



Features

- Radial leaded devices
- Smaller size for similar I hold rating
- Faster tripping
- RoHS compliant* and halogen free**

Applications

- Automotive applications
- Anywhere space is limited and fast tripping is required

PRCP-RG Series - Polymer Resettable Circuit Protectors

Electrical Characteristics

Model	V max. Volts	I max. Amps	I _{hold}	I _{trip}	Initial Resistance		1Hour(R ₁) Post-Trip Resistance	Max. Time To Trip		Tripped Power Dissipation
			Amperes at 23 °C		Ohms at 23 °C		Ohms at 23 °C	Amperes at 23 °C	Seconds at 23 °C	Watts at 23 °C
			Hold	Trip	Min.	Max.	Max.			Typ.
PRCP-RG300	16	100	3.00	5.10	0.038	0.065	0.0975	15	1.0	2.30
PRCP-RG500	16	100	5.00	8.50	0.015	0.023	0.0340	25	2.0	2.60

Environmental Characteristics

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.....	+85 °C to -40 °C, 20 times..... ±10 % typical resistance change
Solvent Resistance.....	MIL-STD-202, Method 215..... No change
Vibration.....	MIL-STD-883C, Method 2007.1, Condition A..... No change

Test Procedures And Requirements For Model PRCP-RG Series

Test	Test Conditions	Accept/Reject Criteria
Visual/Mech.....	Verify dimensions and materials.....	Per P.R.C.P. 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

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
PRCP-RG300	4.4	4.0	3.6	3.0	2.6	2.4	2.1	1.9	1.4
PRCP-RG500	7.3	6.6	6.0	5.0	4.4	4.0	3.6	3.1	2.4

*I_{trip} is approximately two times I_{hold}.

*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.

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Customers should verify actual device performance in their specific applications.

PRCP-RG Series - Polymer Resettable Circuit Protectors

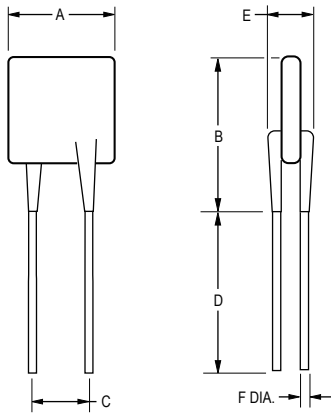
Product Dimensions

Model	A Max.	B Max.	C		D Min.	E Max.	F Nom.	Physical Characteristics
			Nom.	Tol. ±				Material
PRCP-RG300	7.1 (0.280)	11.0 (0.433)	5.1 (0.201)	0.7 (0.028)	7.6 (0.299)	3.0 (0.118)	0.81 (0.032)	Sn/Cu
PRCP-RG500	10.4 (0.409)	14.3 (0.563)	5.1 (0.201)	0.7 (0.028)	7.6 (0.299)	3.0 (0.118)	0.81 (0.032)	Sn/Cu

Packaging options:

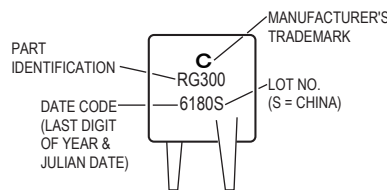
BULK: 500 pcs. per bag. TAPE & REEL: 3000 pcs. per reel.

0.81 (20AWG) DIMENSIONS = $\frac{\text{MM}}{\text{(INCHES)}}$



Typical Part Marking

Represents total content. Layout may vary.



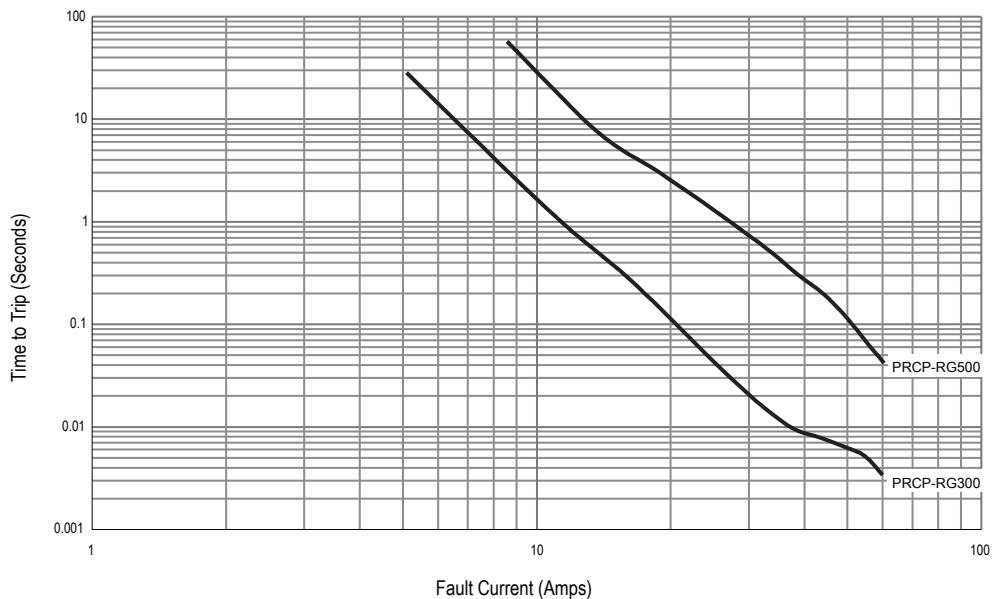
How to Order

PRCP - RG 300 - 0

Product Designator _____
 Style _____
 RG = Smaller Radial Leaded Component
 Component _____
 Hold Current, I_{hold} _____
 300-500 (3.0 Amps - 5.0 Amps)
 Packaging Options _____
 - 0 = Bulk Packaging
 - 2 = Tape and Reel

NOTE: Kinked leads are available for board standoff options. Contact factory for details.

Typical Time to Trip at 23 °C



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PRCP-RG Series Tape and Reel Specifications

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

Dimension Description	IEC Mark	EIA Mark	Dimensions	
			Dimension	Tolerance
Carrier tape width	W	W	$\frac{18}{(0.709)}$	$\frac{-0.5/+1.0}{(-0.02/+0.039)}$
Hold down tape width		W4	$\frac{11}{(0.433)}$	min.
Hold down tape	W ₀		No protrusion	
Top distance between tape edges	W ₂	W ₆	$\frac{3}{(0.118)}$	max.
Sprocket hole position	W ₁	W ₅	$\frac{9}{(0.354)}$	$\frac{-0.5/+0.75}{(-0.02/+0.03)}$
Sprocket hole diameter	D ₀	D ₀	$\frac{4}{(0.157)}$	$\frac{\pm 0.2}{(\pm 0.0078)}$
Abscissa to plane (straight lead)	H	H	$\frac{18.5}{(0.728)}$	$\frac{\pm 3.0}{(\pm 0.118)}$
Abscissa to plane (kinked lead)	H ₀	H ₀	$\frac{16}{(0.63)}$	$\frac{\pm 0.5}{(\pm 0.02)}$
Abscissa to top (straight lead)	H ₁	H ₁	$\frac{38.0}{(1.496)}$	max.
Abscissa to top (kinked lead)	H ₁	H ₁	$\frac{32.2}{(1.268)}$	max.
Overall width w/lead protrusion (straight lead)		C ₁	$\frac{55.0}{(2.165)}$	max.
Overall width w/lead protrusion (kinked lead)		C ₁	$\frac{43.2}{(1.7)}$	max.
Overall width w/o lead protrusion (straight lead)		C ₂	$\frac{54.0}{(2.126)}$	max.
Overall width w/o lead protrusion (kinked lead)		C ₂	$\frac{42.5}{(1.673)}$	max.
Lead protrusion	l ₁	l ₁	$\frac{1.0}{(0.039)}$	max.
Protrusion of cutout	L	L	$\frac{11}{(0.433)}$	max.
Protrusion beyond hold-down tape	l ₂	l ₂	Not specified	
Sprocket hole pitch	P ₀	P ₀	$\frac{12.7}{(0.5)}$	$\frac{\pm 0.3}{(\pm 0.012)}$
Pitch tolerance			20 consecutive	$\frac{\pm 1}{(\pm 0.039)}$
Device pitch			$\frac{12.7}{(0.5)}$	
Tape thickness	t	t	$\frac{0.9}{(0.035)}$	max.
Tape thickness with splice		t ₁	$\frac{2.0}{(0.079)}$	max.
Splice sprocket hole alignment			$\frac{4.0}{(0.157)}$	$\frac{\pm 0.2}{(\pm 0.008)}$
Body lateral deviation	Δ _h	Δ _h	0	$\frac{\pm 1}{(\pm 0.039)}$
Body tape plane deviation	Δ _p	Δ _p	0	$\frac{\pm 1.3}{(\pm 0.051)}$
Lead seating plane deviation	ΔP ₁	P ₁	$\frac{3.81}{(0.015)}$	$\frac{\pm 0.7}{(\pm 0.028)}$
Lead spacing	F	F	$\frac{8.0}{(0.315)}$	
Reel width	w	w	$\frac{56.0}{(2.20)}$	max.
Reel diameter	d	a	$\frac{370.0}{(14.57)}$	max.
Space between flanges less device			$\frac{4.75}{(0.187)}$	$\frac{\pm 3.25}{(\pm 0.128)}$

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

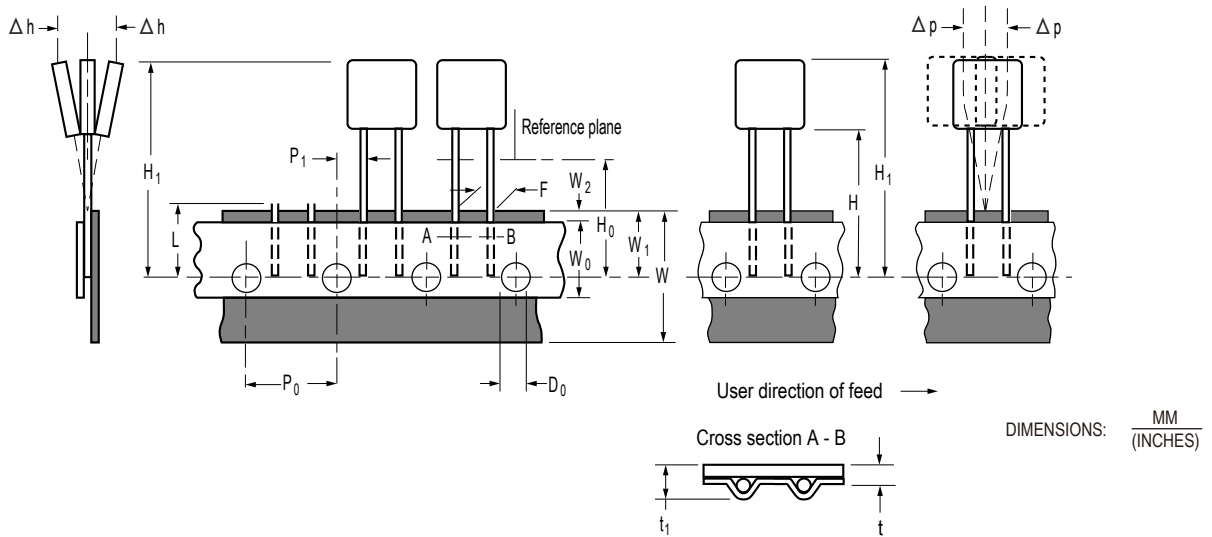
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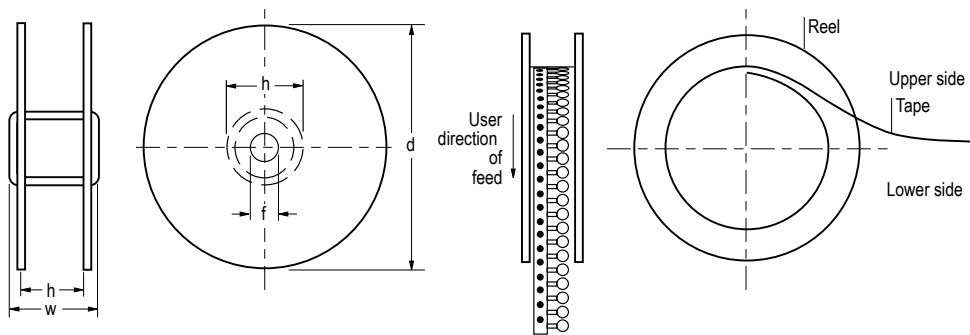
PRCP-RG Series Tape and Reel Specifications

Dimension Description	IEC Mark	EIA Mark	Dimensions	
			Dimension	Tolerance
Arbor hole diameter	f	c	$\frac{26.0}{(1.02)}$	$\frac{\pm 12.0}{(\pm 0.472)}$
Core diameter	h	n	$\frac{80.0}{(3.15)}$	max.
Box			$\frac{62}{(2.44)}$ $\frac{355}{(14.0)}$ $\frac{345}{(13.6)}$	max.
Consecutive missing places			3	max.
Empty places per reel			Not specified	

Taped Component Dimensions - Figure 1



Reel Dimensions - Figure 2



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