

# 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/30VDC
- (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)

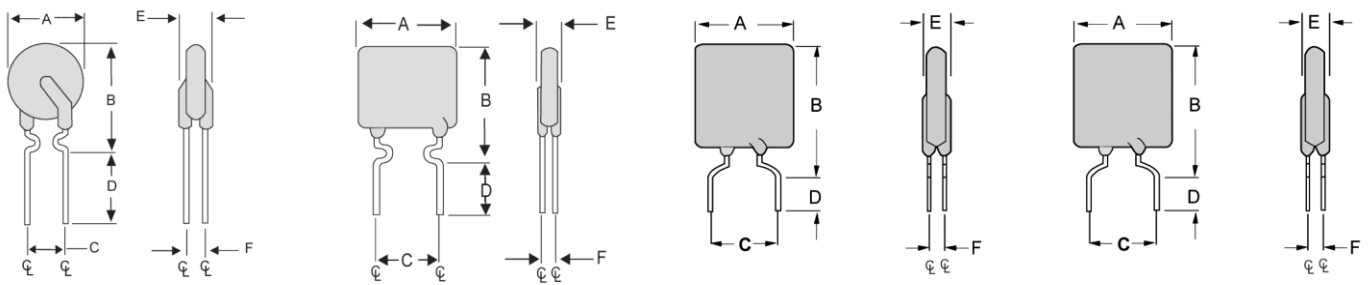
| Part Number | Hold Current       | Trip Current       | Max.Time to Trip        | Maximum Current      | Rated Voltage          | Typical Power      | Resistance       |                   |
|-------------|--------------------|--------------------|-------------------------|----------------------|------------------------|--------------------|------------------|-------------------|
|             | 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               |                         |                      |                        |                    |                  |                   |
| 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            |

NOTE : Specification subject to change without notice.

2017/7/10

$I_H$ =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: FHT050-30F~FHT100-30F and FHT200-16F Tin plated copper, 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**

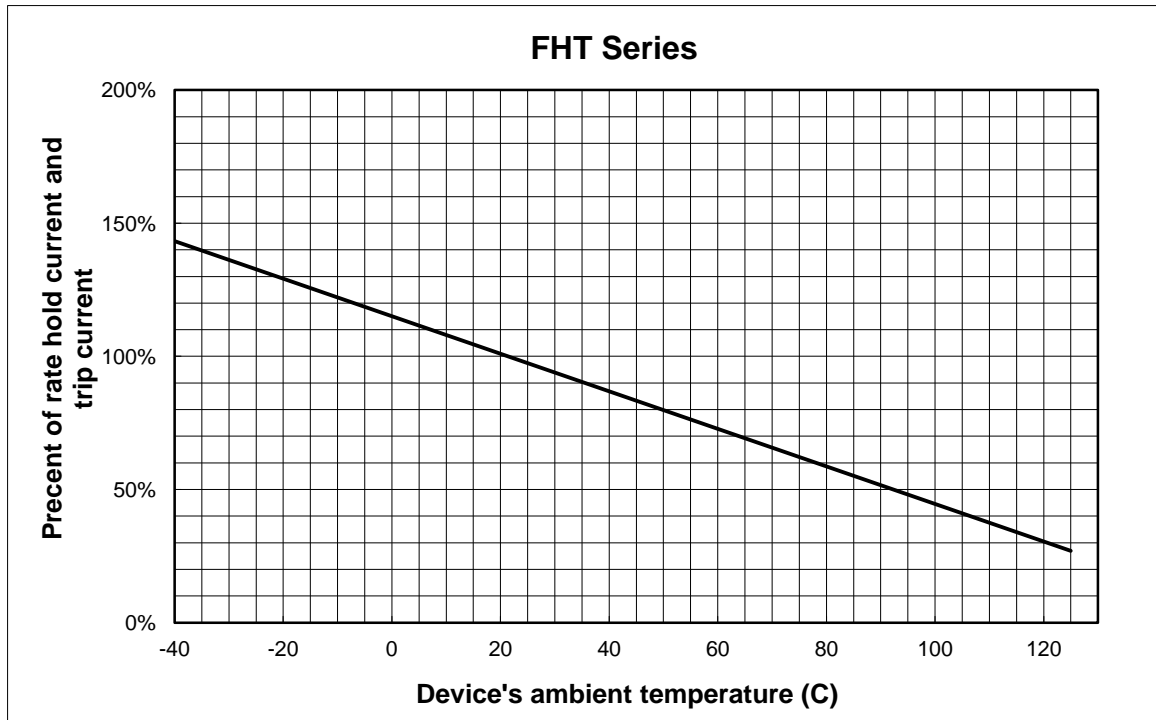
**Fig.3**  
**Lead Size : 20AWG**  
**Φ 0.81 mm Diameter**

**Fig.4**  
**Lead Size : 18AWG**  
**Φ 1.00 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     |

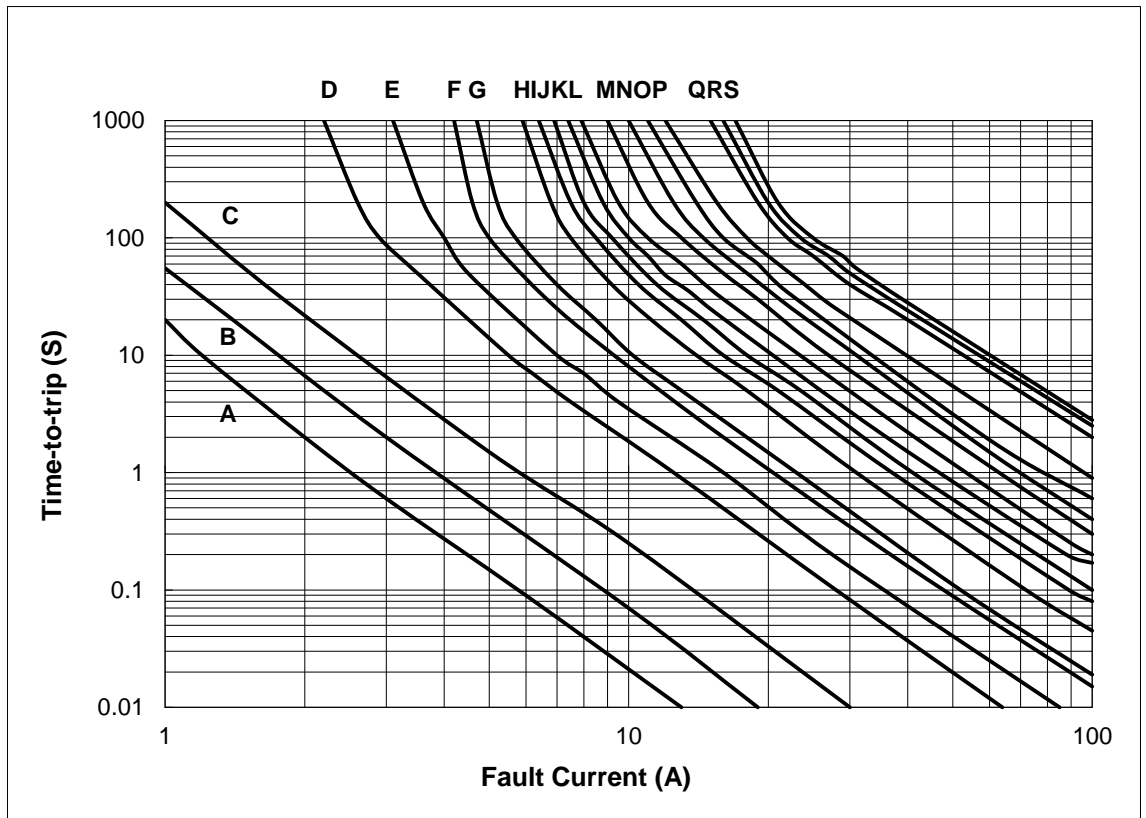
NOTE : Specification subject to change without notice.

## 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



NOTE : Specification subject to change without notice.

## 7. Material Specification

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

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

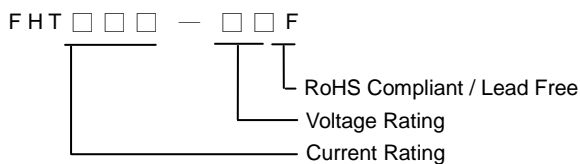
FHT1300-16F~FHT1500-16F Tin plated copper, 18 AWG.

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

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

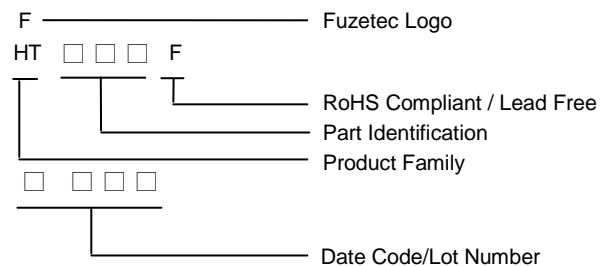
## 8. Part Numbering and Marking System

### Part Numbering System



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.