

Description:

MV Series varistors/suppressors are dual function devices that protect electronic equipment operating in the low voltage region against voltage surges and high-frequency noise, replacing two components: a low voltage varistor and a capacitor.

The MV Series incorporates a varistor function in the DC voltage range from 14 V to 125 V and the function of a high-frequency by-pass capacitor operating in the capacitance range from 10 nF to 1,000 nF. They are intended for protection of all sensitive electronic devices experiencing both voltage transient and high-frequency noise produced by electromechanical devices such as buzzers, relays, etc.

MV varistors/suppressors are square shaped components with in-line leads, which require at least 30% less mounting space than the two components they replace.



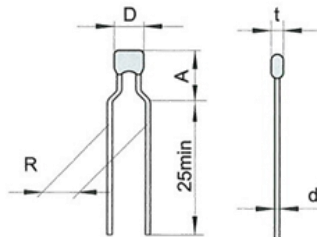
Features:

- AC operating voltage (Vrms) from 11 V to 95 V (up to 130 V – contact Stackpole)
- DC operating voltage (Vdc) from 14 V to 125 V (up to 170 V – contact Stackpole)
- Capacitance range (@ 1 kHz) from 10 nF to 1,000 nF (lower capacitance values available – contact Stackpole)
- Capacitor temperature characteristic X7R or Z5U
- Protects against voltage transients and suppresses high-frequency interference
- Dimensional and weight savings on PC board
- One model size available 6 x 9 mm
- In-line leads
- Available with crimped leads
- RoHS compliant, lead-free and halogen-free

General Technical Data	
Capacitance Range	10 nF to 1,000 nF
Capacitor Temperature Characteristic	X7R or Z5U
Operating Temperature	-40 °C to +85 °C
Storage Temperature Range	-40 °C to +125 °C
Threshold Voltage Temperature Coefficient	< -0.05 %/°C
Insulation Resistance	> 1 Gohm
Isolation Voltage Capability	> 1.25 kV
Response Time	< 25 nS
Climatic Category	40/85/56

Standard Packaging Options					
Series	Voltage Range (Vrms)	Model Size	Packaging Options: 7 mm, 10 mm, 14 mm, 20 mm, 23 mm		
			B = Bulk	R = Reel	A = A mmo Pack
MV	11 - 95	6 X 9 mm	2,000	2,000	2,500

Device Ratings Dimensions



Part Number	V _{RMS} (volts)	V _{DC} (volts)	V _N (1 mA) (volts)	V _C (@1 A) (volts)	W _{max} (10/1000 μSec) (joules)	P _{MAX} (watts)	I _{MAX} (8/20 μSec) (amps)	C _{TYP} (@1 kHz) (nF)	D _{MAX} (mm)	A _{MAX} (mm)	R (mm)	d (mm)	t _{MAX} (mm)
MV11K103MZ	11	14	18	35	0.8	0.01	150	10	6	9	5	0.6	5.5
MV11K104MZ	11	14	18	35	0.8	0.01	150	100	6	9	5	0.6	5.5
MV11K105MZ	11	14	18	35	0.8	0.01	150	1,000	6	9	5	0.6	5.5
MV14K103MZ	14	18	22	38	0.9	0.01	150	10	6	9	5	0.6	5.5
MV14K104MZ	14	18	22	38	0.9	0.01	150	100	6	9	5	0.6	5.5
MV14K105MZ	14	18	22	38	0.9	0.01	150	1,000	6	9	5	0.6	5.5
MV17K103MZ	17	22	27	49	1.1	0.01	150	10	6	9	5	0.6	5.5
MV17K104MZ	17	22	27	49	1.1	0.01	150	100	6	9	5	0.6	5.5
MV17K105MZ	17	22	27	49	1.1	0.01	150	1,000	6	9	5	0.6	5.5
MV20K103MZ	20	26	33	54	1.3	0.01	150	10	6	9	5	0.6	5.5
MV20K104MZ	20	26	33	54	1.3	0.01	150	100	6	9	5	0.6	5.5
MV20K105MZ	20	26	33	54	1.3	0.01	150	1,000	6	9	5	0.6	5.5
MV25K103MZ	25	31	39	65	1.7	0.01	150	10	6	9	5	0.6	5.5
MV25K104MZ	25	31	39	65	1.7	0.01	150	100	6	9	5	0.6	5.5
MV25K105MZ	25	31	39	65	1.7	0.01	150	1,000	6	9	5	0.6	5.5
MV30K103MZ	30	38	47	77	2.0	0.01	150	10	6	9	5	0.6	5.5
MV30K104MZ	30	38	47	77	2.0	0.01	150	100	6	9	5	0.6	5.5
MV30K105MZ	30	38	47	77	2.0	0.01	150	1,000	6	9	5	0.6	5.5
MV35K103MZ	35	45	56	90	2.2	0.01	150	10	6	9	5	0.6	5.5
MV35K104MZ	35	45	56	90	2.2	0.01	150	100	6	9	5	0.6	5.5
MV35K105MZ	35	45	56	90	2.2	0.01	150	1,000	6	9	5	0.6	5.5
MV40K103MZ	40	56	68	110	2.3	0.01	150	10	6	9	5	0.6	5.5
MV40K104MZ	40	56	68	110	2.3	0.01	150	100	6	9	5	0.6	5.5
MV40K105MZ	40	56	68	110	2.3	0.01	150	1,000	6	9	5	0.6	5.5
MV50K103MZ	50	65	82	135	2.3	0.01	150	10	6	9	5	0.6	5.5
MV50K104MZ	50	65	82	135	2.3	0.01	150	100	6	9	5	0.6	5.5
MV50K105MZ	50	65	82	135	2.3	0.01	150	1,000	6	9	5	0.6	5.5
MV60K103MZ	60	85	100	165	2.3	0.01	150	10	6	9	5	0.6	5.5
MV60K104MZ	60	85	100	165	2.3	0.01	150	100	6	9	5	0.6	5.5
MV60K105MZ	60	85	100	165	2.3	0.01	150	1,000	6	9	5	0.6	5.5
MV95K103MZ	95	125	150	250	2.5	0.01	150	10	6	9	5	0.6	5.5
MV95K104MZ	95	125	150	250	2.5	0.01	150	100	6	9	5	0.6	5.5
MV95K105MZ	95	125	150	250	2.5	0.01	150	1,000	6	9	5	0.6	5.5

Other capacitance values >1,000nF are also available. Contact Stackpole.

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)
MV	Low Voltage Leaded Dual Function Varistor - RFI Suppressor	Leaded	YES	100% Matte Sn	Jul-05	05/27

"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.

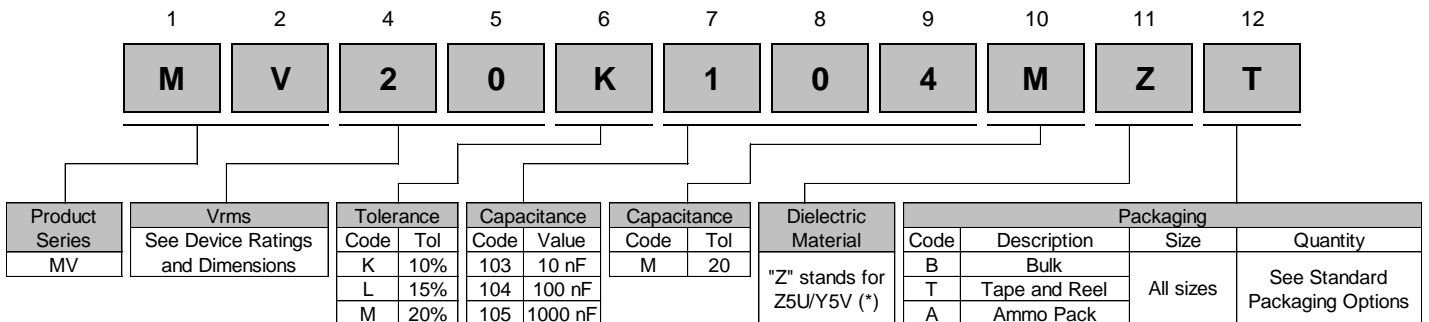
Compliance to "REACH"

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



(*) Note: X = X7R temperature characteristics is also available.