PFRA



16.0 - 60.0 VDC · 0.05 - 11 A

Approvals
- UL File Number: E172175

Applications
- Computer & peripherals
- General electronics
- Automotive applications

References
General Product Information
Time-Current Curves see last page
Packaging Details

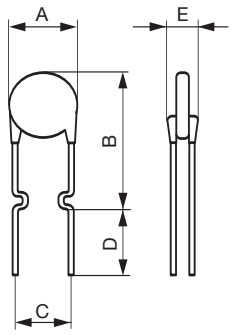
Weblinks
Approvals: http://www.schurter.com/approvals
RoHS: http://www.schurter.com/rohs

Technical Data

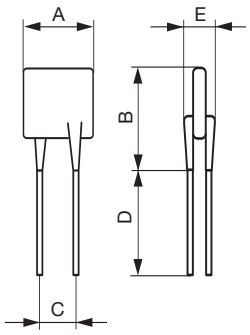
V max [VDC]	16.0 - 60.0 VDC
I max [A]	40 - 100 A
I hold [A]	0.05 - 11 A
Fastening	PCB,THT
Allowable operation temp.	-40 °C to 85 °C
Material: Terminals	see variants
Weight	60 g
Stock Conditions	0 °C to 40 °C, max. 70% r.h.
Product Marking	S, Type, Current Rating

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-202F, Method 107G (+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

Dimensions

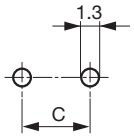


PFRA.010 - PFRA.185



PRFA.250 - PFRA.1100

PFRA



Drilling holes

Dimensions

Order Number	A max [mm]	B max [mm]	C min [mm]	C max [mm]	D min [mm]	E max [mm]	Ø Lead [mm]	Terminals
PFRA.010	7.4	12.7	4.4	5.8	7.6	3.1	0.51	Tin-Pated NiCu
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	12.7	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.040	7.4	13.7	4.4	5.8	7.6	3.1	0.51	Tin-Plated CuFe
PFRA.050	7.9	13.7	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.075	10.4	16	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.110	8.9	14	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.160	10.2	16.8	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.250	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.400	14.4	24.8	4.4	5.8	7.6	3	0.81	see variants
PFRA.500	17.4	24.9	9.5	10.9	7.6	3	0.81	see variants
PFRA.600	19.3	31.9	9.5	10.9	7.6	3	0.81	see variants
PFRA.700	22.1	29.8	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	24.2	32.9	9.5	10.9	7.6	3	0.81	see variants

PFRA

Thermal Derating Chart Ihold / Itrip [A]

Order Number	-40 °C	-20 °C	0 °C	23 °C	40 °C	50 °C	60 °C	70 °C	85 °C
PFRA.010	0.16 / 0.32	0.14 / 0.28	0.12 / 0.24	0.1 / 0.2	0.08 / 0.16	0.07 / 0.14	0.06 / 0.12	0.05 / 0.1	0.04 / 0.08
PFRA.017	0.26 / 0.52	0.23 / 0.46	0.2 / 0.4	0.17 / 0.34	0.14 / 0.28	0.12 / 0.24	0.11 / 0.22	0.09 / 0.18	0.07 / 0.14
PFRA.020	0.31 / 0.62	0.27 / 0.54	0.24 / 0.48	0.2 / 0.4	0.16 / 0.32	0.14 / 0.28	0.13 / 0.26	0.11 / 0.22	0.08 / 0.16
PFRA.025	0.39 / 0.78	0.34 / 0.68	0.3 / 0.6	0.25 / 0.5	0.2 / 0.4	0.18 / 0.36	0.16 / 0.32	0.14 / 0.28	0.1 / 0.2
PFRA.030	0.47 / 0.94	0.41 / 0.82	0.36 / 0.72	0.3 / 0.6	0.24 / 0.48	0.22 / 0.44	0.19 / 0.38	0.16 / 0.32	0.12 / 0.24
PFRA.040	0.62 / 1.24	0.54 / 1.08	0.48 / 0.96	0.4 / 0.8	0.32 / 0.64	0.29 / 0.58	0.25 / 0.5	0.22 / 0.44	0.16 / 0.32
PFRA.050	0.78 / 1.56	0.68 / 1.36	0.6 / 1.2	0.5 / 1	0.41 / 0.82	0.36 / 0.72	0.32 / 0.64	0.27 / 0.54	0.2 / 0.4
PFRA.065	1.01 / 2.02	0.88 / 1.76	0.77 / 1.54	0.65 / 1.3	0.53 / 1.06	0.47 / 0.94	0.41 / 0.82	0.35 / 0.7	0.26 / 0.52
PFRA.075	1.16 / 2.32	1.02 / 2.04	0.89 / 1.78	0.75 / 1.5	0.61 / 1.22	0.54 / 1.08	0.47 / 0.94	0.41 / 0.82	0.3 / 0.6
PFRA.090	1.4 / 2.8	1.22 / 2.44	1.07 / 2.14	0.9 / 1.8	0.73 / 1.46	0.65 / 1.3	0.57 / 1.14	0.49 / 0.98	0.36 / 0.72
PFRA.110	1.6 / 3.2	1.43 / 2.86	1.27 / 2.54	/ 2.2	0.91 / 1.82	0.85 / 1.7	0.75 / 1.5	0.67 / 1.34	0.57 / 1.14
PFRA.135	1.96 / 3.92	1.76 / 3.52	1.55 / 3.1	1.35 / 2.7	1.12 / 2.24	1.04 / 2.08	0.92 / 1.84	0.82 / 1.64	0.7 / 1.4
PFRA.160	2.32 / 4.64	2.08 / 4.16	1.84 / 3.68	1.6 / 3.2	1.33 / 2.66	1.32 / 2.46	1.09 / 2.18	0.98 / 1.96	0.83 / 1.66
PFRA.185	2.68 / 5.36	2.41 / 4.82	2.13 / 4.26	1.85 / 3.7	1.54 / 3.08	1.42 / 2.84	1.26 / 2.52	1.13 / 2.26	0.96 / 1.92
PFRA.250	3.63 / 7.26	3.25 / 6.5	2.88 / 5.76	2.5 / 5	2.08 / 4.16	1.93 / 3.86	1.7 / 3.4	1.53 / 3.06	1.3 / 2.6
PFRA.300	4.35 / 8.7	3.9 / 7.8	3.45 / 6.9	3 / 6	2.49 / 4.98	2.31 / 4.62	2.04 / 4.08	1.83 / 3.66	1.56 / 3.12
PFRA.400	5.8 / 11.6	5.2 / 10.4	4.6 / 9.2	4 / 8	3.32 / 6.64	3.08 / 6.16	2.72 / 5.44	2.44 / 4.88	2.08 / 4.16
PFRA.500	7.25 / 14.5	6.5 / 13	5.75 / 11.5	5 / 10	4.15 / 8.3	3.85 / 7.7	3.4 / 6.8	3.05 / 6.1	2.6 / 5.2
PFRA.600	8.7 / 17.4	7.8 / 15.6	6.9 / 13.8	6 / 12	4.98 / 9.96	4.62 / 9.24	4.08 / 8.16	3.66 / 7.32	3.12 / 6.24
PFRA.700	10.1 / 20.3	9.1 / 18.2	8.05 / 16.1	7 / 14	5.81 / 11.6	5.39 / 10.7	4.76 / 9.52	4.27 / 9.44	3.64 / 7.28
PFRA.800	11.6 / 23.2	10.4 / 20.8	9.2 / 18.4	8 / 16	6.64 / 13.2	6.16 / 12.3	5.44 / 10.8	4.88 / 9.76	4.16 / 8.32
PFRA.900	13 / 26.1	11.7 / 23.4	10.3 / 20.7	9 / 18	7.47 / 14.9	6.93 / 12.7	6.12 / 12.2	5.49 / 10.9	4.68 / 9.36
PFRA.1100	16.1 / 32	14.6 / 29.2	13.1 / 26.2	11 / 22	9.4 / 18.4	8.8 / 17.6	7.8 / 15.6	6.9 / 13.8	5.2 / 10.4

Electrical Characteristics

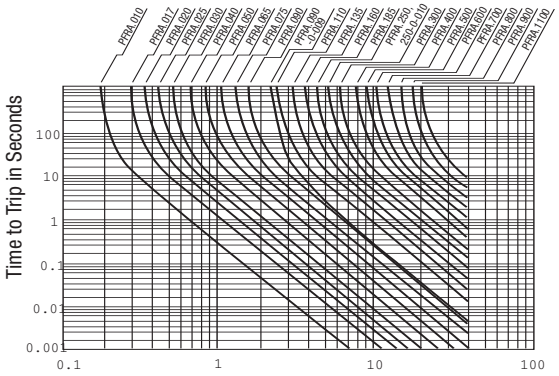
Order Number	V max [VDC]	I max [A]	I hold [A]	I trip [A]	R initial min [mΩ]	R initial max [mΩ]	R 1hour max [Ω]	Max Time to trip [A]	Max Time to Trip [s]	Tripped Power Dissipation [W]
PFRA.010	60.0	40	0.1	0.2	2.5	4.5	7.5	0.5	4	0.38
PFRA.017	60.0	40	0.17	0.34	2	3.2	8	0.85	3	0.48
PFRA.020	60.0	40	0.2	0.4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

PFRA

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.)

PFRA



Fault Current in Amperes