



## Radial Leaded PTC Resettable Fuse : FBR Series

### 1. Summary

- (a) **RoHS Compliant (Lead Free) Product**
- (b) Applications : Cable Telephone Electronics/Cable Power Passing Tap
- (c) Product Features : Low hold current, Solid state, Radial leaded product ideal for up to 90V
- (d) Operation Current : 100mA~900mA
- (e) Maximum Voltage : 90V
- (f) Temperature Range : -40°C to 85°C

### 2. Agency Recognition

UL : File No. E 211981

C-UL: File No. E 211981

TÜV: File No. R 50004084

Note: FBR100UF~FBR350F TÜV Pending

### 3. Electrical Characteristics (23°C)

Part Number	Hold Current $I_H, A$	Trip Current $I_T, A$	Max. Time to Trip at 5xI <sub>H</sub>	Maximum Current $I_{MAX}, A$	Rated Voltage $V_{MAX}, V_{dc}$	Typical Power $P_d, W$	Resistance	
							R <sub>MIN</sub> ohms	R <sub>1MAX</sub> ohms
FBR100UF	0.10	0.20	10	40	90	0.38	2.50	7.50
FBR100F	0.10	0.20	10	40	90	0.38	2.50	7.50
FBR150UF	0.15	0.35	10	40	90	0.70	2.40	7.00
FBR150F	0.15	0.35	10	40	90	0.70	2.40	7.00
FBR200UF	0.20	0.45	10	40	90	0.80	1.50	4.50
FBR200F	0.20	0.45	10	40	90	0.80	1.50	4.50
FBR250UF	0.25	0.55	10	40	90	0.90	1.25	3.70
FBR250F	0.25	0.55	10	40	90	0.90	1.25	3.70
FBR350UF	0.35	0.75	10	40	90	1.30	0.90	2.50
FBR350F	0.35	0.75	10	40	90	1.30	0.90	2.50
FBR550UF	0.55	1.20	12	40	90	1.50	0.45	1.50
FBR550F	0.55	1.20	12	40	90	1.50	0.45	1.50
FBR750UF	0.75	1.60	13	40	90	1.70	0.30	1.20
FBR750F	0.75	1.60	13	40	90	1.70	0.30	1.20
FBR900UF	0.90	2.00	20	40	90	2.30	0.15	0.70
FBR900F	0.90	2.00	20	40	90	2.30	0.15	0.70

$I_H$ =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 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: FBR100~FBR900 Tin plated copper, 20 AWG.

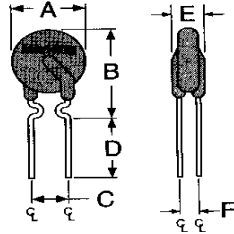
Soldering characteristics: MIL-STD-202, Method 208E.

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

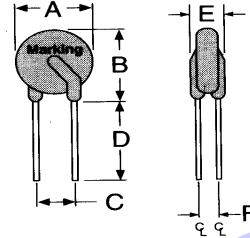
**NOTE : Specification subject to change without notes**



### 4. Production Dimensions (millimeter)



**FBR 100F ~ FBR 350F**  
Lead Size : 24AWG  
Φ 0.51 mm Diameter

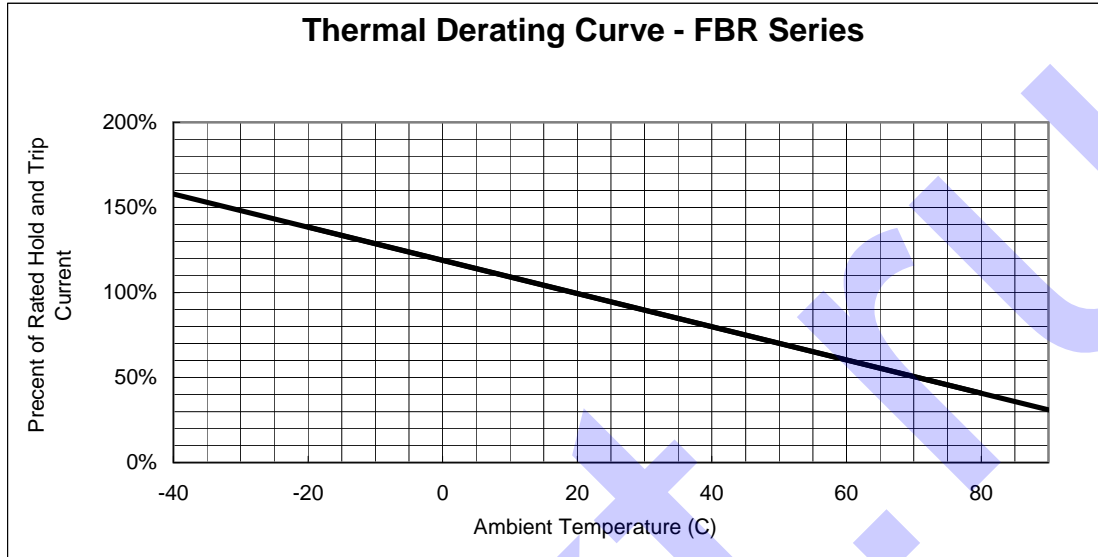


**FBR 550F ~ FBR 900F**  
Lead Size : 20AWG  
Φ 0.81 mm Diameter

Part Number	A	B	C	D	E	F
	Maximum	Maximum	Typical	Minimum	Maximum	Typical
FBR100UF	7.4	12.7	5.1	7.6	3.6	1.4
FBR100F	7.4	12.7	5.1	7.6	3.6	1.4
FBR150UF	9.0	12.7	5.1	7.6	3.6	1.4
FBR150F	9.0	12.7	5.1	7.6	3.6	1.4
FBR200UF	9.0	12.7	5.1	7.6	3.6	1.4
FBR200F	9.0	12.7	5.1	7.6	3.6	1.4
FBR250UF	9.0	12.7	5.1	7.6	3.6	1.4
FBR250F	9.0	12.7	5.1	7.6	3.6	1.4
FBR350UF	9.0	12.7	5.1	7.6	3.6	1.4
FBR350F	9.0	12.7	5.1	7.6	3.6	1.4
FBR550UF	10.9	14.0	5.1	7.6	3.6	1.4
FBR550F	10.9	14.0	5.1	7.6	3.6	1.4
FBR750UF	11.9	15.5	5.1	7.6	3.6	1.4
FBR750F	11.9	15.5	5.1	7.6	3.6	1.4
FBR900UF	13.0	16.0	5.1	7.6	3.6	1.4
FBR900F	13.0	16.0	5.1	7.6	3.6	1.4

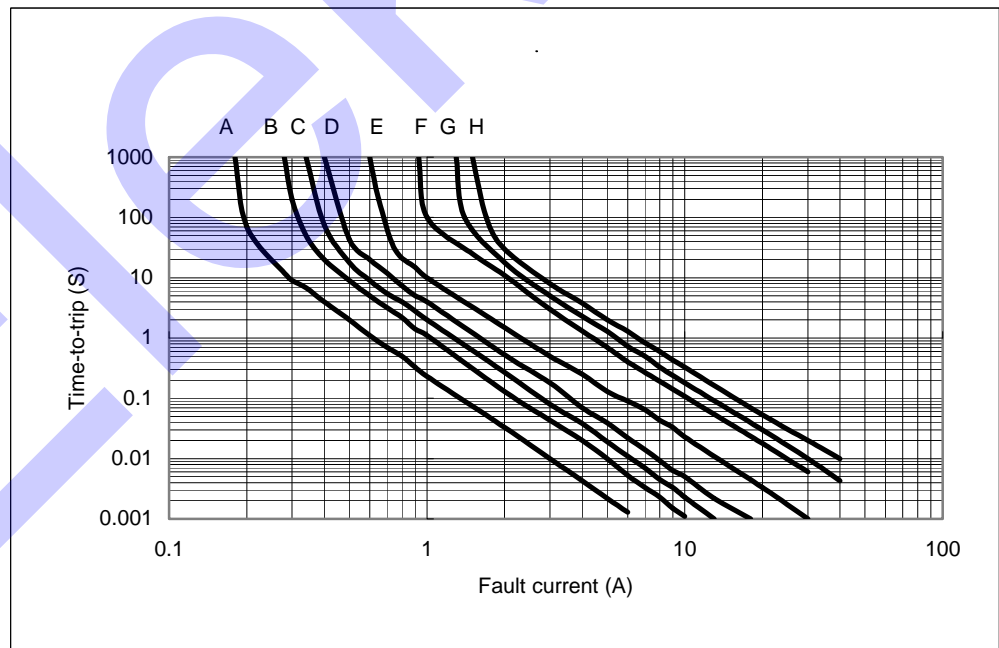


### 5. Thermal Derating Curve



### 6. Typical Time-To-Trip at 23°C

- A = FBR100UF/100F
- B = FBR150UF/150F
- C = FBR200UF/200F
- D = FBR250UF/250F
- E = FBR350UF/350F
- F = FBR550UF/550F
- G = FBR750UF/750F
- H = FBR900UF/900F



### 7. Material Specification

Lead material : FBR100~FBR900 Tin plated copper,20 AWG.

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

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

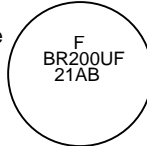
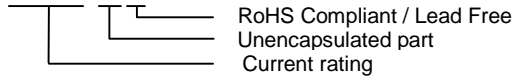
**NOTE : Specification subject to change without notes**



### 8. Part Numbering and Marking System

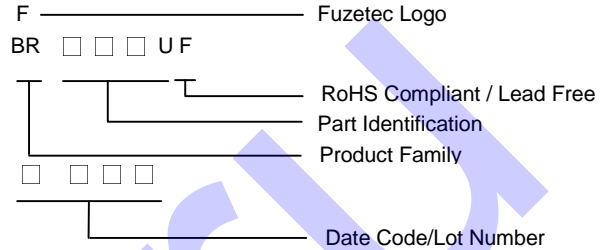
#### Part Numbering System

F BR □ □ □ U F



Example

#### Part Marking System



**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.