# 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℃.
(d) Operation Current : 0.5A~15.0A
(e) Maximum Voltage : 16V/30VDC
(f) Temperature Range : -40℃ to 125℃

## 2. Agency Recognition

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

## 3. Electrical Characteristics (23℃)

| Part Number | Hold Current | Trip Current | Max.Time to Trip | Maximum Current | Rated Voltage | Typical Power | Resistance | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | $R_{MIN}$ | $R1_{MAX}$ |
| | $I_H$, A | $I_T$, A | at 5x$I_H$, S | $I_{MAX}$, A | $V_{MAX}$, VDC | Pd, W | 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.

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$I_H$=Hold current-maximum current at which the device will not trip at 23℃ still air.
$I_T$=Trip current-minimum current at which the device will always trip at 23℃ 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℃ still air environment.
$R_{MIN}$=Minimum device resistance at 23℃.
$R1_{MAX}$=Maximum device resistance at 23℃, 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)

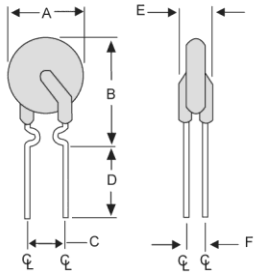


**Fig.1**
**Lead Size :24AWG**
**Φ0.51 mm Diameter**

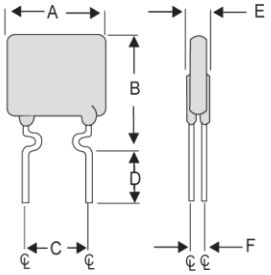


**Fig.2**
**Lead Size :24AWG**
**Φ0.51 mm Diameter**

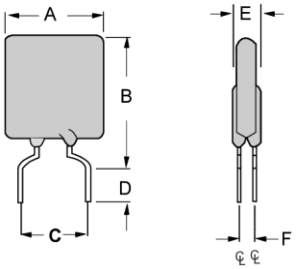


**Fig.3**
**Lead Size : 20AWG**
**Φ 0.81 mm Diameter**

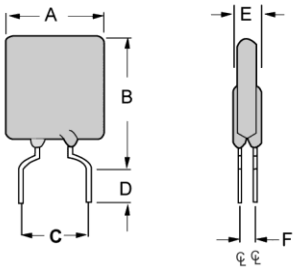


**Fig.4**
**Lead Size : 18AWG**
**Φ 1.00 mm Diameter**

| 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.**

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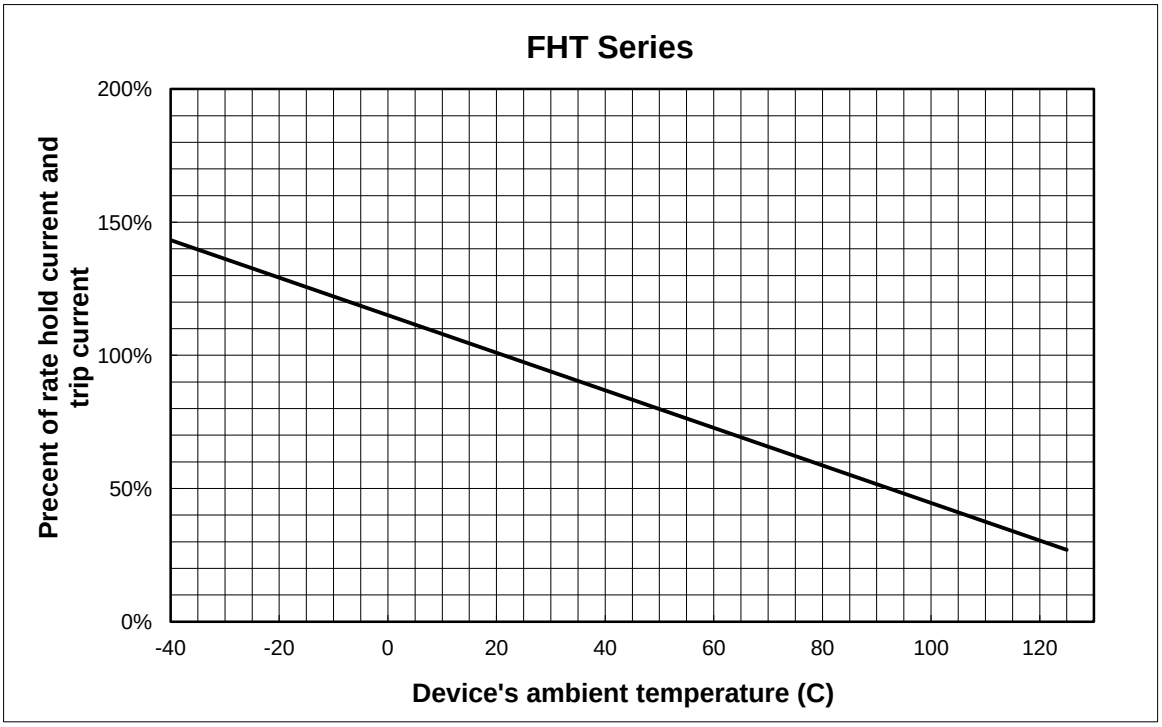
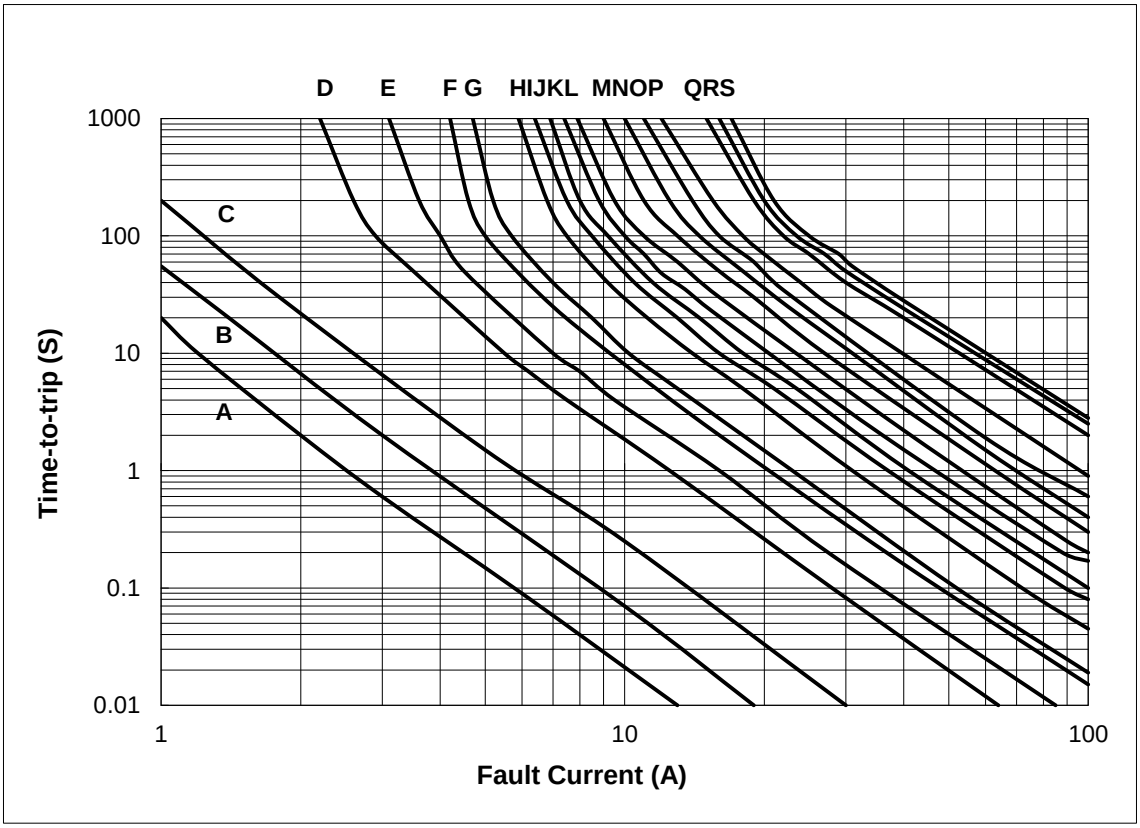
## 5. Thermal Derating Curve




## 6. Typical Time-To-Trip at 23℃

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.

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## 7.Material Specification

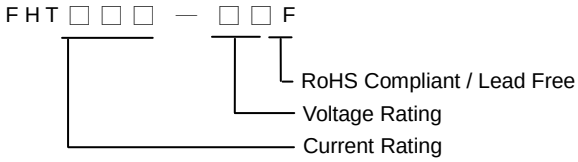
Lead material： FHT050-30F~FHT100-30F and FHT200-16F Tin plated copper, 24 AWG.
FHT300-16F~FHT1100-16F Tin plated copper, 20 AWG.
FHT1300-16F~FHT1500-16F Tin plated copper, 18 AWG.

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

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

## 8. Part Numbering and Marking System

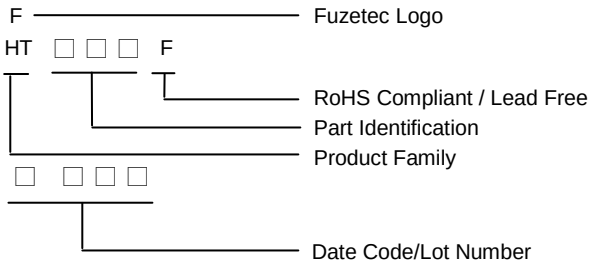
### Part Numbering System




### Part Marking System




Example




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.