

**FEATURES**

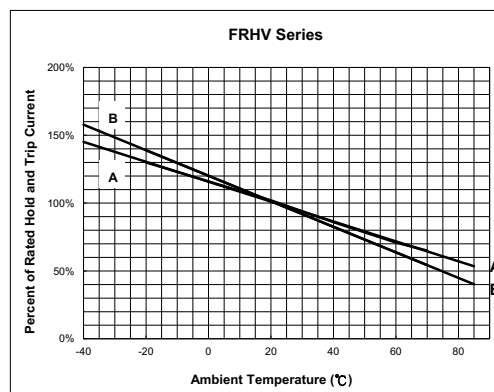
- Applications : IEEE 1394 Fire Wire, Computers & Consumer electronics
- Product Features : Fast trip time, Lower Trip-to-hold Ratio
- Operation Current : 0.5A ~ 2.50A
- Maximum Voltage : 36Vdc
- Temperature Range : -40°C to 85°C

**AGENCY RECOGNITION**

Made for RFE by UL shop Fuzetec

- UL (E211981)
- C-UL (E211981)
- TÜV (R50004084)

**THERMAL DERATING CURVE**



A= FRH180-250XF  
B= All other FRHV devices

**ELECTRICAL CHARACTERISTICS (23°C)**

Part Number	Hold Current I <sub>H</sub> , A	Trip Current I <sub>T</sub> , A	Max. Time to Trip		Maximum Current I <sub>MAX</sub> , A	Max. Oper. Voltage V <sub>MAX</sub> , Vdc	Max. Int. Voltage V <sub>I-MAX</sub> , Vac	Typical Power Pd, W	Resistance	
			Current A	Time Sec.					R min Ohms	R1 max Ohms
FRH080-250VF	0.08	0.16	0.35	4.0	3.0	100	250	1.0	14.00	33.00
FRH110-250VF	0.11	0.22	1.00	2.0	3.0	100	250	1.0	5.00	16.00
FRH120-250VF	0.12	0.24	1.00	2.0	3.0	100	250	1.0	4.00	16.00
FRH145-250VF	0.15	0.29	1.00	2.5	3.0	100	250	1.0	3.00	12.00
FRH180-250XF	0.18	0.65	3.00	2.0	10.0	100	250	1.0	0.80	4.00
FRH150-600MF	0.15	0.30	1.00	4.0	3.0	250	600	1.0	6.00	17.00
FRH160-600MF	0.16	0.32	1.00	7.0	3.0	250	600	1.0	4.00	16.00
FRH160-600VF	0.16	0.32	1.00	7.0	3.0	250	600	1.0	4.00	18.00
FRH200-600VF	0.20	0.40	1.00	12.0	3.0	250	600	1.0	4.00	13.50
FRH250-600VF	0.25	0.85	3.00	1.0	3.0	250	600	1.0	1.00	7.00
FRH400-600F	0.40	1.00	3.00	4.0	3.0	60	600	1.0	0.95	1.90

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-maximum 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.  
 I<sub>MAX</sub>=Maximum fault current device can withstand without damage at rated voltage (V<sub>MAX</sub>).  
 Pd=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.  
 R1<sub>MAX</sub>=Maximum device resistance at 23°C, 1 hour after tripping.

Physical specifications:

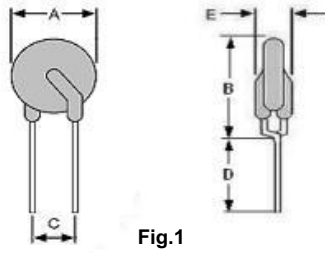
- Lead material: Tin plated copper, 24 AWG.
- Soldering characteristics: MIL-STD-202, Method 208E.
- Insulating coating: Flame retardant epoxy, meet UL-94V-0 requirement.

\* Note: All FRHV products are designed to assist equipment to pass ITU, UI1950 or Gr1089 specification.  
 \* FRH150-600MF, FRH160-600VF meet UL497A Overvoltage and Endurance Conditioning requirements for Thermistor type components.

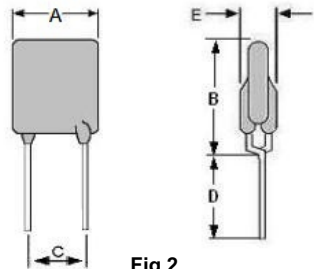
**CAUTION : FRHV devices are not intended for continuous use of Line Voltage such as 120Vac ~ 600Vac and**

**NOTE: All Specifications subject to change without notice.**

**DIMENSIONS (mm)**



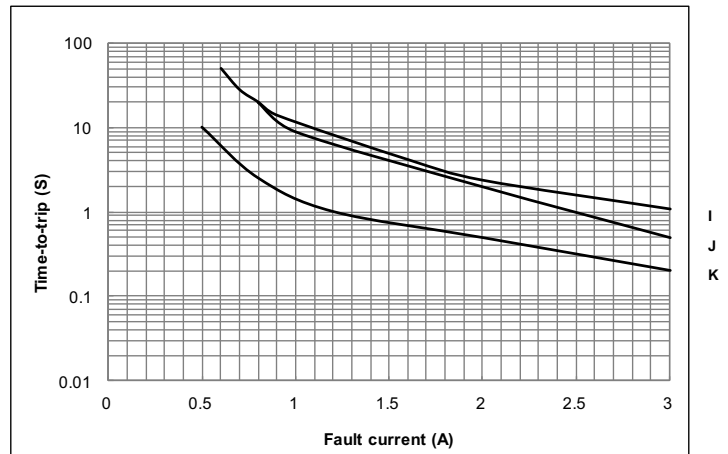
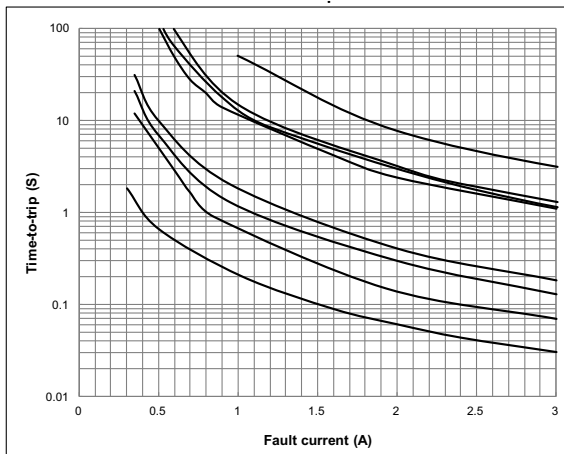
**Fig.1**  
Lead Size :22AWG,  
Φ 0.65 mm Diameter



**Fig.2**  
Lead Size : 22AWG,  
Φ 0.65 mm Diameter

Part Number	Fig.	A	B	C	D	E
		Maximum	Maximum	Typical	Minimum	Maximum
FRH080-250VF	1	5.8	9.6	5.0	4.7	4.6
FRH110-250VF	1	6.8	9.9	5.0	4.7	4.6
FRH120-250VF	2	6.5	11.0	5.0	4.7	4.6
FRH145-250VF	2	6.5	11.0	5.0	4.7	4.6
FRH180-250XF	1	9.0	12.0	5.0	4.7	3.8
FRH150-600MF	2	9.0	12.5	5.0	4.7	4.6
FRH160-600MF	2	9.0	12.5	5.0	4.7	4.6
FRH160-600VF	2	16.0	12.6	5.0	4.7	6.0
FRH200-600VF	2	12.0	14.0	5.0	4.7	6.0
FRH250-600VF	2	12.0	15.0	5.0	4.7	6.0
FRH400-600F	2	15.0	14.5	5.0	4.7	6.0

**TYPICAL TIME-TO-TRIP AT 23°C**



- A= FRH080-250VF
- B= FRH110-250VF
- C= FRH120-250VF
- D= FRH145-250VF
- E= FRH160-600VF
- F= FRH200-600VF
- G= FRH250-600VF
- H= FRH400-600F

- I= FRH160-600MF
- J= FRH180-250XF
- K= FRH150-600MF

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