

PTC Resettable Fuse Radial Leaded Type

MPRV Series

MERITEK

FEATURE

- Operation Current: 0.10A to 3.75A
- Maximum Operating Voltage: 120V_{AC/DC}, 240V_{AC/DC}
- Maximum Interrupt Voltage: 135V_{AC/DC}, 265V_{AC/DC}
- Operation Temperature : -40°C to 85°C
- Wide variety of electronic applications
- UL/cUL safety approved: certification No: E223037
- TUV safety approved: certification No: R50223766



PART NUMBERING SYSTEM

MPRV 120V 090
(1) (2) (3)



No	Item	Digit	Description	Series Reference
(1)	Meritek Series	MPRV	Polymer Resettable Fuse Series	Radial Lead Type
(2)	Voltage Rating	120V	120V: 120V _{AC/DC}	240V: 240V _{AC/DC}
(3)	Current Rating	090	090: 900mA	110: 1.10A

ELECTRICAL CHARACTERISTICS AT 23°C

Item	Value	Characteristics
Hold Current	0.90A	I _H =Hold current-maximum current at which the device will not trip at 23°C still air.
Trip Current	1.80A	I _T =Trip current-minimum current at which the device will always trip at 23°C still air.
Rated Voltage	120V _{ACDC}	V _{MAX} =Maximum voltage device can withstand without damage at its rated current (I _{MAX}).
Max Current	5.0A	I _{MAX} = Maximum fault current device can withstand without damage at rated voltage (V _{MAX}).
Typical Power	1.80W	P _d =Typical power dissipated-type amount of power dissipated by the device when in the tripped state in 23°C still air environment.
Max Time to Trip	7.2Sec.	Device response time, at current of 5X Hold Current: 4.5A
Resistance	R _{MIN}	0.20 Ω
	R _{1MAX}	0.47 Ω
		R _{MIN} =Minimum device resistance at 23°C prior to tripping.
		R _{1MAX} =Maximum device resistance at 23°C measured 1 hour after tripping or reflow soldering of 260°C for 20 seconds.

* Termination pad characteristics

* Termination pad materials: Pure Tin

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ELECTRICAL CHARACTERISTICS AT 23°C

MPRV120V

Part Number	Hold Current	Trip Current	Max. Time to trip	Maximum Current	Rated Voltage	Max. Int. Voltage	Typical Power	Resistance Tolerance	
	I_H, A	I_T, A	at $5x I_H$	I_{MAX}, A	$V_{MAX}, V_{AC/DC}$	$V_{I-Max}, V_{AC/DC}$	P_d, W	R_{MIN}	$R1_{MAX}$
	I_H, A	I_T, A	at $5x I_H$	I_{MAX}, A	$V_{MAX}, V_{AC/DC}$	$V_{I-Max}, V_{AC/DC}$	P_d, W	ohms	ohms
MPRV120V010	0.10	0.20	10.0	2.0	120	135	0.84	3.00	7.50
MPRV120V017	0.17	0.34	10.0	2.0	120	135	0.84	2.00	7.00
MPRV120V020	0.20	0.40	9.0	2.0	120	135	1.08	1.83	4.40
MPRV120V025	0.25	0.50	7.5	3.0	120	135	1.08	1.25	3.00
MPRV120V030	0.30	0.60	8.5	3.0	120	135	1.44	0.88	2.10
MPRV120V040	0.40	0.80	6.5	3.0	120	135	1.44	0.55	1.29
MPRV120V050	0.50	1.00	6.0	3.0	120	135	1.56	0.50	1.17
MPRV120V065	0.65	1.30	5.7	5.0	120	135	1.68	0.31	0.72
MPRV120V070	0.75	1.50	6.3	5.0	120	135	1.80	0.25	0.60
MPRV120V075	0.75	1.50	15.0	7.5	120	135	2.64	0.25	0.69
MPRV120V090	0.90	1.80	7.2	5.0	120	135	1.80	0.20	0.47
MPRV120V100	1.00	2.00	15.0	10.0	120	135	2.64	0.18	0.47
MPRV120V110	1.10	2.20	8.2	8.0	120	135	2.28	0.15	0.38
MPRV120V125	1.25	2.50	20.0	12.5	120	135	2.88	0.11	0.33
MPRV120V130	1.35	2.70	9.6	10.0	120	135	2.64	0.12	0.30
MPRV120V135	1.35	2.70	20.0	13.5	120	135	3.12	0.11	0.30
MPRV120V160	1.60	3.20	11.4	12.0	120	135	3.12	0.09	0.22
MPRV120V185	1.85	3.70	12.6	12.0	120	135	3.36	0.08	0.19
MPRV120V200	2.00	4.20	36.0	20.0	120	135	4.32	0.08	0.21
MPRV120V250	2.50	5.00	15.6	15.0	120	135	4.44	0.05	0.13
MPRV120V300	3.00	6.00	19.8	17.0	120	135	4.56	0.04	0.10
MPRV120V375	3.75	7.50	24.0	20.0	120	135	4.80	0.03	0.08

MPRV240V

Part Number	Hold Current	Trip Current	Max. Time to trip	Maximum Current	Rated Voltage	Max. Int. Voltage	Typical Power	Resistance Tolerance	
	I_H, A	I_T, A	at $5x I_H$	I_{MAX}, A	$V_{MAX}, V_{AC/DC}$	$V_{I-Max}, V_{AC/DC}$	P_d, W	ohms	ohms
	I_H, A	I_T, A	at $5x I_H$	I_{MAX}, A	$V_{MAX}, V_{AC/DC}$	$V_{I-Max}, V_{AC/DC}$	P_d, W	ohms	ohms
MPRV240V005	0.05	0.12	15.0	1.0	240	265	0.70	18.50	65.00
MPRV240V008	0.08	0.19	15.0	1.2	240	265	0.80	7.40	26.00
MPRV240V012	0.12	0.30	15.0	1.2	240	265	1.00	3.00	12.00
MPRV240V016	0.16	0.37	15.0	2.0	240	265	1.40	2.50	7.80
MPRV240V025	0.25	0.56	18.5	3.5	240	265	1.50	1.30	3.80
MPRV240V033	0.33	0.74	18.5	4.5	240	265	1.70	0.83	2.60
MPRV240V040	0.40	0.90	24.0	5.5	240	265	2.00	0.60	1.90
MPRV240V055	0.55	1.25	26.0	7.0	240	265	3.40	0.45	1.45
MPRV240V075	0.75	1.50	18.0	7.5	240	265	2.60	0.32	0.84
MPRV240V100	1.00	2.00	21.0	10.0	240	265	2.90	0.22	0.58
MPRV240V125	1.25	2.50	23.0	12.5	240	265	3.30	0.17	0.44
MPRV240V150	1.50	3.00	23.0	15.0	240	265	3.70	0.12	0.32
MPRV240V200	2.00	4.00	28.0	20.0	240	265	4.50	0.09	0.22

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DIMENSIONS

MPRV120V

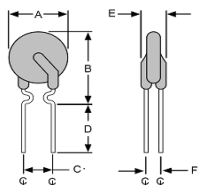


Figure 1
Lead Size: 24AWG
Φ 0.51 mm Diameter

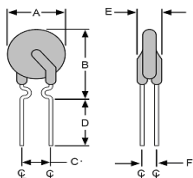


Figure 2
Lead Size: 22AWG
Φ 0.65 mm Diameter

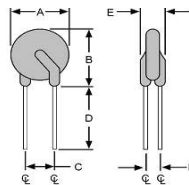


Figure 3
Lead Size: 20AWG
Φ 0.81 mm Diameter

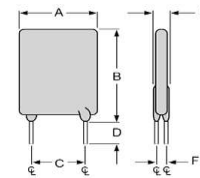


Figure 4
Lead Size: 20AWG
Φ 0.81 mm Diameter

Part Number	Figure	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
		Maximum	Maximum	Typical	Minimum	Maximum	Typical
MPRV120V010	1	7.9	13.0	5.1	7.6	3.8	2.2
MPRV120V017	1	7.9	13.0	5.1	7.6	3.8	2.2
MPRV120V020	2	7.9	13.0	5.1	7.6	3.8	2.2
MPRV120V025	2	7.9	13.0	5.1	7.6	3.8	2.2
MPRV120V030	2	7.9	13.0	5.1	7.6	3.8	2.2
MPRV120V040	2	8.2	14.2	5.1	7.6	3.8	2.2
MPRV120V050	2	9.2	14.9	5.1	7.6	3.8	2.2
MPRV120V065	2	9.7	14.9	5.1	7.6	3.8	2.2
MPRV120V070	2	10.6	15.5	5.1	7.6	3.8	2.2
MPRV120V075	4	10.9	17.0	5.1	7.6	4.1	2.2
MPRV120V090	2	11.9	15.9	5.1	7.6	3.8	2.2
MPRV120V100	4	11.5	20.1	5.1	7.6	4.1	2.2
MPRV120V110	3	13.3	18.3	5.1	7.6	4.1	2.2
MPRV120V125	4	14.0	21.7	5.1	7.6	4.1	2.2
MPRV120V130	3	15.5	20.6	5.1	7.6	4.1	2.2
MPRV120V135	4	16.3	21.7	5.1	7.6	4.1	2.2
MPRV120V160	3	17.5	22.5	5.1	7.6	4.1	2.2
MPRV120V185	3	19.9	24.9	5.1	7.6	4.1	2.2
MPRV120V200	4	23.5	27.9	10.2	7.6	4.1	2.2
MPRV120V250	3	22.5	27.5	10.2	7.6	4.1	2.2
MPRV120V300	3	25.5	30.0	10.2	7.6	4.1	2.2
MPRV120V375	3	29.5	34.0	10.2	7.6	4.1	2.2

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DIMENSIONS (CONTINUED)

MPRV240V

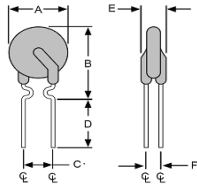


Figure 1
Lead Size: 24AWG
Φ 0.51 mm Diameter

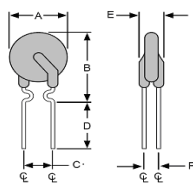


Figure 2
Lead Size: 22AWG
Φ 0.65 mm Diameter

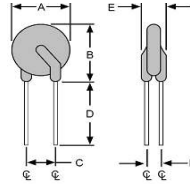


Figure 3
Lead Size: 20AWG
Φ 0.81 mm Diameter

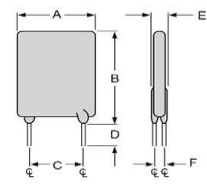


Figure 4
Lead Size: 20AWG
Φ 0.81 mm Diameter

Part Number	Figure	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
		Maximum	Maximum	Typical	Minimum	Maximum	Typical
MPRV240V005	1	8.3	10.7	5.1	7.6	3.8	1.6
MPRV240V008	1	8.3	10.7	5.1	7.6	3.8	1.6
MPRV240V012	1	8.3	10.7	5.1	7.6	3.8	1.6
MPRV240V016	1	9.9	12.5	5.1	7.6	3.8	1.6
MPRV240V025	2	9.6	17.4	5.1	7.6	3.8	1.8
MPRV240V033	2	11.4	16.5	5.1	7.6	3.8	1.8
MPRV240V040	2	11.5	19.5	5.1	7.6	3.8	1.8
MPRV240V055	3	14.0	21.7	5.1	7.6	4.1	1.9
MPRV240V075	3	11.5	23.4	5.1	7.6	4.8	1.9
MPRV240V100	4	18.7	24.4	10.2	7.6	5.1	1.9
MPRV240V125	4	21.2	27.4	10.2	7.6	5.3	1.9
MPRV240V150	4	23.4	30.9	10.2	7.6	5.3	1.9
MPRV240V200	3	24.9	33.8	10.2	7.6	6.1	1.9

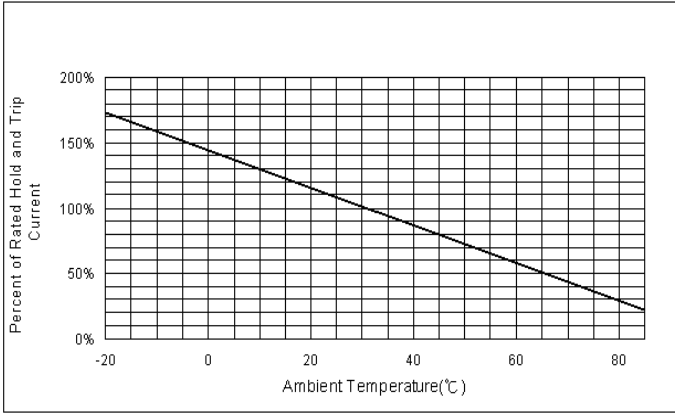
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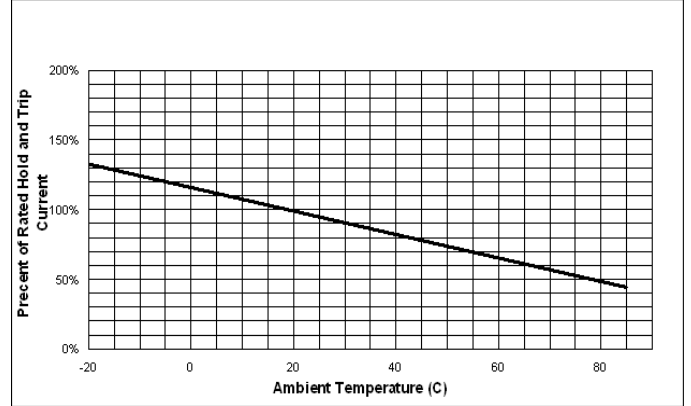
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THERMAL DERATING CURVE

MPRV120V



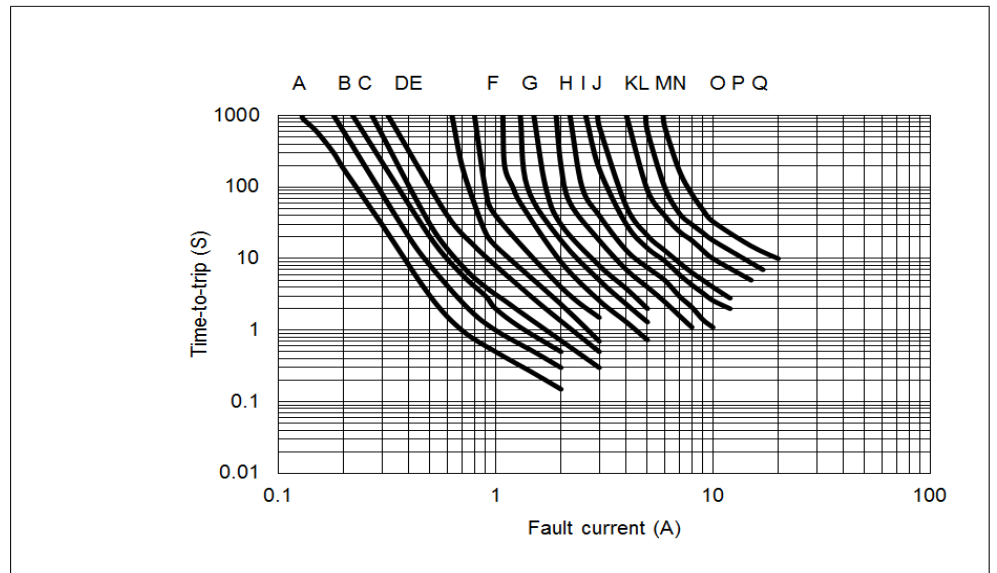
MPRV240V



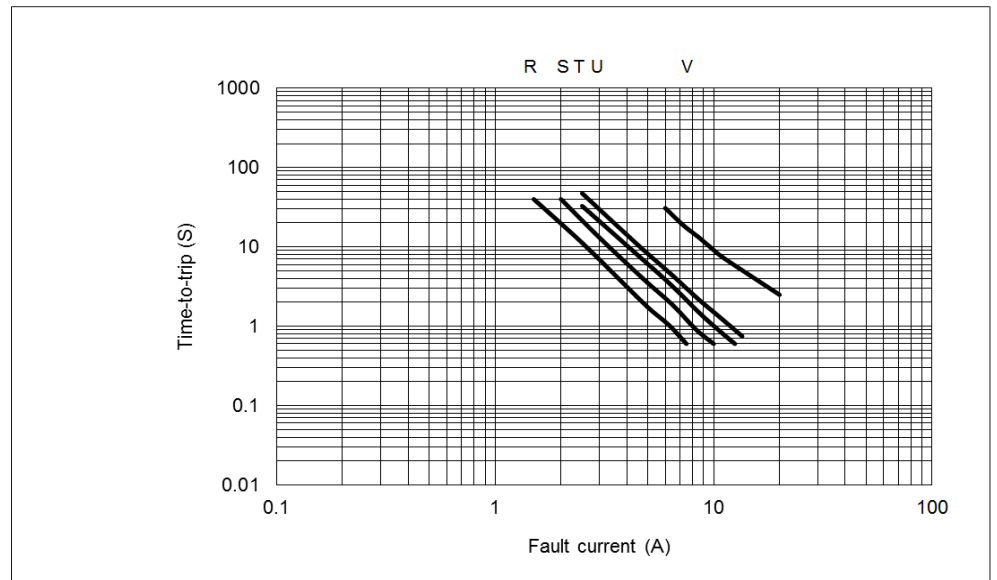
TYPICAL TIME-TO-TRIP AT 23°C

MPRV120V

- A = MPRV120V010
- B = MPRV120V017
- C = MPRV120V020
- D = MPRV120V025
- E = MPRV120V030
- F = MPRV120V040
- G = MPRV120V050
- H = MPRV120V065
- I = MPRV120V070
- J = MPRV120V075
- K = MPRV120V090
- L = MPRV120V100
- M = MPRV120V110
- N = MPRV120V125
- O = MPRV120V130
- P = MPRV120V135
- Q = MPRV120V160



- R = MPRV120V185
- S = MPRV120V200
- T = MPRV120V250
- U = MPRV120V300
- V = MPRV120V375



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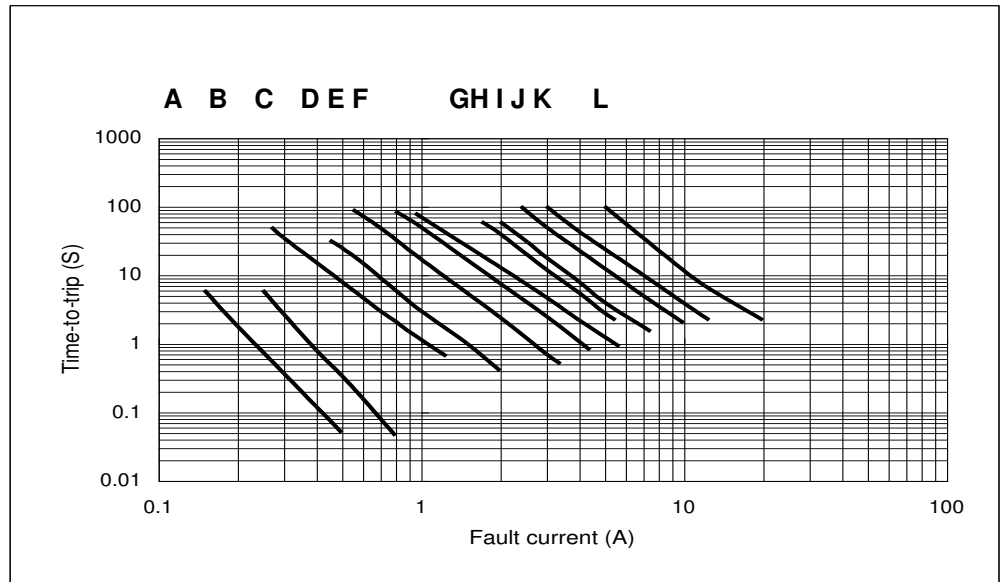
MPRV Series

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TYPICAL TIME-TO-TRIP AT 23°C (CONTINUED)

MPRV240V

A = MPRV240V005
B = MPRV240V008
C = MPRV240V012
D = MPRV240V016
E = MPRV240V025
F = MPRV240V033
G = MPRV240V040
H = MPRV240V055
I = MPRV240V075
J = MPRV240V100
K = MPRV240V125
L = MPRV240V200



WARNING

- Operation beyond the specified maximum ratings or improper use may result in damage and possible electrical arcing and/or flame.
- PPTC device are intended for occasional overcurrent protection. Application for repeated overcurrent condition and/or prolonged trip is not anticipated.
- Avoid contact of PPTC device with chemical solvent. Prolonged contact will damage the device performance

*Specification subject to change without notice.