

<b>RFE</b>    <b>FUZETEC</b>	<b>NO.</b>	<b>PQ27-120E</b>		
<b>Product Specification and Approval Sheet</b>	<b>Version</b>	<b>1</b>	<b>Page</b>	<b>1/4</b>

## Radial Leaded PTC Resettable Fuse: FHT 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 16V and Operating temperatures up to 125°C.**
- (d) **Operation Current: 0.5A~15.0A**
- (e) **Maximum Voltage: 16V/30V<sub>DC</sub>**
- (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	
	$I_H$ , A	$I_T$ , A	at $5xI_H$ , s	$I_{MAX}$ , A	$V_{MAX}$ , V <sub>DC</sub>	Pd, W	R <sub>MIN</sub>	R <sub>1MAX</sub>
							Ohm	Ohm
FHT050-30F	0.5	0.9	2.5	40	30	0.9	0.4800	1.1000
FHT070-30F	0.7	1.4	3.2	40	30	1.4	0.3000	0.8000
FHT100-30F	1.0	1.8	5.2	40	30	1.4	0.1800	0.4300
FHT200-16F	2.0	3.8	3.0	100	16	1.4	0.0450	0.1100
FHT300-16F	3.0	6.0	5.0	100	16	3.0	0.0330	0.0790
FHT400-16F	4.0	7.0	5.0	100	16	3.3	0.0240	0.0600
FHT450-16F	4.5	7.8	3.0	100	16	3.6	0.0220	0.0540
FHT550-16F	5.5	10.0	6.0	100	16	3.5	0.0150	0.0370
FHT600-16F	6.0	10.8	5.0	100	16	4.1	0.0130	0.0320
FHT650-16F	6.5	12.0	5.5	100	16	4.3	0.0110	0.0260
FHT700-16F	7.0	13.0	7.0	100	16	4.0	0.0100	0.0250
FHT750-16F	7.5	13.1	7.0	100	16	4.5	0.0094	0.0220
FHT800-16F	8.0	15.0	8.0	100	16	4.2	0.0080	0.0200
FHT900-16F	9.0	16.5	10.0	100	16	5.0	0.0074	0.0170
FHT1000-16F	10.0	18.5	9.0	100	16	5.3	0.0062	0.0150
FHT1100-16F	11.0	20.0	11.0	100	16	5.5	0.0055	0.0130
FHT1300-16F	13.0	24.0	13.0	100	16	6.9	0.0041	0.0100
FHT1400-16F	14.0	27.0	13.0	100	16	6.9	0.0030	0.0090
FHT1500-16F	15.0	28.0	20.0	100	16	7.0	0.0032	0.0092

$I_H$ =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.  
 $I_{MAX}$ = Maximum fault current device can withstand without damage at rated voltage ( $V_{MAX}$ ).  
 $V_{MAX}$ =Maximum voltage device can withstand without damage at its rated current.  
 $P_d$ =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: FHT050-30F~FHT100-30F and FHT200-16F Tin plated copper clad steel, 24 AWG.  
                   FHT300-16F~FHT1100-16F Tin plated copper, 20 AWG.  
                   FHT1300-16F~FHT1500-16F Tin plated copper, 18 AWG.  
 Soldering characteristics: MIL-STD-202, Method 208E.  
 Insulating coating: Flame retardant epoxy, meets UL-94V-0 requirement.

#### 4. Production Dimensions (millimeter)

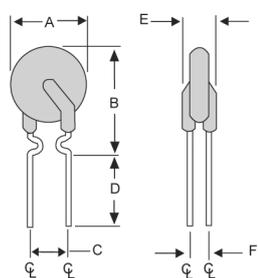


Fig. 1

Lead Size: 24AWG  
 φ0.51 mm Diameter

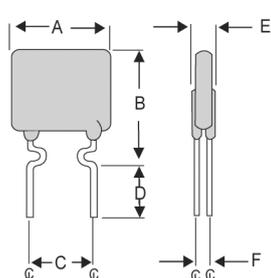


Fig. 2

Lead Size: 24AWG  
 φ0.51 mm Diameter

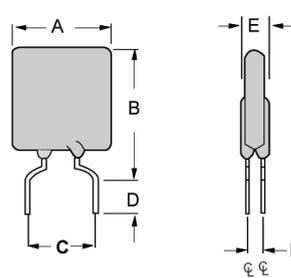


Fig. 3

Lead Size: 20AWG  
 φ0.81 mm Diameter

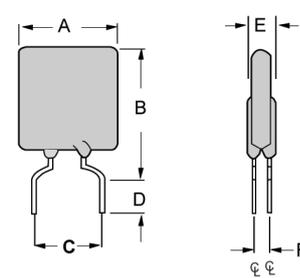
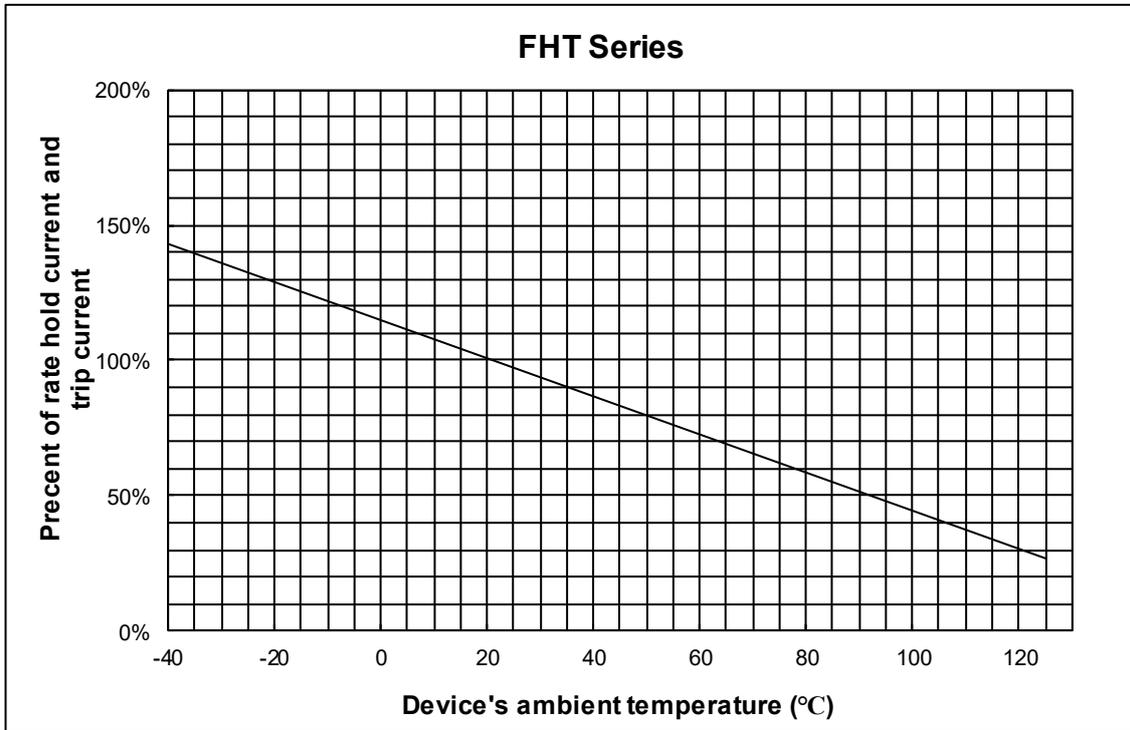


Fig. 4

Lead Size: 18AWG  
 φ1.00 mm Diameter

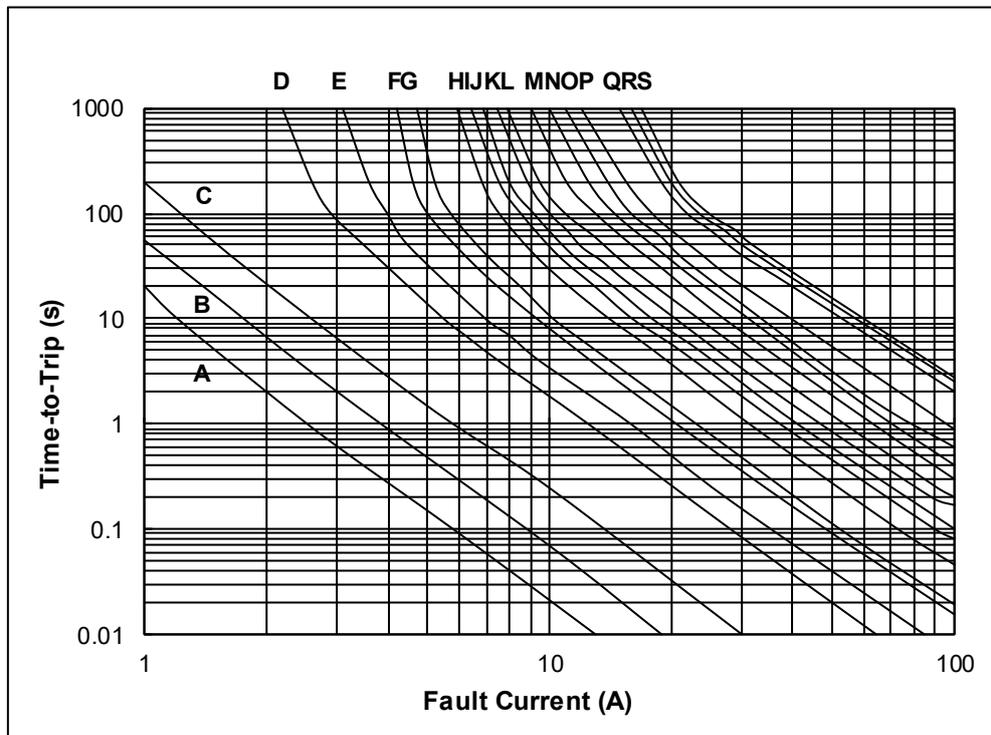
Part Number	Figure	A	B	C	D	E	F
		Maximum	Maximum	Typical	Minimum	Maximum	Typical
FHT050-30F	1	7.4	12.7	5.1	7.6	3.0	1.2
FHT070-30F	2	6.9	10.8	5.1	7.6	3.0	1.2
FHT100-30F	1	9.7	13.6	5.1	7.6	3.0	1.2
FHT200-16F	1	9.4	14.4	5.1	7.6	3.0	1.2
FHT300-16F	3	8.8	13.8	5.1	7.6	3.0	1.2
FHT400-16F	3	10.0	15.0	5.1	7.6	3.0	1.2
FHT450-16F	3	10.4	15.6	5.1	7.6	3.0	1.2
FHT550-16F	3	11.2	18.9	5.1	7.6	3.0	1.2
FHT600-16F	3	11.2	21.0	5.1	7.6	3.0	1.2
FHT650-16F	3	12.7	22.2	5.1	7.6	3.0	1.2
FHT700-16F	3	14.0	21.9	5.1	7.6	3.0	1.2
FHT750-16F	3	14.0	23.5	5.1	7.6	3.0	1.2
FHT800-16F	3	16.5	22.5	5.1	7.6	3.0	1.2
FHT900-16F	3	16.5	25.7	5.1	7.6	3.0	1.2
FHT1000-16F	3	17.5	26.5	10.2	7.6	3.0	1.2
FHT1100-16F	3	21.0	26.1	10.2	7.6	3.0	1.2
FHT1300-16F	4	23.5	28.7	10.2	7.6	3.6	1.4
FHT1400-16F	4	23.5	28.7	10.2	7.6	3.6	1.4
FHT1500-16F	4	23.5	28.7	10.2	7.6	3.6	1.4

### 5. Thermal Derating Curve



### 6. Typical Time-to-Trip at 23°C

- A=FHT050-30F
- B=FHT070-30F
- C=FHT100-30F
- D=FHT200-16F
- E=FHT300-16F
- F=FHT400-16F
- G=FHT450-16F
- H=FHT550-16F
- I=FHT600-16F
- J=FHT650-16F
- K=FHT700-16F
- L=FHT750-16F
- M=FHT800-16F
- N=FHT900-16F
- O=FHT1000-16F
- P=FHT1100-16F
- Q=FHT1300-16F
- R=FHT1400-16F
- S=FHT1500-16F



	NO.	PQ27-120E		
	Product Specification and Approval Sheet	Version	1	Page

## 7. Material Specification

Lead material: FHT050-30F~FHT100-30F and FHT200-16F Tin plated copper clad steel, 24 AWG.

FHT300-16F~FHT1100-16F Tin plated copper, 20 AWG.

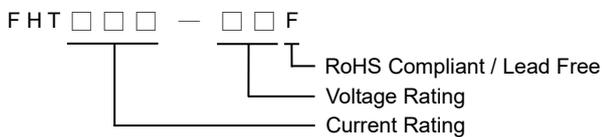
FHT1300-16F~FHT1500-16F Tin plated copper, 18 AWG.

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

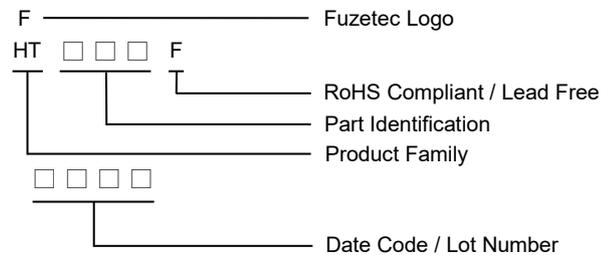
Insulating coating: Flame retardant epoxy, meets UL-94V-0 requirement.

## 8. Part Numbering and Marking System

### Part Numbering System



### Part Marking System



Note: Font on Marking may look slightly different due to fine turnings of each Marking printer.

**Warning:** - Each product should be carefully evaluated and tested for their suitability of application.



- Operation beyond the specified maximum rating 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, including some inert material such as silicone based oil, lubricant and etc. Prolonged contact will damage the device performance.
- Additional protection mechanism are strongly recommended to be used in conjunction with the PPTC device for protection against abnormal or failure conditions.
- Avoid use of PPTC device in a constrained space such as potting material, housing and containers where have limited space to accommodate device thermal expansion and/or contraction.