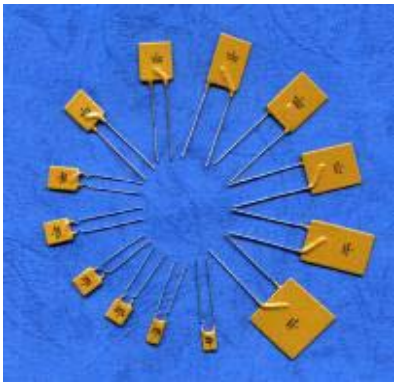
Radial Leaded PTC FRU Series



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: 900mA~9A

Maximum Voltage: 30V

Temperature Range: -40℃ to 85℃

Agency Approvals: UL

C-UL

TUV

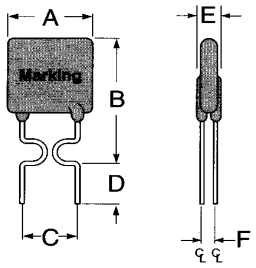
Electrical Characteristics(23℃)

Part Number	Hold Current	Trip Current	Max.Time To Trip	Maximum Current	Rated Voltage	Typical Power	Resistance Tolerance	
							R_{MIN}	$R1_{MAX}$
	I_H,A	I_T,A	at 5xI_H	I_{MAX},A	V_{MAX},Vdc	Pd, W	Ω	Ω
FRU090-30	0.90	1.80	5.9	40	30	0.6	0.070	0.22
FRU110-30	1.10	2.20	6.6	40	30	0.7	0.050	0.17
FRU135-30	1.35	2.70	7.3	40	30	0.8	0.040	0.13
FRU160-30	1.60	3.20	8.0	40	30	0.9	0.030	0.11
FRU185-30	1.85	3.70	8.7	40	30	1.0	0.030	0.09
FRU250-30	2.50	5.00	10.3	40	30	1.2	0.020	0.07
FRU300-30	3.00	6.00	10.8	40	30	2.0	0.020	0.08
FRU400-30	4.00	8.00	12.7	40	30	2.5	0.010	0.05
FRU500-30	5.00	10.00	14.5	40	30	3.0	0.010	0.05
FRU600-30	6.00	12.00	16.0	40	30	3.5	0.005	0.04
FRU700-30	7.00	14.00	17.5	40	30	3.8	0.005	0.03
FRU800-30	8.00	16.00	18.8	40	30	4.0	0.005	0.02
FRU900-30	9.00	18.00	20.0	40	30	4.2	0.005	0.02

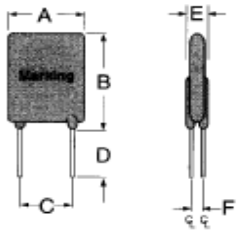
I_H=Hold current-maximum current at which the device will not trip at 23℃ still air.
I_T=Trip current-minimum current at which the device will always trip at 23℃ still air.
V_{MAX}=Maximum voltage device can withstand without damage at its rated current.
I_{MAX}= Maximum fault current device can withstand without damage at rated voltage (V max).
Pd=Maximum 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~FRU250 Tin plated copper,24 AWG.
FRU300~FRU900 Tin plated copper,20 AWG.
Soldering characteristics:MIL-STD-202, Method 208E.
Insulating coating:Flame retardant epoxy ,meet UL-94V-O requirement.

Radial Leaded PTC FRU Series

FRU Product Dimensions (millimeters)



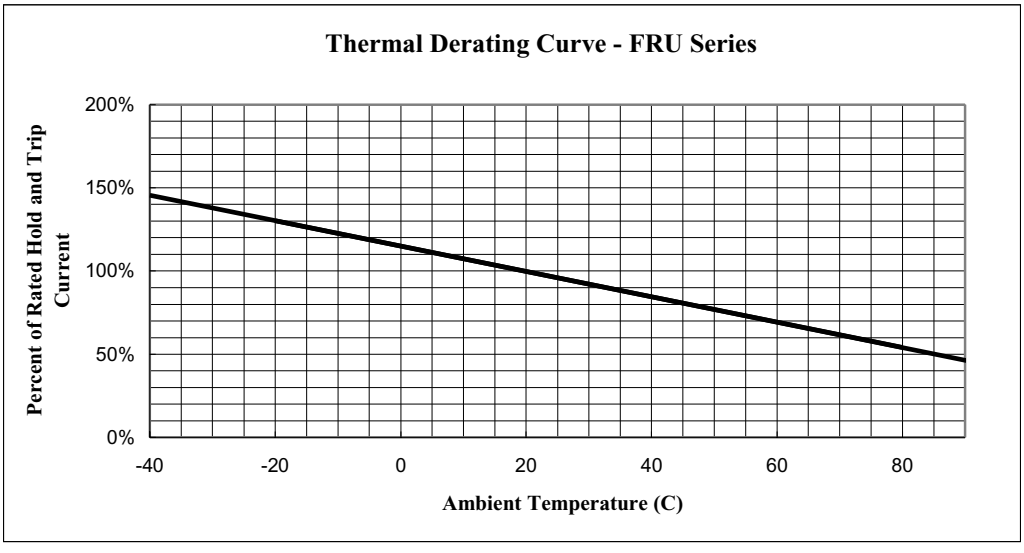
FRU 090-30 ~ FRU 250-30
Lead Size :24AWG,
Φ 0.51 mm Diameter



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

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

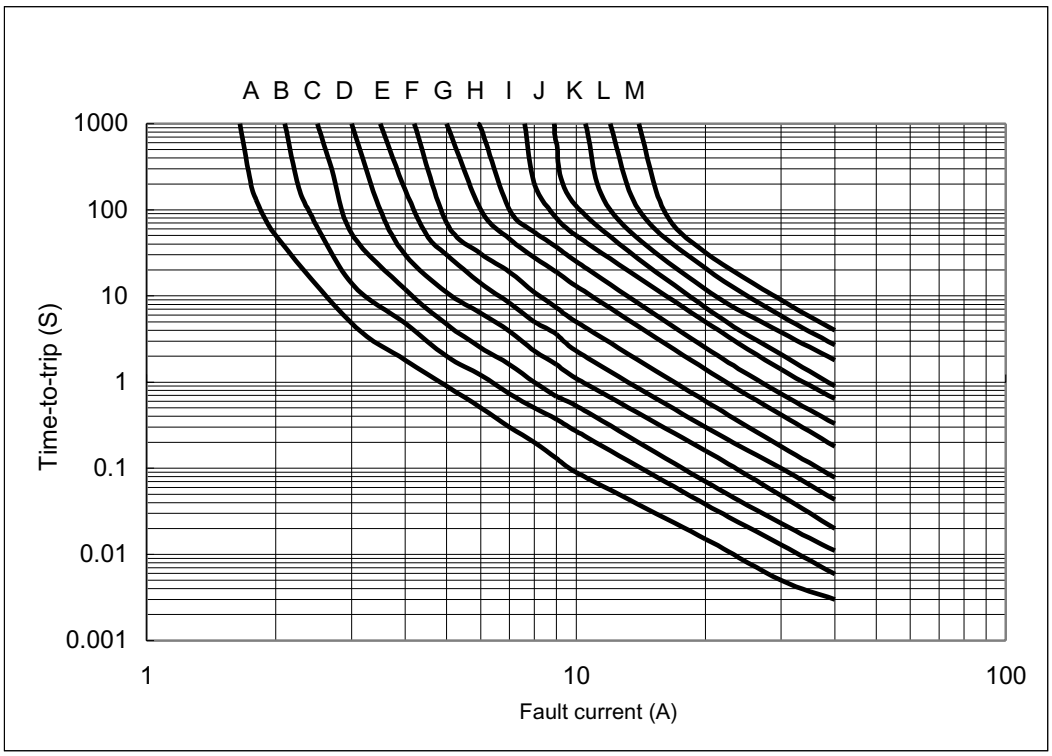
Thermal Derating Curve



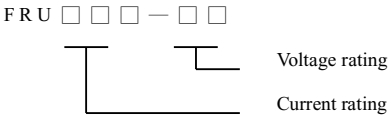
Radial Leaded PTC FRU Series

Typical Time-To-Trip at 23℃

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



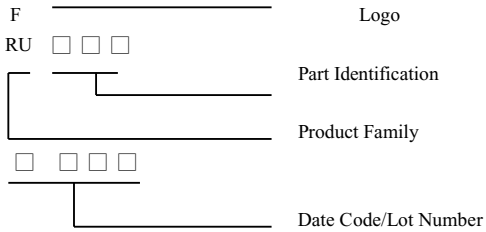
Part Numbering System





Example

Part Marking System



Standard Package

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

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