

Standard MOV Varistor

Round, 5mm

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
IEC 61051-2-2:1991 Annex G 8.1 of IEC 62368-1:2018

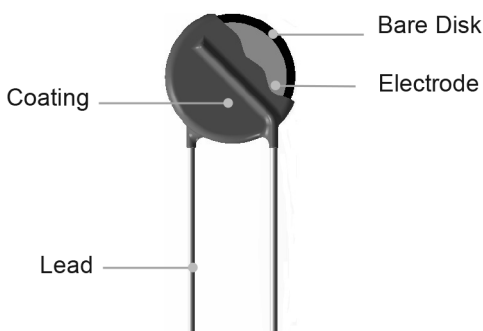
Features

- 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°C to +105°C

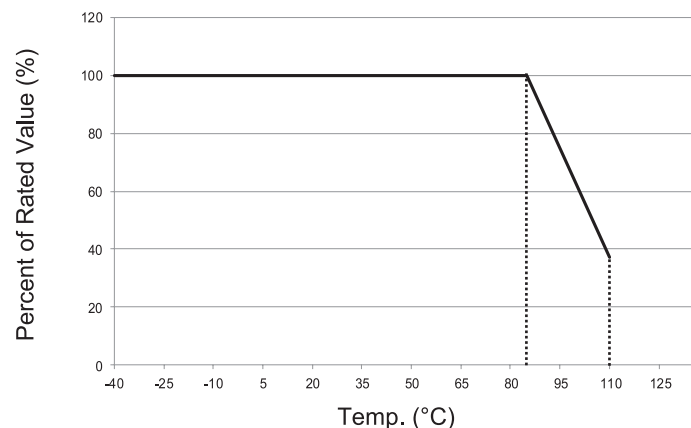
Applications

- 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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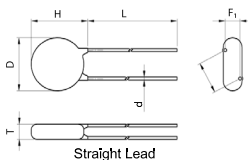
General Technical Data

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	F ₁	A (Max.)
MPV20D101KNK	20	25.5	5	23	1 ±0.0	10 ±0.6	1.5 - 3	27.5
MPV20D102KNK			9.9				5.9 - 7.9	
MPV20D121KNK			5.2				1.6 - 3.2	
MPV20D151KNK			5.5				1.7 - 3.5	
MPV20D201KNK			5.1				1.5 - 3.2	
MPV20D241KNK			5.3				1.7 - 3.4	
MPV20D271KNK			5.5				1.8 - 3.6	
MPV20D361KNK			6				2.1 - 4.1	
MPV20D391KNK			6.2				2.3 - 4.3	
MPV20D431KNK			6.4				2.5 - 4.5	
MPV20D471KNK			6.7				2.8 - 4.8	
MPV20D511KNK			6.9				3 - 5	
MPV20D561KNK			7.2				3.3 - 5.3	
MPV20D621KNK			7.6				3.6 - 5.6	
MPV20D681KNK			8				4 - 6	
MPV20D751KNK			8.4				4.4 - 6.4	
MPV20D820KNK			4.8				1.4 - 2.8	
MPV20D821KNK			8.8				4.8 - 6.8	
MPV20D911KNK			9.4				5.4 - 7.4	

Diagram



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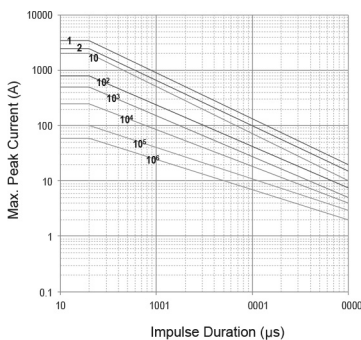
Specification

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)			
MPV20D101KNK	60	85	90	110	165	100	10	70	4000	√	√
MPV20D102KNK	625	825	900	1100	1650			565	400		
MPV20D121KNK	75	100	108	132	200			85	3400		
MPV20D151KNK	95	125	135	165	250			106	2700		
MPV20D201KNK	130	170	180	220	340			140	2000		
MPV20D241KNK	150	200	216	264	395			168	1650		
MPV20D271KNK	175	225	243	297	455			190	1500		
MPV20D361KNK	230	300	324	396	595			255	1100		
MPV20D391KNK	250	320	351	429	650			275	1000		
MPV20D431KNK	275	350	387	473	710			305	930		
MPV20D471KNK	300	385	423	517	775			350	850		
MPV20D511KNK	320	415	459	561	845			360	780		
MPV20D561KNK	350	460	504	616	925			380	710		
MPV20D621KNK	385	505	558	682	1025			390	650		
MPV20D681KNK	420	560	612	748	1120			400	600		
MPV20D751KNK	460	615	675	825	1240			420	530		
MPV20D820KNK	50	65	74	90	135			56	4900		
MPV20D821KNK	510	670	738	902	1355			460	500		
MPV20D911KNK	550	745	819	1001	1500			510	440		

√ : Approved

Performance Curve

Max. Peak Current Derating Curves



MPV20D820KNK

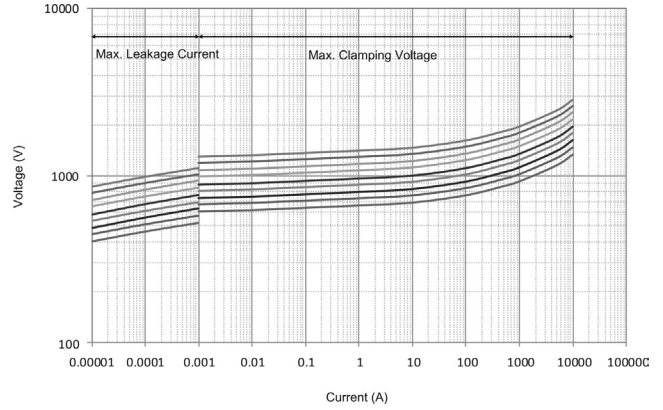
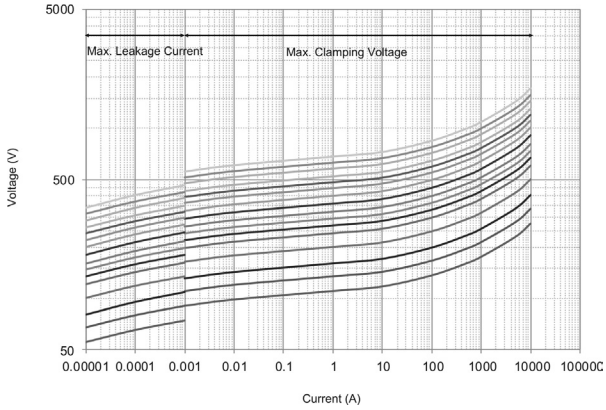
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Part Number Table

Description	Part Number
Varistor, MOV, 165V, Disc 20mm	MPV20D101KNK
Varistor, MOV, 1.65KV, Disc 20mm	MPV20D102KNK
Varistor, MOV, 200V, Disc 20mm	MPV20D121KNK
Varistor, MOV, 250V, Disc 20mm	MPV20D151KNK
Varistor, MOV, 340V, Disc 20mm	MPV20D201KNK
Varistor, MOV, 395V, Disc 20mm	MPV20D241KNK
Varistor, MOV, 455V, Disc 20mm	MPV20D271KNK
Varistor, MOV, 595V, Disc 20mm	MPV20D361KNK
Varistor, MOV, 650V, Disc 20mm	MPV20D391KNK
Varistor, MOV, 710V, Disc 20mm	MPV20D431KNK
Varistor, MOV, 775V, Disc 20mm	MPV20D471KNK
Varistor, MOV, 845V, Disc 20mm	MPV20D511KNK
Varistor, MOV, 925V, Disc 20mm	MPV20D561KNK
Varistor, MOV, 1.025KV, Disc 20mm	MPV20D621KNK
Varistor, MOV, 1.12KV, Disc 20mm	MPV20D681KNK
Varistor, MOV, 1.24KV, Disc 20mm	MPV20D751KNK
Varistor, MOV, 135V, Disc 20mm	MPV20D820KNK
Varistor, MOV, 1.355KV, Disc 20mm	MPV20D821KNK
Varistor, MOV, 1.5KV, Disc 20mm	MPV20D911KNK

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