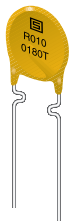


Radial Leaded Fuse, PTC, 60 VDC



16.0 - 60.0VDC · 0.1 - 11A



Description

- THT standard industry type
- Directly solderable on printed circuit boards

Standards

- UL 1434
- CSA C22.2 no. 0, TIL no. CA-3A

Approvals

- UL File Number: E172175
- CSA File Number: 702083

Applications

- Computer & Peripherals
- General electronics
- Automotive applications


References

[Packaging Details](#)

Weblinks

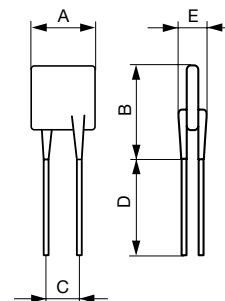
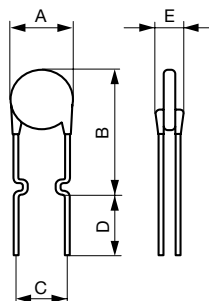
[pdf-datasheet](#), [html-datasheet](#), [General Product Information](#), [Approvals](#), [CE declaration of conformity](#), [RoHS](#), [CHINA-RoHS](#), [REACH](#), [e-Shop](#), [SCHURTER-Stock-Check](#), [Distributor-Stock-Check](#), [Detailed request for product](#)

Technical Data

| | |
|---------------------------|--|
| V max | 16.0 - 60.0VDC |
| I _{max} | 40 - 100A |
| I hold | 0.1 - 11A |
| Mounting | PCB, THT |
| Allowable Operation Temp. | -40°C to 85°C |
| Material: Terminals | see variants |
| Weight | 0.35 g |
| Storage Conditions | 0°C to 40°C, max. 70% r.h. |
| Product Marking |  , Type, I hold |

| | |
|------------------------------|---|
| Soldering Methods | Wave |
| Solderability | 235 °C / 2 sec |
| Resistance to Soldering Heat | 260 °C / 10 sec |
| Passing Aging | +85 °C, 1000 Hours -> +/- 5% Typical Resistance Change |
| Humidity Aging | +85 °C, 85% r.h., 1000 Hours -> +/- 5% Typical Resistance Change |
| Thermal Shock | MIL-STD-202, Method 107 (+125 °C to -55 °C, 10 Cycles) -> +/- 15% Typical Resistance Change |
| Vibration | MIL-STD-883C, Method 2007.1, Test Condition A |
| Resistance to Solvents | MIL-STD-202, Methode 215 |
| Flammability | UL 94V-0 |

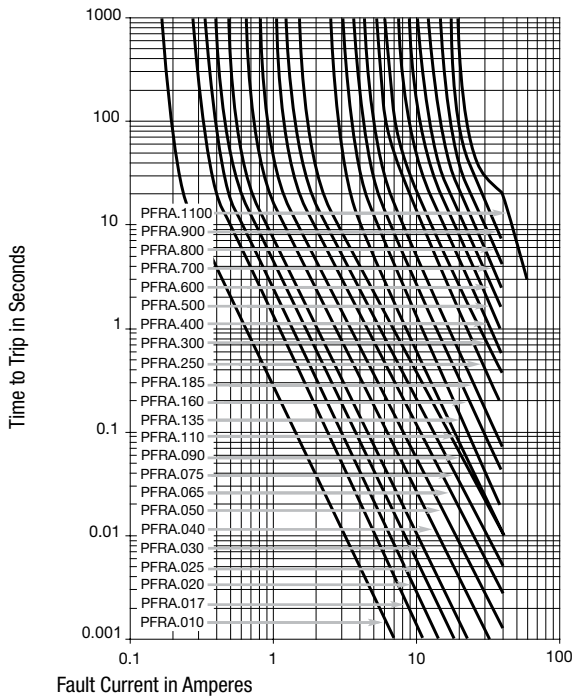
Dimension



PFRA.010 - PFRA.185

PFRA.250 - PFRA.1100

Time-Current-Curves



Dimensions

| A max [mm] | Insert depth | C min [mm] | C max [mm] | D min [mm] | E max [mm] | Ø Lead [mm] | Terminal | Order Number |
|------------|--------------|------------|------------|------------|------------|-------------|-----------------|--------------|
| 7.4 | 12.7 | 4.4 | 5.8 | 7.6 | 3.1 | 0.51 | Tin-Pated NiCu | PFRA.010 |
| 7.4 | 12.7 | 4.4 | 5.8 | 7.6 | 3.1 | 0.51 | Tin-Plated CuFe | PFRA.017 |
| 7.4 | 12.7 | 4.4 | 5.8 | 7.6 | 3.1 | 0.51 | Tin-Plated CuFe | PFRA.020 |
| 7.4 | 12.7 | 4.4 | 5.8 | 7.6 | 3.1 | 0.51 | Tin-Plated CuFe | PFRA.025 |
| 7.4 | 13.4 | 4.4 | 5.8 | 7.6 | 3.1 | 0.51 | Tin-Plated CuFe | PFRA.030 |
| 7.4 | 13.7 | 4.4 | 5.8 | 7.6 | 3.1 | 0.51 | Tin-Plated CuFe | PFRA.040 |
| 7.9 | 13.7 | 4.4 | 5.8 | 7.6 | 3.1 | 0.51 | see variants | PFRA.050 |
| 9.7 | 15.2 | 4.4 | 5.8 | 7.6 | 3.1 | 0.51 | see variants | PFRA.065 |
| 10.4 | 16 | 4.4 | 5.8 | 7.6 | 3.1 | 0.51 | see variants | PFRA.075 |
| 11.7 | 16.7 | 4.4 | 5.8 | 7.6 | 3.1 | 0.51 | see variants | PFRA.090 |
| 8.9 | 14 | 4.4 | 5.8 | 7.6 | 3 | 0.51 | see variants | PFRA.110 |
| 8.9 | 18.9 | 4.4 | 5.8 | 7.6 | 3 | 0.51 | see variants | PFRA.135 |
| 10.2 | 16.8 | 4.4 | 5.8 | 7.6 | 3 | 0.51 | see variants | PFRA.160 |
| 12 | 18.4 | 4.4 | 5.8 | 7.6 | 3 | 0.51 | see variants | PFRA.185 |
| 12 | 18.3 | 4.4 | 5.8 | 7.6 | 3 | 0.81 | see variants | PFRA.250 |
| 12 | 18.3 | 4.4 | 5.8 | 7.6 | 3 | 0.81 | see variants | PFRA.300 |
| 14.4 | 24.8 | 4.4 | 5.8 | 7.6 | 3 | 0.81 | see variants | PFRA.400 |
| 17.4 | 24.9 | 9.5 | 10.9 | 7.6 | 3 | 0.81 | see variants | PFRA.500 |
| 19.3 | 31.9 | 9.5 | 10.9 | 7.6 | 3 | 0.81 | see variants | PFRA.600 |
| 22.1 | 29.8 | 9.5 | 10.9 | 7.6 | 3 | 0.81 | see variants | PFRA.700 |
| 24.2 | 32.9 | 9.5 | 10.9 | 7.6 | 3 | 0.81 | see variants | PFRA.800 |
| 24.2 | 32.9 | 9.5 | 10.9 | 7.6 | 3 | 0.81 | see variants | PFRA.900 |
| 24.2 | 32.9 | 9.5 | 10.9 | 7.6 | 3 | 0.81 | see variants | PFRA.1100 |

Most Popular.

Availability for all products can be searched real-time: <http://www.schurter.com/en/Stock-Check/Stock-Check-SCHURTER>

Thermal Derating Chart Ihold [A]

| -40 °C | -20 °C | 0 °C | 23 °C | 40 °C | 50 °C | 60 °C | 70 °C | 85 °C | Order Number |
|--------|--------|------|-------|-------|-------|-------|-------|-------|--------------|
| 0.16 | 0.14 | 0.12 | 0.1 | 0.08 | 0.07 | 0.06 | 0.05 | 0.04 | PFRA.010 |
| 0.26 | 0.23 | 0.2 | 0.17 | 0.14 | 0.12 | 0.11 | 0.09 | 0.07 | PFRA.017 |
| 0.31 | 0.27 | 0.24 | 0.2 | 0.16 | 0.14 | 0.13 | 0.11 | 0.08 | PFRA.020 |
| 0.39 | 0.34 | 0.3 | 0.25 | 0.2 | 0.18 | 0.16 | 0.14 | 0.1 | PFRA.025 |
| 0.47 | 0.41 | 0.36 | 0.3 | 0.24 | 0.22 | 0.19 | 0.16 | 0.12 | PFRA.030 |
| 0.62 | 0.54 | 0.48 | 0.4 | 0.32 | 0.29 | 0.25 | 0.22 | 0.16 | PFRA.040 |
| 0.78 | 0.68 | 0.6 | 0.5 | 0.41 | 0.36 | 0.32 | 0.27 | 0.2 | PFRA.050 |
| 1.01 | 0.88 | 0.77 | 0.65 | 0.53 | 0.47 | 0.41 | 0.35 | 0.26 | PFRA.065 |
| 1.16 | 1.02 | 0.89 | 0.75 | 0.61 | 0.54 | 0.47 | 0.41 | 0.3 | PFRA.075 |
| 1.4 | 1.22 | 1.07 | 0.9 | 0.73 | 0.65 | 0.57 | 0.49 | 0.36 | PFRA.090 |
| 1.6 | 1.43 | 1.27 | 1.1 | 0.91 | 0.85 | 0.75 | 0.67 | 0.57 | PFRA.110 |
| 1.96 | 1.76 | 1.55 | 1.35 | 1.12 | 1.04 | 0.92 | 0.82 | 0.7 | PFRA.135 |
| 2.32 | 2.08 | 1.84 | 1.6 | 1.33 | 1.32 | 1.09 | 0.98 | 0.83 | PFRA.160 |
| 2.68 | 2.41 | 2.13 | 1.85 | 1.54 | 1.42 | 1.26 | 1.13 | 0.96 | PFRA.185 |
| 3.63 | 3.25 | 2.88 | 2.5 | 2.08 | 1.93 | 1.7 | 1.53 | 1.3 | PFRA.250 |
| 4.35 | 3.9 | 3.45 | 3 | 2.49 | 2.31 | 2.04 | 1.83 | 1.56 | PFRA.300 |
| 5.8 | 5.2 | 4.6 | 4 | 3.32 | 3.08 | 2.72 | 2.44 | 2.08 | PFRA.400 |
| 7.25 | 6.5 | 5.75 | 5 | 4.15 | 3.85 | 3.4 | 3.05 | 2.6 | PFRA.500 |
| 8.7 | 7.8 | 6.9 | 6 | 4.98 | 4.62 | 4.08 | 3.66 | 3.12 | PFRA.600 |
| 10.1 | 9.1 | 8.05 | 7 | 5.81 | 5.39 | 4.76 | 4.27 | 3.64 | PFRA.700 |
| 11.6 | 10.4 | 9.2 | 8 | 6.64 | 6.16 | 5.44 | 4.88 | 4.16 | PFRA.800 |
| 13 | 11.7 | 10.3 | 9 | 7.47 | 6.93 | 6.12 | 5.49 | 4.68 | PFRA.900 |
| 16.1 | 14.6 | 13.1 | 11 | 9.4 | 8.8 | 7.8 | 6.9 | 5.2 | PFRA.1100 |

Most Popular.

Availability for all products can be searched real-time:<http://www.schurter.com/en/Stock-Check/Stock-Check-SCHURTER>

Electrical Characteristics at 23 °C

| V max [VDC] | I max [A] | I hold [A] | I trip [A] | R initial min [Ω] | R initial max [Ω] | R 1hour max [Ω] | Max Time to trip [A] | Max Time to Trip [s] | Tripped Power Dissipation [W] | Order Number |
|-------------|-----------|------------|------------|-------------------|-------------------|-----------------|----------------------|----------------------|-------------------------------|--------------|
| 60.0 | 40 | 0.1 | 0.2 | 2.5 | 4.5 | 7.5 | 0.5 | 4 | 0.38 | PFRA.010 |
| 60.0 | 40 | 0.17 | 0.34 | 2 | 3.2 | 8 | 0.85 | 3 | 0.48 | PFRA.017 |
| 60.0 | 40 | 0.2 | 0.4 | 1.5 | 2.84 | 4.4 | 1 | 2.2 | 0.40 | PFRA.020 |
| 60.0 | 40 | 0.25 | 0.5 | 1 | 1.95 | 3 | 1.25 | 2.5 | 0.45 | PFRA.025 |
| 60.0 | 40 | 0.3 | 0.6 | 0.76 | 1.36 | 2.1 | 1.5 | 3 | 0.50 | PFRA.030 |
| 60.0 | 40 | 0.4 | 0.8 | 0.52 | 0.86 | 1.29 | 2 | 3.8 | 0.55 | PFRA.040 |
| 60.0 | 40 | 0.5 | 1 | 0.41 | 0.77 | 1.17 | 2.5 | 4 | 0.75 | PFRA.050 |
| 60.0 | 40 | 0.65 | 1.3 | 0.27 | 0.48 | 0.72 | 3.25 | 5.3 | 0.90 | PFRA.065 |
| 60.0 | 40 | 0.75 | 1.5 | 0.18 | 0.4 | 0.6 | 3.75 | 6.3 | 0.90 | PFRA.075 |
| 60.0 | 40 | 0.9 | 1.8 | 0.14 | 0.31 | 0.47 | 4.5 | 7.2 | 1.00 | PFRA.090 |
| 30.0 | 40 | 1.1 | 2.2 | 0.1 | 0.18 | 0.27 | 5.5 | 6.6 | 0.70 | PFRA.110 |
| 30.0 | 40 | 1.35 | 2.7 | 0.065 | 0.115 | 0.17 | 6.75 | 7.3 | 0.80 | PFRA.135 |
| 30.0 | 40 | 1.6 | 3.2 | 0.055 | 0.105 | 0.15 | 8 | 8 | 0.90 | PFRA.160 |
| 30.0 | 40 | 1.85 | 3.7 | 0.04 | 0.07 | 0.11 | 9.25 | 8.7 | 1.00 | PFRA.185 |
| 30.0 | 40 | 2.5 | 5 | 0.025 | 0.048 | 0.07 | 12.5 | 10.3 | 1.20 | PFRA.250 |
| 30.0 | 40 | 3 | 6 | 0.02 | 0.05 | 0.08 | 15 | 10.8 | 2.00 | PFRA.300 |
| 30.0 | 40 | 4 | 8 | 0.01 | 0.03 | 0.05 | 20 | 12.7 | 2.50 | PFRA.400 |
| 30.0 | 40 | 5 | 10 | 0.01 | 0.03 | 0.05 | 25 | 14.5 | 3.00 | PFRA.500 |
| 30.0 | 40 | 6 | 12 | 0.005 | 0.02 | 0.04 | 30 | 16 | 3.50 | PFRA.600 |
| 30.0 | 40 | 7 | 14 | 0.005 | 0.02 | 0.03 | 35 | 17.5 | 3.80 | PFRA.700 |
| 30.0 | 40 | 8 | 16 | 0.005 | 0.02 | 0.03 | 40 | 18.8 | 4.00 | PFRA.800 |
| 30.0 | 40 | 9 | 18 | 0.005 | 0.01 | 0.02 | 45 | 20 | 4.20 | PFRA.900 |
| 16.0 | 100 | 11 | 22 | 0.003 | 0.01 | 0.01 | 40 | 20 | 4.50 | PFRA.1100 |

Most Popular.

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| | | |
|-----------------------|-------------------------|------------------------------|
| Packaging Unit | PFRA.xxxx | Bulk (500 pcs.) |
| | PFRA.010.2 - PFRA.160.2 | Taped 34 cm Reel (3000 pcs.) |
| | PFRA.185.2 - PFRA.400.2 | Taped 34 cm Reel (1500 pcs.) |
