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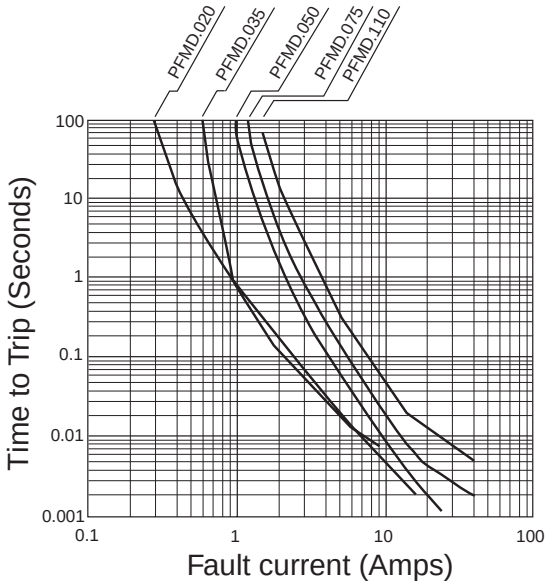
PFMD Polymeric PTC Resettable Fuse – Surface Mount

Typical Time to Trip at 23 °C



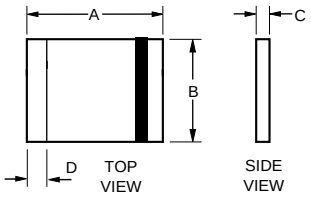
NEW

- High Density Circuit Board Application:
  Hard disk drives,
  PC motherboards
  PC peripherals
  Point-of-sale (POS) equipment
  PCMCIA cards
- Packaged per EIA 481-2 standard

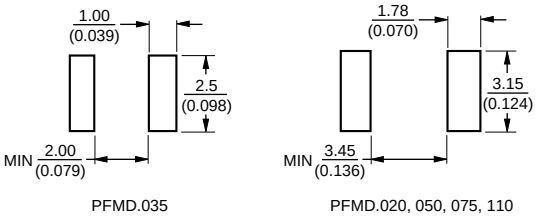
Approvals:

UL	recognition
CSA	pending
TÜV	approval

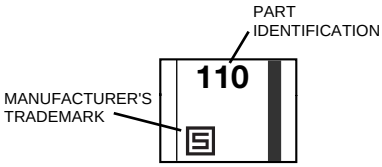
Dimensions



Solder Pad Layouts



Typical Part Marking
Represents total content. Layout may vary.



Dimentions in mm / (inch)

Technical Data		
Operating/Storage Temperature	-40°C to +85°C	
Maximum Device Surface Temperature in Tripped State	125°C	
Passive Aging	+85°C, 1000 hours	±5% typical resistance change
Humidity Aging	+85°C, 85% R.H. 1000 hours	±5% typical resistance change
Thermal Shock	+125°C/-40°C 10 times	±10% typical resistance change
Mechanical Shock	MIL-STD-202, Method 213, Condition 1 (100g, 6 seconds)	No resistance change
Solvent Resistance	MIL-STD-202, Method 215	No change
Vibration	MIL-STD-883C, Method 2007.1, Condition A	No change
Terminal material	Solder-plated copper	
Termination pad solderability	Meets EIA Specification RS-186-9E, ANSI/J-STD-002 Cat.3	

Test Procedures And Requirements		
Test	Test Conditions	Accept/Reject Criteria
Visual/Mech.	Verify dimensions and materials	Per PF physical description
Resistance	In still air @ 23°C	Rmin ≤ R ≤ Rmax
Time to Trip	At 8 Amps , Vmax, 23°C	T ≤ max. time to trip (seconds)
Hold Current	30 min. at Ihold	No trip
Trip Cycle Life	Vmax, Imax, 100 cycles	No arcing or burning
Trip Endurance	Vmax, 48 hours	No arcing or burning

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PFMD Technical Data, continued

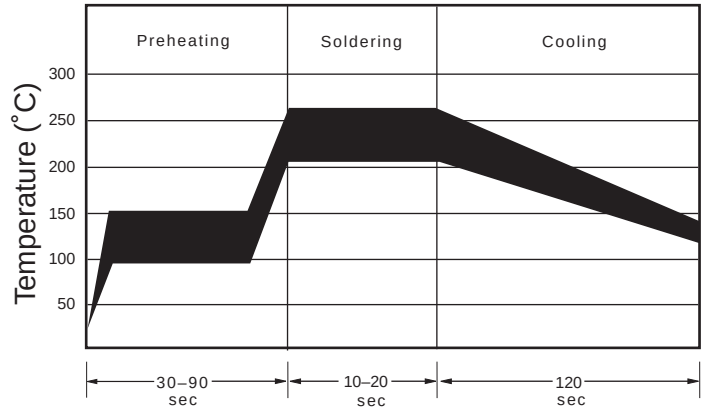
Electrical Characteristics

Model	I max. Amps	V max. Volts	I_{hold}	I_{trip}	Initial Resistance		Max. Time To Trip at 23°C		Tripped Power Dissipation
			Amperes at 23°C		Ohms at 23°C		Amps	Seconds	Watts at 23°C
			Hold	Trip	$R_{Min.}$	$R_{1Max.}$			
PFMD.020.2	10	30.0	0.20	0.40	0.40	5.00	8.0	0.02	0.8
PFMD.035.2	40	6.0	0.35	0.70	0.32	1.30	8.0	0.10	0.6
PFMD.050.2	40	15.0	0.50	1.00	0.15	1.00	8.0	0.15	0.8
PFMD.075.2	40	13.2	0.75	1.50	0.11	0.45	8.0	0.20	0.8
PFMD.110.2	40	6.0	1.10	2.20	0.04	0.21	8.0	0.30	0.8

Product Dimensions

Model	A		B		C		D
	Min.	Max.	Min.	Max.	Min.	Max.	Min.
PFMD.020.2	4.37	4.73	3.07	3.41	0.56	0.81	0.30
PFMD.035.2	3.00	3.43	2.35	2.80	0.38	0.62	0.35
PFMD.050.2	4.37	4.73	3.07	3.41	0.38	0.62	0.30
PFMD.075.2	4.37	4.73	3.07	3.41	0.38	0.62	0.30
PFMD.110.2	4.37	4.73	3.07	3.41	0.38	0.62	0.30

Solder Reflow And Rework Recommendations



How to Order **P F M D . 0 2 0 . 2**

Product Designator
Style
MD = 4.5mm SMD
Hold Current, I_{hold}
020-110 (0.20 Amps - 1.10 Amps)
Packaging
.2 = 1,500 pcs. tape & reel

- Packaging options:
- TAPE & REEL: PFMD.035.2 = 3000 pcs per reel
  All other models = 1500 pcs. per reel.

NOTE:
- PFMD models can be waved soldered and reworked.
- If reflow temeratures exceed the recommended profile, devices may not meet the performance requirements.

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

Part No.	Ambient Operating Temperature								
	-40˚C	-20˚C	0˚C	23˚C	40˚C	50˚C	60˚C	70˚C	85˚C
PFMD.020.2	0.29 / 0.58	0.26 / 0.52	0.23 / 0.46	0.20 / 0.40	0.17 / 0.34	0.15 / 0.30	0.14 / 0.28	0.12 / 0.24	0.10 / 0.20
PFMD.035.2	0.47 / 0.94	0.45 / 0.90	0.40 / 0.80	0.35 / 0.70	0.30 / 0.60	0.28 / 0.56	0.24 / 0.48	0.21 / 0.42	0.18 / 0.36
PFMD.050.2	0.77 / 1.54	0.68 / 1.36	0.59 / 1.18	0.50 / 1.00	0.44 / 0.88	0.40 / 0.80	0.37 / 0.74	0.33 / 0.66	0.29 / 0.58
PFMD.075.2	1.15 / 2.30	1.01 / 2.02	0.88 / 1.76	0.75 / 1.50	0.65 / 1.30	0.60 / 1.20	0.55 / 1.10	0.49 / 0.98	0.43 / 0.86
PFMD.110.2	1.59 / 3.18	1.43 / 2.86	1.26 / 2.52	1.10 / 2.20	0.95 / 1.90	0.87 / 1.74	0.80 / 1.60	0.71 / 1.42	0.60 / 1.20

*$I_{trip} = 2 \cdot I_{hold}$

Schurter's resettable fuses cross to many like products already on the market. See our online cross list at www.schurterinc.com/cross.htm

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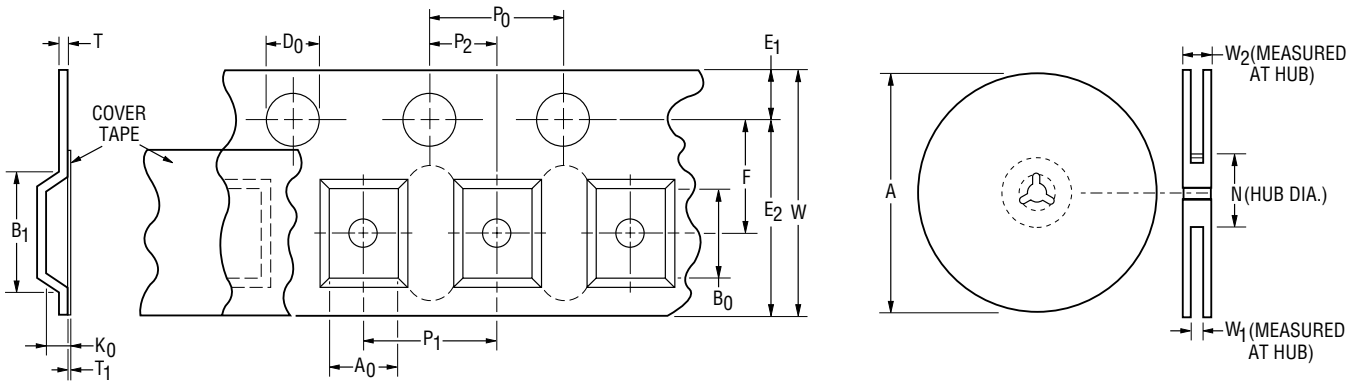
PFMD Tape and Reel Specifications

Tape Dimension Identifiers	PFMD 020, 050, 075, 110, per EIA-481-2	PFMD 035 per EIA 481-2
W	12 ± 0.3	8 ± 0.3
P_0	4.0 ± 0.10	4.0 ± 0.10
P_1	8.0 ± 0.10	4.0 ± 0.10
P_2	2.0 ± 0.05	2.0 ± 0.05
A_0	3.5 ± 0.23	2.8 ± 0.1
B_0	5.1 ± 0.15	3.5 ± 0.1
B_1 max.	5.9	4.35
D_0	1.5 + 0.1/ - 0	1.5 + 0.1/ -0
F	5.5 ± 0.05	3.5 ± 0.05
E_1	1.75 ± 0.10	1.75 ± 0.10
E_2 min.	10.25	6.25
T max.	0.6	0.6
T_1 max.	0.1	0.1
K_0	0.9 ± 0.15	1.1 ± 0.05
Leader min.	390	390
Trailer min.	160	160
Reel Dimension Identifiers		
A max.	185	185
N min.	50	50
W_1	12.4 + 2.0/ -0	8.4 + 1.5/ -0
W_2 max.	18.4	14.4

DIMENSIONS: MM



Specifications are subject to change without notice.

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