# PULSE RESISTORS, SURFACE MOUNT

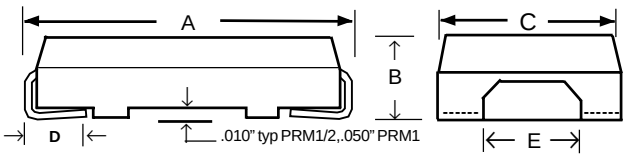
# PRM SERIES

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

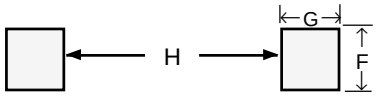
## OPTIONS

- ❒ 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.



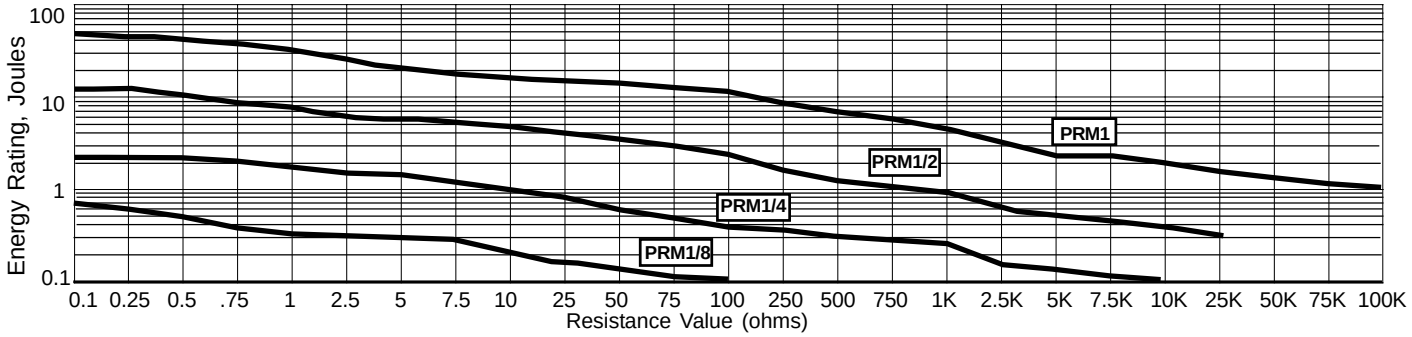

SUGGESTED PAD LAYOUT

## 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<br>Max.Induc*: Opt. X>50Ω | 0.2uH PRM1/8-1/2, .3uH PRM1<br>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)

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