

Summary

- **RoHS Compliant (Lead Free) Product**
- Applications : Telecom and wide variety of electronic equipment.
- Product Features : Low hold current, Solid state, Radial leaded product ideal for up to 90VDC
- Operation Current : 0.10A~3.75A
- Maximum Voltage : Up to 90V DC
- Temperature Range : -40°C to 85°C

Agency Recognition

UL : File No. E211981
 C-UL: File No. E211981
 TÜV: File No. R50004084

Electrical Characteristics (23°C)

Part Number	Hold Current	Trip Current	Max.Time to Trip	Max. Current	Rated Voltage	Typ. Power	Resistance	
							RMIN	R1MAX
	I _H ,A	I _T ,A	at 5xI _H ,s	I _{MAX} ,A	V _{MAX} ,VDC	Pd, W	Ohms	Ohms
TRX010-90F	0.10	0.20	4.0	40	72/90	0.38	2.50	7.50
TRX015-90F	0.15	0.35	10.0	40	72/90	0.70	2.40	7.00
TRX017-90F	0.17	0.34	3.0	40	72/90	0.48	2.00	8.00
TRX020-90F	0.20	0.40	2.2	40	72/90	0.41	1.83	4.40
TRX025-90F	0.25	0.50	2.5	40	72/90	0.45	1.25	3.00
TRX030-90F	0.30	0.60	3.0	40	72/90	0.49	0.88	2.10
TRX035-90F	0.35	0.75	10.0	40	72/90	1.30	0.70	2.50
TRX040-90F	0.40	0.80	3.8	40	72/90	0.56	0.55	1.29
TRX050-90F	0.50	1.00	4.0	40	72/90	0.77	0.50	1.17
TRX055-90F	0.55	1.20	10.0	40	72/90	1.50	0.40	1.50
TRX065-90F	0.65	1.30	5.3	40	72/90	0.88	0.31	0.72
TRX075-90F	0.75	1.50	6.3	40	72/90	0.92	0.25	0.60
TRX090-90F	0.90	1.80	7.2	40	72/90	0.99	0.20	0.47
TRX110-90F	1.10	2.20	8.2	40	72/90	1.50	0.15	0.38
TRX135-90F	1.35	2.70	9.6	40	72/90	1.70	0.12	0.30
TRX160-90F	1.60	3.20	11.4	40	72/90	1.90	0.09	0.22
TRX185-90F	1.85	3.70	12.6	40	72/90	2.10	0.08	0.19
TRX250-90F	2.50	5.00	15.6	40	72/90	2.50	0.05	0.13
TRX300-90F	3.00	6.00	19.8	40	72/90	2.80	0.04	0.10
TRX375-90F	3.75	7.50	24.0	40	72/90	3.20	0.03	0.08

I_H=Hold current-maximum current at which the device will not trip at 23°C still air.
 I_T=Trip current-minimum current at which the device will always trip at 23°C still air.
 V_{MAX}=Maximum voltage device can withstand without damage at its rated current.
 I_{MAX}= Maximum fault current device can withstand without damage at rated voltage (V_{MAX}).
 Pd=Typical power dissipated from device when in tripped state in 23°C still air environment.
 R_{MIN}=Minimum device resistance at 23°C.
 R1MAX=Maximum device resistance at 23°C, 1 hour after tripping .

Physical specifications:

Lead material: FRX010-90F~FRX090-90F Tin plated copper, 24 AWG.

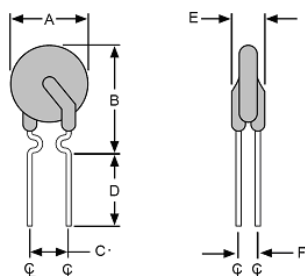
FRX110-90F~FRX375-90F Tin plated copper, 20 AWG.

Soldering characteristics:MIL-STD-202, Method 208E.

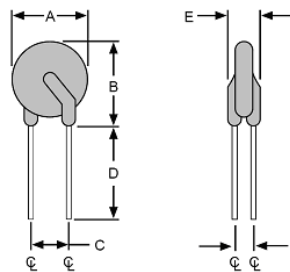
Insulating coating:Flame retardant epoxy, meets UL-94V-0 requirement.

NOTE : Specification subject to change without notice.

Production Dimensions (millimeter)



FRX 010-90F ~ FRX 090-90F

Lead Size : 24AWG
Φ 0.51 mm Diameter

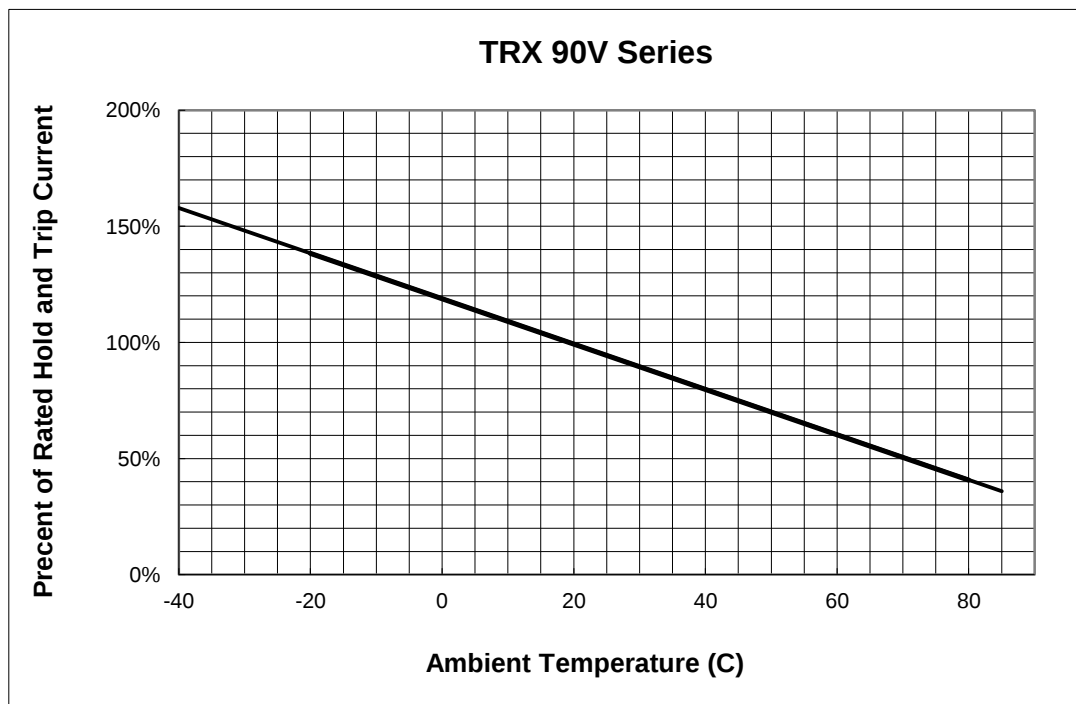
FRX 110-90F ~ FRX 375-90F

Lead Size : 20AWG
Φ 0.81 mm Diameter

Part Number	A Maximum	B Maximum	C Typical	D Minimum	E Maximum	F Typical
TRX010-90F	7.4	12.7	5.1	7.6	3.1	1.1
TRX015-90F	7.4	12.7	5.1	7.6	3.1	1.1
TRX017-90F	7.4	12.7	5.1	7.6	3.1	1.1
TRX020-90F	7.4	12.7	5.1	7.6	3.1	1.1
TRX025-90F	7.4	12.7	5.1	7.6	3.1	1.1
TRX030-90F	7.4	13.0	5.1	7.6	3.1	1.1
TRX035-90F	7.4	12.7	5.1	7.6	3.1	1.1
TRX040-90F	7.6	13.5	5.1	7.6	3.1	1.1
TRX050-90F	7.9	13.7	5.1	7.6	3.1	1.1
TRX055-90F	9.7	14.0	5.1	7.6	3.1	1.1
TRX065-90F	9.7	14.5	5.1	7.6	3.1	1.1
TRX075-90F	10.4	15.2	5.1	7.6	3.1	1.1
TRX090-90F	11.7	15.8	5.1	7.6	3.1	1.1
TRX110-90F	13.0	18.0	5.1	7.6	3.1	1.4
TRX135-90F	14.5	19.6	5.1	7.6	3.1	1.4
TRX160-90F	16.3	21.3	5.1	7.6	3.1	1.4
TRX185-90F	17.8	22.9	5.1	7.6	3.1	1.4
TRX250-90F	21.3	26.4	10.2	7.6	3.1	1.4
TRX300-90F	24.9	30.0	10.2	7.6	3.1	1.4
TRX375-90F	28.5	33.5	10.2	7.6	3.1	1.4

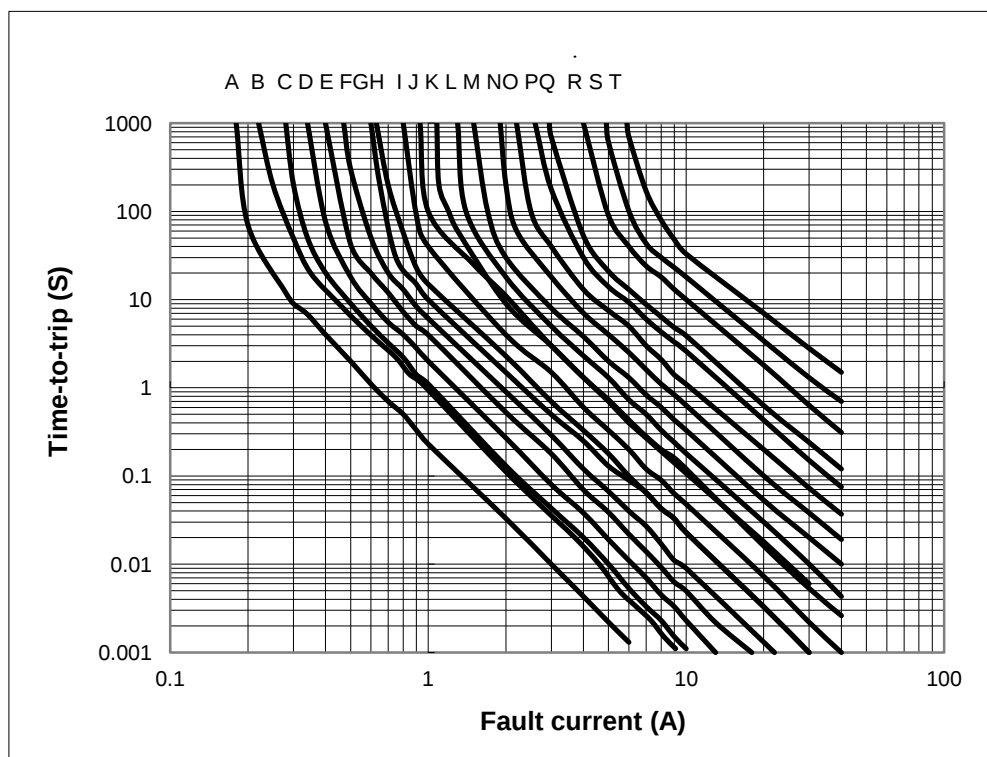
NOTE : Specification subject to change without notice.

Thermal Derating Curve



Typical Time-To-Trip at 23°C

A = TRX010-90F
 B = TRX015-90F
 C = TRX017-90F
 D = TRX020-90F
 E = TRX025-90F
 F = TRX030-90F
 G = TRX035-90F
 H = TRX040-90F
 I = TRX050-90F
 J = TRX055-90F
 K = TRX065-90F
 L = TRX075-90F
 M = TRX090-90F
 N = TRX110-90F
 O = TRX135-90F
 P = TRX160-90F
 Q = TRX185-90F
 R = TRX250-90F
 S = TRX300-90F
 T = TRX375-90F



NOTE : Specification subject to change without notice.

Material Specification

Lead material : FRX010-90F~FRX090-90F Tin plated copper, 24 AWG.

FRX110-90F~FRX375-90F Tin plated copper, 20 AWG.

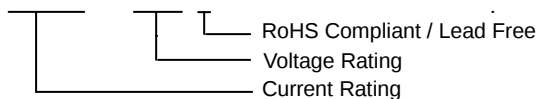
Soldering characteristics: MIL-STD-202, Method 208E.

Insulating coating: Flame retardant epoxy, meets UL-94V-0 requirement

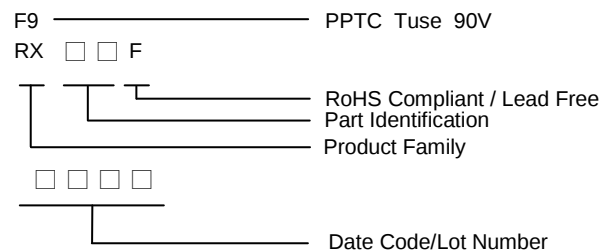
Part Numbering and Marking System

Part Numbering System

TRX □ □ □ — □ □ F



Part Marking System



Note: Font on Marking may look slightly different due to fine turnings of each Marking printer.

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 are not anticipated.

- Avoid contact of PPTC device with chemical solvent. Prolonged contact will damage the device performance.