

# PULSE RESISTORS, SURFACE MOUNT

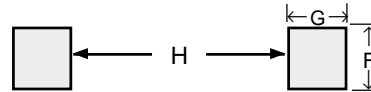
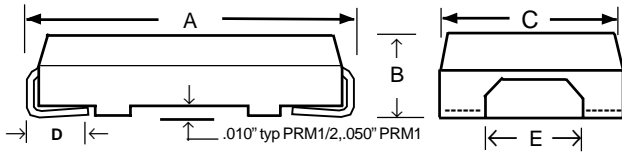
## PRM SERIES



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

### OPTIONS

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



SUGGESTED  
PAD LAYOUT

### Pulse tolerant surface mount resistors!

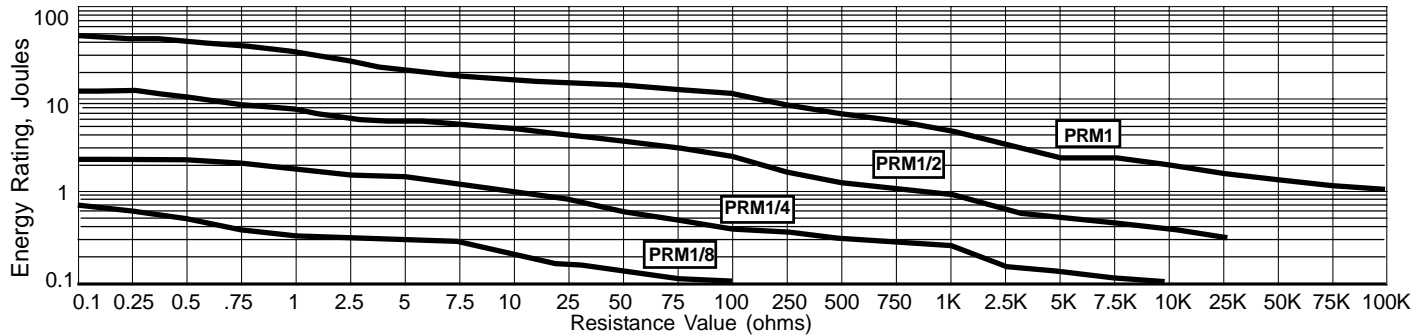
Series PRM withstand high energy pulses, and are superior to conventional film & wirewound types. The heavy duty construction features a ceramic core, enabling improved thermal transfer and long term stability. Elements are protected by flame-retardant molding for excellent environmental performance. 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.

### SPECIFICATIONS

RCD Type	Wattage Rating Std	Wattage Rating Opt B	Max. Voltage <sup>1,3,4</sup>	Max. Peak Pulse Voltage <sup>2,4</sup>	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. [.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]

<sup>1</sup>Rated continuous voltage =  $\sqrt{P \times R}$ , nte value listed. <sup>2</sup>Pulse voltage capability is dependent on res.value, waveform, & repetition rate. <sup>3</sup>Expanded range available <sup>4</sup>Multiply 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	0.2uH PRM1/8-1/2, .3uH PRM1
Max. Induc*: Opt. X > 50Ω	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)