

## Features

- Operating temperature range up to 125 °C
- Low thermal derating factor
- Higher hold currents at elevated temperature
- RoHS compliant\*

## Applications

- Protection of automotive circuitry including engine control modules
- Overcurrent surge protection of electronic equipment required to operate at high operating temperature ranges
- Resettable fault protection of general electronic equipment

# MF-PSHT Series - PTC Resettable Fuses

## Electrical Characteristics

Model	V max. Volts	I max. Amps	I <sub>hold</sub>	I <sub>trip</sub>	Resistance		Max. Time To Trip		Tripped Power Dissipation
			Amperes at 23 °C		Ohms at 23 °C		Amperes at 23 °C	Seconds at 23 °C	Watts at 23 °C
			Hold	Trip	R <sub>Min.</sub>	R <sub>1Max.</sub> **			Typ.
MF-PSHT010X	16	40	0.10	0.60	1.0	7.5	2.5	1.5	1.0

\*\*R<sub>1Max.</sub> measured 24 hours post reflow.

## Environmental Characteristics

Operating Temperature.....	-40 °C to +125 °C
Maximum Device Surface Temperature in Tripped State .....	+125 °C
Passive Aging.....	+125 °C, 1000 hours..... R <sub>final</sub> < R <sub>1max.</sub>
Humidity Aging.....	+85 °C, 85 % R.H. 1000 hours..... R <sub>final</sub> < R <sub>1max.</sub>
Thermal Shock .....	+125 °C to -40 °C, 20 times..... R <sub>final</sub> < R <sub>1max.</sub>
Solvent Resistance.....	MIL-STD-202, Method 215..... No change
Vibration .....	MIL-STD-883C, Method 2007.1, Condition A..... No change

## Test Procedures And Requirements For Model MF-PSHT Series

Test	Test Conditions	Accept/Reject Criteria
Visual/Mech.....	Verify dimensions and materials.....	Per MF physical description
Resistance.....	In still air @ 23 °C.....	R <sub>min</sub> ≤ R ≤ R <sub>1max</sub>
Time to Trip.....	At specified current, V <sub>max</sub> , 23 °C.....	T ≤ max. time to trip (seconds)
Hold Current .....	30 min. at I <sub>hold</sub> .....	No trip
Trip Cycle Life.....	V <sub>max</sub> , I <sub>max</sub> , 100 cycles.....	No arcing or burning
Trip Endurance .....	V <sub>max</sub> , 48 hours.....	No arcing or burning
Solderability.....	ANSI/J-STD-002.....	95 % min. coverage

## Thermal Derating Chart - I<sub>hold</sub> (Amps)

Model	Ambient Operating Temperature									
	-40 °C	-20 °C	0 °C	+23 °C	+40 °C	+50 °C	+60 °C	+70 °C	+85 °C	+125 °C
MF-PSHT010X	0.15	0.13	0.115	0.10	0.09	0.084	0.078	0.072	0.063	0.04

# BOURNS®

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[www.bourns.com](http://www.bourns.com)

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

# MF-PSHT Series - PTC Resettable Fuses

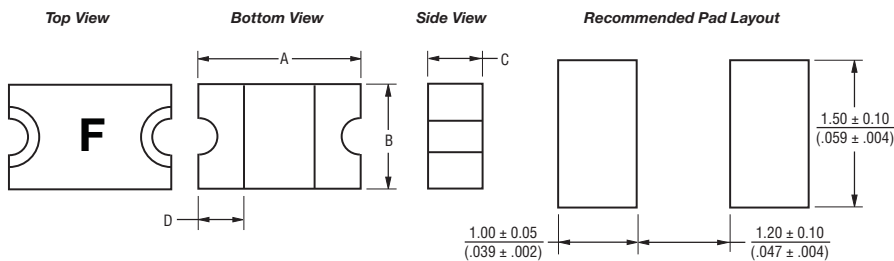
# BOURNS®

## Product Dimensions

Model	A		B		C		D
	Min.	Max.	Min.	Max.	Min.	Max.	Min.
MF-PSHT010X	$\frac{2.00}{(0.079)}$	$\frac{2.30}{(0.091)}$	$\frac{1.20}{(0.047)}$	$\frac{1.50}{(0.059)}$	$\frac{0.40}{(0.016)}$	$\frac{0.80}{(0.031)}$	$\frac{0.25}{(0.010)}$

Packaging: 3000 pcs. per reel.

DIMENSIONS:  $\frac{\text{MM}}{\text{(INCHES)}}$



### Terminal material:

Nickel/gold plated.

### Termination pad solderability:

Standard Au finish:  
Meets ANSI/J-STD-002 Category 2.

### Recommended Storage:

40 °C max./70 % RH max.

## Typical Time to Trip at 23 °C



The Time to Trip curves represent typical performance of a device in a simulated application environment. Actual performance in specific customer applications may differ from these values due to the influence of other variables.

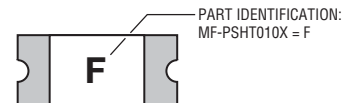
## How to Order

### MF - PSHT 010 X - 2

Multifuse® Product Designator \_\_\_\_\_  
Series \_\_\_\_\_  
PSHT = 0805 High Temperature Surface Mount Component  
Hold Current,  $I_{hold}$  \_\_\_\_\_  
010 (0.10 Amps)  
Multifuse® freeXpansion™ Design \_\_\_\_\_  
Packaging \_\_\_\_\_  
Packaged per EIA 481-1  
-2 = Tape and Reel

## Typical Part Marking

Represents total content. Layout may vary.

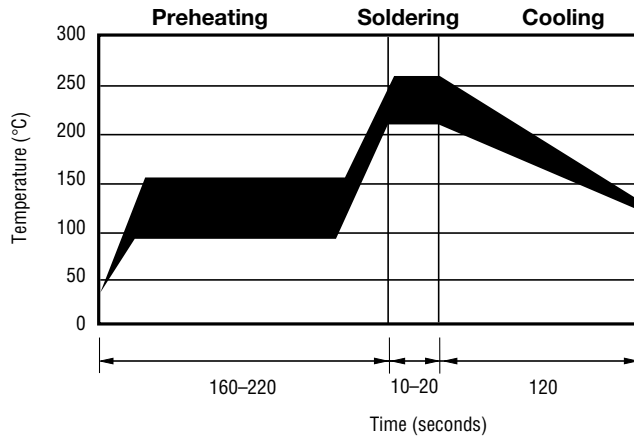


BIWEEKLY DATE CODE WILL APPEAR ON THE PACKAGING LABEL:  
WEEK 1 AND 2 = A  
WEEK 51 AND 52 = Z

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## Solder Reflow Recommendations



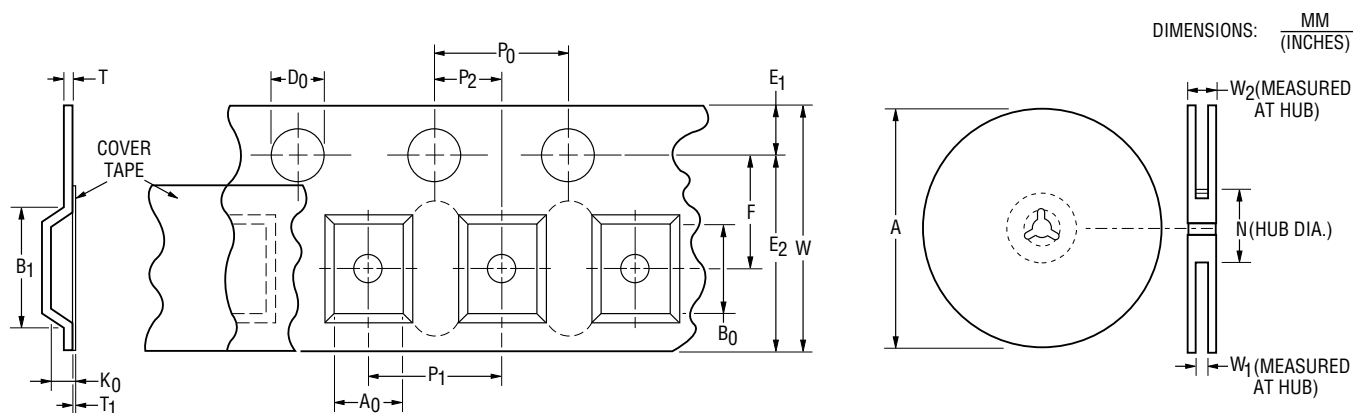
### Notes:

- MF-PSHT models cannot be wave soldered. Please contact Bourns for hand soldering recommendations.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.
- Compatible with Pb and Pb-free solder reflow profiles.
- Excess solder may cause a short circuit, especially during hand soldering. Please refer to the Multifuse® Polymer PTC Soldering Recommendation guidelines.

# MF-PSHT Series Tape and Reel Specifications

# BOURNS®

Tape Dimensions	MF-PSHT010X per EIA 481-1
W	$8.0 \pm 0.30$ (0.315 ± 0.012)
P <sub>0</sub>	$4.0 \pm 0.10$ (0.157 ± 0.004)
P <sub>1</sub>	$4.0 \pm 0.10$ (0.157 ± 0.004)
P <sub>2</sub>	$2.0 \pm 0.05$ (0.079 ± 0.002)
A <sub>0</sub>	$1.65 \pm 0.10$ (0.065 ± 0.004)
B <sub>0</sub>	$2.40 \pm 0.10$ (0.094 ± 0.004)
B <sub>1</sub> max.	$4.35$ (0.171)
D <sub>0</sub>	$1.5 + 0.10/-0.0$ (0.059 + 0.004/-0)
F	$3.5 \pm 0.05$ (0.138 ± 0.002)
E <sub>1</sub>	$1.75 \pm 0.10$ (0.069 ± 0.004)
E <sub>2</sub> min.	$6.25$ (0.246)
T max.	$0.6$ (0.024)
T <sub>1</sub> max.	$0.1$ (0.004)
K <sub>0</sub>	$0.95 \pm 0.10$ (0.037 ± 0.004)
Leader min.	$390$ (15.35)
Trailer min.	$160$ (6.30)
<b>Reel Dimensions</b>	
A max.	$185$ (7.28)
N min.	$50$ (1.97)
W <sub>1</sub>	$8.4 + 1.5/-0.0$ (0.331 + 0.059/-0.0)
W <sub>2</sub> max.	$14.4$ (0.567)



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Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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