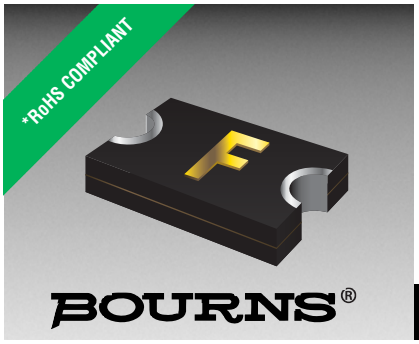

Features

- 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_{hold}	I_{trip}	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	$R_{Min.}$	$R_{1Max.}$**			Typ.
MF-PSHT010X	16	40	0.10	0.60	1.0	7.5	2.5	1.5	1.0

**$R_{1Max.}$ 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	$R_{final} < R_{1max.}$
Humidity Aging	+85 °C, 85 % R.H. 1000 hours	$R_{final} < R_{1max.}$
Thermal Shock	+125 °C to -40 °C, 20 times	$R_{final} < R_{1max.}$
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	$R_{min} \le R \le R_{1max}$
Time to Trip	At specified current, Vmax, 23 °C	T ≤ max. time to trip (seconds)
Hold Current	30 min. at I_{hold}	No trip
Trip Cycle Life	V_{max}, I_{max}, 100 cycles	No arcing or burning
Trip Endurance	V_{max}, 48 hours	No arcing or burning
Solderability	ANSI/J-STD-002	95 % min. coverage

Thermal Derating Chart - I_{hold} (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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The Americas: Tel: +1-951 781-5500 • Fax: +1-951 781-5700
www.bourns.com

MF-PSHT Series - PTC Resettable Fuses

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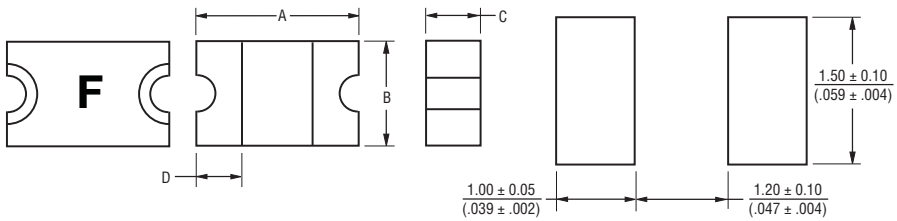
Product Dimensions

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

Packaging: 3000 pcs. per reel.

DIMENSIONS: MM (INCHES)

Top View *Bottom View* *Side View* *Recommended Pad Layout*

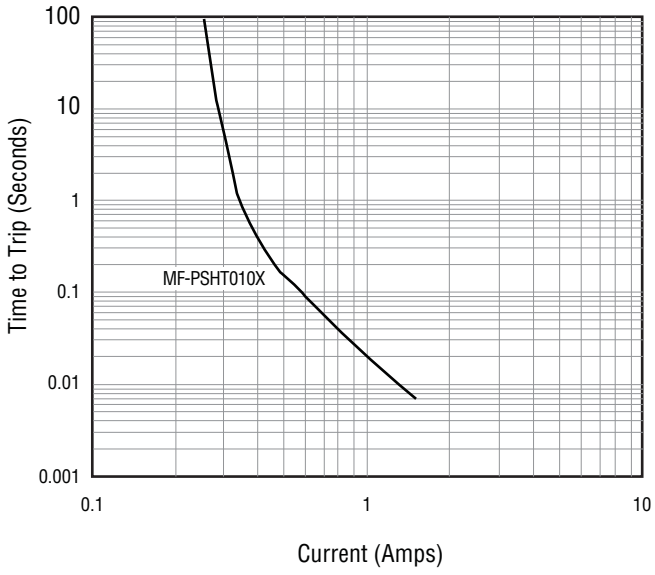


Terminal material:
Nickel/gold plated.

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

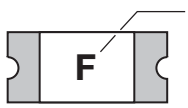
Hold Current, I_{hold}
010 (0.10 Amps)

Multifuse® freeXpansion™ Design

Packaging
Packaged per EIA 481-1
-2 = Tape and Reel

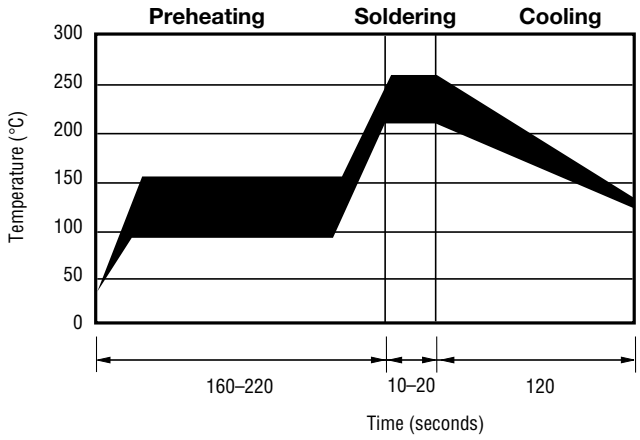
Typical Part Marking

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

Solder Reflow Recommendations



Notes:

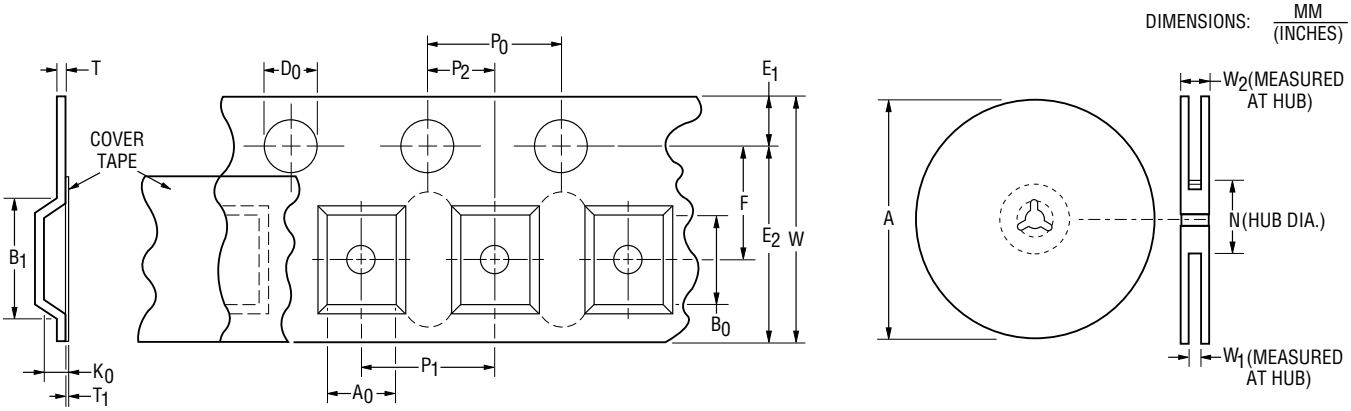
- MF-PSHT models cannot be wave soldered. Please contact Bourns for hand soldering recommendations.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.
- Compatible with Pb and Pb-free solder reflow profiles.
- Excess solder may cause a short circuit, 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 ± 0.30 (0.315 ± 0.012)
P_0	4.0 ± 0.10 (0.157 ± 0.004)
P_1	4.0 ± 0.10 (0.157 ± 0.004)
P_2	2.0 ± 0.05 (0.079 ± 0.002)
A_0	1.65 ± 0.10 (0.065 ± 0.004)
B_0	2.40 ± 0.10 (0.094 ± 0.004)
B_1 max.	4.35 (0.171)
D_0	1.5 + 0.10/-0.0 (0.059 + 0.004/-0)
F	3.5 ± 0.05 (0.138 ± 0.002)
E_1	1.75 ± 0.10 (0.069 ± 0.004)
E_2 min.	6.25 (0.246)
T max.	0.6 (0.024)
T_1 max.	0.1 (0.004)
K_0	0.95 ± 0.10 (0.037 ± 0.004)
Leader min.	390 (15.35)
Trailer min.	160 (6.30)
Reel Dimensions	
A max.	185 (7.28)
N min.	50 (1.97)
W_1	8.4 + 1.5/-0.0 (0.331 + 0.059/-0.0)
W_2 max.	14.4 (0.567)

DIMENSIONS: MM (INCHES)



Specifications are subject to change without notice.
Customers 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.