

**Application:**

Wide variety of electronic equipment

**Product Features:**

Low hold current, Solid state

Radial-leaded product ideal for up to 120V/120AC

**Operation Current:** 100mA~3.75A

**Maximum Voltage:** 120VAC

**Temperature Range:** -40°C to 85°C

**Agency Approvals:** UL, C-UL & TUV pending

**Electrical Characteristics(23°C)**

Part Number	Hold Current	Trip Current	Max.Time to Trip	Maximum Current	Rated Voltage	Typical Power	Resistance Tolerance	
	$I_H, A$	$I_T, A$	at 5x $I_H$	$I_{MAX}, A$	$V_{MAX}, V$	$P_d, W$	$R_{MIN}$	$R_{1MAX}$
	$\Omega$	$\Omega$					$\Omega$	$\Omega$
<b>FRA010-120</b>	0.10	0.20	4.0	0.5	120	0.57	2.50	7.50
<b>FRA017-120</b>	0.17	0.34	3.0	0.5	120	0.59	2.00	7.00
<b>FRA020-120</b>	0.20	0.40	2.2	1.0	120	0.62	1.83	4.40
<b>FRA025-120</b>	0.25	0.50	2.5	1.0	120	0.68	1.25	3.00
<b>FRA030-120</b>	0.30	0.60	3.0	1.0	120	0.74	0.88	2.10
<b>FRA040-120</b>	0.40	0.80	3.8	1.0	120	0.84	0.55	1.29
<b>FRA050-120</b>	0.50	1.00	4.0	2.0	120	1.16	0.50	1.17
<b>FRA065-120</b>	0.65	1.30	5.3	2.0	120	1.32	0.31	0.72
<b>FRA075-120</b>	0.75	1.50	6.3	2.0	120	1.38	0.25	0.60
<b>FRA090-120</b>	0.90	1.80	7.2	3.0	120	1.49	0.20	0.47
<b>FRA110-120</b>	1.10	2.20	8.2	3.0	120	2.25	0.15	0.38
<b>FRA135-120</b>	1.35	2.70	9.6	5.0	120	2.55	0.12	0.30
<b>FRA160-120</b>	1.60	3.20	11.4	5.0	120	2.85	0.09	0.22
<b>FRA185-120</b>	1.85	3.70	12.6	5.0	120	3.15	0.08	0.19
<b>FRA250-120</b>	2.50	5.00	15.6	7.0	120	3.75	0.05	0.13
<b>FRA300-120</b>	3.00	6.00	19.8	10.0	120	4.20	0.04	0.10
<b>FRA375-120</b>	3.75	7.50	24.0	10.0	120	4.80	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).

$P_d$ =Typical power dissipated from device when in the tripped state in 23°C still air environment.

$R_{MIN}$ =Minimum device resistance at 23°C.

$R_{1MAX}$ =Maximum device resistance at 23°C, 1 hour after tripping .

Physical specifications:

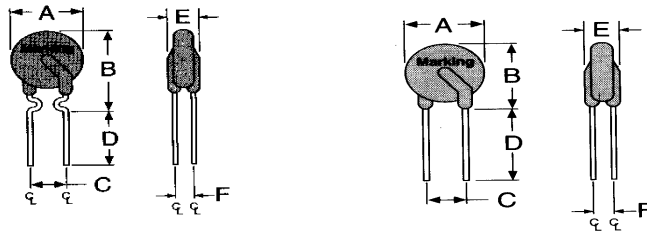
Lead material: FRA010~FRA090 Tin plated copper,22 AWG.

FRA110~FRA375 Tin plated copper,20 AWG.

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

Insulating coating:Flame retardant epoxy ,meet UL-94V-O requirement.

## FRA Product Dimensions (millimeters)

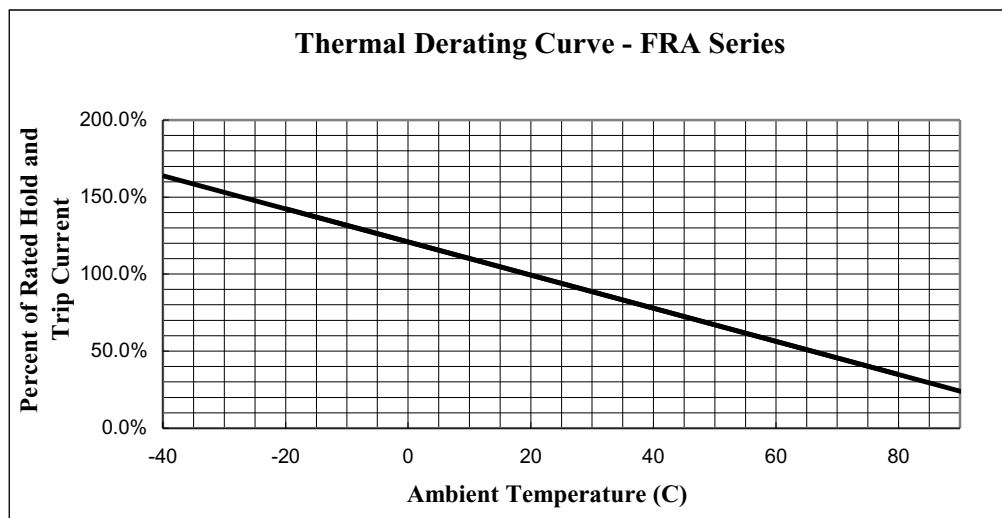


FRA 010-120 ~ FRA 090-120  
 Lead Size :22AWG,  
 Φ 0.65 mm Diameter

FRA 110-120 ~ FRA 375-120  
 Lead Size : 20AWG,  
 Φ 0.81 mm Diameter

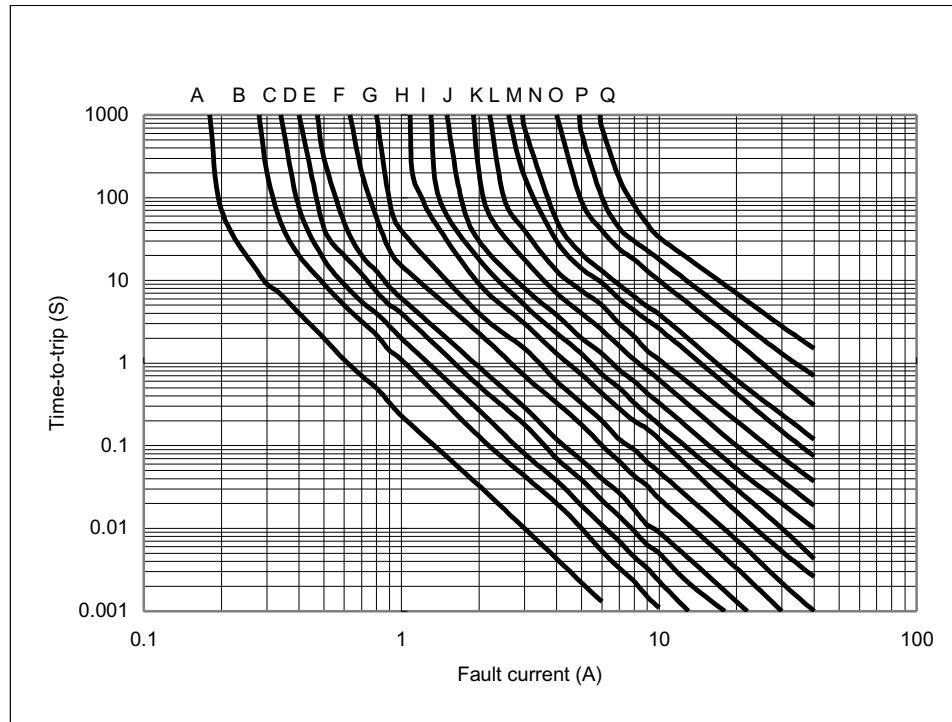
Part Number	A	B	C	D	E	F
	Maximum	Maximum	Typical	Minimum	Maximum	Typical
FRA010-120	7.4	12.7	5.1	7.6	5.0	3.0
FRA017-120	7.4	12.7	5.1	7.6	5.0	3.0
FRA020-120	7.4	12.2	5.1	7.6	5.0	3.0
FRA025-120	7.4	12.7	5.1	7.6	5.0	3.0
FRA030-120	7.4	13.0	5.1	7.6	5.0	3.0
FRA040-120	8.2	14.2	5.1	7.6	5.0	3.0
FRA050-120	9.2	14.9	5.1	7.6	5.0	3.0
FRA065-120	9.7	14.9	5.1	7.6	5.0	3.0
FRA075-120	10.6	15.5	5.1	7.6	5.0	3.0
FRA090-120	11.9	15.9	5.1	7.6	5.0	3.0
FRA110-120	13.3	18.3	5.1	7.6	5.0	3.0
FRA135-120	15.5	20.6	5.1	7.6	5.0	3.0
FRA160-120	17.5	22.5	5.1	7.6	5.0	3.0
FRA185-120	19.9	24.9	5.1	7.6	5.0	3.0
FRA250-120	22.5	27.5	10.2	7.6	5.0	3.0
FRA300-120	25.5	30.0	10.2	7.6	5.0	3.0
FRA375-120	29.5	34.0	10.2	7.6	5.0	3.0

## Thermal Derating Curve

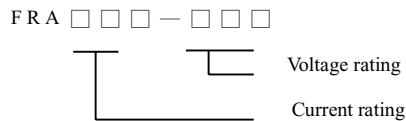


## Typical Time-To-Trip at 23°C

- A =FRA010-120
- B =FRA017-120
- C =FRA020-120
- D =FRA025-120
- E =FRA030-120
- F =FRA040-120
- G =FRA050-120
- H =FRA065-120
- I =FRA075-120
- J =FRA090-120
- K =FRA110-120
- L =FRA135-120
- M =FRA160-120
- N =FRA185-120
- O =FRA250-120
- P =FRA300-120
- Q =FRA375-120

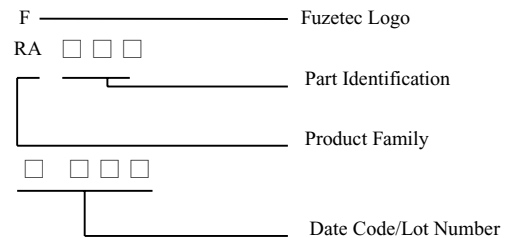


### Part Numbering System



Example

### Part Marking System



### Standard Package

P/N	Pcs /Bag	Reel/Tape
FRA-010-120	300	2K
FRA-017-120	300	2K
FRA-020-120	300	2K
FRA-025-120	300	2K
FRA-030-120	300	2K
FRA-040-120	300	2K
FRA-050-120	300	2K
FRA-065-120	300	2K
FRA-075-120	300	2K

P/N	Pcs /Bag	Reel/Tape
FRA-090-120	300	2K
FRA-110-120	300	1.5K
FRA-135-120	200	1.5K
FRA-160-120	200	-----
FRA-185-120	200	-----
FRA-250-120	100	-----
FRA-300-120	100	-----
FRA-375-120	100	-----