



Radial Leaded PTC Resettable Fuse : FRK110-60F

1. Summary

- (a) **RoHS Compliant (Lead Free) product**
- (b) **Applications : Wide variety of electronic equipment**
- (c) **Product Features : Solid state, Radial leaded product ideal for up to 60V_{DC}**
- (d) **Operation Current : 1.10A**
- (e) **Maximum Operation Voltage : 60V_{DC}**
- (f) **Temperature Range : -40°C to 85°C**

2. Agency Recognition

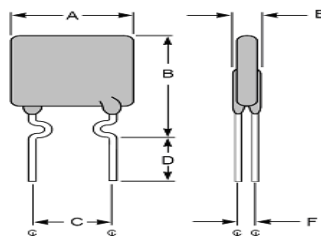
- UL : Pending
- C-UL: Pending
- TÜV: Pending

3. Electrical Characteristics (23°C)

| Part Number | Hold Current | Trip Current | Max.Time to Trip | | Max. Current | Rated Voltage | Typ. Power | Resistance | |
|-------------|--------------------|--------------------|------------------|--------|----------------------|------------------------|------------|------------------|-------------------|
| | | | | | | | | R _{MIN} | R _{1MAX} |
| | I _H , A | I _T , A | I, A | Time,s | I _{MAX} , A | V _{MAX} , VDC | Pd, W | Ohms | Ohms |
| FRK110-60F | 1.10 | 2.20 | 8.0 | 3.0 | 40 | 60 | 2.20 | 0.170 | 0.470 |

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.
 R_{1MAX}=Maximum device resistance at 23°C, 1 hour after tripping .
 Physical specifications:
 Lead material: Tin plated copper,20AWG.
 Soldering characteristics:MIL-STD-202, Method 208E.
 Insulating coating:Flame retardant epoxy, meets UL-94V-0 requirement.

4. Production Dimensions (millimeter)



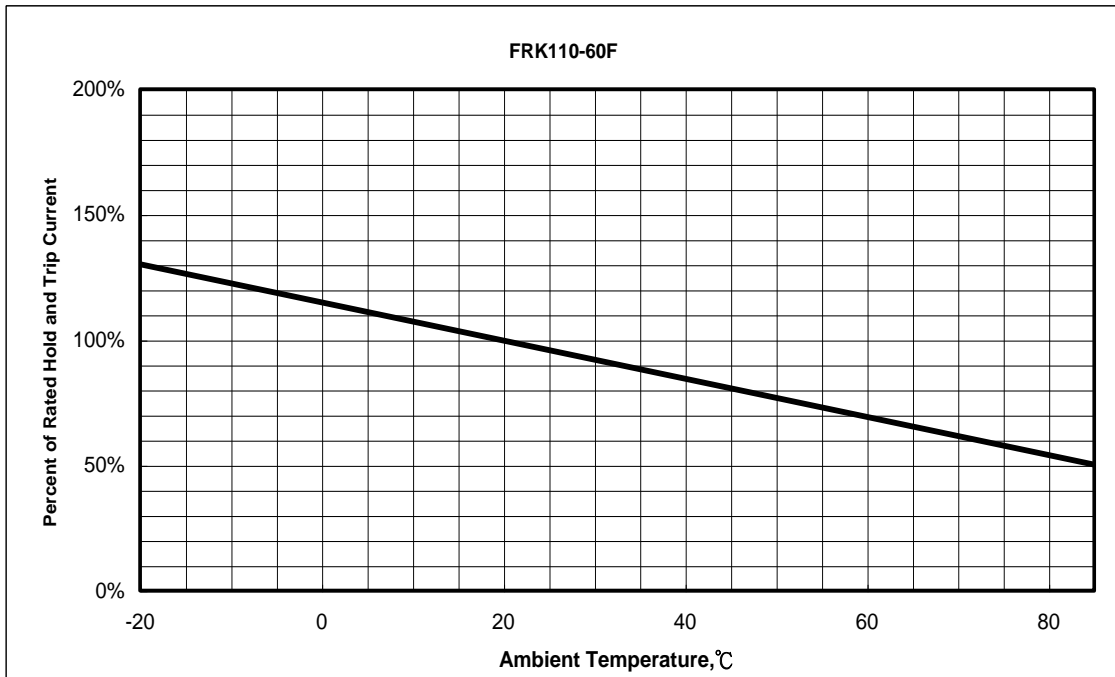
FRK110-60F
 Lead Size : 20AWG
 Φ 0.81 mm Diameter

| Part Number | A | B | C | D | E | F |
|-------------|---------|---------|---------|---------|---------|---------|
| | Maximum | Maximum | Typical | Minimum | Maximum | Typical |
| FRK110-60F | 7.60 | 14.50 | 5.1 | 7.6 | 4.10 | 1.1 |

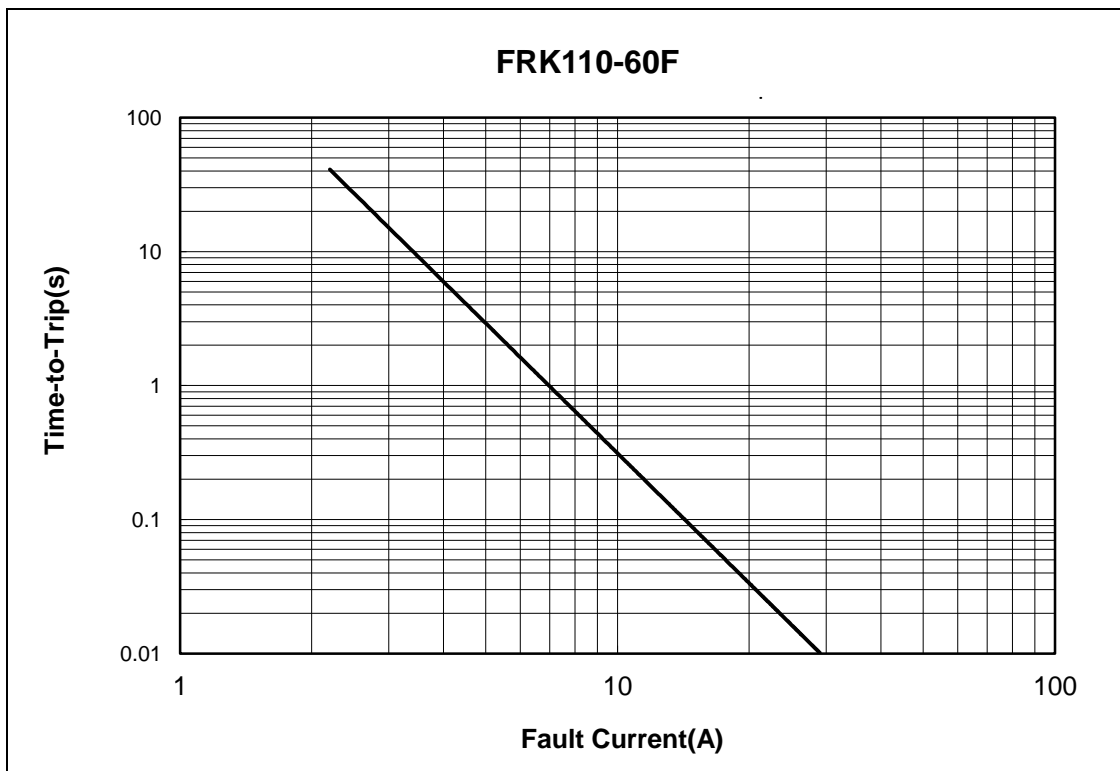
NOTE : Specification subject to change without notice.



5. Thermal Derating Curve



6. Typical Time-To-Trip at 23°C



NOTE : Specification subject to change without notice.



7. Material Specification

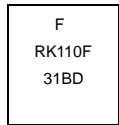
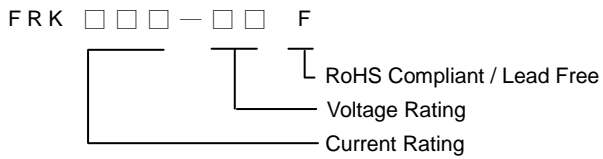
Lead material : Tin plated copper, 20 AWG.

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

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

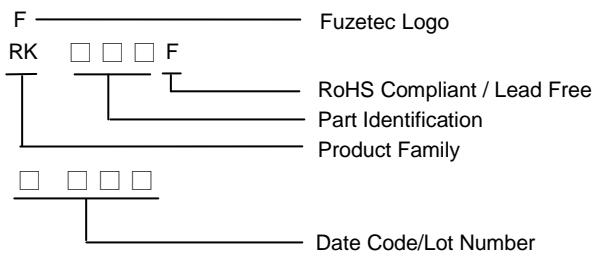
8. Part Numbering and Marking System

Part Numbering System



Example

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.