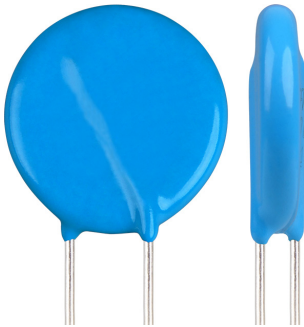


Standard MOV Varistor

Round, 25mm

multicomp PRO

**RoHS
Compliant**



Description

Metal Oxide Varistor (MOV) as one nonlinear resistance element is mainly made of zinc oxide (ZnO), which has very high surge capacity and big nonlinear coefficient. Below the threshold voltage, its resistance is very high, nearly no current flows through, but above the threshold voltage, the resistance reduces sharply, huge current can be discharged. Due to this characteristic, varistor as a protection component in electronic and electrical equipment can absorb abnormal over-voltage and lightning surge.

Varistor is with High Surge Current Density, Low Clamping Voltage, and Good Surge Capacity. It can also be customized as required.

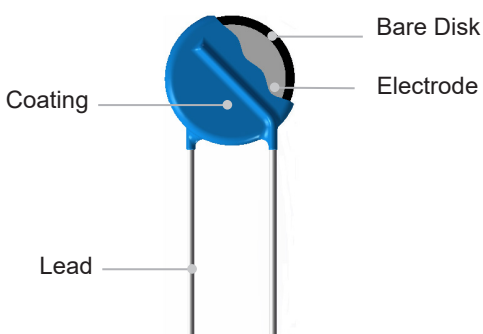
Applications

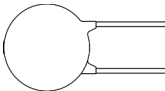
- Power Supplies
- Home Electrical Appliances
- Industrial Devices
- Surge Protectors
- Telecom Devices

Features

- Epoxy Resin Coating
- Silicone Resin Coating
- Low Leakage Current
- Bidirectional and Symmetrical V/I Characteristics
- Operating Temperature Range
Low Temperature: -40 °C
High Temperature: +85°C / +105°C

Product Structure



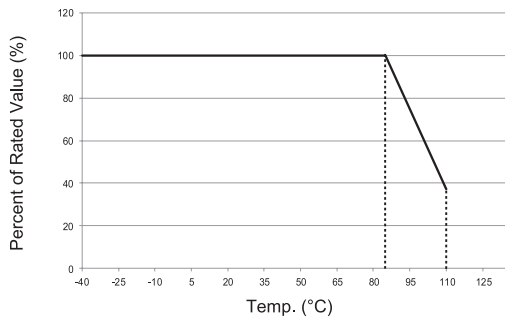
Lead Types		Codes
	Straight Lead	A

Standard MOV Varistor

Round, 25mm

multicomp PRO

Temp. Derating Curve



For Normal Temp. Series

Note:

When ambient Temp. exceeds 85°C, the peak surge current and energy rating should be reduced as shown in the left curve.

General Technical Data

Item	Value	Unit
Operating Temperature	-40 to +85	°C
Storage Temperature	-40 to +125	°C
Voltage Proof	≥2500	Vac
Insulation Resistance	≥100	MΩ

Item	Description
V _N	Nominal Varistor Voltage Voltage, at specified D.C. current used as a reference point in the component characteristics.
I _L	Leakage Current Measuring at 75% of varistor voltage.
UCT	Upper Category Temp. Max. ambient temp. for which a varistor has been designed to operate continuously.
UCT	Lower Category Temp. Minimum ambient temp. at which a varistor has been designed to operate continuously.
Max. Peak Current	Max. Peak Current Max. current per pulse, which may be passed by a varistor at an ambient temp. of 25 °C, for a given number of pulses.
V _c	Clamping Voltage Peak voltage developed across the varistor terminations under standard atmospheric conditions, when passing an 8/20 μs class current pulse.
Voltage Proof	Voltage Proof Max. peak voltage, which may be applied under continuous operating conditions between the varistor terminations and any conducting mounting surface (Applicable only to insulated varistors).
C _v	Capacitance Capacitance across the MOV measured at a specified frequency and voltage.
V _{ac}	Max. Continuous a.c. Voltage Max. a.c. r.m.s. voltage of a substantially sinusoidal waveform (less than 5% total harmonic distortion) which can be applied to the component under continuous operating conditions at 25°C.
V _{dc}	Max. Continuous d.c. Voltage Max. d.c. voltage (with less than 5% ripple) which can be applied to the component under continuous operating conditions at an ambient temp. of 25°C.

multicomp PRO

Standard MOV Varistor

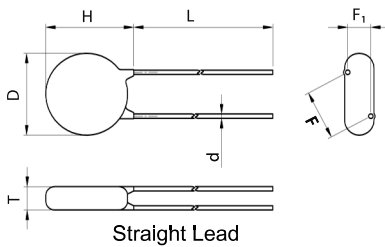
Round, 25mm

multicomp PRO

Dimensions

Model	L (Min.)	H (Max.)	T (Max.)	D (Max.)	d	F	F ₁	A (Max.)
MPV25D241KNK	20	32	5.7	28	1.2 ±0.05	10 ±0.6	1.7 - 3.6	35
MPV25D271KNK			5.9				1.8 - 3.8	
MPV25D391KNK			6.7				2.5 - 4.5	
MPV25D431KNK			6.9				2.7 - 4.7	
MPV25D471KNK			7.2				3 - 5	
MPV25D511KNK			7.4				3.2 - 5.2	
MPV25D621KNK			8.1				3.8 - 5.8	
MPV25D681KNK			8.5				4.2 - 6.2	

Diagram



Specification

Model	Max. Continuous Operating Voltage		Varistor Voltage @1 mA DC		Clamping Voltage (Max.)		Max. Discharge Current (8/20 μs)		Max. Energy (10/1000 μs)	Typical Capacitance (For reference only) @1 kHz
	V _{ac}	V _{dc}	Min.	Max.	V _c	I _p	I _n	I _{max}	I _{max}	(pF)
	(V)	(V)	(V)	(V)	(V)	(V)	(kA)		(J)	
MPV25D241KNK	150	200	216	264	395	150	10	20	220	2650
MPV25D271KNK	175	225	243	297	455				255	2400
MPV25D391KNK	250	320	351	429	650				360	1600
MPV25D431KNK	275	350	387	473	710				380	1500
MPV25D471KNK	300	385	423	517	775				400	1400
MPV25D511KNK	320	415	459	561	845				420	1250
MPV25D621KNK	385	505	558	682	1025				450	1050
MPV25D681KNK	420	560	612	748	1120				460	950

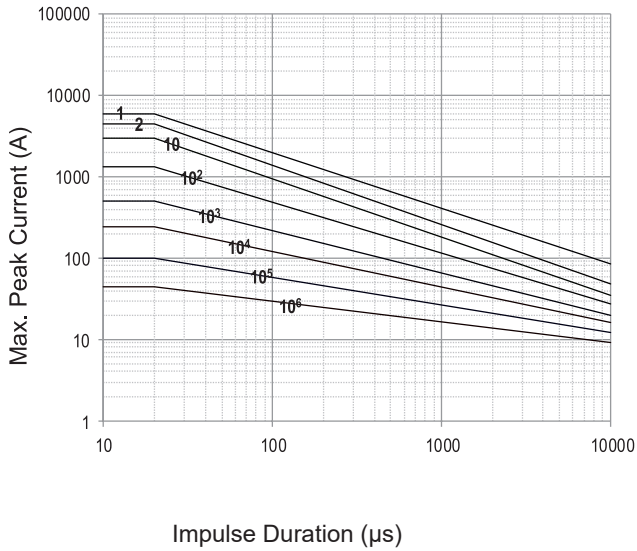
Newark.com/multicomp-pro
 Farnell.com/multicomp-pro
 sg.element14.com/b/multicomp-pro

multicomp PRO

Standard MOV Varistor Round, 25mm

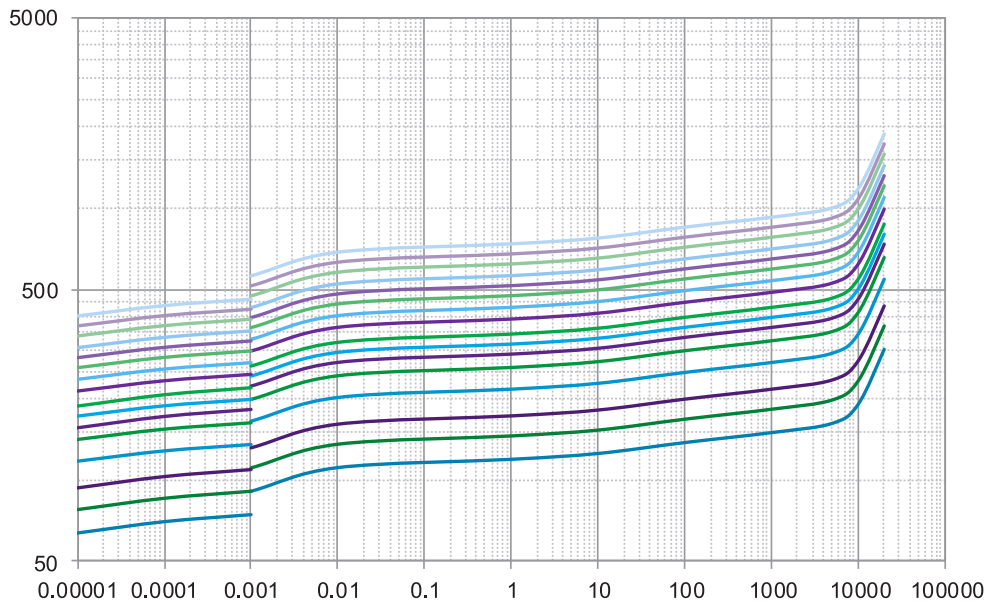
Performance Curve

Max. Peak Current Derating Curves



Note: 1, 2, 10, 10², 10³, 10⁴, 10⁵, 10⁶ Stand for Repetitions.

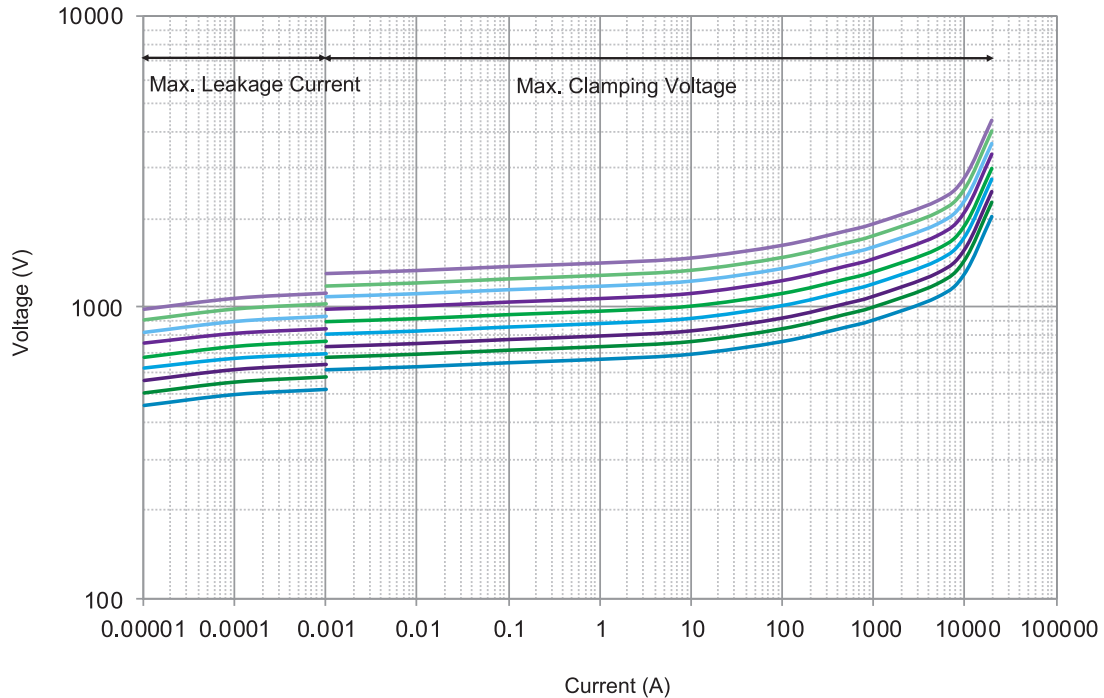
Voltage-Current Characteristic Curves



Standard MOV Varistor

Round, 25mm

multicomp PRO



Part Number Table

Description	Part Number
Varistor, 240V	MPV25D241KNK
Varistor, 270V	MPV25D271KNK
Varistor, 390V	MPV25D391KNK
Varistor, 430V	MPV25D431KNK
Varistor, 470V	MPV25D471KNK
Varistor, 510V	MPV25D511KNK
Varistor, 620V	MPV25D621KNK
Varistor, 680V	MPV25D681KNK

Important Notice : This data sheet and its contents (the "Information") belong to the members of the AVNET group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp Pro is the registered trademark of Premier Farnell Limited 2019.

Newark.com/multicomp-pro
 Farnell.com/multicomp-pro
 sg.element14.com/b/multicomp-pro

multicomp PRO