



Features

- Compliant with AEC-Q200 Rev-C- Stress Test Qualification for Passive Components in Automotive Applications
- 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	12.0	2.5	1.5	1.0

**R_{1Max.} measured 24 hours post reflow. Maximum resistance after two solder reflow cycles.

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,..... No change
	Condition A
Moisture Sensitivity Level (MSL)	Level 1
ESD Classification - HBM.....	Class 6

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} ≤ R ≤ R _{1max}
Time to Trip.....	At specified current, V _{max} , 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

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WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

*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.

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MF-PSHT Series - PTC Resettable Fuses

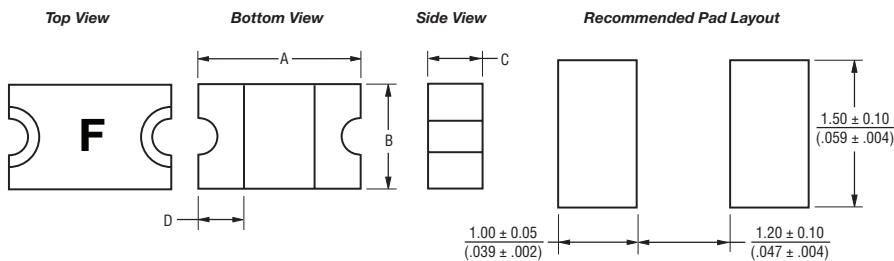
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Product Dimensions

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

Packaging: 3000 pcs. per reel.

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



Terminal material:

Nickel/gold plated.

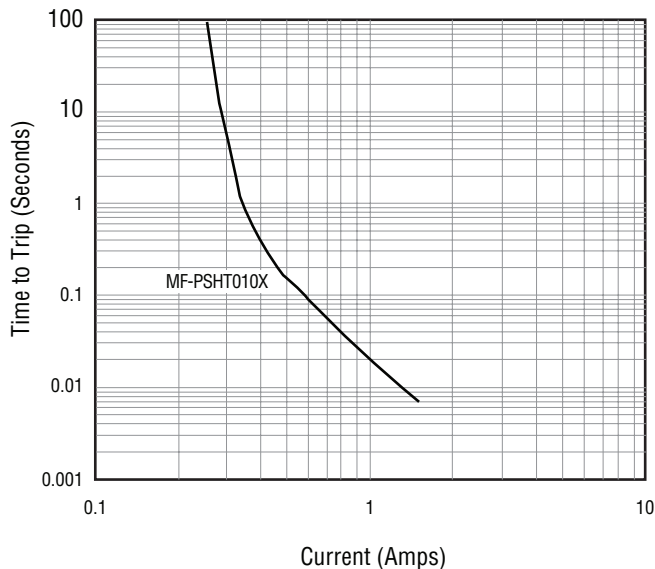
Termination pad solderability:

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.

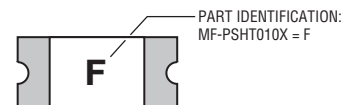
How to Order

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

Specifications are subject to change without notice.

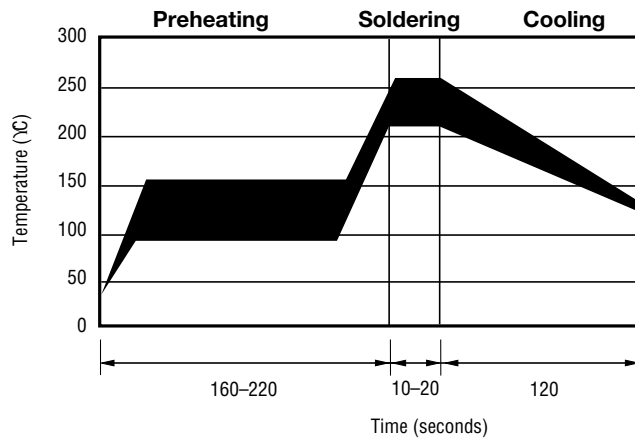
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MF-PSHT Series - PTC Resettable Fuses

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Solder Reflow Recommendations



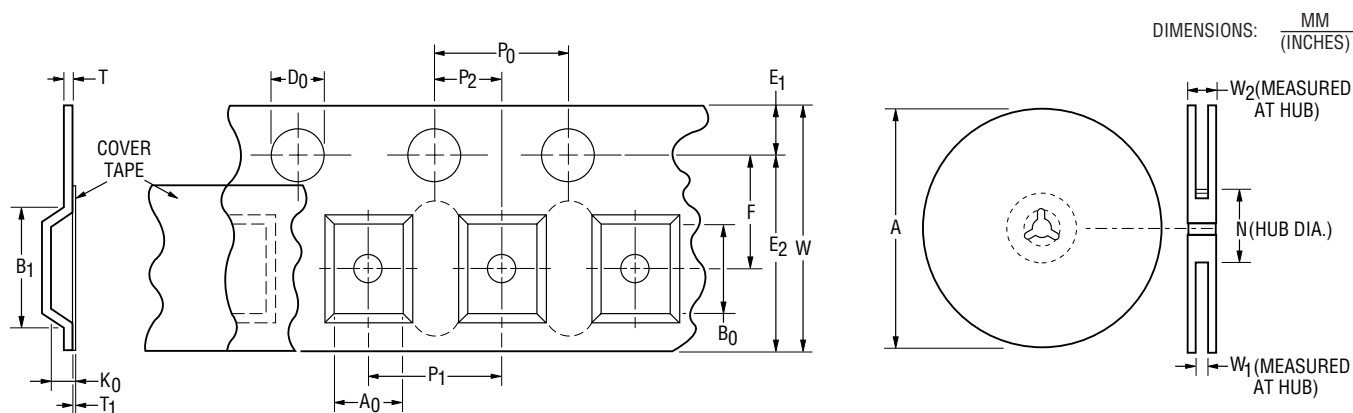
Notes:

- 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

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Tape Dimensions		MF-PSHT010X per EIA 481-1
W		8.0 ± 0.30 (0.315 \pm 0.012)
P ₀		4.0 ± 0.10 (0.157 \pm 0.004)
P ₁		4.0 ± 0.10 (0.157 \pm 0.004)
P ₂		2.0 ± 0.05 (0.079 \pm 0.002)
A ₀		1.65 ± 0.10 (0.065 \pm 0.004)
B ₀		2.40 ± 0.10 (0.094 \pm 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 \pm 0.002)
E ₁		1.75 ± 0.10 (0.069 \pm 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 \pm 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)



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