# 2W TO 25 WATT VERTICAL MOUNT RESISTORS

## PV SERIES - 2 Terminal
## PVH SERIES - 4 Terminal
## PWV SERIES - Bracket Mount

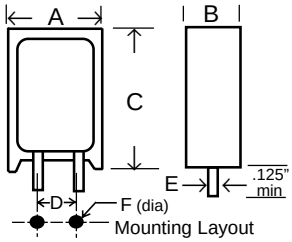
RoHS Term.W is RoHS compliant & 260°C compatible


- ❒ Industry's widest range! 1mΩ-1M, to ±.05% 10ppm!
- ❒ Built-in standoffs minimize heat transfer to P.C.B.
- ❒ Available on exclusive ***SWIFT***™ delivery program!

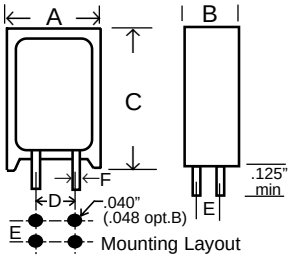
**OPTIONS**
- ❒ Option X - Non-Inductive
- ❒ Option WW or M (wirewound or film element)
- ❒ Option P - Increased pulse capability
- ❒ Option FF- Fuse within 10S @50x rated W (custom avail)
- ❒ Option E - Low thermal EMF design
- ❒ Option B - Increased power (refer to chart below)
- ❒ Numerous modifications avail: custom marking, TC's to +6000ppm, various lead wire sizes, burn-in, etc.

**Significant space savings compared to axial-lead types!**
PV, PVH, and PWV resistors are designed for power applications where space is at a premium. The PV series offers lowest cost for medium power applications. PVH series are similar except in 4-terminal Kelvin design (to cancel lead wire effect). PWV bracketed resistors enable higher power levels and superior performance in applications involving shock and vibration. The ceramic construction is fireproof and resistant to moisture & solvents. The internal element is wirewound on lower values, power film on higher values (depending on options, e.g. opt. P parts are always WW). If a specific construction is preferred, specify opt.'WW' for wirewound, opt.'M' for power film (not available in all values).

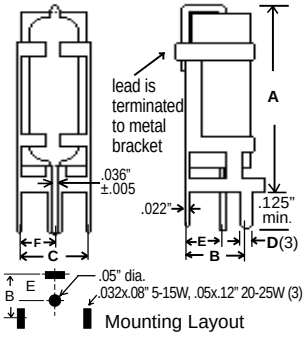
| SERIES PV | Wattage Std (Opt.B) | Max. Voltage* | Max. Current* | Std Resis Range | A ±.04 [1.0] | B ±.04 [1.0] | C ±.062 [1.6] | D ±.04 [1] | E ±.005[.12] | F (Nom) |
|---|---|---|---|---|---|---|---|---|---|---|
| PV2 | 2W (3W) | 80V | 14A | .005Ω to 1M | .450 [11.4] | .300 [7.6] | .800 [20.3] | .197 [5] | .028 [.7] | .036 [.9] |
| PV3 | 3W (4W) | 150V | 17A | .005Ω to 1M | .475 [12.1] | .350 [8.9] | .980 [24.9] | .197 [5] | .031 [.8] | .040 [1] |
| PV5 | 5W (6W) | 250V | 22A | .005Ω to 1M | .500 [12.7] | .360 [9.2] | 1.00 [25.4] | .197 [5] | .031 [.8] | .040 [1] |
| PV7 | 7W (10W) | 350V | 26A | .005Ω to 1M | .500 [12.7] | .400 [10] | 1.52 [38.6] | .197 [5] | .031 [.8] | .040 [1] |
| PV10 | 10W (12W) | 500V | 32A | .005Ω to 1M | .500 [12.7] | .400 [10] | 2.02 [51.3] | .197 [5] | .031 [.8] | .040 [1] |
| PV10S | 10W (12W) | 400V | 32A | .005Ω to 1M | .625 [15.9] | .500 [12.7] | 1.38 [35.0] | .290 [7.4] | .036 [.9] | .048 [1.2] |
| PV10A | 10W (12W) | 400V | 32A | .005Ω to 1M | .625 [15.9] | .500 [12.7] | 1.38 [35.0] | .197 [5] | .036 [.9] | .048 [1.2] |




| SERIES PVH | Wattage Std (Opt.B) | Max. Voltage* | Max Current* Std (Opt.B) | Std Resis Range | A ±.04 [1.0] | B ±.04 [1.0] | C ±.062 [1.6] | D ±.04 [1] | E ±.024[.6] | F ± .003" Std (Opt.B) |
|---|---|---|---|---|---|---|---|---|---|---|
| PVH2 | 2W (3W) | 80V | 14A (17A) | .001Ω to 10K | .450 [11.4] | .300 [7.6] | .800 [20.3] | .197 [5] | .075 [1.91] | .032 (.040) |
| PVH3 | 3W (5W) | 150V | 17A (22A) | .001Ω to 25K | .475 [12.1] | .350 [8.9] | .980 [24.9] | .197 [5] | .100 [2.54] | .032 (.040) |
| PVH5 | 5W (7W) | 250V | 22A (26A) | .001Ω to 30K | .500 [12.7] | .400 [10] | 1.00 [25.4] | .197 [5] | .100 [2.54] | .032 (.040) |
| PVH7 | 7W (10W) | 350V | 26A (32A) | .001Ω to 50K | .500 [12.7] | .400 [10] | 1.52 [38.6] | .197 [5] | .100 [2.54] | .032 (.040) |
| PVH10 | 10W (12W) | 500V | 32A (40A) | .001Ω to 250K | .500 [12.7] | .400 [10] | 2.02 [51.3] | .197 [5] | .100 [2.54] | .032 (.040) |
| PVH10S | 10W (12W) | 400V | 32A (40A) | .001Ω to 250K | .625 [15.9] | .500 [12.7] | 1.38 [35.0] | .290 [7.4] | .125 [3.18] | .032 (.040) |
| PVH10A | 10W (12W) | 400V | 32A (40A) | .001Ω to 250K | .625 [15.9] | .500 [12.7] | 1.38 [35.0] | .197 [5] | .125 [3.18] | .032 (.040) |




| SERIES PWV | Wattage | Max. Voltage* | Max Current* | Std Resis Range | A Max | B ±.04 [1.0] | C ±.04 [1.0] | D ±.02 [0.5] | E ±.06 [1.5] | F ±.06 [1.5] |
|---|---|---|---|---|---|---|---|---|---|---|
| PWV5 | 5 | 200V | 22A | .01Ω to 1M | 1.40 [35.6] | .400 [10] | .400 [10] | .060 [1.5] | .200 [5] | .200 [5] |
| PWV7 | 7 | 350V | 26A | .01Ω to 1M | 1.86 [47.3] | .400 [10] | .400 [10] | .060 [1.5] | .200 [5] | .200 [5] |
| PWV10 | 10 | 500V | 32A | .01Ω to 1M | 2.46 [62.5] | .400 [10] | .400 [10] | .060 [1.5] | .200 [5] | .200 [5] |
| PWV15 | 15 | 540V | 32A | .01Ω to 150K | 2.46 [62.5] | .500 [12.7] | .530 [13.5] | .100 [2.5] | .265 [6.7] | .265 [6.7] |
| PWV20 | 20 | 600V | 32A | .01Ω to 150K | 3.02 [76.7] | .500 [12.7] | .580 [14.7] | .100 [2.5] | .275 [7.0] | .295 [7.5] |
| PWV25 | 25 | 600V | 32A | .01Ω to 150K | 3.02 [76.7] | .500 [12.7] | .580 [14.7] | .100 [2.5] | .275 [7.0] | .295 [7.5] |




* Units not to exceed wattage, voltage, or current rating, whichever is less. Voltage determined by $E=\sqrt{PR}$, E not to exceed max voltage rating. Multiply voltage rating by 0.7 for Opt. X. Increased voltage & current ratings available (up to 1KV, 100A).

## TYPICAL PERFORMANCE CHARACTERISTICS

| | Res. Range | PV &PWV Std (Best) | PVH Std (Best) |
|---|---|---|---|
| Temp. Coef. PPM/°C (25 ~100/°C) | .001-.0049Ω | N/A | 1200ppm (50ppm) |
| | .005-.0099Ω | 800ppm (50ppm) | 600ppm (25ppm) |
| | .01-.024Ω | 600ppm (50ppm) | 200ppm (25ppm) |
| | .025-.049Ω | 500ppm (30ppm) | 150ppm (25ppm) |
| | .05-.099Ω | 400ppm (20ppm) | 90ppm (10ppm) |
| | .1 - .99Ω | 350ppm (20ppm) | 50ppm (10ppm) |
| | 1Ω & above | 200ppm (10ppm) | 20ppm (5ppm) |
| Operating Temp. | | -55° to +220° C (275° C avail) | |
| Dielectric Strength | | 1000V | |
| 5 Sec. overload (≤1.5x max V) | | 3X rated wattage (Opt. WW = 5X) | |
| Moisture Resistance | | 3.0% | |
| High Temp. Exposure | | 1.0% | |
| Load Life (1000 hours) | | 3.0% | |
| Opt X Inductance (reduced inductance levels avail. to 67nH) | | Opt.X ≤5W: ≤50Ω=.2uH max, >50Ω=.37uH max<br>Opt. X ≥7W: ≤50Ω =.3uH max, >50Ω = .6uH max | |
| Temperature Rise | | 125 to 220°C typ at full rated power | |
| Derating (W, V, A) | | Derate by .513%/°C above 25° C | |

## P/N DESIGNATION:

PV10 ☐ - 100 - J B ☐ W

**RCD Type**

**Options**: X, WW, P, M, FF, E, B (Leave blank if standard)

**Resis.Code .05%-1%**: 3 signif. figures & multiplier, e.g. R001=.001Ω, R010=.01Ω, R100=.1Ω, 1R00=1Ω, 10R0=10Ω, 1000=100Ω, 1001=1K.
**Resis.Code 2%-10%**: 2 signif. figures & multiplier, e.g. R001=.001Ω, R01=0.01Ω, R10=0.1Ω, 1R0=1Ω, 100=10Ω, 101=100Ω, 102=1K.

**Tolerance**: A=0.05%, B=0.1%, C=0.25%, D=0.5%, F=1%, G=2%, J=5%(std), K=10%

**Packaging**: B=bulk (standard)

**Optional TC**: 10=10ppm, 20=20ppm, 50=50ppm, 101=100ppm, 201=200ppm, etc. (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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