PULSE RESISTORS, SURFACE MOUNT

PRM SERIES

RoHS Term.W is RoHS compliant & 260°C compatible

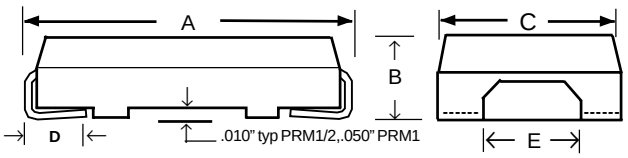
- ❒ High voltage/ high surge capability
- ❒ Cost effective surface mount package
- ❒ Available on RCD's exclusive ***SWIFT*** ™ program



RCD RESISTORS•CAPACITORS•COILS•DELAY LINES

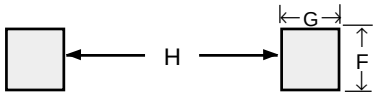
OPTIONS

- ❒ Option ER: Group A Screening per MIL-R-39008 RCR
- ❒ Option B: Increased power
- ❒ Option X: Non-inductive



Pulse tolerant surface mount resistors!

Series PRM withstand high energy pulses, and are superior to conventional film & wirewound types. The heavy duty construction features a ceramic core, enabling improved thermal transfer and long term stability. Elements are protected by flame-retardant molding for excellent environmental performance. Alpha-numeric marking is standard. PRM resistors are cost effective in a wide variety of pulse applications including telecom line feed resistors, snubber circuits, in-rush currents, capacitor charge/discharge circuits, lightning surges, etc.



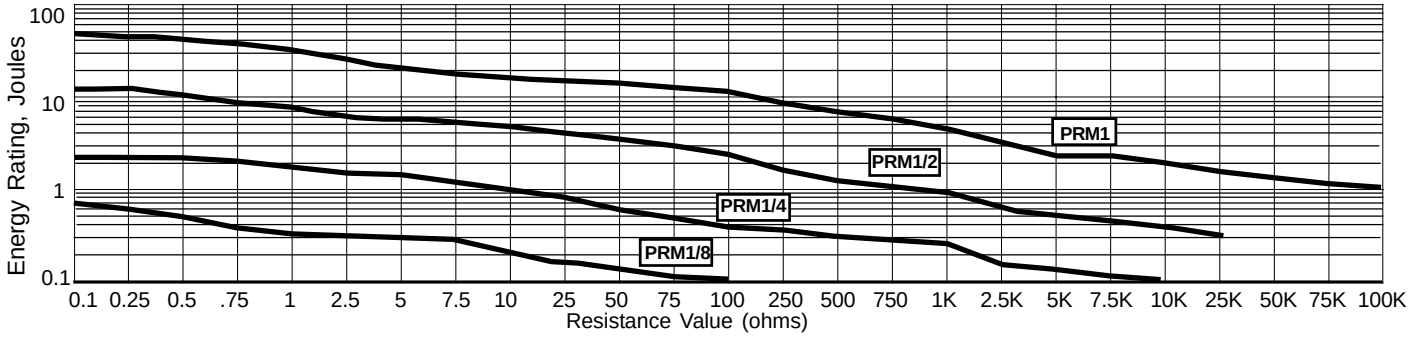
SUGGESTED PAD LAYOUT

SPECIFICATIONS

RCD Type	Wattage Rating Std	Opt B	Max. Voltage[1,3,4]	Max. Peak Pulse Voltage[2,4]	Resistance Range	DIMENSIONS Inch [mm] A	B	C	D	E	F	G	H
PRM1/8	.125W	.5W	150V	2KV	0.1Ω - 2K	.200 ± .02 [5.1 ± .5]	.096± .015 [2.44± .38]	.120 ± .01 [3.18± .25]	.025 Min. [.63]	.045 ± .015 [1.14 ± .38]	.080 [2.0]	.100 [2.5]	.08 [2.0]
PRM1/4	.25W	1W	250V	3.5KV	0.1Ω -10K	.258 ± .02 [6.55 ± .5]	.110± .015 [2.79± .38]	.150± .015 [3.81± .38]	.032 Min. [0.8]	.060 ± .015 [1.5 ± .38]	.100 [2.5]	.125 [3.2]	.120 [3.0]
PRM1/2	.5W	2W	350V	5KV	0.1Ω -24K	.472 ± .024 [12 ± .6]	.208 ± .02 [5.3 ± .5]	.228± .016 [5.8± .4]	.050 Min. [1.27]	.070 ± .02 [1.78 ± .5]	.160 [4.0]	.180 [4.57]	.200 [5.0]
PRM1	1W	4W	500V	10KV	0.1Ω -100K	.811 ± .020 [20.6 ± .5]	.275± .020 [6.99± .5]	.273± .020 [6.93± .5]	.063 Min. [1.6]	.102 ± .028 [2.6 ± .7]	.200 [5.0]	.200 [5.0]	.600 [15.2]

[1]Rated continuous voltage = √(PxR), nte value listed. [2]Pulse voltage capability is dependent on res.value, waveform, & repetition rate. [3]Expanded range available [4]Miltiply by 0.7 on Opt.X parts

SURGE CAPABILITY



TYPICAL PERFORMANCE CHARACTERISTICS

Wattage Derating	1.25%/°C >70°C (Opt. B to be derated 0.8%/°C >25°C)
Max.Induc*: Opt. X≤50Ω Max.Induc*: Opt. X>50Ω	0.2uH PRM1/8-1/2, .3uH PRM1 0.37uH PRM1/8-1/2, .6uH PRM1
Short-time Overload	±0.5%
Temperature Cycling	±0.5%
TCR (20ppm avail.)	±120ppm/°C (<0.2Ω=200ppm)
Moisture Resistance	±1%
Shock and Vibration	±0.2%
Effect of Soldering	±0.2%
Voltage Coefficient	±0.005%/V
Load Life	±0.5% Std, ±1% Opt.B
Operating Temp Range	-55 to +150°C, +275°C avail.
Dielectric Strength	500V (1KV avail.)

* specify Opt.75 for induc levels 50% that of Opt.X, or Opt.76 for 33% that of Opt.X

APPLICATION NOTE

Use chart above to select model to meet desired surge level. Pulse not to exceed peak V & j ratings (derate 30% for Opt.X), and average power during repetitive pulses nte rated W. 30% safety factor is recommended for infrequent pulses, 50% typ. for repetitive pulses (request Note R42 for derating factors attributable to pulse width, rep. rate, temp., altitude, humidity). Verify by evaluating under worst-case conditions. Depending on specifics, PR series can often satisfy the surge requirements of UL-217, -268, -294, -497, -508, -913, -943, -991, -1459, -1971, ANSI/IEEE C62.41, CCITT (Rec. K17), Bellcore TR-NWT-001089 & TR-TSY-000057, CSA C22.2-225, IEC 664, IEC 801.5, IEEE587, Can.Doc. CS-03, FCC Part 68., etc. Consult factory for assistance.

P/N DESIGNATION:

PRM1 ❒ - **102** - **K** **T** ❒ **W**

RCD Type

Options: X, ER, B (leave blank if std)

Resis. Code 1% tol: 3 signif. figures & multiplier, e.g. R100=0.1Ω, 1R00=1Ω, 10R0=10Ω, 1000=100Ω, 1001=1K.
2%-10%: 2 signif.fig. & multiplier (R10=0.1Ω, 1R0=1Ω, 100=10Ω, 102=1K)

Tolerance: J=5% (standard), F=1%, G=2%, K=10%

Packaging: B = bulk, T = Tape & Reel

Optional TC: 20 =20ppm, 50= 50ppm (leave blank if standard)

Termination: W= Lead-free, Q= Tin/Lead (leave blank if either is acceptable, in which case RCD will select based on lowest price and quickest delivery)

RCD Components Inc, 520 E. Industrial Park Dr, Manchester, NH, USA 03109 rcdcomponents.com Tel: 603-669-0054 Fax: 603-669-5455 Email:sales@rcdcomponents.com