

FRX90V Series



Application

Telecom & wide variety of electronic equipment

Product Features

Low hold current, Solid state, Radial leaded product ideal for up to 90V_{DC}



Operation Current

0.10A~3.75A

Maximum Voltage

Up to 90V_{DC}



Temperature Range

-40°C to 85°C

Agency Recognition

AGENCY	AGENCY FILE NUMBER
	UL(E211981)
	C-UL(E211981)
	TÜV (R50004084)



SVHC Compliant

Electrical Characteristics (23°C)

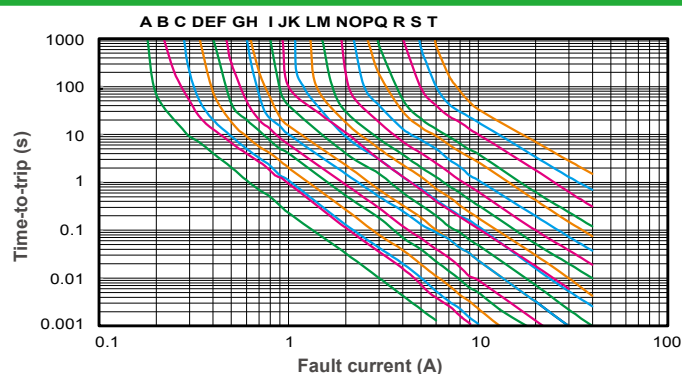
Part Number	Hold Current I_H , A	Trip Current I_T , A	Max. Time to trip at 5x I_H , s	Max. Current I_{MAX} , A	Rated Voltage V_{MAX} , V _{DC}	Typ. Power Pd, W	Resistance	
							R _{MIN} Ohms	R _{1MAX} Ohms
FRX010-90F	0.10	0.20	4.0	40	72/90	0.38	2.50	7.50
FRX015-90F	0.15	0.35	10.0	40	72/90	0.70	2.40	7.00
FRX017-90F	0.17	0.34	3.0	40	72/90	0.48	2.00	8.00
FRX020-90F	0.20	0.40	2.2	40	72/90	0.41	1.83	4.40
FRX025-90F	0.25	0.50	2.5	40	72/90	0.45	1.25	3.00
FRX030-90F	0.30	0.60	3.0	40	72/90	0.49	0.88	2.10
FRX035-90F	0.35	0.75	10.0	40	72/90	1.30	0.70	2.50
FRX040-90F	0.40	0.80	3.8	40	72/90	0.56	0.55	1.29
FRX050-90F	0.50	1.00	4.0	40	72/90	0.77	0.50	1.17
FRX055-90F	0.55	1.20	10.0	40	72/90	1.50	0.40	1.50
FRX065-90F	0.65	1.30	5.3	40	72/90	0.88	0.31	0.72
FRX075-90F	0.75	1.50	6.3	40	72/90	0.92	0.25	0.60
FRX090-90F	0.90	1.80	7.2	40	72/90	0.99	0.20	0.47
FRX110-90F	1.10	2.20	8.2	40	72/90	1.50	0.15	0.38
FRX135-90F	1.35	2.70	9.6	40	72/90	1.70	0.12	0.30
FRX160-90F	1.60	3.20	11.4	40	72/90	1.90	0.09	0.22
FRX185-90F	1.85	3.70	12.6	40	72/90	2.10	0.08	0.19
FRX250-90F	2.50	5.00	15.6	40	72/90	2.50	0.05	0.13
FRX300-90F	3.00	6.00	19.8	40	72/90	2.80	0.04	0.10
FRX375-90F	3.75	7.50	24.0	40	72/90	3.20	0.03	0.08

Thermal Derating for PPTC Device at Various Ambient Temperatures

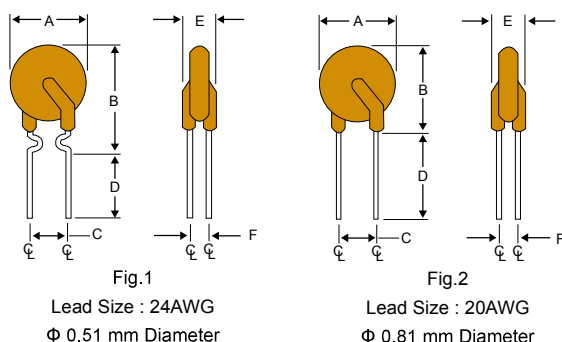
TEMPERATURE	-40°C	-20°C	0°C	23°C	30°C	40°C	50°C	60°C	70°C	85°C
DERATING %	158%	138%	119%	100%	90%	81%	70%	60%	50%	36%

Typical Time-To-Trip at 23°C

A = FRX010-90F	K = FRX065-90F
B = FRX015-90F	L = FRX075-90F
C = FRX017-90F	M = FRX090-90F
D = FRX020-90F	N = FRX110-90F
E = FRX025-90F	O = FRX135-90F
F = FRX030-90F	P = FRX160-90F
G = FRX035-90F	Q = FRX185-90F
H = FRX040-90F	R = FRX250-90F
I = FRX050-90F	S = FRX300-90F
J = FRX055-90F	T = FRX375-90F

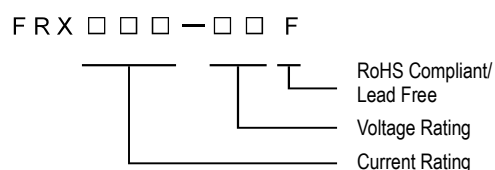


FRX90V Product Dimensions (mm)

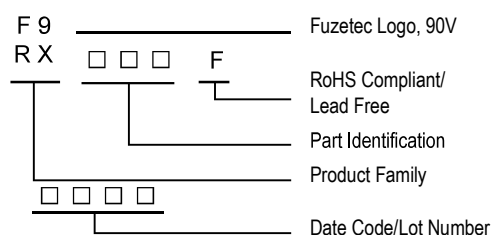


Part Number	Fig.	A	B	C	D	E	F
		Max.	Max.	Typ.	Min.	Max.	Typ.
FRX010-90F	1	7.4	12.7	5.1	7.6	3.1	1.1
FRX015-90F	1	7.4	12.7	5.1	7.6	3.1	1.1
FRX017-90F	1	7.4	12.7	5.1	7.6	3.1	1.1
FRX020-90F	1	7.4	12.7	5.1	7.6	3.1	1.1
FRX025-90F	1	7.4	12.7	5.1	7.6	3.1	1.1
FRX030-90F	1	7.4	12.7	5.1	7.6	3.1	1.1
FRX035-90F	1	7.4	12.7	5.1	7.6	3.1	1.1
FRX040-90F	1	7.6	13.5	5.1	7.6	3.1	1.1
FRX050-90F	1	7.9	13.7	5.1	7.6	3.1	1.1
FRX055-90F	1	9.7	14.0	5.1	7.6	3.1	1.1
FRX065-90F	1	9.7	14.5	5.1	7.6	3.1	1.1
FRX075-90F	1	10.4	15.2	5.1	7.6	3.1	1.1
FRX090-90F	1	11.7	15.8	5.1	7.6	3.1	1.1
FRX110-90F	2	13.0	18.0	5.1	7.6	3.1	1.4
FRX135-90F	2	14.5	19.6	5.1	7.6	3.1	1.4
FRX160-90F	2	16.3	21.3	5.1	7.6	3.1	1.4
FRX185-90F	2	17.8	22.9	5.1	7.6	3.1	1.4
FRX250-90F	2	21.3	26.4	10.2	7.6	3.1	1.4
FRX300-90F	2	24.9	30.0	10.2	7.6	3.1	1.4
FRX375-90F	2	28.5	33.5	10.2	7.6	3.1	1.4

Part Numbering System



Part Marking System



Package Information

Part Number	Standard Package
FRX010-90F~FRX055-90F	500Pcs/Bag, 3.0K Reel/Tape
FRX065-90F~FRX090-90F	300Pcs/Bag, 3.0K Reel/Tape
FRX110-90F	300Pcs/Bag, 1.5K Reel/Tape
FRX135-90F~FRX185-90F	200Pcs/Bag, 1.5K Reel/Tape
FRX250-90F~FRX375-90F	100Pcs/Bag, 1.0K Reel/Tape

Physical specifications

Lead material	FRX010-90F~FRX040-90F Tin plated copper clad steel, 24 AWG.
	FRX050-90F~FRX090-90F Tin plated copper, 24 AWG.
	FRX110-90F~FRX375-90F Tin plated copper, 20 AWG.
Soldering characteristics	MIL-STD-202, Method 208E.
Insulating coating	Flame retardant epoxy, meets UL-94V-0 requirement.

Warning :



- Each product should be carefully evaluated and tested for their suitability of application.
- 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 are not anticipated.
- Avoid contact of PPTC device with chemical solvent, including some inert material such as silicone based oil, lubricant and etc. Prolonged contact will damage the device performance.
- Additional protection mechanism are strongly recommended to be used in conjunction with the PPTC device for protection against abnormal or failure conditions.
- Avoid use of PPTC device in a constrained space such as potting material, housing and containers where have limited space to accommodate device thermal expansion and/or contraction.

NOTE : All Specifications subject to change without notice.