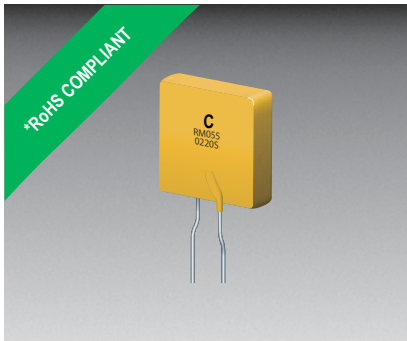




Features

- Radial leaded devices
- Cured, flame retardant epoxy polymer insulating material meets UL94 V-0 requirements
- Bulk packaging, tape and reel available
- Resettable circuit protection
- Agency recognition:  
- RoHS compliant* and halogen free**

Applications

- Food blenders, coffee machines
- HVAC
- Electric fans, blowers
- AC adaptors

PRCP-RM Series - Polymer Resettable Circuit Protectors

Electrical Characteristics

Model	Typical Current Trip Limit		V _{max}		I _{max}	Initial Resistance	One Hour Post-Trip Resistance	Maximum Time to Trip		Tripped Power Dissipation
	I _{hold} at 23 °C	I _{trip} at 23 °C	Operating Voltage	Interrupt Voltage	Interrupt Current	R _{min} at 23 °C	R ₁ max at 23 °C	at 23 °C		PD Typ. at 23 °C
	(A)	(A)	(Vac)	(Vac)	(A)	(Ohms)	(Ohms)	(A)	(Sec.)	(W)
PRCP-RM005/240	0.05	0.12	240	265	1.0	18.50	65.00	0.25	10.0	0.9
PRCP-RM008/240	0.08	0.19	240	265	1.2	7.40	26.00	0.40	10.0	0.9
PRCP-RM012/240	0.12	0.30	240	265	1.2	3.00	12.00	0.60	15.0	1.0
PRCP-RM016/240	0.16	0.37	240	265	2.0	2.50	7.80	0.80	15.0	1.4
PRCP-RM025/240	0.25	0.56	240	265	3.5	1.30	3.80	1.25	18.5	1.5
PRCP-RM033/240	0.33	0.74	240	265	4.5	0.77	2.60	1.65	21.0	1.7
PRCP-RM040/240	0.40	0.90	240	265	5.5	0.60	1.90	2.00	24.0	2.0
PRCP-RM055/240	0.55	1.25	240	265	7.0	0.45	1.45	2.75	26.0	3.4

Environmental Characteristics

Operating Temperature.....	-20 °C to +85 °C	
Humidity Aging.....	+85 °C, 85 % R.H. 1000 h.....	±20 % typical resistance change
Passive Aging.....	+85 °C, 1000 h.....	±20 % typical resistance change
Vibration.....	MIL-STD-883C, Method 2007.1.....	No change
	Condition A	
Solvent Resistance.....	MIL-STD-202, Method 215.....	No change

Test Procedures And Requirements For Model PRCP-RM Series

Item	Test Conditions	Accept/Reject Criteria
Visual/Mechanical.....	Verify dimensions and material.....	Per P.R.C.P. physical description
Resistance.....	In still air @ 23 °C.....	R _{min} ≤ R ≤ R ₁ max
Time to Trip.....	240 Vac, specified current.....	T ≤ maximum time to trip
Hold Current.....	At I _{hold}	No trip
Trip Cycle Life.....	240 Vac, I _{max} , 100 cycles.....	No arcing or burning
Trip Endurance.....	a) 240 Vac, I _{max} , 24 h.....	No arcing or burning
	b) 265 Vac, I _{max} , 30 min	
Solderability.....	MIL-STD-202, Method 208.....	95 % minimum coverage

*RoHS Directive 2015/863, Mar. 31, 2015 and Annex.

**NIDEC COMPONENTS follows the prevailing definition of "halogen free" in the industry. NIDEC COMPONENTS considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Customers should verify actual device performance in their specific applications.

Advantages

- Resettable feature with overtemperature and overcurrent protection can save expensive components from having to be replaced after tripping, e.g., transformers with built in thermal fuses
- Faster than bimetallic switch designs that take on average approximately 30 seconds to cool down and reset
- Generally lower electromagnetic interference than bimetallic switches

Benefits

- Reduced repair and replacement costs
- Reduced nuisance tripping
- Combined overcurrent and overtemperature protector in one device

PRCP-RM Series - Polymer Resettable Circuit Protectors

Thermal Derating Chart - Ihold(Amps)

Model	Ambient Operating Temperature							
	-20 °C	0 °C	23 °C	40 °C	50 °C	60 °C	70 °C	85 °C
PRCP-RM005/240	0.08	0.06	0.05	0.04	0.04	0.03	0.03	0.02
PRCP-RM008/240	0.12	0.10	0.08	0.07	0.06	0.05	0.04	0.03
PRCP-RM012/240	0.18	0.15	0.12	0.10	0.09	0.07	0.06	0.04
PRCP-RM016/240	0.24	0.20	0.16	0.13	0.11	0.10	0.08	0.05
PRCP-RM025/240	0.38	0.32	0.25	0.21	0.18	0.15	0.13	0.09
PRCP-RM033/240	0.50	0.42	0.33	0.27	0.23	0.20	0.17	0.11
PRCP-RM040/240	0.61	0.51	0.40	0.33	0.28	0.24	0.20	0.14
PRCP-RM055/240	0.80	0.68	0.55	0.46	0.40	0.35	0.29	0.22

Product Dimensions

Model	A Max.	B Max.	C		D Min.	E Max.	Physical Characteristics		
			Nom.	Tol. ±			Style	Lead Dia.	Material
PRCP-RM005/240	$\frac{8.3}{(0.327)}$	$\frac{12.9}{(0.508)}$	$\frac{5.1}{(0.201)}$	$\frac{0.7}{(0.028)}$	$\frac{7.6}{(0.299)}$	$\frac{3.8}{(0.150)}$	1	$\frac{0.51}{(0.020)}$	Sn/Cu
PRCP-RM008/240	$\frac{8.3}{(0.327)}$	$\frac{12.9}{(0.508)}$	$\frac{5.1}{(0.201)}$	$\frac{0.7}{(0.028)}$	$\frac{7.6}{(0.299)}$	$\frac{3.8}{(0.150)}$	1	$\frac{0.51}{(0.020)}$	Sn/Cu
PRCP-RM012/240	$\frac{8.3}{(0.327)}$	$\frac{12.9}{(0.508)}$	$\frac{5.1}{(0.201)}$	$\frac{0.7}{(0.028)}$	$\frac{7.6}{(0.299)}$	$\frac{3.8}{(0.150)}$	1	$\frac{0.51}{(0.020)}$	Sn/Cu
PRCP-RM016/240	$\frac{9.9}{(0.390)}$	$\frac{13.8}{(0.543)}$	$\frac{5.1}{(0.201)}$	$\frac{0.7}{(0.028)}$	$\frac{7.6}{(0.299)}$	$\frac{3.8}{(0.150)}$	1	$\frac{0.51}{(0.020)}$	Sn/Cu
PRCP-RM025/240	$\frac{10.0}{(0.394)}$	$\frac{20.0}{(0.787)}$	$\frac{5.1}{(0.201)}$	$\frac{0.7}{(0.028)}$	$\frac{7.6}{(0.299)}$	$\frac{3.8}{(0.150)}$	2	$\frac{0.65}{(0.026)}$	Sn/Cu
PRCP-RM033/240	$\frac{11.4}{(0.449)}$	$\frac{20.0}{(0.787)}$	$\frac{5.1}{(0.201)}$	$\frac{0.7}{(0.028)}$	$\frac{7.6}{(0.299)}$	$\frac{3.8}{(0.150)}$	2	$\frac{0.65}{(0.026)}$	Sn/Cu
PRCP-RM040/240	$\frac{11.5}{(0.453)}$	$\frac{20.9}{(0.823)}$	$\frac{5.1}{(0.201)}$	$\frac{0.7}{(0.028)}$	$\frac{7.6}{(0.299)}$	$\frac{3.8}{(0.150)}$	2	$\frac{0.65}{(0.026)}$	Sn/Cu
PRCP-RM055/240	$\frac{14.0}{(0.551)}$	$\frac{22.4}{(0.882)}$	$\frac{5.1}{(0.201)}$	$\frac{0.7}{(0.028)}$	$\frac{7.6}{(0.299)}$	$\frac{4.1}{(0.161)}$	2	$\frac{0.81}{(0.032)}$	Sn/Cu

Packaging options:

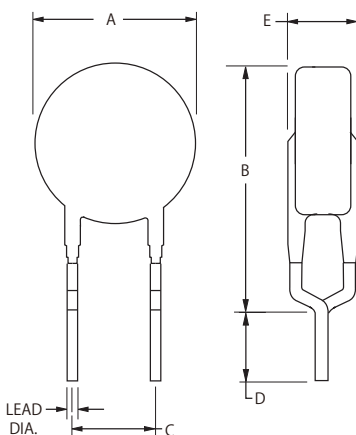
BULK: 500 pcs. per bag.

TAPE&REEL: 2000 pcs. per reel (PRCP-RM005/240~PRCP-RM040/24); 1000 pcs. per reel (PRCP-RM055/240)

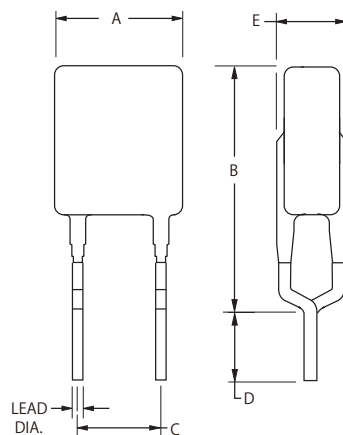
0.51(24AWG)
0.65(22AWG)
0.81(20AWG)

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

Style 1

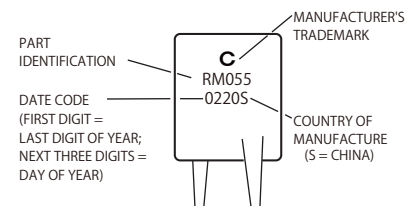


Style 2



Typical Part Marking

Represents total content. Layout may vary.



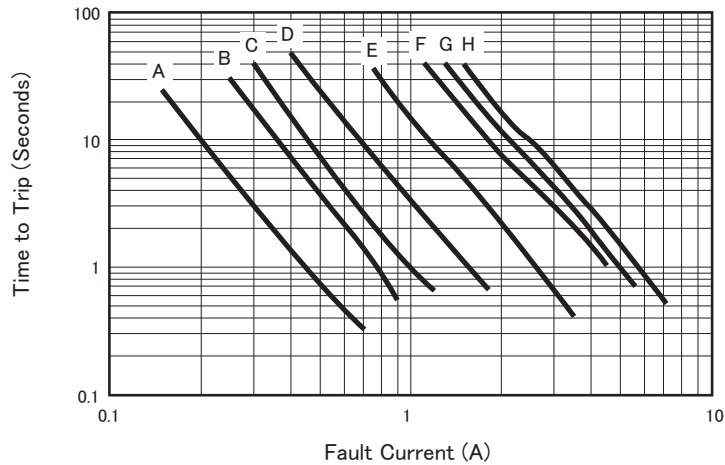
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PRCP-RM Series - Polymer Resettable Circuit Protectors

Typical Time to Trip at 23 °C



How to Order

PRCP - RM 005 / 240 - 2

Product Designator

Series

RM = Radial Leaded Component

Hold Current, I

005-055 (0.05 A-0.55 A)

Operating Voltage, V_{max}

240 = 240 Vac

Packaging Options

- 0 = Bulk Packaging
- 2 = Tape and Reel

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PRCP-RM Series - Polymer Resettable Circuit Protectors

Devices taped using EIA468-B/IEC60286-2 standards. See table below and Figures 1 and 2 for details.

Dimensions Description	IEC Mark	EIA Mark	Dimensions	
			Dimensions	Tolerance
Carrier tape width	W	W	18 (0.709)	$-0.5/+1.0$ ($-0.02/+0.039$)
Hold down tape width	W ₀	W ₄	11 (0.433)	minimum
Hold down tape			No protrusion	
Top distance between tape edges	W ₂	W ₆	3 (0.118)	maximum
Sprocket hole position	W ₁	W ₅	9 (0.354)	$-0.5/+0.75$ ($-0.02/+0.03$)
Sprocket hole diameter	D ₀	D ₀	4 (0.157)	± 0.2 (± 0.79)
Abscissa to plane (PRCP-RM005/240~PRCP-RM016/240)	H	H	18.5 (0.728)	± 3.0 (± 0.118)
Abscissa to plane (PRCP-RM025/240~PRCP-RM055/240)	H ₀	H ₀	16 (0.63)	± 0.5 (± 0.02)
Abscissa to top (PRCP-RM005/240~PRCP-RM016/240)	H ₁	H ₁	32.2 (1.268)	maximum
Abscissa to top (PRCP-RM025/240~PRCP-RM055/240)	H ₁	H ₁	45.0 (1.772)	maximum
Overall width w/lead protrusion (PRCP-RM005/240~PRCP-RM016/240)		C ₁	43.2 (1.701)	maximum
Overall width w/lead protrusion (PRCP-RM025/240~PRCP-RM055/240)		C ₁	56.0 (2.205)	maximum
Overall width w/o lead protrusion (PRCP-RM005/240~PRCP-RM016/240)		C ₂	42.5 (1.673)	maximum
Overall width w/o lead protrusion (PRCP-RM025/240~PRCP-RM055/240)		C ₂	56.0 (2.205)	maximum
Lead protrusion	I ₁	L ₁	1.0 (0.039)	maximum
Protrusion of cutout	L	L	11 (0.433)	maximum
Protrusion beyond hold-down tape	I ₂	I ₂	Not specified	
Sprocket hole pitch	P ₀	P ₀	12.7 (0.500)	± 0.3 (± 0.012)
Pitch tolerance			20 consecutive	± 1 (± 0.039)
Device pitch (PRCP-RM005/240~PRCP-RM040/240)			12.7 (0.500)	± 0.3 (± 0.012)
Device pitch (PRCP-RM055/240)			25.4 (1.00)	± 0.6 (± 0.024)
Tape thickness	t	t	0.9 (0.35)	maximum
Tape thickness with splice (PRCP-RM005/240~PRCP-RM040/240)		t ₁	1.5 (0.059)	maximum
Tape thickness with splice (PRCP-RM055/240)		t ₁	2.3 (0.091)	maximum
Splice sprocket hole alignment			0	± 0.3 (± 0.012)
Body lateral deviation	Δ_h	Δ_h	0	± 1 (± 0.039)
Body tape plane deviation	Δ_p	Δ_p	0	± 0.3 (± 0.012)
Lead seating plane deviation	ΔP_1	P ₁	3.81 (0.015)	± 0.7 (± 0.028)
Lead spacing	F	F	5.08 (0.200)	$+0.8/-0.5$ ($+0.031/-0.020$)

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

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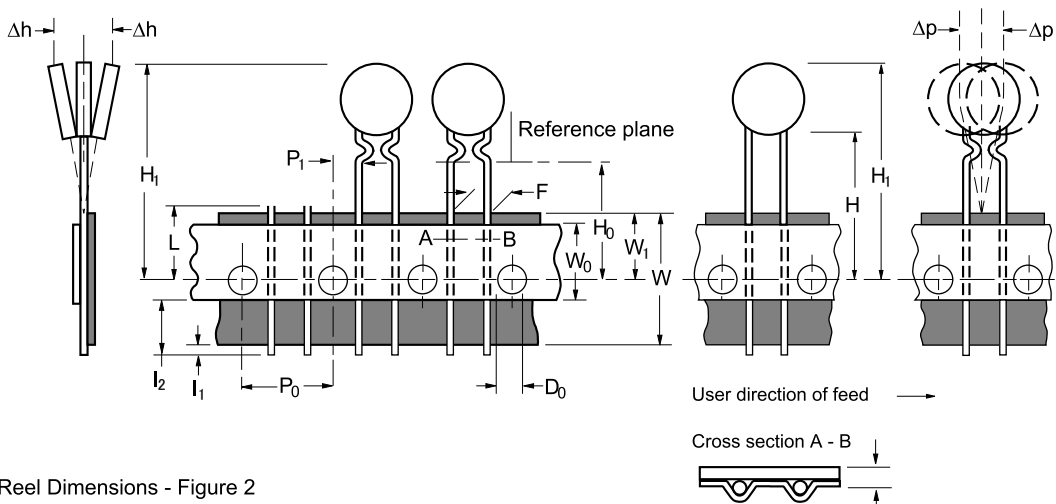
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PRCP-RM Series - Polymer Resettable Circuit Protectors

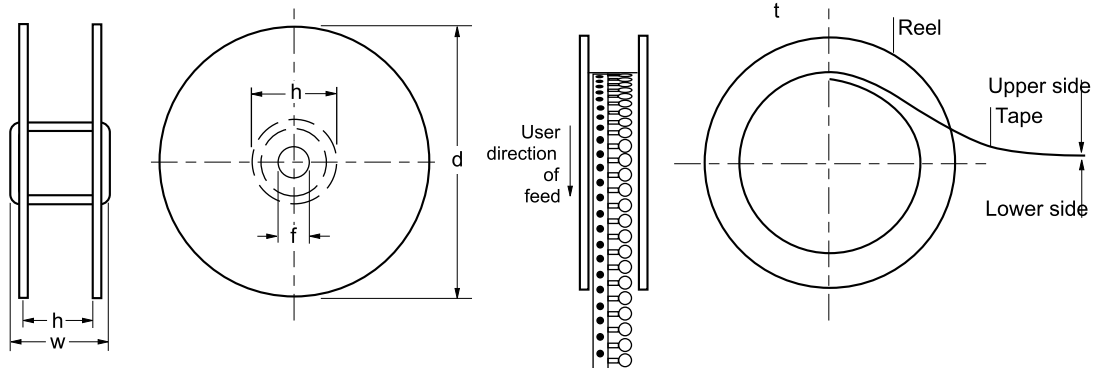
Dimensions Description	IEC Mark	EIA Mark	Dimensions	Dimensions Tolerance
Reel width (PRCP-RM005/240~PRCP-RM040/240)	w	w ₂	$\frac{56.0}{(2.20)}$	maximum
Reel width (PRCP-RM055/240)	w	w ₂	$\frac{63.5}{(2.50)}$	maximum
Reel diameter	d	a	$\frac{370.0}{(14.57)}$	maximum
Space between flanges (PRCP-RM005/240~PRCP-RM040/240)	h	w ₁	$\frac{48.0}{(1.89)}$	maximum
Space between flanges (PRCP-RM055/240)	h	w ₁	$\frac{55.0}{(2.17)}$	maximum
Arbor hole diameter	f	c	$\frac{26.0}{(1.02)}$	± 12.0 (± 0.472)
Core diameter	h	n	$\frac{91.0}{(3.58)}$	maximum
Box			$\frac{62}{(2.44)}$ $\frac{355}{(14.0)}$ $\frac{345}{(13.6)}$	maximum
Consecutive missing places			3	maximum
Empty places per reel			0.1 %	maximum

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

Taped Component Dimensions - Figure 1



Reel Dimensions - Figure 2



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