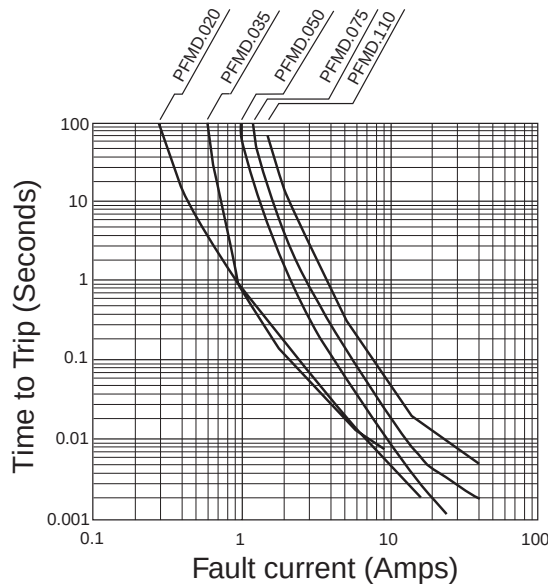


PFMD Polymeric PTC Resettable Fuse – Surface Mount



Typical Time to Trip at 23 °C



NEW



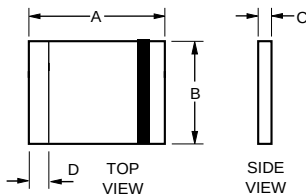
- High Density Circuit Board Application:
Hard disk drives,
PC motherboards
PC peripherals
Point-of-sale (POS) equipment
PCMCIA cards

- Packaged per EIA 481-2 standard

Approvals:

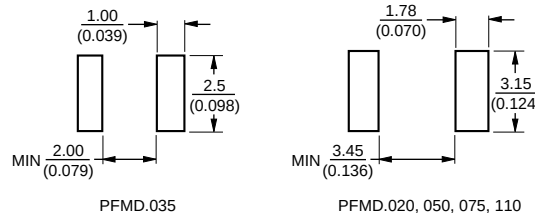
UL recognition
CSA pending
TÜV pending

Dimensions



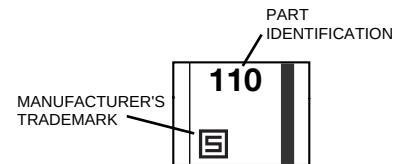
Dimensions in mm / (inch)

Solder Pad Layouts



Typical Part Marking

Represents total content. Layout may vary.



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	$R_{min} \leq R \leq R_{max}$
Time to Trip	At 8 Amps , V_{max} , 23°C	$T \leq \text{max. time to trip (seconds)}$
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

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

How to Order

P F M D . 0 2 0 . 2

Product Designator

Style

MD = 4.5mm SMD

Hold Current, I_{hold}

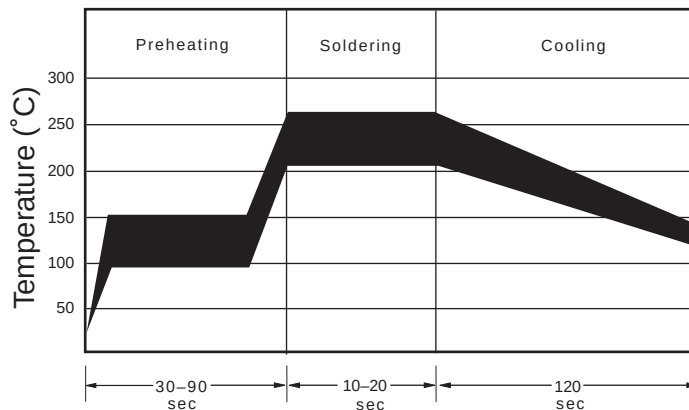
020-110 (0.20 Amps - 1.10 Amps)

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.

Solder Reflow And Rework Recommendations



NOTE:

- PFMD models can be waved soldered and reworked.
- If reflow temperatures 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

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

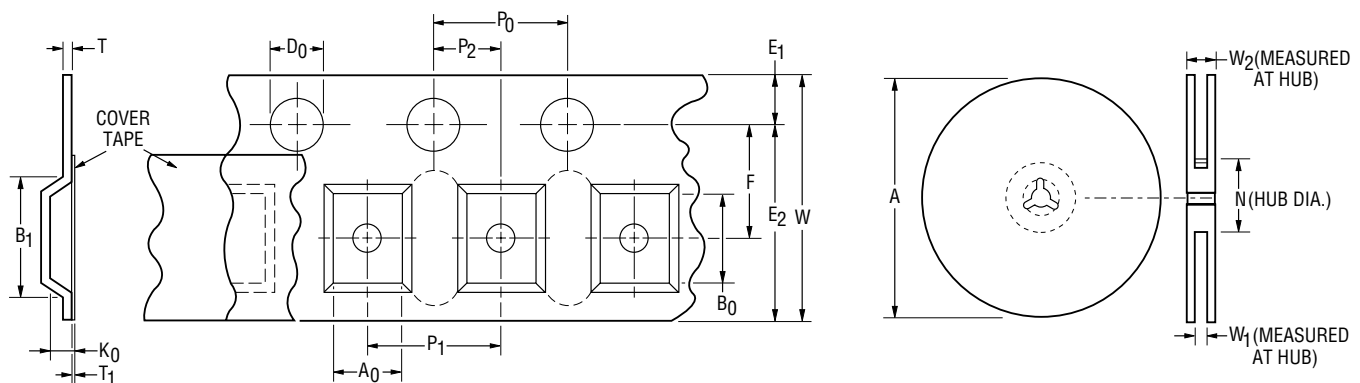
Schurter's resettable fuses cross to many like products already on the market. See our online cross list at www.schurterinc.com/cross.htm

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.