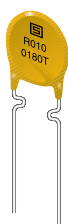


Radial Leaded Fuse, PTC, 60 VDC



16.0 - 60.0VDC · 0.1 - 11 A



Description

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

Standards

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

Approvals

- Approval Reference Type: PFRA
- UL File Number: E172175

Applications

- Computer & Peripherals
- General electronics
- Automotive applications


References

[Packaging Details](#)

Weblinks

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

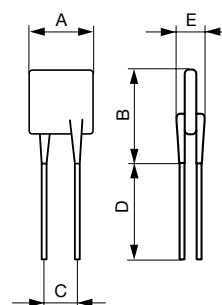
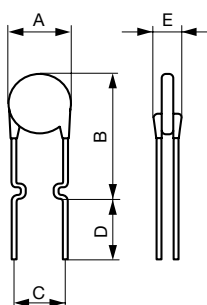
Technical Data

V max	16.0 - 60.0VDC
I _{max}	40 - 100A
I hold	0.1 - 11 A
Attachment	PCB,THT
Allowable Operation Temperature	-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 Soldering Profile
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

Detailed information on product approvals, code requirements, usage instructions and detailed test conditions can be looked up in [General Product Information](#)

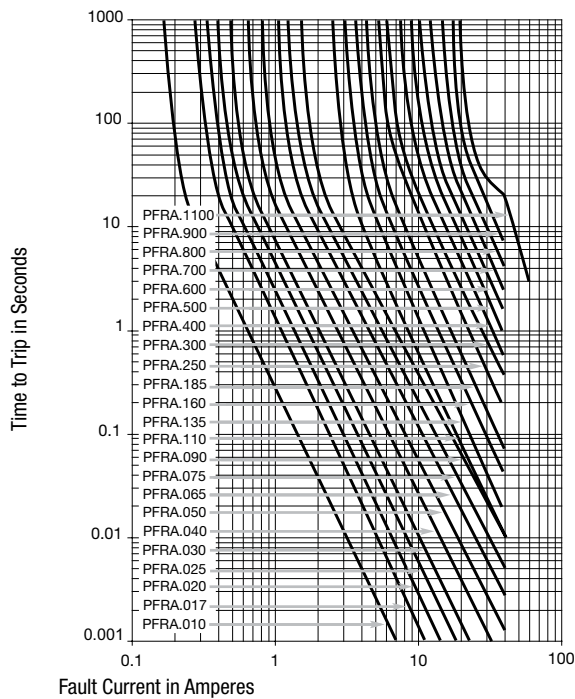
Dimension [mm]



PFRA.010 - PFRA.185

PFRA.250 - PFRA.1100

Time-Current-Curves



Letter heights and Fonts

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-Pated NiCu	PFRA.010.2	
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.017.2	
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.020.2	
7.4	12.7	4.4	5.8	7.6	3.1	0.51	Tin-Plated CuFe	PFRA.025	■
7.4	12.7	4.4	5.8	7.6	3.1	0.51	Tin-Plated CuFe	PFRA.025.2	
7.4	13.4	4.4	5.8	7.6	3.1	0.51	Tin-Plated CuFe	PFRA.030	■
7.4	13.4	4.4	5.8	7.6	3.1	0.51	Tin-Plated CuFe	PFRA.030.2	
7.4	13.7	4.4	5.8	7.6	3.1	0.51	Tin-Plated CuFe	PFRA.040	■
7.4	13.7	4.4	5.8	7.6	3.1	0.51	Tin-Plated CuFe	PFRA.040.2	
7.9	13.7	4.4	5.8	7.6	3.1	0.51	see variants	PFRA.050	■
7.9	13.7	4.4	5.8	7.6	3.1	0.51	see variants	PFRA.050.2	
9.7	15.2	4.4	5.8	7.6	3.1	0.51	see variants	PFRA.065	■
9.7	15.2	4.4	5.8	7.6	3.1	0.51	see variants	PFRA.065.2	
10.4	16	4.4	5.8	7.6	3.1	0.51	see variants	PFRA.075	■
10.4	16	4.4	5.8	7.6	3.1	0.51	see variants	PFRA.075.2	
11.7	16.7	4.4	5.8	7.6	3.1	0.51	see variants	PFRA.090	■
11.7	16.7	4.4	5.8	7.6	3.1	0.51	see variants	PFRA.090.2	
8.9	14	4.4	5.8	7.6	3	0.51	see variants	PFRA.110	■
8.9	14	4.4	5.8	7.6	3	0.51	see variants	PFRA.110.2	
8.9	18.9	4.4	5.8	7.6	3	0.51	see variants	PFRA.135	
8.9	18.9	4.4	5.8	7.6	3	0.51	see variants	PFRA.135.2	
10.2	16.8	4.4	5.8	7.6	3	0.51	see variants	PFRA.160	■
10.2	16.8	4.4	5.8	7.6	3	0.51	see variants	PFRA.160.2	
12	18.4	4.4	5.8	7.6	3	0.51	see variants	PFRA.185	■
12	18.4	4.4	5.8	7.6	3	0.51	see variants	PFRA.185.2	
12	18.3	4.4	5.8	7.6	3	0.81	see variants	PFRA.250	■

A max [mm]	Insert depth	C min [mm]	C max [mm]	D min [mm]	E max [mm]	Ø Lead [mm]	Terminal	Order Number
12	18.3	4.4	5.8	7.6	3	0.81	see variants	PFRA.250.2
12	18.3	4.4	5.8	7.6	3	0.81	see variants	PFRA.300
12	18.3	4.4	5.8	7.6	3	0.81	see variants	PFRA.300.2
14.4	24.8	4.4	5.8	7.6	3	0.81	see variants	PFRA.400
14.4	24.8	4.4	5.8	7.6	3	0.81	see variants	PFRA.400.2
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
0.16	0.14	0.12	0.1	0.08	0.07	0.06	0.05	0.04	PFRA.010.2
0.26	0.23	0.2	0.17	0.14	0.12	0.11	0.09	0.07	PFRA.017
0.26	0.23	0.2	0.17	0.14	0.12	0.11	0.09	0.07	PFRA.017.2
0.31	0.27	0.24	0.2	0.16	0.14	0.13	0.11	0.08	PFRA.020
0.31	0.27	0.24	0.2	0.16	0.14	0.13	0.11	0.08	PFRA.020.2
0.39	0.34	0.3	0.25	0.2	0.18	0.16	0.14	0.1	PFRA.025
0.39	0.34	0.3	0.25	0.2	0.18	0.16	0.14	0.1	PFRA.025.2
0.47	0.41	0.36	0.3	0.24	0.22	0.19	0.16	0.12	PFRA.030
0.47	0.41	0.36	0.3	0.24	0.22	0.19	0.16	0.12	PFRA.030.2
0.62	0.54	0.48	0.4	0.32	0.29	0.25	0.22	0.16	PFRA.040
0.62	0.54	0.48	0.4	0.32	0.29	0.25	0.22	0.16	PFRA.040.2
0.78	0.68	0.6	0.5	0.41	0.36	0.32	0.27	0.2	PFRA.050
0.78	0.68	0.6	0.5	0.41	0.36	0.32	0.27	0.2	PFRA.050.2
1.01	0.88	0.77	0.65	0.53	0.47	0.41	0.35	0.26	PFRA.065
1.01	0.88	0.77	0.65	0.53	0.47	0.41	0.35	0.26	PFRA.065.2
1.16	1.02	0.89	0.75	0.61	0.54	0.47	0.41	0.3	PFRA.075
1.16	1.02	0.89	0.75	0.61	0.54	0.47	0.41	0.3	PFRA.075.2
1.4	1.22	1.07	0.9	0.73	0.65	0.57	0.49	0.36	PFRA.090
1.4	1.22	1.07	0.9	0.73	0.65	0.57	0.49	0.36	PFRA.090.2
1.6	1.43	1.27	1.1	0.91	0.85	0.75	0.67	0.57	PFRA.110
1.6	1.43	1.27	-	0.91	0.85	0.75	0.67	0.57	PFRA.110.2
1.96	1.76	1.55	1.35	1.12	1.04	0.92	0.82	0.7	PFRA.135
1.96	1.76	1.55	1.35	1.12	1.04	0.92	0.82	0.7	PFRA.135.2
2.32	2.08	1.84	1.6	1.33	1.32	1.09	0.98	0.83	PFRA.160
2.32	2.08	1.84	1.6	1.33	1.32	1.09	0.98	0.83	PFRA.160.2
2.68	2.41	2.13	1.85	1.54	1.42	1.26	1.13	0.96	PFRA.185
2.68	2.41	2.13	1.85	1.54	1.42	1.26	1.13	0.96	PFRA.185.2
3.63	3.25	2.88	2.5	2.08	1.93	1.7	1.53	1.3	PFRA.250
3.63	3.25	2.88	2.5	2.08	1.93	1.7	1.53	1.3	PFRA.250.2
4.35	3.9	3.45	3	2.49	2.31	2.04	1.83	1.56	PFRA.300
4.35	3.9	3.45	3	2.49	2.31	2.04	1.83	1.56	PFRA.300.2
5.8	5.2	4.6	4	3.32	3.08	2.72	2.44	2.08	PFRA.400
5.8	5.2	4.6	4	3.32	3.08	2.72	2.44	2.08	PFRA.400.2
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

-40 °C	-20 °C	0 °C	23 °C	40 °C	50 °C	60 °C	70 °C	85 °C	Order Number
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	0.1	0.2	2.5	4.5	7.5	0.5	4	0.38	PFRA.010.2
60.0	40	0.17	0.34	2	3.2	8	0.85	3	0.48	PFRA.017
60.0	40	0.17	0.34	2	3.2	8	0.85	3	0.48	PFRA.017.2
60.0	40	0.2	0.4	1.5	2.84	4.4	1	2.2	0.40	PFRA.020
60.0	40	0.2	0.4	1.5	2.84	4.4	1	2.2	0.40	PFRA.020.2
60.0	40	0.25	0.5	1	1.95	3	1.25	2.5	0.45	PFRA.025
60.0	40	0.25	0.5	1	1.95	3	1.25	2.5	0.45	PFRA.025.2
60.0	40	0.3	0.6	0.76	1.36	2.1	1.5	3	0.50	PFRA.030
60.0	40	0.3	0.6	0.76	1.36	2.1	1.5	3	0.50	PFRA.030.2
60.0	40	0.4	0.8	0.52	0.86	1.29	2	3.8	0.55	PFRA.040
60.0	40	0.4	0.8	0.52	0.86	1.29	2	3.8	0.55	PFRA.040.2
60.0	40	0.5	1	0.41	0.77	1.17	2.5	4	0.75	PFRA.050
60.0	40	0.5	1	0.41	0.77	1.17	2.5	4	0.75	PFRA.050.2
60.0	40	0.65	1.3	0.27	0.48	0.72	3.25	5.3	0.90	PFRA.065
60.0	40	0.65	1.3	0.27	0.48	0.72	3.25	5.3	0.90	PFRA.065.2
60.0	40	0.75	1.5	0.18	0.4	0.6	3.75	6.3	0.90	PFRA.075
60.0	40	0.75	1.5	0.18	0.4	0.6	3.75	6.3	0.90	PFRA.075.2
60.0	40	0.9	1.8	0.14	0.31	0.47	4.5	7.2	1.00	PFRA.090
60.0	40	0.9	1.8	0.14	0.31	0.47	4.5	7.2	1.00	PFRA.090.2
30.0	40	1.1	2.2	0.1	0.18	0.27	5.5	6.6	0.70	PFRA.110
30.0	40	-	2.2	0.1	0.18	0.27	5.5	6.6	0.70	PFRA.110.2
30.0	40	1.35	2.7	0.065	0.115	0.17	6.75	7.3	0.80	PFRA.135
30.0	40	1.35	2.7	0.065	0.115	0.17	6.75	7.3	0.80	PFRA.135.2
30.0	40	1.6	3.2	0.055	0.105	0.15	8	8	0.90	PFRA.160
30.0	40	1.6	3.2	0.055	0.105	0.15	8	8	0.90	PFRA.160.2
30.0	40	1.85	3.7	0.04	0.07	0.11	9.25	8.7	1.00	PFRA.185
30.0	40	1.85	3.7	0.04	0.07	0.11	9.25	8.7	1.00	PFRA.185.2
30.0	40	2.5	5	0.025	0.048	0.07	12.5	10.3	1.20	PFRA.250
30.0	40	2.5	5	0.025	0.048	0.07	12.5	10.3	1.20	PFRA.250.2
30.0	40	3	6	0.02	0.05	0.08	15	10.8	2.00	PFRA.300
30.0	40	3	6	0.02	0.05	0.08	15	10.8	2.00	PFRA.300.2
30.0	40	4	8	0.01	0.03	0.05	20	12.7	2.50	PFRA.400
30.0	40	4	8	0.01	0.03	0.05	20	12.7	2.50	PFRA.400.2
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:

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

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.)
