## Description:

The PV Series is a line of surface mount plastic-encapsulated varistors designed to protect electronic equipment against high voltage surges in the low and medium voltage region. They offer direct SMD equivalents to 5 mm and 7 mm leaded disc varistors. The thermoplastic encapsulation is non-flammable according to the standard defined by UL94V-0. Terminations are tinned copper sheet.




PV varistors are designed exclusively for surface mounting and are available in two model sizes. These transient voltage suppressors cover operating voltages (Vrms) from 60V to 300V and feature maximum surge currents from 100A to 1200A.

## Features:

- AC operating voltage (Vrms) from 60V to 300V
- DC operating voltage (Vdc) from 85V to 385V
- Insensitive to water cleaning procedures and to humidity according to the climate category 55/125/56
- +85ºC continuous operating temperature
- Non-flammable thermoplastic encapsulation case according to standard UL94V-0
- 2 model sizes available: 3225 and 4032
- Dimensional and weight savings on board
- Easily solderable tinned copper terminations
- UL1449, 3rd Ed. and CSA C22.2 certified
- 100% RoHS compliant and lead free without exemption
- Halogen free
- REACH compliant

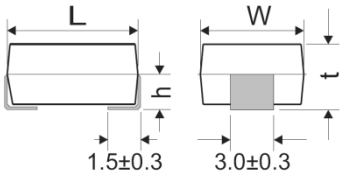
## Electrical Specifications

| | |
|---|---|
| Climatic Category | 55 / 125 / 56 |
| Operating Temperature | -40 ºC to +85 ºC |
| Storage Temperature Range | -40 ºC to +125 ºC |
| Threshold Voltage Temperature Coefficient | ≤0.05% / ºC |
| Response Time | < 5 nS |

## Standard Packaging Options / Quantities

| Series | Voltage Range (Vrms) | Chip Size | |
|---|---|---|---|
| | | 3225 | 4032 |
| PV | 60 - 150 | 1500 | 1000 |
| | 175 - 300 | 1000 | 1000 |

## Device Ratings and Dimensions




| Part Number | $V_{RMS}$ (volts) | $V_{DC}$ (volts) | $V_n$ (@ 1mA) (volts) | $V_C$ (volts) | $I_C$ (amps) | $W_{MAX}$ (joules) | $P_{MAX}$ (watts) | $I_{max}$ (8/20 µSec) (amps) | $C_{TYP}$ (@ 1kHz) (pF) | h ± 0.3 (mm) | L ± 0.5 (mm) | W ± 0.4 (mm) | t ± 0.3 (mm) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PV60K3225 | 60 | 85 | 100 | 165 | 5.0 | 3.0 | 0.10 | 400 | 330 | 1.70 | 8.0 | 6.3 | 3.4 |
| PV60K4032 | 60 | 85 | 100 | 165 | 10.0 | 7.0 | 0.25 | 1,200 | 680 | 2.30 | 10.0 | 8.0 | 4.7 |
| PV75K3225 | 75 | 100 | 120 | 200 | 5.0 | 4.0 | 0.10 | 400 | 270 | 1.70 | 8.0 | 6.3 | 3.4 |
| PV75K4032 | 75 | 100 | 120 | 200 | 10.0 | 9.0 | 0.25 | 1,200 | 550 | 2.30 | 10.0 | 8.0 | 4.7 |




This specification may be changed at any time without prior notice

Please confirm technical specifications before you order and/or use.

| Device Ratings and Dimensions (cont.) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Part Number | $V_{RMS}$ (volts) | $V_{DC}$ (volts) | $V_n$ (@ 1mA) (volts) | $V_C$ (volts) | $I_C$ (amps) | $W_{MAX}$ (joules) | $P_{MAX}$ (watts) | $I_{max}$ (8/20 µSec) (amps) | $C_{TYP}$ (@ 1kHz) (pF) | h ± 0.3 (mm) | L ± 0.5 (mm) | W ± 0.4 (mm) | t ± 0.3 (mm) |
| PV95K3225 | 95 | 125 | 150 | 250 | 5.0 | 6.0 | 0.10 | 400 | 220 | 1.70 | 8.0 | 6.3 | 3.4 |
| PV95K4032 | 95 | 125 | 150 | 250 | 10.0 | 11.0 | 0.25 | 1,200 | 440 | 2.30 | 10.0 | 8.0 | 4.7 |
| PV115K3225 | 115 | 150 | 180 | 300 | 5.0 | 6.5 | 0.10 | 400 | 180 | 1.70 | 8.0 | 6.3 | 3.4 |
| PV115K4032 | 115 | 150 | 180 | 300 | 10.0 | 13.0 | 0.25 | 1,200 | 360 | 2.30 | 10.0 | 8.0 | 4.7 |
| PV130K3225 | 130 | 170 | 205 | 340 | 5.0 | 7.0 | 0.10 | 400 | 160 | 1.70 | 8.0 | 6.3 | 3.4 |
| PV130K4032 | 130 | 170 | 205 | 340 | 10.0 | 15.0 | 0.25 | 1,200 | 320 | 2.30 | 10.0 | 8.0 | 4.7 |
| PV140K3225 | 140 | 180 | 220 | 360 | 5.0 | 7.5 | 0.10 | 400 | 150 | 1.70 | 8.0 | 6.3 | 3.4 |
| PV140K4032 | 140 | 180 | 220 | 360 | 10.0 | 18.0 | 0.25 | 1,200 | 300 | 2.30 | 10.0 | 8.0 | 4.7 |
| PV150K3225 | 150 | 200 | 240 | 395 | 5.0 | 9.0 | 0.10 | 400 | 140 | 1.70 | 8.0 | 6.3 | 3.4 |
| PV150K4032 | 150 | 200 | 240 | 395 | 10.0 | 18.5 | 0.25 | 1,200 | 280 | 2.30 | 10.0 | 8.0 | 4.7 |
| PV175K3225 | 175 | 225 | 270 | 455 | 5.0 | 9.5 | 0.10 | 400 | 120 | 2.30 | 8.0 | 6.3 | 4.7 |
| PV175K4032 | 175 | 225 | 270 | 455 | 10.0 | 21.0 | 0.25 | 1,200 | 250 | 2.30 | 10.0 | 8.0 | 4.7 |
| PV230K3225 | 230 | 300 | 360 | 595 | 5.0 | 10.0 | 0.10 | 400 | 95 | 2.30 | 8.0 | 6.3 | 4.7 |
| PV230K4032 | 230 | 300 | 360 | 595 | 10.0 | 23.0 | 0.25 | 1,200 | 190 | 2.30 | 10.0 | 8.0 | 4.7 |
| PV250K3225 | 250 | 320 | 390 | 650 | 5.0 | 11.0 | 0.10 | 400 | 80 | 2.30 | 8.0 | 6.3 | 4.7 |
| PV250K4032 | 250 | 320 | 390 | 650 | 10.0 | 25.0 | 0.25 | 1,200 | 180 | 2.30 | 10.0 | 8.0 | 4.7 |
| PV275K3225 | 275 | 350 | 430 | 710 | 5.0 | 13.0 | 0.10 | 400 | 75 | 2.30 | 8.0 | 6.3 | 4.7 |
| PV275K4032 | 275 | 350 | 430 | 710 | 10.0 | 29.0 | 0.25 | 1,200 | 160 | 2.30 | 10.0 | 8.0 | 4.7 |
| PV300K3225 | 300 | 385 | 470 | 775 | 5.0 | 15.0 | 0.10 | 400 | 70 | 2.30 | 8.0 | 6.3 | 4.7 |
| PV300K4032 | 300 | 385 | 470 | 775 | 10.0 | 30.0 | 0.25 | 1,200 | 150 | 2.30 | 10.0 | 8.0 | 4.7 |

## RoHS Compliance

Stackpole Electronics has joined the worldwide effort to reduce the amount of lead in electronic components and to meet the various regulatory requirements now prevalent, such as the European Union's directive regarding "Restrictions on Hazardous Substances" (RoHS 3). As part of this ongoing program, we periodically update this document with the status regarding the availability of our compliant components. All our standard part numbers are compliant to EU Directive 2011/65/EU of the European Parliament as amended by Directive (EU) 2015/863/EU as regards the list of restricted substances.

| RoHS Compliance Status | | | | | | |
|---|---|---|---|---|---|---|
| Standard Product Series | Description | Package / Termination Type | Standard Series RoHS Compliant | Lead-Free Termination Composition | Lead-Free Mfg. Effective Date (Std Product Series) | Lead-Free Effective Date Code (YY/WW) |
| PV | Low and Medium Voltage Plastic Encapsulated SMD Varistor | SMD | YES | 100% Matte Sn | Always | Always |

## "Conflict Metals" Commitment

We at Stackpole Electronics, Inc. are joined with our industry in opposing the use of metals mined in the "conflict region" of the eastern Democratic Republic of the Congo (DRC) in our products. Recognizing that the supply chain for metals used in the electronics industry is very complex, we work closely with our own suppliers to verify to the extent possible that the materials and products we supply do not contain metals sourced from this conflict region. As such, we are in compliance with the requirements of Dodd-Frank Act regarding Conflict Minerals.

## Compliance to "REACH"

We certify that all passive components supplied by Stackpole Electronics, Inc. are SVHC (Substances of Very High Concern) free and compliant with the requirements of EU Directive 1907/2006/EC, "The Registration, Evaluation, Authorization and Restriction of Chemicals", otherwise referred to as REACH. Contact us for complete list of REACH Substance Candidate List.


This specification may be changed at any time without prior notice
Please confirm technical specifications before you order and/or use.

## Environmental Policy

It is the policy of Stackpole Electronics, Inc. (SEI) to protect the environment in all localities in which we operate. We continually strive to improve our effect on the environment. We observe all applicable laws and regulations regarding the protection of our environment and all requests related to the environment to which we have agreed. We are committed to the prevention of all forms of pollution.

## How to Order

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| **P** | **V** | **6** | **0** | **K** | **3** | **2** | **2** | **5** | **T** |

| Product Series | |
|---|---|
| PV | Low & Medium Voltage Plastic Encapsulated SMD Varistor |

| Vrms |
|---|
| 60 - 300 |

| Tolerance | |
|---|---|
| Code | Tol |
| K | 10% |
| S | Special |

| Chip Size |
|---|
| 3225 |
| 4032 |

| Packaging | |
|---|---|
| Code | Description |
| T | Tape and Reel |


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