

# FUSES

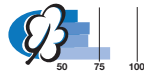
## Resettable fuses

# PFMT

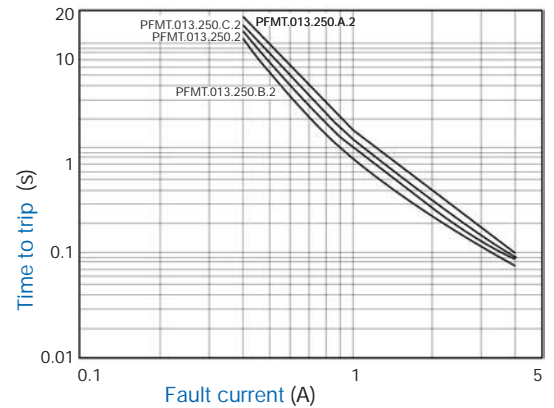
### Surface Mount PTC-Fuses Type PFMT

5,4 x 8,5 mm  
High voltage surge capabilities  
Compliance to ITU K.20/K.21 specifications  
Packaged per EIA 486-B

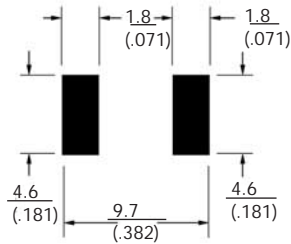
Agency recognition:  
UL, CSA, TÜV



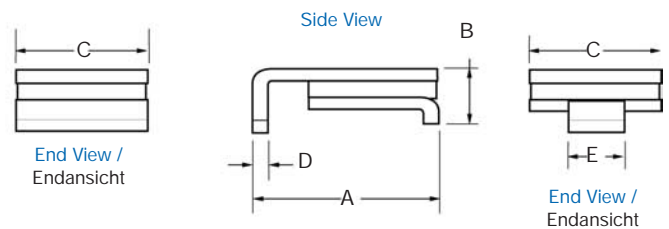
Typical Time to Trip at 23 °C



### Solder pad layouts



### Dimensions



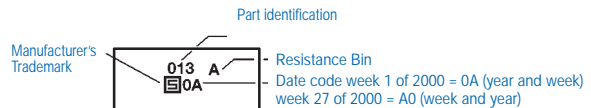
### Applications

Used as a secondary overcurrent protection device in:

- Customer Premise Equipment (CPE)
- Central Office (CO)
- Subscriber Line Interface Cards (SLIC)

### Typical Part Marking

Layout may vary



### Environmental Characteristics

Operating/Storage Temperature	-45 °C to +85 °C	
Maximum Device Surface Temperature in Tripped State	125 °C	
Passive Aging	+85 °C, 1000 hours	± 2% typ. resist. change
	+60 °C, 1000 hours	± 3% typ. resist. change
Humidity Aging	+85 °C, 85% R.H. 500 hours	± 3% typ. resist. change
Thermal Shock	MIL-STD-202F, Method 107G	±10% typ. resist. change
	+125 °C/-55 °C 10 times	±15% typ. resist. change
Solvent Resistance	MIL-STD-202, Method 215B	No change
Lead Solderability	ANSI/J-STD-002	
Flammability	IEC 695-2-2	No Flame for 60 sec.
Vibration	MIL-STD-883C, Method 2007.1, Condition A	No change

### Test Procedures And Requirements For Model PFMT Series

Test	Test Conditions	Accept/Reject Criteria
Visual/Mech.	Verify dimensions and materials	Per MF physical description
Resistance	In still air @ 23°C	$R_{min} \leq R \leq R_{max}$
Time to Trip	At specified current, $V_{max}$ 23 °C	$T \leq \text{max. time to trip (sec.)}$
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	MIL-STD-202F, Method 208F	95% min. coverage

**Electrical Characteristics**

Type	Max. Oper. Voltage	Max. Interrupt Ratings		Hold Current	Initial Resistance		One Hour Post-Trip Resistance	Nom. Power Dissipation
		Volts	Amps		Amps at 23 °C	Ohms at 23 °C		
	Volts	max.	max.	$I_h$	min.	max.	max.	Watts at 650 V / 23 °C
PFMT.013.250.2	60	250	3.0	0.13	6.5	12.0	20.0	3.3
PFMT.013.250.A.2	60	250	3.0	0.13	6.5	9.0	20.0	3.3
PFMT.013.250.B.2	60	250	3.0	0.13	9.0	12.0	20.0	3.3
PFMT.013.250.C.2	60	250	3.0	0.13	7.0	10.0	20.0	3.3

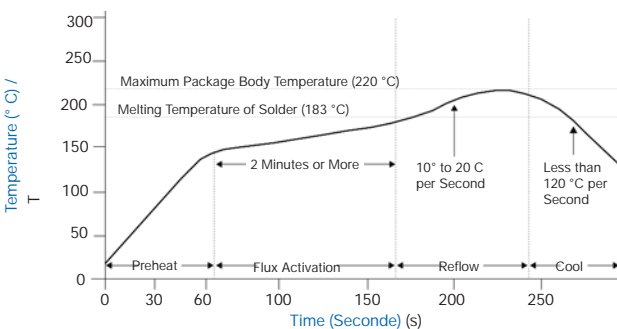
**Dimensions**

Type	A		B	C	D	E
	min.	max.	max.	max.	nom.	nom.
PFMT.013.250.2	8.5 (0.335)	9.4 (0.370)	3.4 (0.134)	7.4 (0.291)	0.3 (0.011)	3.75 (0.148)
PFMT.013.250.A.2	8.5 (0.335)	9.4 (0.370)	3.4 (0.134)	7.4 (0.291)	0.3 (0.011)	3.75 (0.148)
PFMT.013.250.B.2	8.5 (0.335)	9.4 (0.370)	3.4 (0.134)	7.4 (0.291)	0.3 (0.011)	3.75 (0.148)
PFMT.013.250.C.2	8.5 (0.335)	9.4 (0.370)	3.4 (0.134)	7.4 (0.291)	0.3 (0.011)	3.75 (0.148)

Packaged: Tape and reel: 2000 pcs. per reel

Dimensions in mm/inches

**Soldering Profile**



**Solder reflow**

- Recommended reflow methods:  $I_R$ , vapor phase oven, hot air oven.
- Devices are not designed to be wave soldered to the bottom side of the board.
- Gluing the devices is not recommended.
- Recommended maximum paste thickness is 0,25 mm (.010 inch).
- Devices can be cleaned using standard industry methods and solvents.

**Note:**

- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

**Rework**

- A device should not be reworked.

**Thermal Derating Chart- $I_{hold}/I_{trip}$  (Amps)**

Type	Ambient Operating Temperature								
	-40 °C	-20 °C	0 °C	23 °C	40 °C	50 °C	60 °C	70 °C	85 °C
PFMT.013.250.2	0.21/0.42	0.18/0.37	0.16/0.31	0.13/0.26	0.10/0.23	0.09/0.18	0.08/0.15	0.07/0.12	0.05/0.10
PFMT.013.250.A.2	0.21/0.42	0.18/0.37	0.16/0.31	0.13/0.26	0.10/0.23	0.09/0.18	0.08/0.15	0.07/0.12	0.05/0.10
PFMT.013.250.B.2	0.21/0.42	0.18/0.37	0.16/0.31	0.13/0.26	0.10/0.23	0.09/0.18	0.08/0.15	0.07/0.12	0.05/0.10
PFMT.013.250.C.2	0.21/0.42	0.18/0.37	0.16/0.31	0.13/0.26	0.10/0.23	0.09/0.18	0.08/0.15	0.07/0.12	0.05/0.10

**How To Order**

PTC-Fuse **PF** **MT** **.xxx** **.xxx** **.x** **.x**

Style  
MT = Surface Mount/  
Telecom Component

Hold Current,  $I_{hold}$   
013 (0.13 Amps)

Max. Interrupt Voltage, V  
250 (250 V)

Resistance Sorted  
Ω  
A = 6.5-9Ω  
B = 9-12Ω  
C = 7-12Ω

Packaging Options  
Packaged per EIA 486-B  
2 = Tape and reel