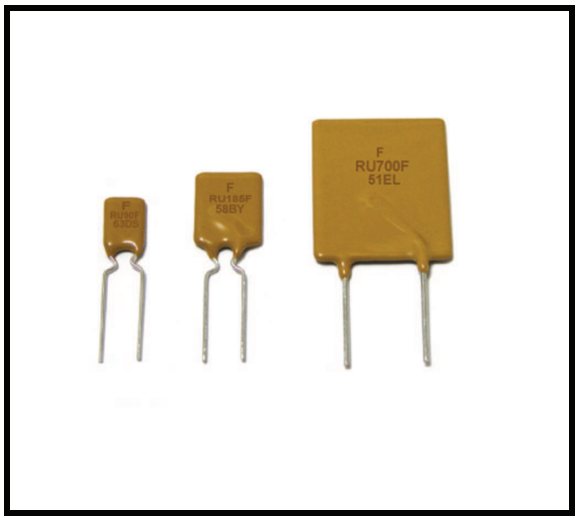
FRU Series



RoHS Compliant & Lead Free

RoHS 2002/95/EC | Pb Lead Free

Application:

Wide variety of electronic equipment

Product Features:

Low resistance, High hold current, Solid state

Radial-leaded product ideal for up to 30V

Operation Current: 0.9A~9.0A

Maximum Voltage: 30V

Temperature Range: -40℃ to 85℃

Agency Recognition: UL(E211981)

C-UL(E211981)

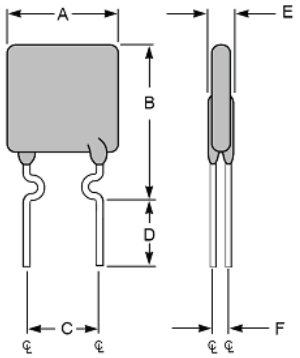
TÜV (R3-50004084)

Electrical Characteristics(23℃)

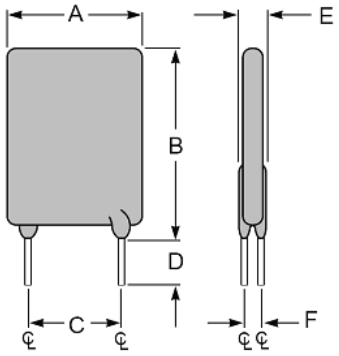
Part Number	Hold Current	Trip Current	Max.Time To Trip	Max. Current	Rated Voltage	Typical Power	Resistance Tolerance	
							R_{MIN}	$R1_{MAX}$
	I_H, A	I_T, A	at 5xI_H, s	I_{MAX}, A	V_{MAX}, V_{DC}	Pd, W	Ohms	Ohms
FRU090-30F	0.90	1.80	5.9	40	30	0.6	0.070	0.220
FRU110-30F	1.10	2.20	6.6	40	30	0.7	0.050	0.170
FRU135-30F	1.35	2.70	7.3	40	30	0.8	0.040	0.130
FRU160-30F	1.60	3.20	8.0	40	30	0.9	0.030	0.110
FRU185-30F	1.85	3.70	8.7	40	30	1.0	0.030	0.090
FRU250-30F	2.50	5.00	10.3	40	30	1.2	0.020	0.070
FRU300-30F	3.00	6.00	10.8	40	30	2.0	0.020	0.080
FRU400-30F	4.00	8.00	12.7	40	30	2.5	0.010	0.050
FRU500-30F	5.00	10.00	14.5	40	30	3.0	0.010	0.050
FRU600-30F	6.00	12.00	16.0	40	30	3.5	0.005	0.040
FRU700-30F	7.00	14.00	17.5	40	30	3.8	0.005	0.030
FRU800-30F	8.00	16.00	18.8	40	30	4.0	0.005	0.020
FRU900-30F	9.00	18.00	20.0	40	30	4.2	0.005	0.020

I_H=Hold current-maximum current at which the device will not trip at 23℃ still air.
I_T=Trip current-minimum current at which the device will always trip at 23℃ 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 (Vmax).
Pd=Typical power dissipated from device when in the tripped state in 23℃ still air environment.
R_{MIN}=Minimum device resistance at 23℃.
$R1_{MAX}$=Maximum device resistance at 23℃, 1 hour after tripping.
Physical specifications:
Lead material: FRU090-30F~FRU250-30F Tin plated copper, 24 AWG.
FRU300-30F~FRU900-30F Tin plated copper, 20 AWG.
Soldering characteristics: MIL-STD-202, Method 208E.
Insulating coating:Flame retardant epoxy, meets UL 94 V-0 requirement.

FRU Product Dimensions (Millimeter)



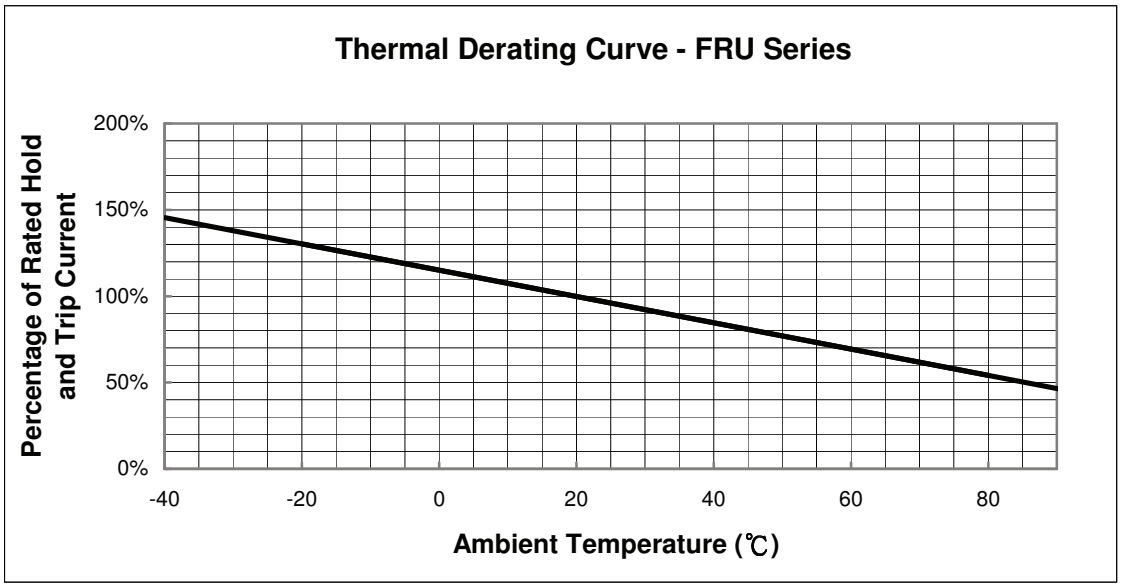
FRU 090-30F ~ FRU 250-30F
Lead Size: 24AWG,
Φ 0.51 mm Diameter



FRU 300-30F ~ FRU 900-30F
Lead Size: 20AWG
Φ 0.81 mm Diameter

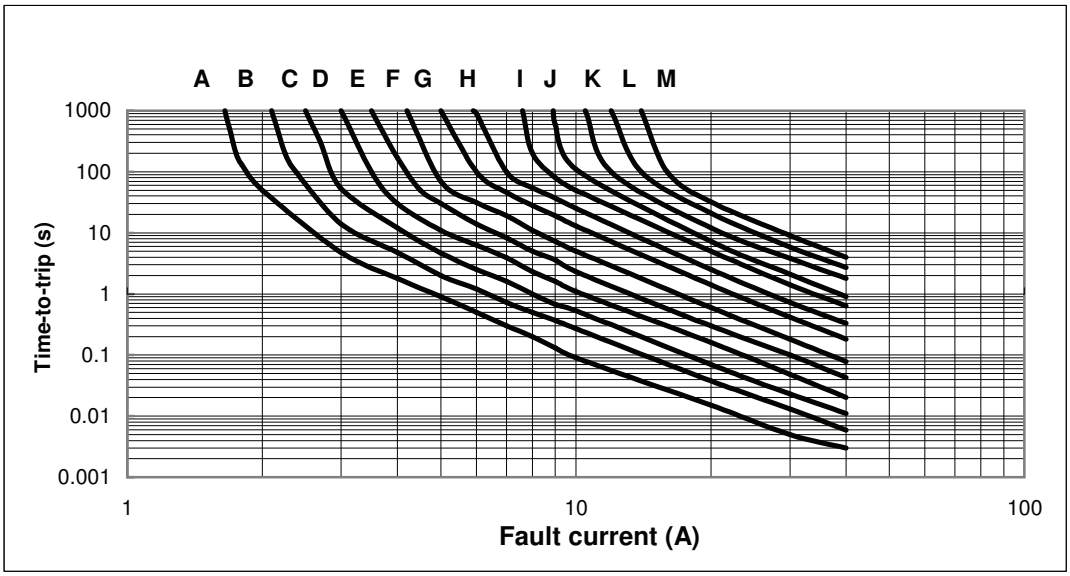
Part Number	A	B	C	D	E	F
	Maximum	Maximum	Typical	Minimum	Maximum	Typical
FRU090-30F	7.4	12.2	5.1	7.6	3.0	0.9
FRU110-30F	7.4	14.2	5.1	7.6	3.0	0.9
FRU135-30F	8.9	13.5	5.1	7.6	3.0	0.9
FRU160-30F	8.9	15.2	5.1	7.6	3.0	0.9
FRU185-30F	10.2	15.7	5.1	7.6	3.0	0.9
FRU250-30F	11.4	18.3	5.1	7.6	3.0	0.9
FRU300-30F	11.4	17.3	5.1	7.6	3.0	1.2
FRU400-30F	14.0	20.1	5.1	7.6	3.0	1.2
FRU500-30F	14.0	24.9	10.2	7.6	3.0	1.2
FRU600-30F	16.5	24.9	10.2	7.6	3.0	1.2
FRU700-30F	19.1	26.7	10.2	7.6	3.0	1.2
FRU800-30F	21.6	29.2	10.2	7.6	3.0	1.2
FRU900-30F	24.1	29.7	10.2	7.6	3.0	1.2

Thermal Derating Curve

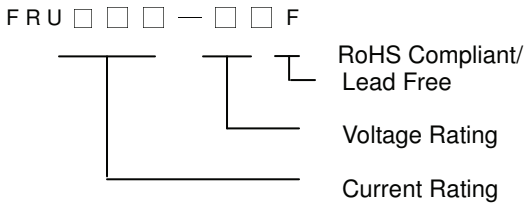


Typical Time-To-Trip at 23℃

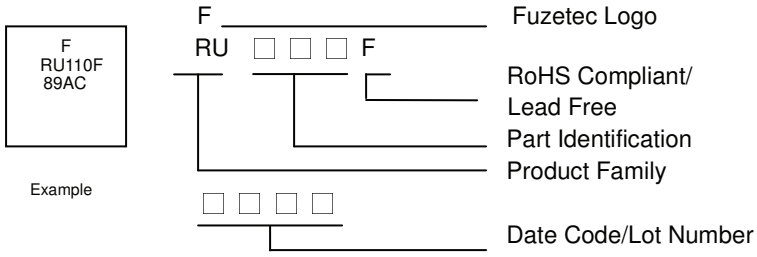
A = FRU090-30F
B = FRU110-30F
C = FRU135-30F
D = FRU160-30F
E = FRU185-30F
F = FRU250-30F
G = FRU300-30F
H = FRU400-30F
I = FRU500-30F
J = FRU600-30F
K = FRU700-30F
L = FRU800-30F
M = FRU900-30F



Part Numbering System



Part Marking System



Standard Package

P/N	Pcs /Bag	Reel/Tape
FRU090-30F	500	3k
FRU110-30F	500	3k
FRU135-30F	300	3k
FRU160-30F	300	3k
FRU185-30F	300	3k
FRU250-30F	300	3k
FRU300-30F	200	1.5k

P/N	Pcs /Bag	Reel/Tape
FRU400-30F	200	1.5k
FRU500-30F	200	------
FRU600-30F	100	------
FRU700-30F	100	------
FRU800-30F	100	------
FRU900-30F	100	------

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.