PV Series

Low & Medium Voltage Plastic Encapsulated SMD Varistor

Stackpole Electronics, Inc.
Resistive Product Solutions

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
- Halogen free
- REACH compliant

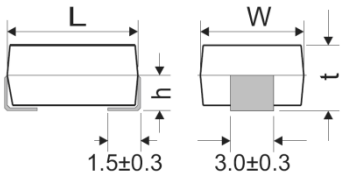
Electrical Specifications

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

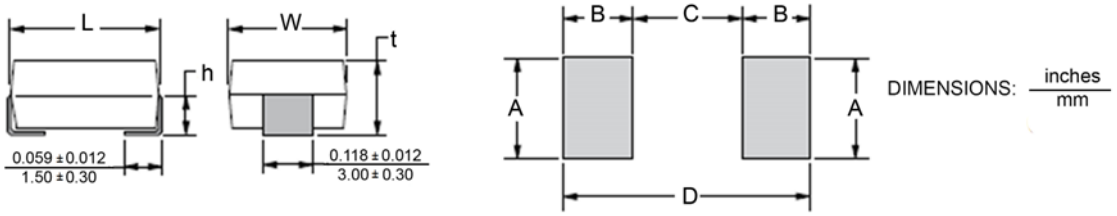


Part Number	V_{RMS} (volts)	V_{DC} (volts)	V_n (@ 1mA) (volts)	V_C (volts)	I_C (amps)	W_{MAX} (joules)	P_{MAX} (watts)	I_{max} (8/20 µSec) (amps)	C_{TYP} (@ 1kHz) (pF)	h ± 0.3 (mm)	L ± 0.5 (mm)	W ± 0.4 (mm)	t ± 0.3 (mm)
PV60K3225	60	85	100	165	5.0	3.0	0.10	400	330	1.70	8.0	6.3	3.4
PV60K4032	60	85	100	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

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

Recommended Pad Layout



Size	Voltage Range (V)	h	L	W	t	A	B	C	D	Unit
3225	60 to 150	0.067 ± 0.012	0.315 ± 0.020	0.248 ± 0.016	0.134 ± 0.012	0.138	0.114	0.177	0.406	inches
		1.70 ± 0.30	8.00 ± 0.50	6.30 ± 0.40	3.40 ± 0.30	3.50	2.90	4.50	10.30	mm
	175 to 300	0.091 ± 0.012	0.315 ± 0.020	0.248 ± 0.016	0.185 ± 0.012	0.138	0.114	0.177	0.406	inches
		2.30 ± 0.30	8.00 ± 0.50	6.30 ± 0.40	4.70 ± 0.30	3.50	2.90	4.50	10.30	mm
4032	60 to 300	0.091 ± 0.012	0.394 ± 0.020	0.327 ± 0.016	0.185 ± 0.012	0.138	0.114	0.256	0.484	inches
		2.30 ± 0.30	10.00 ± 0.50	8.30 ± 0.40	4.70 ± 0.30	3.50	2.90	6.50	12.30	mm

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(1)	100% Matte Sn	Always	Always

Note (1): RoHS Compliant by means of exemption 7c-I.

"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.

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

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