

Standard MOV Varistor

Round, 10mm

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.

Approvals

UL1449 4th Edition
TUV EN 61051-1:2008
IEC 61051-1:2007
IEC 61051-2:1991+A1
IEC 61051-2-2:1991
Annex G.8.1 of IEC 62368-1:2018

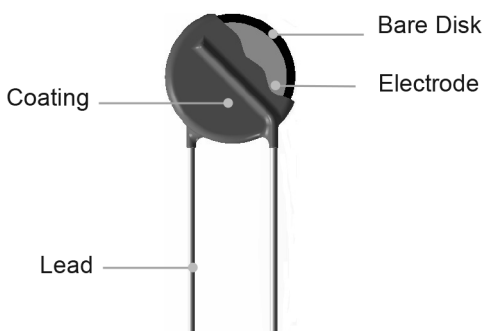
Features

- Epoxy Resin Coating
- Silicone Resin Coating
- Low Leakage Current
- Bidirectional and Symmetrical V/I Characteristics
- Operating Temperature Range
- Low Temperature: -40°C
- High Temperature: $+85^{\circ}\text{C}$ to $+105^{\circ}\text{C}$

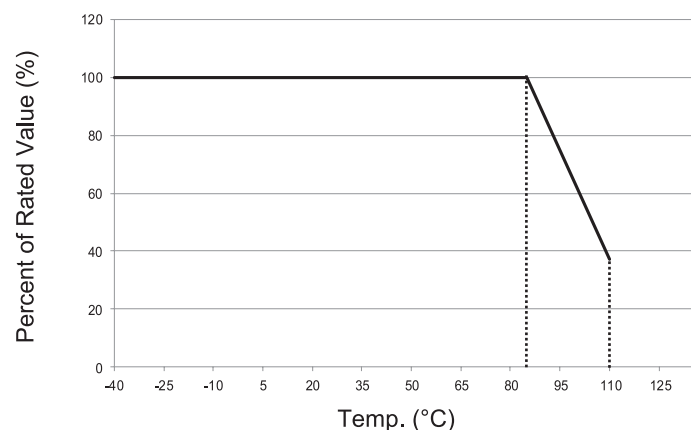
Applications

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

Product Structure



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.

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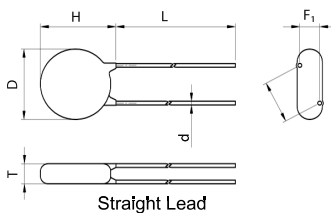
General Technical Data

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

Dimensions

Part Number	L (Min.)	H (Max.)	T (Max.)	D (Max.)	d	F	F1	A (Max.)
MPV10D101KNK	20	15.5	4.6	12.5	0.8 ±0.05	7.5 ±0.6	1.3 - 2.8	17.5
MPV10D121KNK			4.8				1.4 - 3	
MPV10D181KNK			4.4				1.2 - 2.7	
MPV10D201KNK			4.6				1.3 - 2.9	
MPV10D241KNK			4.8				1.4 - 3.1	
MPV10D271KNK			4.9				1.5 - 3.2	
MPV10D361KNK			5.4				1.9 - 3.7	
MPV10D391KNK			5.6				2 - 3.9	
MPV10D431KNK			5.8				2.1 - 4.1	
MPV10D471KNK			6.1				2.3 - 4.3	
MPV10D511KNK			6.3				2.5 - 4.5	
MPV10D561KNK			6.6				2.7 - 4.7	
MPV10D621KNK			6.9				3.1 - 5.1	
MPV10D681KNK			7.2				3.4 - 5.4	
MPV10D751KNK			7.6				3.7 - 5.7	
MPV10D820KNK			4.4				1.2 - 2.6	
MPV10D821KNK			8				4.1 - 6.1	
MPV10D911KNK			8.5				4.6 - 6.6	

Diagram



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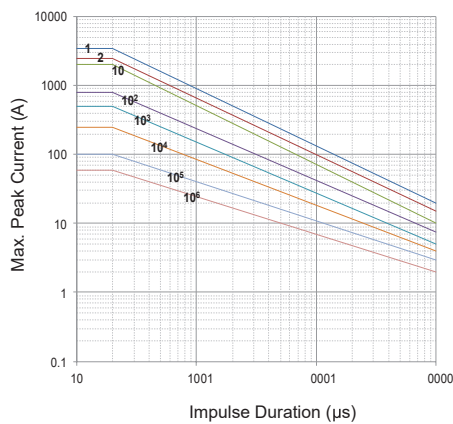
Specification Table

Part Number	Max. Continuous Operating Voltage		Varistor Voltage @1 mA DC		Clamping Voltage (Max.)		Max. Peak Current (1 time, 8/20 μ s)	Max. Energy (10/1000 μ s)	Typical Capacitance (For reference only) @1 kHz	Agency Approvals		
	Vac	Vdc	Min.	Max.	VC	IP	K		(pF)	UL	TUV	
	(V)	(V)	(V)	(V)	(V)	(V)	(kA)	(J)				
MPV10D101KNK	60	85	90	110	165	25	3.5	17	1000	•	•	
MPV10D121KNK	75	100	108	132	200			20	830			
MPV10D181KNK	115	150	162	198	300			30	560			
MPV10D201KNK	130	170	180	220	340			35	500			
MPV10D241KNK	150	200	216	264	395			42	420			
MPV10D271KNK	175	225	243	297	455			49	370			
MPV10D361KNK	230	300	324	396	595			65	280			
MPV10D391KNK	250	320	351	429	650			70	260			
MPV10D431KNK	275	350	387	473	710			80	230			
MPV10D471KNK	300	385	423	517	775			85	210			
MPV10D511KNK	320	415	459	561	845			90	200			
MPV10D561KNK	350	460	504	616	925			92	180			
MPV10D621KNK	385	505	558	682	1025			95	160			
MPV10D681KNK	420	560	612	748	1120			98	150			
MPV10D751KNK	460	615	675	825	1240			100	130			○
MPV10D820KNK	50	65	74	90	135			14	1200			•
MPV10D821KNK	510	670	738	902	1355			110	120			○
MPV10D911KNK	550	745	819	1001	1500			130	110			○

• : Approved ○ : Unauthorized

Performance Curve

Max. Peak Current Derating Curves

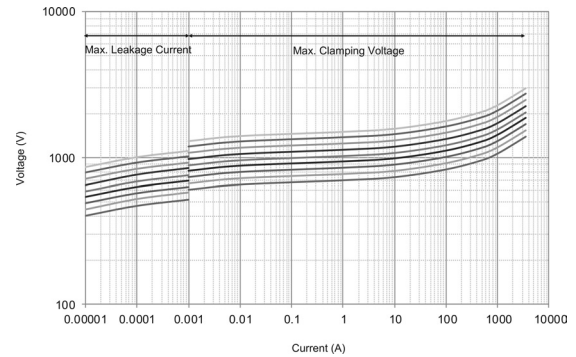
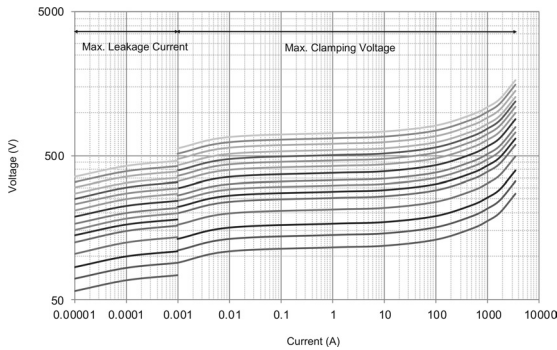


MP011853

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Part Number Table

Description	Part Number
Varistor, MOV, 165V, Disc 10mm	MPV10D101KNK
Varistor, MOV, 200V, Disc 10mm	MPV10D121KNK
Varistor, MOV, 300V, Disc 10mm	MPV10D181KNK
Varistor, MOV, 340V, Disc 10mm	MPV10D201KNK
Varistor, MOV, 395V, Disc 10mm	MPV10D241KNK
Varistor, MOV, 455V, Disc 10mm	MPV10D271KNK
Varistor, MOV, 595V, Disc 10mm	MPV10D361KNK
Varistor, MOV, 650V, Disc 10mm	MPV10D391KNK
Varistor, MOV, 710V, Disc 10mm	MPV10D431KNK
Varistor, MOV, 775V, Disc 10mm	MPV10D471KNK
Varistor, MOV, 845V, Disc 10mm	MPV10D511KNK
Varistor, MOV, 925V, Disc 10mm	MPV10D561KNK
Varistor, MOV, 1.025KV, Disc 10mm	MPV10D621KNK
Varistor, MOV, 1.12KV, Disc 10mm	MPV10D681KNK
Varistor, MOV, 1.240KV, Disc 10mm	MPV10D751KNK
Varistor, MOV, 1.35V, Disc 10mm	MPV10D820KNK
Varistor, MOV, 1.355KV, Disc 10mm	MPV10D821KNK
Varistor, MOV, 1.5KV, Disc 10mm	MPV10D911KNK

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