

 <b>FUZETEC TECHNOLOGY CO., LTD.</b>	<b>NO.</b>	<b>PQ43-101E</b>		
	<b>Product Specification and Approval Sheet</b>	<b>Version</b>	<b>5</b>	<b>Page</b>

## Radial Leaded PTC Resettable Fuse : FHE Series

### 1. Summary

- (a) **RoHS Compliant (Lead Free) Product**
- (b) **Applications : Wide variety of electronic equipment**
- (c) **Product Features : Very Low resistance, Very High hold current, Solid state, Radial leaded product ideal for up to 32V and Operating temperatures up to 125°C.**
- (d) **Operation Current : 0.5A~10.0A**
- (e) **Maximum Voltage : 32V**
- (f) **Temperature Range : -40°C to 125°C**

### 2. Agency Recognition

**UL: File No. E211981**  
**C-UL: File No. E211981**  
**TÜV: File No. R50004084**

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

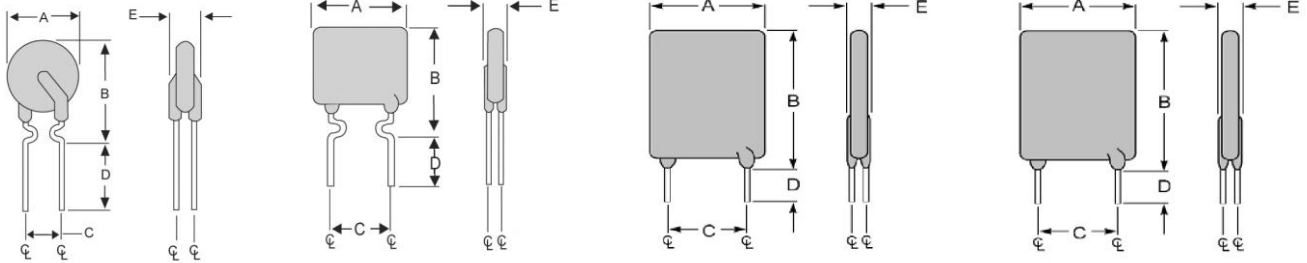
Part Number	Hold Current	Trip Current	Max.Time to Trip	Maximum Current	Rated Voltage	Typical Power	Resistance	
	I <sub>H</sub> , A	I <sub>T</sub> , A	at 5xI <sub>H</sub> , S	I <sub>MAX</sub> , A	V <sub>MAX</sub> , VDC	P <sub>d</sub> , W	R <sub>MIN</sub>	R <sub>1MAX</sub>
							Ohms	Ohms
<b>FHE050-32F</b>	0.5	1.0	3.0	100	32	0.9	0.3500	1.1000
<b>FHE070-32F</b>	0.7	1.4	3.2	100	32	1.4	0.2300	0.8000
<b>FHE100-32F</b>	1.0	1.9	6.2	100	32	1.4	0.1500	0.4300
<b>FHE200-32F</b>	2.0	4.0	5.5	100	32	2.2	0.0650	0.2500
<b>FHE300-32F</b>	3.0	6.0	5.0	100	32	3.2	0.0350	0.1100
<b>FHE500-32F</b>	5.0	10.0	9.0	100	32	5.3	0.0150	0.0400
<b>FHE750-32F</b>	7.5	15.0	13.0	100	32	6.5	0.0074	0.0230
<b>FHE1000-32F</b>	10.0	20.0	15.0	100	32	7.0	0.0060	0.0160

I<sub>H</sub>=Hold current-maximum current at which the device will not trip at 23°C still air.  
 I<sub>T</sub>=Trip current-minimum current at which the device will always trip at 23°C still air.  
 V<sub>MAX</sub>=Maximum voltage device can withstand without damage at its rated current.  
 I<sub>MAX</sub>= Maximum fault current device can withstand without damage at rated voltage (V<sub>MAX</sub>).  
 P<sub>d</sub>=Typical power dissipated from device when in tripped state in 23°C still air environment.  
 R<sub>MIN</sub>=Minimum device resistance at 23°C.  
 R<sub>1MAX</sub>=Maximum device resistance at 23°C, 1 hour after tripping .  
 Physical specifications:  
 Lead material: FHE050-32F~FHE100-32F Tin plated copper, 24 AWG.  
                   FHE200-32F~FHE750-32F Tin plated copper, 20 AWG.  
                   FHE1000-32F Tin plated copper, 18 AWG.  
 Soldering characteristics: MIL-STD-202, Method 208E.  
 Insulating coating: Flame retardant epoxy, meets UL-94V-0 requirement.

**NOTE : Specification subject to change without notice.**



**4. Production Dimensions (millimeter)**



**Fig.1**

**Lead Size: 24AWG**  
**Φ0.51 mm Diameter**

**Fig.2**

**Lead Size: 24AWG**  
**Φ0.51 mm Diameter**

**Fig.3**

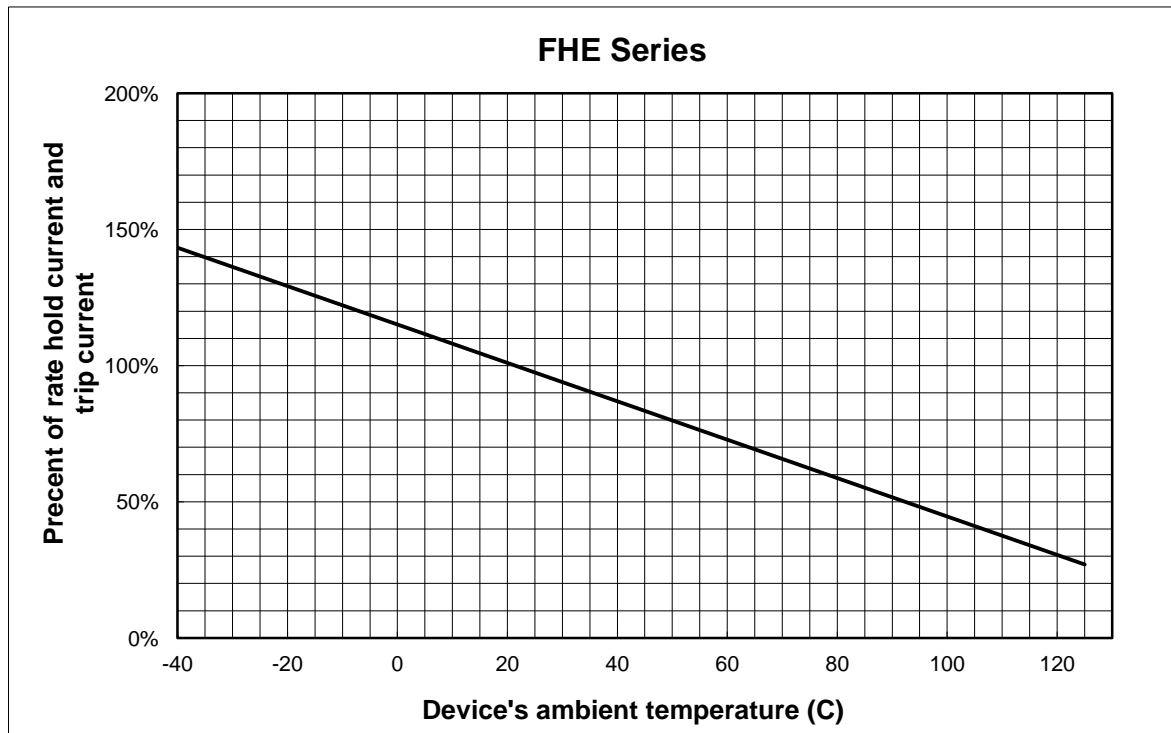
**Lead Size: 20AWG**  
**Φ0.81 mm Diameter**

**Fig.4**

**Lead Size: 18AWG**  
**Φ1.00 mm Diameter**

Part Number	Figure	A	B	C	D	E
		Maximum	Maximum	Typical	Minimum	Maximum
FHE050-32F	1	7.4	12.7	5.1	7.6	3.3
FHE070-32F	2	6.9	10.8	5.1	7.6	3.0
FHE100-32F	1	9.7	13.6	5.1	7.6	3.0
FHE200-32F	3	9.5	13.5	5.1	7.6	3.0
FHE300-32F	3	10.2	15.5	5.1	7.6	3.8
FHE500-32F	3	14.0	24.1	5.1	7.6	3.8
FHE750-32F	3	21.1	24.9	10.2	7.6	3.8
FHE1000-32F	4	23.5	27.9	10.2	7.6	4.0

**5. Thermal Derating Curve**

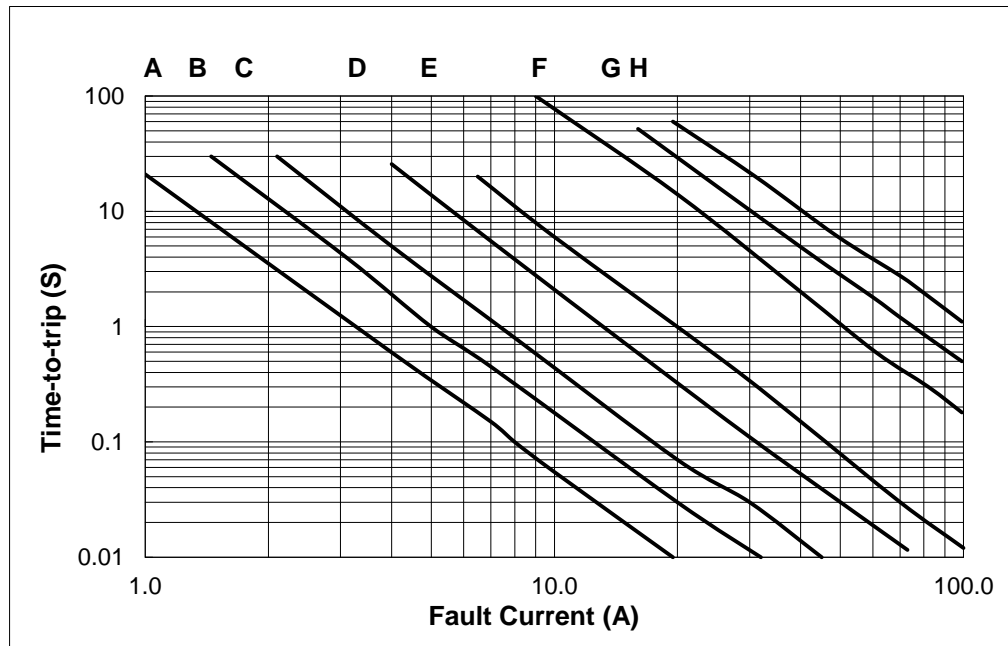


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### 6. Typical Time-To-Trip at 23°C

- A=FHE050-32F
- B=FHE070-32F
- C=FHE100-32F
- D=FHE200-32F
- E=FHE300-32F
- F=FHE500-32F
- G=FHE750-32F
- H=FHE1000-32F



### 7. Material Specification

Lead material: FHE050-32F~FHE100-32F Tin plated copper, 24 AWG.

FHE200-32F~FHE750-32F Tin plated copper, 20 AWG.

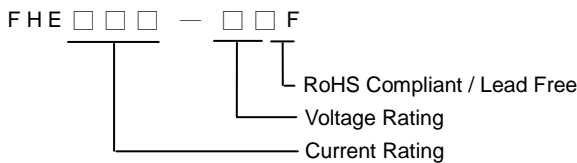
FHE1000-32F Tin plated copper, 18 AWG.

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

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

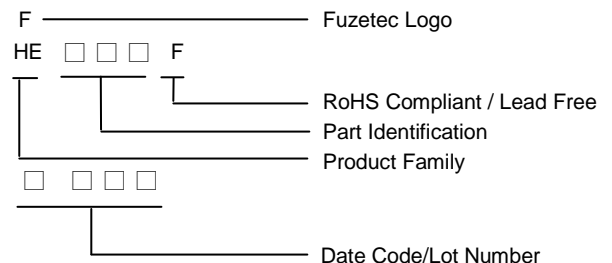
### 8. Part Numbering and Marking System

#### 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.

NOTE : Specification subject to change without notice.