MAX</sub> = Maximum interrupt voltage device can withstand for short period of time. (Not for Long term)  
 I<sub>MAX</sub> = Maximum fault current device can withstand without damage at rated voltage (V max.).  
 P<sub>d</sub> = Typical power dissipated from device when in the tripped state in 23°C still air environment.  
 R<sub>MIN</sub> = Minimum device resistance at 23°C.  
 R<sub>1MAX</sub> = Maximum device resistance at 23°C, 1 hour after tripping.

**Note:** Applicable for all Series

## PTC Thermistors (cont.)

### Physical Dimensions (mm)

| Part Number | A (max) | B (max) | C (typ) | D (min) | E (max) | Physical Characteristics |          |        |
|-------------|---------|---------|---------|---------|---------|--------------------------|----------|--------|
|             |         |         |         |         |         | LeadØ                    | Material | Figure |
| RLD16P075B  | 6.90    | 11.40   | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/Cu    | 2      |
| RLD16P090B  | 7.40    | 12.20   | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  | 1      |
| RLD16P110B  | 7.40    | 14.20   | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  | 1      |
| RLD16P120B  | 6.90    | 11.70   | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  | 2      |
| RLD16P135B  | 8.90    | 13.50   | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  | 1      |
| RLD16P155B  | 6.90    | 11.70   | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  | 2      |
| RLD16P160B  | 8.90    | 15.20   | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  | 1      |
| RLD16P185B  | 10.20   | 15.70   | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  | 1      |
| RLD16P250B  | 11.40   | 18.30   | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  | 1      |

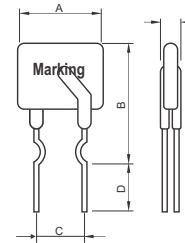


Figure-1

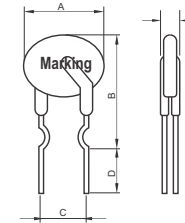
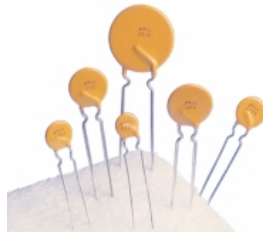


Figure-2

## PTC Thermistors

### Radial Leaded PTC Devices (16V)

Positive Temperature coefficient (PTC) thermistors are designed for protecting electronic circuits against current, voltage and temperature overloads. The PTC device protects the circuit by going from a low resistance to high resistance state in response to an over current. This is called "tripping" the device. Once the overload is removed, the devices return to its low resistance value after cooling, thus needing no replacements. These are used for low voltage over current circuit protection of Computers, Peripherals, General Electronics, Battery, Telecommunication, Power supplies, Various motor protections and many more devices.



Application : Low voltage USB equipment  
 Product Features : Low resistance, Fast trip time, Lower Trip-to-hold Ratio  
 Operation Current : 750mA ~2.5A  
 Maximum Voltage : 16V/30V  
 Temperature Range : -40°C to 85°C

### Electrical Characteristics

| Part Number | I hold (A) | I trip (A) | V max (Vdc) | I max (A) | Pd max (W) | Maximum Time To Trip |            | Resistance |           |
|-------------|------------|------------|-------------|-----------|------------|----------------------|------------|------------|-----------|
|             |            |            |             |           |            | Current (A)          | Time (Sec) | R min (Ω)  | R1max (Ω) |
| RLD16P075B  | 0.75       | 1.30       | 16          | 40        | 0.3        | 8.0                  | 0.4        | 0.080      | 0.23      |
| RLD16P090B  | 0.90       | 1.80       | 16/30       | 40        | 0.6        | 4.5                  | 5.9        | 0.070      | 0.18      |
| RLD16P110B  | 1.10       | 2.20       | 16/30       | 40        | 0.7        | 5.5                  | 6.6        | 0.050      | 0.14      |
| RLD16P120B  | 1.20       | 2.00       | 16          | 40        | 0.6        | 8.0                  | 0.5        | 0.040      | 0.14      |
| RLD16P135B  | 1.35       | 2.70       | 16/30       | 40        | 0.8        | 6.8                  | 7.3        | 0.040      | 0.12      |
| RLD16P155B  | 1.55       | 2.70       | 16          | 40        | 0.7        | 8.0                  | 0.6        | 0.030      | 0.12      |
| RLD16P160B  | 1.60       | 3.20       | 16/30       | 40        | 0.9        | 8.0                  | 8.0        | 0.030      | 0.11      |
| RLD16P185B  | 1.85       | 3.70       | 16/30       | 40        | 1.0        | 9.3                  | 8.7        | 0.030      | 0.09      |
| RLD16P250B  | 2.50       | 5.00       | 16/30       | 40        | 1.2        | 12.5                 | 10.3       | 0.020      | 0.06      |

I<sub>H</sub> = Hold current-maximum current at which the device will not trip at 23°C still air.  
 I<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.  
 V<sub>1-MAX</sub> = Maximum interrupt voltage device can withstand for short period of time. (Not for Long term)  
 I<sub>MAX</sub> = Maximum fault current device can withstand without damage at rated voltage (V max.).  
 P<sub>d</sub> = Typical power dissipated from device when in the tripped state in 23°C still air environment.  
 R<sub>MIN</sub> = Minimum device resistance at 23°C.  
 R<sub>1MAX</sub> = Maximum device resistance at 23°C, 1 hour after tripping.

**Note:** Applicable for all Series

## PTC Thermistors (cont.)

### Physical Dimensions (mm)

| Part Number | A (max) | B (max) | C (typ) | D (min) | E (max) | Physical Characteristics |          |        |
|-------------|---------|---------|---------|---------|---------|--------------------------|----------|--------|
|             |         |         |         |         |         | LeadØ                    | Material | Figure |
| RLD16P075B  | 6.90    | 11.40   | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/Cu    | 2      |
| RLD16P090B  | 7.40    | 12.20   | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  | 1      |
| RLD16P110B  | 7.40    | 14.20   | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  | 1      |
| RLD16P120B  | 6.90    | 11.70   | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  | 2      |
| RLD16P135B  | 8.90    | 13.50   | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  | 1      |
| RLD16P155B  | 6.90    | 11.70   | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  | 2      |
| RLD16P160B  | 8.90    | 15.20   | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  | 1      |
| RLD16P185B  | 10.20   | 15.70   | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  | 1      |
| RLD16P250B  | 11.40   | 18.30   | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  | 1      |

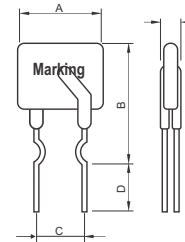


Figure-1

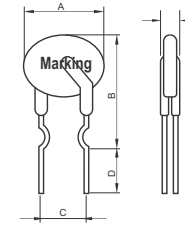


Figure-2

## Radial Leaded PTC Devices (30V)

Application : Wide variety of electronic equipment  
 Product Features : Low resistance, High hold current, Solid state,  
 Radial-leaded product ideal for up to 30V  
 Operation Current : 900mA~9A  
 Maximum Voltage : Up to 30V  
 Temperature Range : -40°C to 85°C

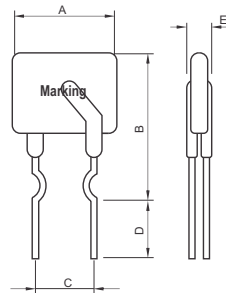


### Electrical Characteristics - 30V DC series

| Part Number | I hold (A) | I trip (A) | V max (Vdc) | I max (A) | Pd max (W) | Maximum Time To Trip |            | Resistance |           |
|-------------|------------|------------|-------------|-----------|------------|----------------------|------------|------------|-----------|
|             |            |            |             |           |            | Current (A)          | Time (Sec) | R min (Ω)  | R1max (Ω) |
| RLD30P090U  | 0.90       | 1.80       | 30          | 40        | 0.6        | 4.5                  | 5.9        | 0.070      | 0.22      |
| RLD30P110U  | 1.10       | 2.20       | 30          | 40        | 0.7        | 5.5                  | 6.6        | 0.050      | 0.17      |
| RLD30P135U  | 1.35       | 2.70       | 30          | 40        | 0.8        | 6.8                  | 7.3        | 0.040      | 0.13      |
| RLD30P160U  | 1.60       | 3.20       | 30          | 40        | 0.9        | 8.0                  | 8.0        | 0.030      | 0.11      |
| RLD30P185U  | 1.85       | 3.70       | 30          | 40        | 1.0        | 9.3                  | 8.7        | 0.030      | 0.09      |
| RLD30P250U  | 2.50       | 5.00       | 30          | 40        | 1.2        | 12.5                 | 10.3       | 0.020      | 0.07      |
| RLD30P300U  | 3.00       | 6.00       | 30          | 40        | 2.0        | 15.0                 | 10.8       | 0.020      | 0.08      |
| RLD30P400U  | 4.00       | 8.00       | 30          | 40        | 2.5        | 20.0                 | 12.7       | 0.010      | 0.05      |
| RLD30P500U  | 5.00       | 10.00      | 30          | 40        | 3.0        | 25.0                 | 14.5       | 0.010      | 0.05      |
| RLD30P600U  | 6.00       | 12.00      | 30          | 40        | 3.5        | 30.0                 | 16.0       | 0.005      | 0.04      |
| RLD30P700U  | 7.00       | 14.00      | 30          | 40        | 3.8        | 35.0                 | 17.5       | 0.005      | 0.03      |
| RLD30P800U  | 8.00       | 16.00      | 30          | 40        | 4.0        | 40.0                 | 18.8       | 0.005      | 0.02      |
| RLD30P900U  | 9.00       | 18.00      | 30          | 40        | 4.2        | 40.0                 | 20.0       | 0.005      | 0.02      |

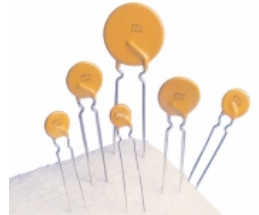
### Physical Dimensions (mm) 30 V DC series

| Part Number | A (max) | B (max) | C (typ) | D (min) | E (max) | Physical Characteristics |          |
|-------------|---------|---------|---------|---------|---------|--------------------------|----------|
|             |         |         |         |         |         | Lead Ø                   | Material |
| RLD30P090U  | 7.4     | 12.2    | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  |
| RLD30P110U  | 7.4     | 14.2    | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  |
| RLD30P135U  | 8.9     | 13.5    | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  |
| RLD30P160U  | 8.9     | 15.2    | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  |
| RLD30P185U  | 10.2    | 15.7    | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  |
| RLD30P250U  | 11.4    | 18.3    | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  |
| RLD30P300U  | 11.4    | 17.3    | 5.1     | 7.6     | 3.0     | 0.81                     | Sn/Cu    |
| RLD30P400U  | 14.0    | 20.1    | 5.1     | 7.6     | 3.0     | 0.81                     | Sn/Cu    |
| RLD30P500U  | 14.0    | 24.9    | 10.2    | 7.6     | 3.0     | 0.81                     | Sn/Cu    |
| RLD30P600U  | 16.5    | 24.9    | 10.2    | 7.6     | 3.0     | 0.81                     | Sn/Cu    |
| RLD30P700U  | 19.1    | 26.7    | 10.2    | 7.6     | 3.0     | 0.81                     | Sn/Cu    |
| RLD30P800U  | 21.6    | 29.2    | 10.2    | 7.6     | 3.0     | 0.81                     | Sn/Cu    |
| RLD30P900U  | 24.1    | 29.7    | 10.2    | 7.6     | 3.0     | 0.81                     | Sn/Cu    |



## Radial Leaded PTC Devices (60V)

Application : Wide variety of electronic equipment  
 Product Features : Low hold current, Solid state, Radial-leaded product ideal for up to 60V  
 Operation Current : 200mA ~ 3.75A  
 Maximum Voltage : 60V  
 Temperature Range : -40°C to 85°C

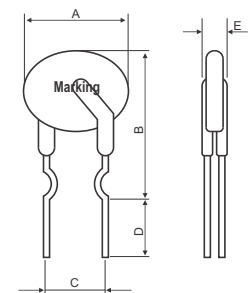


### Electrical Characteristics - 60V DC series

| Part Number | I hold (A) | I trip (A) | V max (Vdc) | I max (A) | Pd max (W) | Maximum Time To Trip |            | Resistance |           |
|-------------|------------|------------|-------------|-----------|------------|----------------------|------------|------------|-----------|
|             |            |            |             |           |            | Current (A)          | Time (Sec) | R min (Ω)  | R1max (Ω) |
| RLD60P020X  | 0.20       | 0.40       | 60          | 40        | 0.41       | 1.00                 | 2.2        | 1.83       | 4.40      |
| RLD60P025X  | 0.25       | 0.50       | 60          | 40        | 0.45       | 1.25                 | 2.5        | 1.25       | 3.00      |
| RLD60P030X  | 0.30       | 0.60       | 60          | 40        | 0.49       | 1.50                 | 3.0        | 0.88       | 2.10      |
| RLD60P040X  | 0.40       | 0.80       | 60          | 40        | 0.56       | 2.00                 | 3.8        | 0.55       | 1.29      |
| RLD60P050X  | 0.50       | 1.00       | 60          | 40        | 0.77       | 2.50                 | 4.0        | 0.50       | 1.17      |
| RLD60P065X  | 0.65       | 1.30       | 60          | 40        | 0.88       | 3.25                 | 5.3        | 0.31       | 0.72      |
| RLD60P075X  | 0.75       | 1.50       | 60          | 40        | 0.92       | 3.75                 | 6.3        | 0.25       | 0.60      |
| RLD60P090X  | 0.90       | 1.80       | 60          | 40        | 0.99       | 4.50                 | 7.2        | 0.20       | 0.47      |
| RLD60P110X  | 1.10       | 2.20       | 60          | 40        | 1.50       | 5.50                 | 8.2        | 0.15       | 0.38      |
| RLD60P135X  | 1.35       | 2.70       | 60          | 40        | 1.70       | 6.75                 | 9.6        | 0.12       | 0.30      |
| RLD60P160X  | 1.60       | 3.20       | 60          | 40        | 1.90       | 8.00                 | 11.4       | 0.09       | 0.22      |
| RLD60P185X  | 1.85       | 3.70       | 60          | 40        | 2.10       | 9.25                 | 12.6       | 0.08       | 0.19      |
| RLD60P250X  | 2.50       | 5.00       | 60          | 40        | 2.50       | 12.50                | 15.6       | 0.05       | 0.13      |
| RLD60P300X  | 3.00       | 6.00       | 60          | 40        | 2.80       | 15.00                | 19.8       | 0.04       | 0.10      |
| RLD60P375X  | 3.75       | 7.50       | 60          | 40        | 3.20       | 18.75                | 24.0       | 0.03       | 0.08      |

### Physical Dimensions (mm) 60 V DC series

| Part Number | A (max) | B (max) | C (typ) | D (min) | E (max) | Physical Characteristics |          |
|-------------|---------|---------|---------|---------|---------|--------------------------|----------|
|             |         |         |         |         |         | Lead Ø                   | Material |
| RLD60P020X  | 7.4     | 12.2    | 5.1     | 7.6     | 3.1     | 0.51                     | Sn/CuFe  |
| RLD60P025X  | 7.4     | 12.7    | 5.1     | 7.6     | 3.1     | 0.51                     | Sn/CuFe  |
| RLD60P030X  | 7.4     | 13.0    | 5.1     | 7.6     | 3.1     | 0.51                     | Sn/CuFe  |
| RLD60P040X  | 7.6     | 13.5    | 5.1     | 7.6     | 3.1     | 0.51                     | Sn/CuFe  |
| RLD60P050X  | 7.9     | 13.7    | 5.1     | 7.6     | 3.1     | 0.51                     | Sn/Cu    |
| RLD60P065X  | 9.7     | 14.5    | 5.1     | 7.6     | 3.1     | 0.51                     | Sn/Cu    |
| RLD60P075X  | 10.4    | 15.2    | 5.1     | 7.6     | 3.1     | 0.51                     | Sn/Cu    |
| RLD60P090X  | 11.7    | 15.7    | 5.1     | 7.6     | 3.1     | 0.51                     | Sn/Cu    |
| RLD60P110X  | 13.0    | 18.0    | 5.1     | 7.6     | 3.1     | 0.81                     | Sn/Cu    |
| RLD60P135X  | 14.5    | 19.6    | 5.1     | 7.6     | 3.1     | 0.81                     | Sn/Cu    |
| RLD60P160X  | 16.3    | 21.3    | 5.1     | 7.6     | 3.1     | 0.81                     | Sn/Cu    |
| RLD60P185X  | 17.8    | 22.9    | 5.1     | 7.6     | 3.1     | 0.81                     | Sn/Cu    |
| RLD60P250X  | 21.3    | 26.4    | 10.2    | 7.6     | 3.1     | 0.81                     | Sn/Cu    |
| RLD60P300X  | 24.9    | 30.0    | 10.2    | 7.6     | 3.1     | 0.81                     | Sn/Cu    |
| RLD60P375X  | 28.4    | 33.5    | 10.2    | 7.6     | 3.1     | 0.81                     | Sn/Cu    |





## Radial Leaded PTC Devices (30V)

Application : Wide variety of electronic equipment  
 Product Features : Low resistance, High hold current, Solid state,  
 Radial-leaded product ideal for up to 30V  
 Operation Current : 900mA~9A  
 Maximum Voltage : Up to 30V  
 Temperature Range : -40°C to 85°C

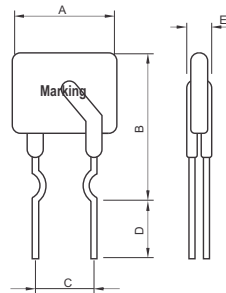


### Electrical Characteristics - 30V DC series

| Part Number | I hold (A) | I trip (A) | V max (Vdc) | I max (A) | Pd max (W) | Maximum Time To Trip |            | Resistance |           |
|-------------|------------|------------|-------------|-----------|------------|----------------------|------------|------------|-----------|
|             |            |            |             |           |            | Current (A)          | Time (Sec) | R min (Ω)  | R1max (Ω) |
| RLD30P090U  | 0.90       | 1.80       | 30          | 40        | 0.6        | 4.5                  | 5.9        | 0.070      | 0.22      |
| RLD30P110U  | 1.10       | 2.20       | 30          | 40        | 0.7        | 5.5                  | 6.6        | 0.050      | 0.17      |
| RLD30P135U  | 1.35       | 2.70       | 30          | 40        | 0.8        | 6.8                  | 7.3        | 0.040      | 0.13      |
| RLD30P160U  | 1.60       | 3.20       | 30          | 40        | 0.9        | 8.0                  | 8.0        | 0.030      | 0.11      |
| RLD30P185U  | 1.85       | 3.70       | 30          | 40        | 1.0        | 9.3                  | 8.7        | 0.030      | 0.09      |
| RLD30P250U  | 2.50       | 5.00       | 30          | 40        | 1.2        | 12.5                 | 10.3       | 0.020      | 0.07      |
| RLD30P300U  | 3.00       | 6.00       | 30          | 40        | 2.0        | 15.0                 | 10.8       | 0.020      | 0.08      |
| RLD30P400U  | 4.00       | 8.00       | 30          | 40        | 2.5        | 20.0                 | 12.7       | 0.010      | 0.05      |
| RLD30P500U  | 5.00       | 10.00      | 30          | 40        | 3.0        | 25.0                 | 14.5       | 0.010      | 0.05      |
| RLD30P600U  | 6.00       | 12.00      | 30          | 40        | 3.5        | 30.0                 | 16.0       | 0.005      | 0.04      |
| RLD30P700U  | 7.00       | 14.00      | 30          | 40        | 3.8        | 35.0                 | 17.5       | 0.005      | 0.03      |
| RLD30P800U  | 8.00       | 16.00      | 30          | 40        | 4.0        | 40.0                 | 18.8       | 0.005      | 0.02      |
| RLD30P900U  | 9.00       | 18.00      | 30          | 40        | 4.2        | 40.0                 | 20.0       | 0.005      | 0.02      |

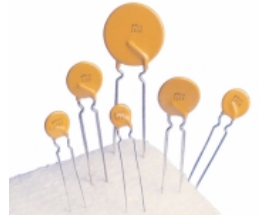
### Physical Dimensions (mm) 30 V DC series

| Part Number | A (max) | B (max) | C (typ) | D (min) | E (max) | Physical Characteristics |          |
|-------------|---------|---------|---------|---------|---------|--------------------------|----------|
|             |         |         |         |         |         | Lead Ø                   | Material |
| RLD30P090U  | 7.4     | 12.2    | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  |
| RLD30P110U  | 7.4     | 14.2    | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  |
| RLD30P135U  | 8.9     | 13.5    | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  |
| RLD30P160U  | 8.9     | 15.2    | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  |
| RLD30P185U  | 10.2    | 15.7    | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  |
| RLD30P250U  | 11.4    | 18.3    | 5.1     | 7.6     | 3.0     | 0.51                     | Sn/CuFe  |
| RLD30P300U  | 11.4    | 17.3    | 5.1     | 7.6     | 3.0     | 0.81                     | Sn/Cu    |
| RLD30P400U  | 14.0    | 20.1    | 5.1     | 7.6     | 3.0     | 0.81                     | Sn/Cu    |
| RLD30P500U  | 14.0    | 24.9    | 10.2    | 7.6     | 3.0     | 0.81                     | Sn/Cu    |
| RLD30P600U  | 16.5    | 24.9    | 10.2    | 7.6     | 3.0     | 0.81                     | Sn/Cu    |
| RLD30P700U  | 19.1    | 26.7    | 10.2    | 7.6     | 3.0     | 0.81                     | Sn/Cu    |
| RLD30P800U  | 21.6    | 29.2    | 10.2    | 7.6     | 3.0     | 0.81                     | Sn/Cu    |
| RLD30P900U  | 24.1    | 29.7    | 10.2    | 7.6     | 3.0     | 0.81                     | Sn/Cu    |



## Radial Leaded PTC Devices (60V)

Application : Wide variety of electronic equipment  
 Product Features : Low hold current, Solid state, Radial-leaded product ideal for up to 60V  
 Operation Current : 200mA ~ 3.75A  
 Maximum Voltage : 60V  
 Temperature Range : -40°C to 85°C

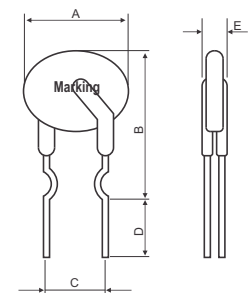


### Electrical Characteristics - 60V DC series

| Part Number | I hold (A) | I trip (A) | V max (Vdc) | I max (A) | Pd max (W) | Maximum Time To Trip |            | Resistance |           |
|-------------|------------|------------|-------------|-----------|------------|----------------------|------------|------------|-----------|
|             |            |            |             |           |            | Current (A)          | Time (Sec) | R min (Ω)  | R1max (Ω) |
| RLD60P020X  | 0.20       | 0.40       | 60          | 40        | 0.41       | 1.00                 | 2.2        | 1.83       | 4.40      |
| RLD60P025X  | 0.25       | 0.50       | 60          | 40        | 0.45       | 1.25                 | 2.5        | 1.25       | 3.00      |
| RLD60P030X  | 0.30       | 0.60       | 60          | 40        | 0.49       | 1.50                 | 3.0        | 0.88       | 2.10      |
| RLD60P040X  | 0.40       | 0.80       | 60          | 40        | 0.56       | 2.00                 | 3.8        | 0.55       | 1.29      |
| RLD60P050X  | 0.50       | 1.00       | 60          | 40        | 0.77       | 2.50                 | 4.0        | 0.50       | 1.17      |
| RLD60P065X  | 0.65       | 1.30       | 60          | 40        | 0.88       | 3.25                 | 5.3        | 0.31       | 0.72      |
| RLD60P075X  | 0.75       | 1.50       | 60          | 40        | 0.92       | 3.75                 | 6.3        | 0.25       | 0.60      |
| RLD60P090X  | 0.90       | 1.80       | 60          | 40        | 0.99       | 4.50                 | 7.2        | 0.20       | 0.47      |
| RLD60P110X  | 1.10       | 2.20       | 60          | 40        | 1.50       | 5.50                 | 8.2        | 0.15       | 0.38      |
| RLD60P135X  | 1.35       | 2.70       | 60          | 40        | 1.70       | 6.75                 | 9.6        | 0.12       | 0.30      |
| RLD60P160X  | 1.60       | 3.20       | 60          | 40        | 1.90       | 8.00                 | 11.4       | 0.09       | 0.22      |
| RLD60P185X  | 1.85       | 3.70       | 60          | 40        | 2.10       | 9.25                 | 12.6       | 0.08       | 0.19      |
| RLD60P250X  | 2.50       | 5.00       | 60          | 40        | 2.50       | 12.50                | 15.6       | 0.05       | 0.13      |
| RLD60P300X  | 3.00       | 6.00       | 60          | 40        | 2.80       | 15.00                | 19.8       | 0.04       | 0.10      |
| RLD60P375X  | 3.75       | 7.50       | 60          | 40        | 3.20       | 18.75                | 24.0       | 0.03       | 0.08      |

### Physical Dimensions (mm) 60 V DC series

| Part Number | A (max) | B (max) | C (typ) | D (min) | E (max) | Physical Characteristics |          |
|-------------|---------|---------|---------|---------|---------|--------------------------|----------|
|             |         |         |         |         |         | Lead Ø                   | Material |
| RLD60P020X  | 7.4     | 12.2    | 5.1     | 7.6     | 3.1     | 0.51                     | Sn/CuFe  |
| RLD60P025X  | 7.4     | 12.7    | 5.1     | 7.6     | 3.1     | 0.51                     | Sn/CuFe  |
| RLD60P030X  | 7.4     | 13.0    | 5.1     | 7.6     | 3.1     | 0.51                     | Sn/CuFe  |
| RLD60P040X  | 7.6     | 13.5    | 5.1     | 7.6     | 3.1     | 0.51                     | Sn/CuFe  |
| RLD60P050X  | 7.9     | 13.7    | 5.1     | 7.6     | 3.1     | 0.51                     | Sn/Cu    |
| RLD60P065X  | 9.7     | 14.5    | 5.1     | 7.6     | 3.1     | 0.51                     | Sn/Cu    |
| RLD60P075X  | 10.4    | 15.2    | 5.1     | 7.6     | 3.1     | 0.51                     | Sn/Cu    |
| RLD60P090X  | 11.7    | 15.7    | 5.1     | 7.6     | 3.1     | 0.51                     | Sn/Cu    |
| RLD60P110X  | 13.0    | 18.0    | 5.1     | 7.6     | 3.1     | 0.81                     | Sn/Cu    |
| RLD60P135X  | 14.5    | 19.6    | 5.1     | 7.6     | 3.1     | 0.81                     | Sn/Cu    |
| RLD60P160X  | 16.3    | 21.3    | 5.1     | 7.6     | 3.1     | 0.81                     | Sn/Cu    |
| RLD60P185X  | 17.8    | 22.9    | 5.1     | 7.6     | 3.1     | 0.81                     | Sn/Cu    |
| RLD60P250X  | 21.3    | 26.4    | 10.2    | 7.6     | 3.1     | 0.81                     | Sn/Cu    |
| RLD60P300X  | 24.9    | 30.0    | 10.2    | 7.6     | 3.1     | 0.81                     | Sn/Cu    |
| RLD60P375X  | 28.4    | 33.5    | 10.2    | 7.6     | 3.1     | 0.81                     | Sn/Cu    |



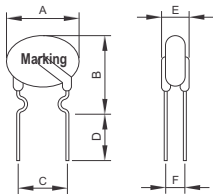
## Radial Leaded PTC Devices (90V)

Application : Cable /Telephone Electronics: Cable Power Passing Tap.  
 Product Features : Low hold current, Solid state, Radial-leaded product ideal for up to 90V  
 Operation Current : 100mA~900mA  
 Maximum Voltage : 90V  
 Temperature Range : -40°C to 85°C

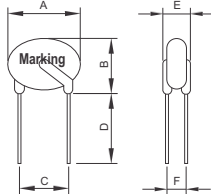


### Electrical Characteristics - 90V series

| Part Number    | I hold (A) | I trip (A) | Time max (Sec) | I max (A) | V max (Vdc) | Pd max (W) | Resistance |           |
|----------------|------------|------------|----------------|-----------|-------------|------------|------------|-----------|
|                |            |            |                |           |             |            | R min (Ω)  | R1max (Ω) |
| RLD90P100R (U) | 0.10       | 0.20       | 10             | 40        | 90          | 0.38       | 2.50       | 7.50      |
| RLD90P150R (U) | 0.15       | 0.35       | 10             | 40        | 90          | 0.70       | 2.40       | 7.00      |
| RLD90P200R (U) | 0.20       | 0.45       | 10             | 40        | 90          | 0.80       | 1.50       | 4.50      |
| RLD90P250R (U) | 0.25       | 0.55       | 10             | 40        | 90          | 0.90       | 1.25       | 3.70      |
| RLD90P350R (U) | 0.35       | 0.75       | 10             | 40        | 90          | 1.30       | 0.90       | 2.50      |
| RLD90P550R (U) | 0.55       | 1.20       | 12             | 40        | 90          | 1.50       | 0.45       | 1.50      |
| RLD90P750R (U) | 0.75       | 1.60       | 13             | 40        | 90          | 1.70       | 0.30       | 1.20      |
| RLD90P900R (U) | 0.90       | 2.00       | 20             | 40        | 90          | 2.30       | 0.15       | 0.70      |



RLD90P100R ~ RLD90P350R  
 Lead Size : 24AWG  
 Ø 0.51mm



RLD90P550R ~ RLD90P900R  
 Lead Size : 20AWG  
 Ø 0.81mm

### Physical Dimensions (mm) 90V series

| Part Number    | A (Max) | B (Max) | C (Typ) | D (Min) | E (Max) | F (Typ) |
|----------------|---------|---------|---------|---------|---------|---------|
| RLD90P100R (U) | 7.4     | 12.7    | 5.1     | 7.6     | 3.6     | 1.4     |
| RLD90P150R (U) | 9.0     | 12.7    | 5.1     | 7.6     | 3.6     | 1.4     |
| RLD90P200R (U) | 9.0     | 12.7    | 5.1     | 7.6     | 3.6     | 1.4     |
| RLD90P250R (U) | 9.0     | 12.7    | 5.1     | 7.6     | 3.6     | 1.4     |
| RLD90P350R (U) | 9.0     | 12.7    | 5.1     | 7.6     | 3.6     | 1.4     |
| RLD90P550R (U) | 10.9    | 14.0    | 5.1     | 7.6     | 3.6     | 1.4     |
| RLD90P750R (U) | 11.9    | 15.5    | 5.1     | 7.6     | 3.6     | 1.4     |
| RLD90P900R (U) | 13.0    | 16.0    | 5.1     | 7.6     | 3.6     | 1.4     |

## Radial Leaded PTC Devices (120V)

Application : Wide variety of electronic equipment  
 Product Features : Low hold current, Solid state Radial-leaded product ideal for up to 120VDC/ 120VAC  
 Operation Current : 100mA~3.75A  
 Maximum Voltage : 20VDC/120VAC  
 Temperature Range : -40°C to 85°C

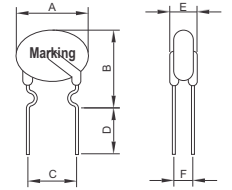


### Electrical Characteristics - 120V series

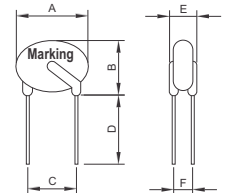
| Part Number | I hold (A) | I trip (A) | Time max (Sec) | I max (A) | V max (Vdc) | Pd max (W) | Resistance |           |
|-------------|------------|------------|----------------|-----------|-------------|------------|------------|-----------|
|             |            |            |                |           |             |            | R min (Ω)  | R1max (Ω) |
| RLD120P010X | 0.10       | 0.20       | 4.0            | 2.0       | 120         | 0.57       | 2.50       | 7.50      |
| RLD120P017X | 0.17       | 0.34       | 3.0            | 2.0       | 120         | 0.59       | 2.00       | 7.00      |
| RLD120P020X | 0.20       | 0.40       | 2.2            | 2.0       | 120         | 0.62       | 1.83       | 4.40      |
| RLD120P025X | 0.25       | 0.50       | 2.5            | 3.0       | 120         | 0.68       | 1.25       | 3.00      |
| RLD120P030X | 0.30       | 0.60       | 3.0            | 3.0       | 120         | 0.74       | 0.88       | 2.10      |
| RLD120P040X | 0.40       | 0.80       | 3.8            | 3.0       | 120         | 0.84       | 0.55       | 1.29      |
| RLD120P050X | 0.50       | 1.00       | 4.0            | 3.0       | 120         | 1.16       | 0.50       | 1.17      |
| RLD120P065X | 0.65       | 1.30       | 5.3            | 3.0       | 120         | 1.32       | 0.31       | 0.72      |
| RLD120P075X | 0.75       | 1.50       | 6.3            | 5.0       | 120         | 1.38       | 0.25       | 0.60      |
| RLD120P090X | 0.90       | 1.80       | 7.2            | 5.0       | 120         | 1.49       | 0.20       | 0.47      |
| RLD120P110X | 1.10       | 2.20       | 8.2            | 5.0       | 120         | 2.25       | 0.15       | 0.38      |
| RLD120P135X | 1.35       | 2.70       | 9.6            | 8.0       | 120         | 2.55       | 0.12       | 0.30      |
| RLD120P160X | 1.60       | 3.20       | 11.4           | 8.0       | 120         | 2.85       | 0.09       | 0.22      |
| RLD120P185X | 1.85       | 3.70       | 12.6           | 8.0       | 120         | 3.15       | 0.08       | 0.19      |
| RLD120P250X | 2.50       | 5.00       | 15.6           | 12.0      | 120         | 3.75       | 0.05       | 0.13      |
| RLD120P300X | 3.00       | 6.00       | 19.8           | 15.0      | 120         | 4.20       | 0.04       | 0.10      |
| RLD120P375X | 3.75       | 7.50       | 24.0           | 15.0      | 120         | 4.80       | 0.03       | 0.08      |

### Physical Dimensions (mm) 120V series

| Part Number | A (Max) | B (Max) | C (Typ) | D (Min) | E (Max) | F (Typ) |
|-------------|---------|---------|---------|---------|---------|---------|
| RLD120P010X | 7.9     | 12.7    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P017X | 7.9     | 12.7    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P020X | 7.9     | 12.2    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P025X | 7.9     | 12.7    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P030X | 7.9     | 13.0    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P040X | 8.2     | 14.2    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P050X | 9.2     | 14.9    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P065X | 9.7     | 14.9    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P075X | 10.6    | 15.5    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P090X | 11.9    | 15.9    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P110X | 13.3    | 18.3    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P135X | 15.5    | 20.6    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P160X | 17.5    | 22.5    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P185X | 19.9    | 24.9    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P250X | 22.5    | 27.5    | 10.2    | 7.6     | 5.0     | 3.0     |
| RLD120P300X | 25.5    | 30.0    | 10.2    | 7.6     | 5.0     | 3.0     |
| RLD120P375X | 29.5    | 34.0    | 10.2    | 7.6     | 5.0     | 3.0     |



RLD120P010X ~ RLD120P090X  
 Lead Size : 22AWG  
 Ø 0.65mm



RLD120P110X ~ RLD120P375X.  
 Lead Size : 20AWG  
 Ø 0.81mm

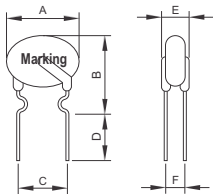
## Radial Leaded PTC Devices (90V)

Application : Cable /Telephone Electronics: Cable Power Passing Tap.  
 Product Features : Low hold current, Solid state, Radial-leaded product ideal for up to 90V  
 Operation Current : 100mA~900mA  
 Maximum Voltage : 90V  
 Temperature Range : -40°C to 85°C

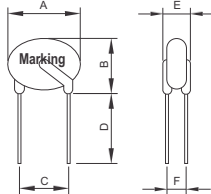


### Electrical Characteristics - 90V series

| Part Number    | I hold (A) | I trip (A) | Time max (Sec) | I max (A) | V max (Vdc) | Pd max (W) | Resistance |           |
|----------------|------------|------------|----------------|-----------|-------------|------------|------------|-----------|
|                |            |            |                |           |             |            | R min (Ω)  | R1max (Ω) |
| RLD90P100R (U) | 0.10       | 0.20       | 10             | 40        | 90          | 0.38       | 2.50       | 7.50      |
| RLD90P150R (U) | 0.15       | 0.35       | 10             | 40        | 90          | 0.70       | 2.40       | 7.00      |
| RLD90P200R (U) | 0.20       | 0.45       | 10             | 40        | 90          | 0.80       | 1.50       | 4.50      |
| RLD90P250R (U) | 0.25       | 0.55       | 10             | 40        | 90          | 0.90       | 1.25       | 3.70      |
| RLD90P350R (U) | 0.35       | 0.75       | 10             | 40        | 90          | 1.30       | 0.90       | 2.50      |
| RLD90P550R (U) | 0.55       | 1.20       | 12             | 40        | 90          | 1.50       | 0.45       | 1.50      |
| RLD90P750R (U) | 0.75       | 1.60       | 13             | 40        | 90          | 1.70       | 0.30       | 1.20      |
| RLD90P900R (U) | 0.90       | 2.00       | 20             | 40        | 90          | 2.30       | 0.15       | 0.70      |



RLD90P100R ~ RLD90P350R  
Lead Size : 24AWG  
Ø 0.51mm



RLD90P550R ~ RLD90P900R  
Lead Size : 20AWG  
Ø 0.81mm

### Physical Dimensions (mm) 90V series

| Part Number    | A (Max) | B (Max) | C (Typ) | D (Min) | E (Max) | F (Typ) |
|----------------|---------|---------|---------|---------|---------|---------|
| RLD90P100R (U) | 7.4     | 12.7    | 5.1     | 7.6     | 3.6     | 1.4     |
| RLD90P150R (U) | 9.0     | 12.7    | 5.1     | 7.6     | 3.6     | 1.4     |
| RLD90P200R (U) | 9.0     | 12.7    | 5.1     | 7.6     | 3.6     | 1.4     |
| RLD90P250R (U) | 9.0     | 12.7    | 5.1     | 7.6     | 3.6     | 1.4     |
| RLD90P350R (U) | 9.0     | 12.7    | 5.1     | 7.6     | 3.6     | 1.4     |
| RLD90P550R (U) | 10.9    | 14.0    | 5.1     | 7.6     | 3.6     | 1.4     |
| RLD90P750R (U) | 11.9    | 15.5    | 5.1     | 7.6     | 3.6     | 1.4     |
| RLD90P900R (U) | 13.0    | 16.0    | 5.1     | 7.6     | 3.6     | 1.4     |

## Radial Leaded PTC Devices (120V)

Application : Wide variety of electronic equipment  
 Product Features : Low hold current, Solid state Radial-leaded product ideal for up to 120VDC/ 120VAC  
 Operation Current : 100mA~3.75A  
 Maximum Voltage : 20VDC/120VAC  
 Temperature Range : -40°C to 85°C

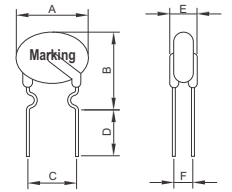


### Electrical Characteristics - 120V series

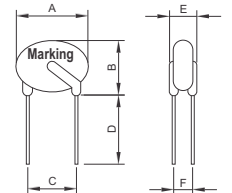
| Part Number | I hold (A) | I trip (A) | Time max (Sec) | I max (A) | V max (Vdc) | Pd max (W) | Resistance |           |
|-------------|------------|------------|----------------|-----------|-------------|------------|------------|-----------|
|             |            |            |                |           |             |            | R min (Ω)  | R1max (Ω) |
| RLD120P010X | 0.10       | 0.20       | 4.0            | 2.0       | 120         | 0.57       | 2.50       | 7.50      |
| RLD120P017X | 0.17       | 0.34       | 3.0            | 2.0       | 120         | 0.59       | 2.00       | 7.00      |
| RLD120P020X | 0.20       | 0.40       | 2.2            | 2.0       | 120         | 0.62       | 1.83       | 4.40      |
| RLD120P025X | 0.25       | 0.50       | 2.5            | 3.0       | 120         | 0.68       | 1.25       | 3.00      |
| RLD120P030X | 0.30       | 0.60       | 3.0            | 3.0       | 120         | 0.74       | 0.88       | 2.10      |
| RLD120P040X | 0.40       | 0.80       | 3.8            | 3.0       | 120         | 0.84       | 0.55       | 1.29      |
| RLD120P050X | 0.50       | 1.00       | 4.0            | 3.0       | 120         | 1.16       | 0.50       | 1.17      |
| RLD120P065X | 0.65       | 1.30       | 5.3            | 3.0       | 120         | 1.32       | 0.31       | 0.72      |
| RLD120P075X | 0.75       | 1.50       | 6.3            | 5.0       | 120         | 1.38       | 0.25       | 0.60      |
| RLD120P090X | 0.90       | 1.80       | 7.2            | 5.0       | 120         | 1.49       | 0.20       | 0.47      |
| RLD120P110X | 1.10       | 2.20       | 8.2            | 5.0       | 120         | 2.25       | 0.15       | 0.38      |
| RLD120P135X | 1.35       | 2.70       | 9.6            | 8.0       | 120         | 2.55       | 0.12       | 0.30      |
| RLD120P160X | 1.60       | 3.20       | 11.4           | 8.0       | 120         | 2.85       | 0.09       | 0.22      |
| RLD120P185X | 1.85       | 3.70       | 12.6           | 8.0       | 120         | 3.15       | 0.08       | 0.19      |
| RLD120P250X | 2.50       | 5.00       | 15.6           | 12.0      | 120         | 3.75       | 0.05       | 0.13      |
| RLD120P300X | 3.00       | 6.00       | 19.8           | 15.0      | 120         | 4.20       | 0.04       | 0.10      |
| RLD120P375X | 3.75       | 7.50       | 24.0           | 15.0      | 120         | 4.80       | 0.03       | 0.08      |

### Physical Dimensions (mm) 120V series

| Part Number | A (Max) | B (Max) | C (Typ) | D (Min) | E (Max) | F (Typ) |
|-------------|---------|---------|---------|---------|---------|---------|
| RLD120P010X | 7.9     | 12.7    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P017X | 7.9     | 12.7    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P020X | 7.9     | 12.2    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P025X | 7.9     | 12.7    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P030X | 7.9     | 13.0    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P040X | 8.2     | 14.2    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P050X | 9.2     | 14.9    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P065X | 9.7     | 14.9    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P075X | 10.6    | 15.5    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P090X | 11.9    | 15.9    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P110X | 13.3    | 18.3    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P135X | 15.5    | 20.6    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P160X | 17.5    | 22.5    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P185X | 19.9    | 24.9    | 5.1     | 7.6     | 5.0     | 3.0     |
| RLD120P250X | 22.5    | 27.5    | 10.2    | 7.6     | 5.0     | 3.0     |
| RLD120P300X | 25.5    | 30.0    | 10.2    | 7.6     | 5.0     | 3.0     |
| RLD120P375X | 29.5    | 34.0    | 10.2    | 7.6     | 5.0     | 3.0     |



RLD120P010X ~ RLD120P090X  
Lead Size : 22AWG  
Ø 0.65mm



RLD120P110X ~ RLD120P375X.  
Lead Size : 20AWG  
Ø 0.81mm

## Radial Leaded PTC Devices (250V)

|                   |                                                                                    |
|-------------------|------------------------------------------------------------------------------------|
| Application       | : Telecommunication and Data transmitting                                          |
| Product Features  | : Low hold current, Solid state Radial-leaded product ideal for upto 60V/250V/600V |
| Operation Current | : 0.08A ~ 0.18A                                                                    |
| Maximum Voltage   | : 60V/250V/600V                                                                    |
| Temperature Range | : -40°C to 85°C                                                                    |



### Electrical Characteristics - 250V series

| Part Number  | Hold Current | Trip Current | Max Current | V max | PD Typ | Max Time To Trip |        | Resistance Tol |      |       |
|--------------|--------------|--------------|-------------|-------|--------|------------------|--------|----------------|------|-------|
|              | IH,A         | IT,A         | IMAX,A      | (Vdc) | (W)    | (I)amps          | (T)sec | Rmin           | Rmax | R1max |
| RLD250P050X  | 0.05         | 0.10         | 3.0         | 250   | 1      | 0.25             | 3.0    | 14.0           | 33.0 | 43.0  |
| RLD250P080X  | 0.08         | 0.16         | 3.0         | 250   | 1      | 0.35             | 3.0    | 14.0           | 22.0 | 33.0  |
| RLD250P110X  | 0.11         | 0.22         | 3.0         | 250   | 1      | 1.0              | 0.75   | 5.0            | 9.0  | 16.0  |
| RLD250P120X  | 0.12         | 0.24         | 3.0         | 250   | 1      | 1.0              | 1.50   | 4.0            | 12.0 | 16.0  |
| RLD250P145X  | 0.145        | 0.29         | 3.0         | 250   | 1      | 1.0              | 2.50   | 3.0            | 10.0 | 20.0  |
| RLD250P180X  | 0.18         | 0.50         | 10.0        | 250   | 1      | 1.0              | 15.0   | 0.8            | 7.0  | 10.0  |
| RLD250P200X  | 0.20         | 0.58         | 10.0        | 250   | 1      | 1.0              | 20.0   | 3.0            | 6.0  | 9.0   |
| RLD250P400X  | 0.40         | 1.10         | 10.0        | 250   | 1      | 2.0              | 30.0   | 1.0            | 3.0  | 5.0   |
| RLD250P600X  | 0.6          | 1.20         | 10.0        | 250   | 1      | 3.0              | 31.0   | 0.6            | 2.0  | 3.5   |
| RLD250P800X  | 0.8          | 1.60         | 10.0        | 250   | 1      | 4.0              | 35.0   | 0.4            | 1.0  | 2.0   |
| RLD250P1000X | 1.0          | 2.0          | 10.0        | 250   | 1      | 5.0              | 40.0   | 0.50           | 0.75 | 1.5   |
| RLD250P2000X | 2.0          | 4.0          | 10.0        | 250   | 1      | 5.0              | 45.0   | 0.10           | 0.4  | 0.8   |
| RLD600P150X  | 0.15         | ---          | 3.0         | 600   | ---    | ---              | ---    | 6.0            | 22.0 | 22.0  |
| RLD600P160X  | 0.16         | ---          | 3.0         | 600   | ---    | ---              | ---    | 4.0            | 18.0 | 18.0  |

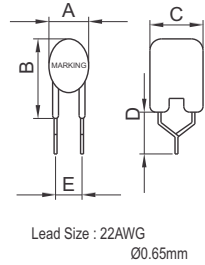


FIG 1

### Physical Dimensions (mm) 250V series

| Part Number  | A   |      | B   |      | C       | D   |     | E    |     | Fig |
|--------------|-----|------|-----|------|---------|-----|-----|------|-----|-----|
|              | Min | Max  | Min | Max  | Typical | Min | Max | Min  | Max | Min |
| RLD250P050X  | -   | 5.5  | -   | 8.0  | 5.0     | 4.7 | -   | 4.6  | -   | 1   |
| RLD250P080X  | -   | 5.8  | -   | 9.9  | 5.0     | 4.7 | -   | 4.6  | -   | 1   |
| RLD250P110X  | -   | 5.8  | -   | 9.9  | 5.0     | 4.7 | -   | 4.6  | -   | 2   |
| RLD250P120X  | -   | 6.5  | -   | 11.0 | 5.0     | 4.7 | -   | 4.6  | -   | 2   |
| RLD250P145X  | -   | 6.5  | -   | 11.0 | 5.0     | 4.7 | -   | 4.6  | -   | 2   |
| RLD250P180X  | -   | 10.4 | -   | 13.6 | 5.0     | 4.7 | -   | 4.6  | -   | 2   |
| RLD250P200X  | -   | 10.0 | -   | 12.5 | 5.0     | 4.7 | -   | 5.1  | -   | 2   |
| RLD250P400X  | -   | 10.2 | -   | 13.0 | 5.0     | 4.7 | -   | 5.1  | -   | 1   |
| RLD250P600X  | -   | 11.6 | -   | 14.0 | 5.0     | 4.7 | -   | 5.1  | -   | 1   |
| RLD250P800X  | -   | 14.0 | -   | 18.5 | 5.0     | 4.7 | -   | 5.1  | -   | 1   |
| RLD250P1000X | -   | 20.1 | -   | 22.6 | 5.0     | 4.7 | -   | 10.2 | -   | 1   |
| RLD250P2000X | -   | 22.5 | -   | 29.0 | 5.0     | 4.7 | -   | 10.2 | -   | 1   |
| RLD600P150X  | -   | 13.5 | -   | 12.6 | 5.0     | 4.7 | -   | 6.0  | -   | 2   |
| RLD600P160X  | -   | 16.0 | -   | 12.6 | 5.0     | 4.7 | -   | 6.0  | -   | 2   |

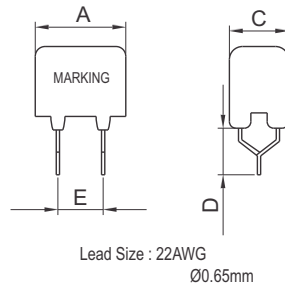


FIG 2

## Surface Mount PTC- PSMD1812 Series

|                   |                                                                                                                                 |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Application       | : All high-density boards                                                                                                       |
| Product Features  | : Small surface mount, Solid state, Faster time to trip than standard SMD devices<br>Lower resistance than standard SMD devices |
| Operation Current | : 140mA~2.0A                                                                                                                    |
| Maximum Voltage   | : 6V~60V                                                                                                                        |
| Temperature Range | : -40°C to 85°C                                                                                                                 |



### Electrical Characteristics (23°C)

| Part Number  | I hold (A) | I trip (A) | V max (Vdc) | I max (A) | Pd max (W) | Maximum Time To Trip |            | Resistance |           |
|--------------|------------|------------|-------------|-----------|------------|----------------------|------------|------------|-----------|
|              |            |            |             |           |            | Current (A)          | Time (Sec) | R min (Ω)  | R1max (Ω) |
| PSMD014-1812 | 0.14       | 0.30       | 60          | 10        | 0.8        | 8.0                  | <0.02      | 1.50       | 6.50      |
| PSMD020-1812 | 0.20       | 0.40       | 30          | 10        | 0.8        | 8.0                  | 0.02       | 0.80       | 5.00      |
| PSMD035-1812 | 0.35       | 0.70       | 16          | 40        | 0.8        | 8.0                  | 0.10       | 0.32       | 1.50      |
| PSMD050-1812 | 0.50       | 1.00       | 16          | 40        | 0.8        | 8.0                  | 0.15       | 0.15       | 1.00      |
| PSMD075-1812 | 0.75       | 1.50       | 16          | 40        | 0.8        | 8.0                  | 0.02       | 0.11       | 0.45      |
| PSMD110-1812 | 1.10       | 2.20       | 6           | 40        | 0.8        | 8.0                  | 0.30       | 0.04       | 0.21      |
| PSMD150-1812 | 1.50       | 3.00       | 6           | 40        | 0.8        | 8.0                  | 0.50       | 0.04       | 0.11      |
| PSMD160-1812 | 1.60       | 3.20       | 6           | 40        | 0.8        | 8.0                  | <0.5       | 0.03       | 0.10      |
| PSMD200-1812 | 2.00       | 3.50       | 8           | 40        | 0.8        | 8.0                  | 2          | 0.02       | 0.07      |

- IT = 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 rated current.(I max)  
I MAX = Maximum fault current device can withstand without damage at rated voltage (V max).  
Pd = Typical power dissipated-type amount of power dissipated by the device when in the tripped state in 23°C still air environment.  
RMIN = Minimum device resistance at 23°C prior to tripping.  
R1MAX = Maximum device resistance at 23°C measured 1 hour post trip.  
Termination pad characteristics  
Termination pad materials: Tin-plated copper

**Note:** Applicable For All Series

## Radial Leaded PTC Devices (250V)

|                   |                                                                                    |
|-------------------|------------------------------------------------------------------------------------|
| Application       | : Telecommunication and Data transmitting                                          |
| Product Features  | : Low hold current, Solid state Radial-leaded product ideal for upto 60V/250V/600V |
| Operation Current | : 0.08A ~ 0.18A                                                                    |
| Maximum Voltage   | : 60V/250V/600V                                                                    |
| Temperature Range | : -40°C to 85°C                                                                    |



### Electrical Characteristics - 250V series

| Part Number  | Hold Current | Trip Current | Max Current | V max | PD Typ | Max Time To Trip |        | Resistance Tol |      |       |
|--------------|--------------|--------------|-------------|-------|--------|------------------|--------|----------------|------|-------|
|              | IH,A         | IT,A         | IMAX,A      | (Vdc) | (W)    | (I)amps          | (T)sec | Rmin           | Rmax | R1max |
| RLD250P050X  | 0.05         | 0.10         | 3.0         | 250   | 1      | 0.25             | 3.0    | 14.0           | 33.0 | 43.0  |
| RLD250P080X  | 0.08         | 0.16         | 3.0         | 250   | 1      | 0.35             | 3.0    | 14.0           | 22.0 | 33.0  |
| RLD250P110X  | 0.11         | 0.22         | 3.0         | 250   | 1      | 1.0              | 0.75   | 5.0            | 9.0  | 16.0  |
| RLD250P120X  | 0.12         | 0.24         | 3.0         | 250   | 1      | 1.0              | 1.50   | 4.0            | 12.0 | 16.0  |
| RLD250P145X  | 0.145        | 0.29         | 3.0         | 250   | 1      | 1.0              | 2.50   | 3.0            | 10.0 | 20.0  |
| RLD250P180X  | 0.18         | 0.50         | 10.0        | 250   | 1      | 1.0              | 15.0   | 0.8            | 7.0  | 10.0  |
| RLD250P200X  | 0.20         | 0.58         | 10.0        | 250   | 1      | 1.0              | 20.0   | 3.0            | 6.0  | 9.0   |
| RLD250P400X  | 0.40         | 1.10         | 10.0        | 250   | 1      | 2.0              | 30.0   | 1.0            | 3.0  | 5.0   |
| RLD250P600X  | 0.6          | 1.20         | 10.0        | 250   | 1      | 3.0              | 31.0   | 0.6            | 2.0  | 3.5   |
| RLD250P800X  | 0.8          | 1.60         | 10.0        | 250   | 1      | 4.0              | 35.0   | 0.4            | 1.0  | 2.0   |
| RLD250P1000X | 1.0          | 2.0          | 10.0        | 250   | 1      | 5.0              | 40.0   | 0.50           | 0.75 | 1.5   |
| RLD250P2000X | 2.0          | 4.0          | 10.0        | 250   | 1      | 5.0              | 45.0   | 0.10           | 0.4  | 0.8   |
| RLD600P150X  | 0.15         | ---          | 3.0         | 600   | ---    | ---              | ---    | 6.0            | 22.0 | 22.0  |
| RLD600P160X  | 0.16         | ---          | 3.0         | 600   | ---    | ---              | ---    | 4.0            | 18.0 | 18.0  |

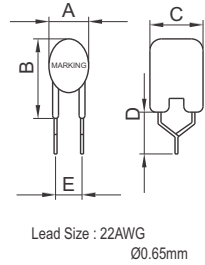


FIG 1

### Physical Dimensions (mm) 250V series

| Part Number  | A   |      | B   |      | C       | D   |     | E    |     | Fig |
|--------------|-----|------|-----|------|---------|-----|-----|------|-----|-----|
|              | Min | Max  | Min | Max  | Typical | Min | Max | Min  | Max | Min |
| RLD250P050X  | -   | 5.5  | -   | 8.0  | 5.0     | 4.7 | -   | 4.6  | -   | 1   |
| RLD250P080X  | -   | 5.8  | -   | 9.9  | 5.0     | 4.7 | -   | 4.6  | -   | 1   |
| RLD250P110X  | -   | 5.8  | -   | 9.9  | 5.0     | 4.7 | -   | 4.6  | -   | 2   |
| RLD250P120X  | -   | 6.5  | -   | 11.0 | 5.0     | 4.7 | -   | 4.6  | -   | 2   |
| RLD250P145X  | -   | 6.5  | -   | 11.0 | 5.0     | 4.7 | -   | 4.6  | -   | 2   |
| RLD250P180X  | -   | 10.4 | -   | 13.6 | 5.0     | 4.7 | -   | 4.6  | -   | 2   |
| RLD250P200X  | -   | 10.0 | -   | 12.5 | 5.0     | 4.7 | -   | 5.1  | -   | 2   |
| RLD250P400X  | -   | 10.2 | -   | 13.0 | 5.0     | 4.7 | -   | 5.1  | -   | 1   |
| RLD250P600X  | -   | 11.6 | -   | 14.0 | 5.0     | 4.7 | -   | 5.1  | -   | 1   |
| RLD250P800X  | -   | 14.0 | -   | 18.5 | 5.0     | 4.7 | -   | 5.1  | -   | 1   |
| RLD250P1000X | -   | 20.1 | -   | 22.6 | 5.0     | 4.7 | -   | 10.2 | -   | 1   |
| RLD250P2000X | -   | 22.5 | -   | 29.0 | 5.0     | 4.7 | -   | 10.2 | -   | 1   |
| RLD600P150X  | -   | 13.5 | -   | 12.6 | 5.0     | 4.7 | -   | 6.0  | -   | 2   |
| RLD600P160X  | -   | 16.0 | -   | 12.6 | 5.0     | 4.7 | -   | 6.0  | -   | 2   |

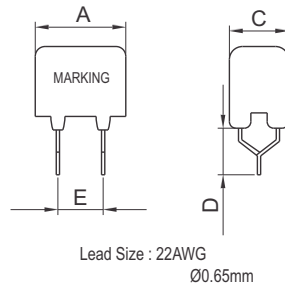


FIG 2

## Surface Mount PTC- PSMD1812 Series

|                   |                                                                                                                                 |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Application       | : All high-density boards                                                                                                       |
| Product Features  | : Small surface mount, Solid state, Faster time to trip than standard SMD devices<br>Lower resistance than standard SMD devices |
| Operation Current | : 140mA~2.0A                                                                                                                    |
| Maximum Voltage   | : 6V~60V                                                                                                                        |
| Temperature Range | : -40°C to 85°C                                                                                                                 |



### Electrical Characteristics (23°C)

| Part Number  | I hold (A) | I trip (A) | V max (Vdc) | I max (A) | Pd max (W) | Maximum Time To Trip |            | Resistance |           |
|--------------|------------|------------|-------------|-----------|------------|----------------------|------------|------------|-----------|
|              |            |            |             |           |            | Current (A)          | Time (Sec) | R min (Ω)  | R1max (Ω) |
| PSMD014-1812 | 0.14       | 0.30       | 60          | 10        | 0.8        | 8.0                  | <0.02      | 1.50       | 6.50      |
| PSMD020-1812 | 0.20       | 0.40       | 30          | 10        | 0.8        | 8.0                  | 0.02       | 0.80       | 5.00      |
| PSMD035-1812 | 0.35       | 0.70       | 16          | 40        | 0.8        | 8.0                  | 0.10       | 0.32       | 1.50      |
| PSMD050-1812 | 0.50       | 1.00       | 16          | 40        | 0.8        | 8.0                  | 0.15       | 0.15       | 1.00      |
| PSMD075-1812 | 0.75       | 1.50       | 16          | 40        | 0.8        | 8.0                  | 0.02       | 0.11       | 0.45      |
| PSMD110-1812 | 1.10       | 2.20       | 6           | 40        | 0.8        | 8.0                  | 0.30       | 0.04       | 0.21      |
| PSMD150-1812 | 1.50       | 3.00       | 6           | 40        | 0.8        | 8.0                  | 0.50       | 0.04       | 0.11      |
| PSMD160-1812 | 1.60       | 3.20       | 6           | 40        | 0.8        | 8.0                  | <0.5       | 0.03       | 0.10      |
| PSMD200-1812 | 2.00       | 3.50       | 8           | 40        | 0.8        | 8.0                  | 2          | 0.02       | 0.07      |

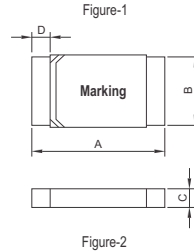
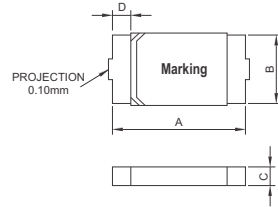
- IT = Trip current-minimum current at which the device will always trip at 23°C still air.  
V MAX = Maximum voltage device can withstand without damage at it rated current.(I max)  
I MAX = Maximum fault current device can withstand without damage at rated voltage (V max).  
Pd = Typical power dissipated-type amount of power dissipated by the device when in the tripped state in 23°C still air environment.  
RMIN = Minimum device resistance at 23°C prior to tripping.  
R1MAX = Maximum device resistance at 23°C measured 1 hour post trip.  
Termination pad characteristics  
Termination pad materials: Tin-plated copper

**Note:** Applicable For All Series

## Surface Mount PTC- PSMD1812 Series (cont.)

### Physical Dimensions (mm)

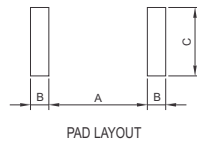
| Part Number  | Fig. | A    |      | B    |      | C    |      | D    |
|--------------|------|------|------|------|------|------|------|------|
|              |      | Min. | Max. | Min. | Max. | Min. | Max. | Min. |
| PSMD014-1812 | 1    | 4.37 | 4.73 | 3.07 | 3.41 | 0.60 | 0.90 | 0.3  |
| PSMD020-1812 | 1    | 4.37 | 4.73 | 3.07 | 3.41 | 0.60 | 0.90 | 0.3  |
| PSMD035-1812 | 1    | 4.37 | 4.73 | 3.07 | 3.41 | 0.40 | 0.70 | 0.3  |
| PSMD050-1812 | 1    | 4.37 | 4.73 | 3.07 | 3.41 | 0.35 | 0.65 | 0.3  |
| PSMD075-1812 | 1    | 4.37 | 4.73 | 3.07 | 3.41 | 0.35 | 0.65 | 0.3  |
| PSMD110-1812 | 1    | 4.37 | 4.73 | 3.07 | 3.41 | 0.25 | 0.55 | 0.3  |
| PSMD150-1812 | 2    | 4.37 | 4.73 | 3.07 | 3.55 | 0.25 | 0.55 | 0.3  |
| PSMD160-1812 | 2    | 4.37 | 4.73 | 3.07 | 3.41 | 0.25 | 0.90 | 0.3  |
| PSMD200-1812 | 2    | 4.37 | 4.73 | 3.07 | 3.41 | 0.50 | 0.90 | 0.3  |



### Pad Layouts- Solder Reflow and Rework Recommendations

The dimension in the table below provide the recommended pad layout for each PSMD1812 device

| Pad Dimensions (mm) |           |           |           |
|---------------------|-----------|-----------|-----------|
| Device              | A Nominal | B Nominal | C Nominal |
| PSMD014-1812        | 3.45      | 1.78      | 3.50      |
| PSMD020-1812        | 3.45      | 1.78      | 3.50      |
| PSMD035-1812        | 3.45      | 1.78      | 3.50      |
| PSMD050-1812        | 3.45      | 1.78      | 3.50      |
| PSMD075-1812        | 3.45      | 1.78      | 3.50      |
| PSMD110-1812        | 3.45      | 1.78      | 3.50      |
| PSMD150-1812        | 3.45      | 1.78      | 3.50      |
| PSMD160-1812        | 3.45      | 1.78      | 3.50      |
| PSMD200-1812        | 3.45      | 1.78      | 3.50      |



### Solder reflow

Due to "Lead Free" nature, up to 40 seconds Dwelling time for the soldering zone is strongly recommended.

1. Recommended reflow methods; IR, vapor phase oven, hot air oven.
2. The PSMD1812 Series are suitable for use with wave-solder application methods.
3. Recommended maximum paste thickness is 0.25mm.
4. Devices can be cleaned using standard industry methods and solvents.

**Note:** Applicable for all series

## Surface Mount PTC- PSMD1210 Series

Application : All high-density boards  
 Product Features : Small surface mount, Solid state  
 Faster time to trip than standard SMD devices  
 Lower resistance than standard SMD devices  
 Operation Current : 50mA~1.5A  
 Maximum Voltage : 6V~60V  
 Temperature Range : -40°C to 85°C

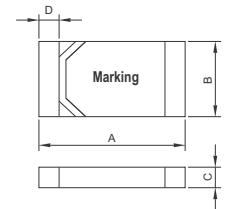


### Electrical Characteristics (23°C)

| Part Number  | I hold (A) | I trip (A) | V max (Vdc) | I max (A) | Pd max (W) | Maximum Time To Trip |            | Resistance |           |
|--------------|------------|------------|-------------|-----------|------------|----------------------|------------|------------|-----------|
|              |            |            |             |           |            | Current (A)          | Time (Sec) | R min (Ω)  | R1max (Ω) |
| PSMD005-1210 | 0.05       | 0.15       | 60          | 10        | 0.60       | 0.25                 | 1.50       | 3.60       | 50.00     |
| PSMD010-1210 | 0.10       | 0.25       | 60          | 10        | 0.60       | 0.50                 | 1.50       | 2.10       | 15.00     |
| PSMD020-1210 | 0.20       | 0.40       | 30          | 10        | 0.60       | 8.00                 | 0.02       | 0.80       | 5.00      |
| PSMD035-1210 | 0.35       | 0.70       | 20          | 40        | 0.60       | 8.00                 | 0.20       | 0.32       | 1.30      |
| PSMD050-1210 | 0.50       | 1.00       | 16          | 40        | 0.60       | 8.00                 | 0.10       | 0.25       | 0.90      |
| PSMD075-1210 | 0.75       | 1.50       | 8           | 40        | 0.60       | 8.00                 | 0.10       | 0.13       | 0.40      |
| PSMD110-1210 | 1.10       | 2.20       | 6           | 40        | 0.80       | 8.00                 | 0.30       | 0.07       | 0.21      |
| PSMD150-1210 | 1.50       | 3.00       | 6           | 40        | 0.80       | 8.00                 | 0.50       | 0.04       | 0.12      |

### Physical Dimensions (mm)

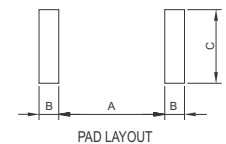
| Part Number  | A    |      | B    |      | C    |      | D    |
|--------------|------|------|------|------|------|------|------|
|              | Min. | Max. | Min. | Max. | Min. | Max. | Min. |
| PSMD005-1210 | 3.00 | 3.43 | 2.35 | 2.80 | 0.60 | 1.15 | 0.25 |
| PSMD010-1210 | 3.00 | 3.43 | 2.35 | 2.80 | 0.60 | 1.15 | 0.25 |
| PSMD020-1210 | 3.00 | 3.43 | 2.35 | 2.80 | 0.45 | 0.85 | 0.25 |
| PSMD035-1210 | 3.00 | 3.43 | 2.35 | 2.80 | 0.45 | 0.80 | 0.25 |
| PSMD050-1210 | 3.00 | 3.43 | 2.35 | 2.80 | 0.40 | 0.75 | 0.25 |
| PSMD075-1210 | 3.00 | 3.43 | 2.35 | 2.80 | 0.35 | 0.70 | 0.25 |
| PSMD110-1210 | 3.00 | 3.43 | 2.35 | 2.80 | 0.90 | 1.30 | 0.25 |
| PSMD150-1210 | 3.00 | 3.43 | 2.35 | 2.80 | 1.45 | 2.25 | 0.25 |



### Pad Layouts- Solder Reflow and Rework Recommendations

The dimension in the table below provide the recommended pad layout for each PSMD1210 device

| Pad Dimensions (mm) |           |           |           |
|---------------------|-----------|-----------|-----------|
| Device              | A Nominal | B Nominal | C Nominal |
| PSMD005-1210        | 2.00      | 1.00      | 2.80      |
| PSMD010-1210        | 2.00      | 1.00      | 2.80      |
| PSMD020-1210        | 2.00      | 1.00      | 2.80      |
| PSMD035-1210        | 2.00      | 1.00      | 2.80      |
| PSMD050-1210        | 2.00      | 1.00      | 2.80      |
| PSMD075-1210        | 2.00      | 1.00      | 2.80      |
| PSMD110-1210        | 2.00      | 1.00      | 2.80      |
| PSMD150-1210        | 2.00      | 1.00      | 2.80      |

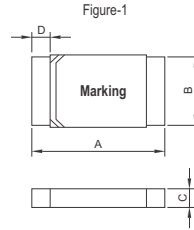
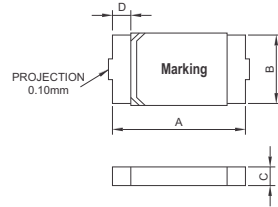




## Surface Mount PTC- PSMD1812 Series (cont.)

### Physical Dimensions (mm)

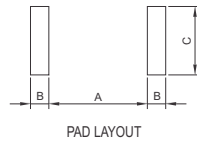
| Part Number  | Fig. | A    |      | B    |      | C    |      | D    |
|--------------|------|------|------|------|------|------|------|------|
|              |      | Min. | Max. | Min. | Max. | Min. | Max. | Min. |
| PSMD014-1812 | 1    | 4.37 | 4.73 | 3.07 | 3.41 | 0.60 | 0.90 | 0.3  |
| PSMD020-1812 | 1    | 4.37 | 4.73 | 3.07 | 3.41 | 0.60 | 0.90 | 0.3  |
| PSMD035-1812 | 1    | 4.37 | 4.73 | 3.07 | 3.41 | 0.40 | 0.70 | 0.3  |
| PSMD050-1812 | 1    | 4.37 | 4.73 | 3.07 | 3.41 | 0.35 | 0.65 | 0.3  |
| PSMD075-1812 | 1    | 4.37 | 4.73 | 3.07 | 3.41 | 0.35 | 0.65 | 0.3  |
| PSMD110-1812 | 1    | 4.37 | 4.73 | 3.07 | 3.41 | 0.25 | 0.55 | 0.3  |
| PSMD150-1812 | 2    | 4.37 | 4.73 | 3.07 | 3.55 | 0.25 | 0.55 | 0.3  |
| PSMD160-1812 | 2    | 4.37 | 4.73 | 3.07 | 3.41 | 0.25 | 0.90 | 0.3  |
| PSMD200-1812 | 2    | 4.37 | 4.73 | 3.07 | 3.41 | 0.50 | 0.90 | 0.3  |



### Pad Layouts- Solder Reflow and Rework Recommendations

The dimension in the table below provide the recommended pad layout for each PSMD1812 device

| Pad Dimensions (mm) |           |           |           |
|---------------------|-----------|-----------|-----------|
| Device              | A Nominal | B Nominal | C Nominal |
| PSMD014-1812        | 3.45      | 1.78      | 3.50      |
| PSMD020-1812        | 3.45      | 1.78      | 3.50      |
| PSMD035-1812        | 3.45      | 1.78      | 3.50      |
| PSMD050-1812        | 3.45      | 1.78      | 3.50      |
| PSMD075-1812        | 3.45      | 1.78      | 3.50      |
| PSMD110-1812        | 3.45      | 1.78      | 3.50      |
| PSMD150-1812        | 3.45      | 1.78      | 3.50      |
| PSMD160-1812        | 3.45      | 1.78      | 3.50      |
| PSMD200-1812        | 3.45      | 1.78      | 3.50      |



### Solder reflow

Due to "Lead Free" nature, up to 40 seconds Dwelling time for the soldering zone is strongly recommended.

1. Recommended reflow methods; IR, vapor phase oven, hot air oven.
2. The PSMD1812 Series are suitable for use with wave-solder application methods.
3. Recommended maximum paste thickness is 0.25mm.
4. Devices can be cleaned using standard industry methods and solvents.

**Note:** Applicable for all series

## Surface Mount PTC- PSMD1210 Series

Application : All high-density boards  
 Product Features : Small surface mount, Solid state  
 Faster time to trip than standard SMD devices  
 Lower resistance than standard SMD devices  
 Operation Current : 50mA~1.5A  
 Maximum Voltage : 6V~60V  
 Temperature Range : -40°C to 85°C

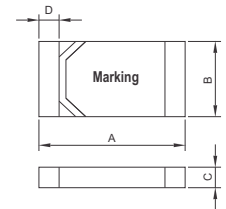


### Electrical Characteristics (23°C)

| Part Number  | I hold (A) | I trip (A) | V max (Vdc) | I max (A) | Pd max (W) | Maximum Time To Trip |            | Resistance |           |
|--------------|------------|------------|-------------|-----------|------------|----------------------|------------|------------|-----------|
|              |            |            |             |           |            | Current (A)          | Time (Sec) | R min (Ω)  | R1max (Ω) |
| PSMD005-1210 | 0.05       | 0.15       | 60          | 10        | 0.60       | 0.25                 | 1.50       | 3.60       | 50.00     |
| PSMD010-1210 | 0.10       | 0.25       | 60          | 10        | 0.60       | 0.50                 | 1.50       | 2.10       | 15.00     |
| PSMD020-1210 | 0.20       | 0.40       | 30          | 10        | 0.60       | 8.00                 | 0.02       | 0.80       | 5.00      |
| PSMD035-1210 | 0.35       | 0.70       | 20          | 40        | 0.60       | 8.00                 | 0.20       | 0.32       | 1.30      |
| PSMD050-1210 | 0.50       | 1.00       | 16          | 40        | 0.60       | 8.00                 | 0.10       | 0.25       | 0.90      |
| PSMD075-1210 | 0.75       | 1.50       | 8           | 40        | 0.60       | 8.00                 | 0.10       | 0.13       | 0.40      |
| PSMD110-1210 | 1.10       | 2.20       | 6           | 40        | 0.80       | 8.00                 | 0.30       | 0.07       | 0.21      |
| PSMD150-1210 | 1.50       | 3.00       | 6           | 40        | 0.80       | 8.00                 | 0.50       | 0.04       | 0.12      |

### Physical Dimensions (mm)

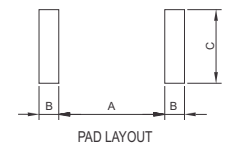
| Part Number  | A    |      | B    |      | C    |      | D    |
|--------------|------|------|------|------|------|------|------|
|              | Min. | Max. | Min. | Max. | Min. | Max. | Min. |
| PSMD005-1210 | 3.00 | 3.43 | 2.35 | 2.80 | 0.60 | 1.15 | 0.25 |
| PSMD010-1210 | 3.00 | 3.43 | 2.35 | 2.80 | 0.60 | 1.15 | 0.25 |
| PSMD020-1210 | 3.00 | 3.43 | 2.35 | 2.80 | 0.45 | 0.85 | 0.25 |
| PSMD035-1210 | 3.00 | 3.43 | 2.35 | 2.80 | 0.45 | 0.80 | 0.25 |
| PSMD050-1210 | 3.00 | 3.43 | 2.35 | 2.80 | 0.40 | 0.75 | 0.25 |
| PSMD075-1210 | 3.00 | 3.43 | 2.35 | 2.80 | 0.35 | 0.70 | 0.25 |
| PSMD110-1210 | 3.00 | 3.43 | 2.35 | 2.80 | 0.90 | 1.30 | 0.25 |
| PSMD150-1210 | 3.00 | 3.43 | 2.35 | 2.80 | 1.45 | 2.25 | 0.25 |



### Pad Layouts- Solder Reflow and Rework Recommendations

The dimension in the table below provide the recommended pad layout for each PSMD1210 device

| Pad Dimensions (mm) |           |           |           |
|---------------------|-----------|-----------|-----------|
| Device              | A Nominal | B Nominal | C Nominal |
| PSMD005-1210        | 2.00      | 1.00      | 2.80      |
| PSMD010-1210        | 2.00      | 1.00      | 2.80      |
| PSMD020-1210        | 2.00      | 1.00      | 2.80      |
| PSMD035-1210        | 2.00      | 1.00      | 2.80      |
| PSMD050-1210        | 2.00      | 1.00      | 2.80      |
| PSMD075-1210        | 2.00      | 1.00      | 2.80      |
| PSMD110-1210        | 2.00      | 1.00      | 2.80      |
| PSMD150-1210        | 2.00      | 1.00      | 2.80      |



## Surface Mount PTC- PSMD1206 Series

|                   |                                                                                                                                   |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Application       | : All high-density boards                                                                                                         |
| Product Features  | : Small surface mount, Solid state<br>Faster time to trip than standard SMD devices<br>Lower resistance than standard SMD devices |
| Operation Current | : 50mA~1.5A                                                                                                                       |
| Maximum Voltage   | : 6V~60V                                                                                                                          |
| Temperature Range | : -40°C to 85°C                                                                                                                   |

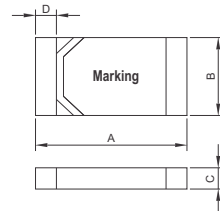


### Electrical Characteristics (23°C)

| Part Number  | I hold (A) | I trip (A) | V max (Vdc) | I max (A) | Pd max (W) | Maximum Time To Trip |            | Resistance |           |
|--------------|------------|------------|-------------|-----------|------------|----------------------|------------|------------|-----------|
|              |            |            |             |           |            | Current (A)          | Time (Sec) | R min (Ω)  | R1max (Ω) |
| PSMD005-1206 | 0.05       | 0.15       | 60          | 10        | 0.4        | 0.25                 | 1.50       | 3.60       | 50.00     |
| PSMD010-1206 | 0.10       | 0.25       | 60          | 10        | 0.4        | 0.50                 | 1.00       | 1.60       | 15.00     |
| PSMD020-1206 | 0.20       | 0.40       | 30          | 10        | 0.4        | 8.00                 | 0.05       | 0.60       | 2.50      |
| PSMD035-1206 | 0.35       | 0.75       | 16          | 40        | 0.4        | 8.00                 | 0.10       | 0.30       | 1.20      |
| PSMD050-1206 | 0.50       | 1.00       | 8           | 40        | 0.4        | 8.00                 | 0.10       | 0.15       | 0.70      |
| PSMD075-1206 | 0.75       | 1.50       | 6           | 40        | 0.6        | 8.00                 | 0.20       | 0.10       | 0.29      |
| PSMD100-1206 | 1.00       | 1.80       | 6           | 40        | 0.6        | 8.00                 | 0.30       | 0.055      | 0.21      |
| PSMD150-1206 | 1.50       | 3.00       | 6           | 40        | 0.8        | 8.00                 | 1.00       | 0.040      | 0.12      |

### Physical Dimensions (mm)

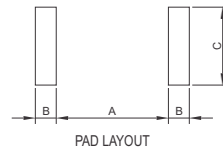
| Part Number  | A    |      | B    |      | C    |      | D    |
|--------------|------|------|------|------|------|------|------|
|              | Min. | Max. | Min. | Max. | Min. | Max. | Min. |
| PSMD005-1206 | 3.0  | 3.5  | 1.50 | 1.80 | 0.45 | 0.75 | 0.10 |
| PSMD010-1206 | 3.0  | 3.5  | 1.50 | 1.80 | 0.45 | 0.75 | 0.10 |
| PSMD020-1206 | 3.0  | 3.5  | 1.50 | 1.80 | 0.45 | 0.75 | 0.10 |
| PSMD035-1206 | 3.0  | 3.5  | 1.50 | 1.80 | 0.45 | 0.75 | 0.10 |
| PSMD050-1206 | 3.0  | 3.5  | 1.50 | 1.80 | 0.45 | 0.75 | 0.10 |
| PSMD075-1206 | 3.0  | 3.5  | 1.50 | 1.80 | 0.45 | 1.25 | 0.10 |
| PSMD100-1206 | 3.0  | 3.5  | 1.50 | 1.80 | 0.75 | 1.25 | 0.10 |
| PSMD150-1206 | 3.0  | 3.5  | 1.50 | 1.80 | 1.45 | 1.25 | 0.10 |



### Pad Layouts- Solder Reflow and Rework Recommendations

The dimension in the table below provide the recommended pad layout for each PSMD1206 device

| Pad Dimensions (mm) |           |           |           |
|---------------------|-----------|-----------|-----------|
| Device              | A Nominal | B Nominal | C Nominal |
| PSMD005-1206        | 2.00      | 1.00      | 1.90      |
| PSMD010-1206        | 2.00      | 1.00      | 1.90      |
| PSMD020-1206        | 2.00      | 1.00      | 1.90      |
| PSMD035-1206        | 2.00      | 1.00      | 1.90      |
| PSMD050-1206        | 2.00      | 1.00      | 1.90      |
| PSMD075-1206        | 2.00      | 1.00      | 1.90      |
| PSMD100-1206        | 2.00      | 1.00      | 1.90      |
| PSMD150-1206        | 2.00      | 1.00      | 1.90      |



## Guidelines for selection of Fuses

### Fast Acting or Slow Blow

When an equipment or a circuit (especially Power Supply circuit) is switched on, there may be “in-rush” current for a short duration depending upon the type of load. This “in-rush” current versus time should be measured and matched with the time-current characteristics of fuses to select Fast Acting or Slow Blow types. In general, the thumb rule given below can be applied :

- Select a SLOW BLOW fuse where protection against a sustained overload current greater than 50% of normal load is required and high “in-rush” or starting loads are present, as in reactive or motor circuits.
- Test selected fuse in the intended circuit under all normal circuit conditions that may include transient, “in-rush”, or any other non-steady-state currents.

### Fast Acting Fuses

These fuses are used for protection of circuits where little or no current surges are encountered or where high over current or high short-circuit must be interrupted quickly.

### Slow Blow Fuses

These fuses can withstand heavy “in-rush” currents. They are used in circuits having high reactive transients and circuits with large starting currents such as motor and lamp circuits.

### Nominal Current (In)

The nominal current rating of a fuse can be decided based on peak “in-rush” current, the duration of “in-rush” current and “steady-state” current in a circuit.

It is recommended that the “steady state” current through the fuse should not exceed 80% of current rating for Fast Acting fuses and 95% for Slow Blow fuses to prevent false operation.

Please note that the nominal current of fuse is the current, which is carried continuously without blowing of fuse.

Ex: 1.6A current rating fuse will carry 1.6A current continuously .

### Fusing Characteristics

The fuse time current characteristic should be compatible with the time-current characteristic of the load and the time current characteristic of the circuit components to be protected.

- Select a NORMAL BLOW fuse for resistive loads or other loads where no transients or surges are encountered. Where only protection against short circuit hazard is required, for maximum economy, a NORMAL BLOW fuse rather than a SLOW BLOW fuse can be used. Select the highest amperage rating possible to prevent normal switching surges, transient spikes, etc., from causing premature fuse failure.

### Voltage Rating

For general circuit protection, the voltage rating on the fuse should be equal to, or greater than, the circuit voltage. A fuse-link may operate at any voltage less than its rated voltage without affecting its fusing characteristics. At very low voltages, however, the fuse-link’s natural resistance should be taken into consideration.

### Breaking Capacity (Interrupting Rating)

The maximum prospective current which can occur under fault conditions should not exceed the rated breaking capacity of the fuse.

Fuses with ceramic body have higher breaking capacity (interrupting rating) than fuse with glass body.

### General Recommendations

Fuse holders which have contact resistance less than 10 mW between fuse holder termination and fuse end cap should be used to preserve the time current characteristics of fuses.

Allow for environmental influence on the fuse-link. The higher the ambient temperature, the hotter the fuse will operate and the shorter its life. Chart given below indicates the ambient temperature influence on the current carrying capacity. In general, curve ‘A’ applies to SLOW BLOW and curve ‘B’ to Fast Acting types.

### Material & Marking Data

End Caps: Brass, Ni Plated

(Silver Plated brass available on request)

Body: Glass/Ceramic

Marking: The Fuses are marked with

- Our logo/name
- Type - **F** for fast acting, **T** for time delay
- Breaking capacity - **L** for low breaking capacity, **H** for high breaking capacity
- Current rating in **A** or **mA**
- Voltage rating in **V**