



10D471K 10D471KJ Mov Varistor Resistor 470V Varistor ZOV 10MM DIP Operation

Our Product Introduction

Basic Information

- Place of Origin: Shenzhen, Guangdong, China
- Brand Name: SOCAY
- Certification: UL, REACH, RoHS, ISO
- Model Number: 10D471K/10D471KJ
- Minimum Order Quantity: 500PCS
- Price: Negotiable
- Delivery Time: 5-8 work days



Product Specification

- Name: Metal Oxide Varistor
- Operation: DIP
- Package Type: $\Phi 10\text{mm}$
- VAC: 300V
- VDC: 385V
- Voltage: 470(423~517)V
- IP: 25A
- VC: 775V
- Rated Power: 0.4W
- Typ. Capacitance: 210pF
- Withstanding Surge Current: 2.5KA (1 Time)
- Highlight: **Mov Varistor Resistor 470V, 10D471K Varistor, Mov 10D471K ZOV**

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Product Description

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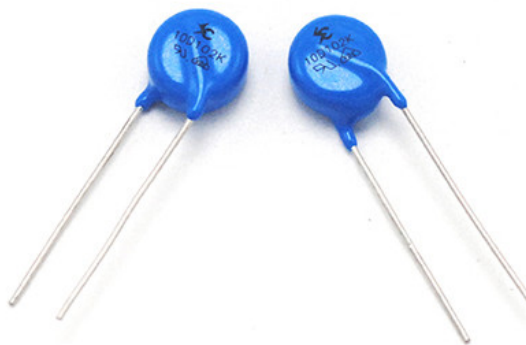
DATASHEET: [10D Series_v2306.1.pdf](#)

Type Number		Maximum Allowable voltage		Varistor Voltage	Maximum Clamping Voltage		Withstanding Surge Current				Maximum Energy (10/1000μs)		Rated Power	Typical Capacitance (Reference)
Standard	High Surge	V _{AC} (V)	V _{DC} (V)	V _{1mA} (V)	I _P (A)	V _C (V)	I(A) Standard		I(A) High Surge		(J) Standard	(J) High Surge	(W)	@1KHZ (pf)
							1 Times	2 Times	1 Times	2 Times				
10D180K	10D180KJ	11	14	18(15~21.6)	5	36	500	250	2000	1000	2.1	3.0	0.05	5600
10D220K	10D220KJ	14	18	22(19.5~26)	5	43	500	250	2000	1000	2.5	5.0	0.05	4500
10D270K	10D270KJ	17	22	27(24~30)	5	53	500	250	2000	1000	3.0	6.0	0.05	3700
10D330K	10D330KJ	20	26	33(29.5~36.5)	5	66	500	250	2000	1000	4.0	7.0	0.05	3000
10D390K	10D390KJ	25	31	39(35~43)	5	77	500	250	2000	1000	4.6	9.0	0.05	2400
10D470K	10D470KJ	30	38	47(42~54)	5	93	500	250	2000	1000	5.5	11.0	0.05	2100
10D560K	10D560KJ	35	45	56(50~62)	5	100	500	250	2000	1000	7.0	13.0	0.05	1800
10D680K	10D680KJ	40	56	68(61~75)	5	135	500	250	2000	1000	8.2	15.0	0.05	1500
10D820K	10D820KJ	50	65	82(74~90)	25	135	2500	1250	3500	2500	12.0	17.0	0.4	1200
10D101K	10D101KJ	60	85	100(90~110)	25	165	2500	1250	3500	2500	15.0	18.0	0.4	1000
10D121K	10D121KJ	75	100	120(108~132)	25	200	2500	1250	3500	2500	18.0	21.0	0.4	830
10D151K	10D151KJ	95	125	150(135~165)	25	250	2500	1250	3500	2500	22.0	25.0	0.4	670
10D181K	10D181KJ	115	150	180(162~198)	25	300	2500	1250	3500	2500	27.0	30.0	0.4	560
10D201K	10D201KJ	130	170	200(185~225)	25	340	2500	1250	3500	2500	30.0	35.0	0.4	500
10D221K	10D221KJ	140	180	220(198~242)	25	360	2500	1250	3500	2500	32.0	39.0	0.4	450
10D241K	10D241KJ	150	200	240(216~264)	25	395	2500	1250	3500	2500	35.0	42.0	0.4	420
10D271K	10D271KJ	175	225	270(243~297)	25	455	2500	1250	3500	2500	40.0	49.0	0.4	370
10D301K	10D301KJ	190	250	300(270~330)	25	500	2500	1250	3500	2500	40.0	54.0	0.4	330
10D331K	10D331KJ	210	275	330(297~363)	25	550	2500	1250	3500	2500	40.0	58.0	0.4	300
10D361K	10D361KJ	230	300	360(324~396)	25	595	2500	1250	3500	2500	43.0	65.0	0.4	280
10D391K	10D391KJ	250	320	390(351~429)	25	650	2500	1250	3500	2500	47.0	70.0	0.4	260
10D431K	10D431KJ	275	350	430(387~473)	25	710	2500	1250	3500	2500	60.0	80.0	0.4	230
10D471K	10D471KJ	300	385	470(423~517)	25	775	2500	1250	3500	2500	65.0	85.0	0.4	210
10D511K	10D511KJ	320	415	510(459~561)	25	845	2500	1250	3500	2500	70.0	90.0	0.4	200
10D561K	10D561KJ	350	460	560(504~616)	25	925	2500	1250	3500	2500	70.0	92.0	0.4	180
10D621K	10D621KJ	385	505	620(558~682)	25	1025	2500	1250	3500	2500	70.0	95.0	0.4	160
10D681K	10D681KJ	420	560	680(612~748)	25	1120	2500	1250	3500	2500	70.0	98.0	0.4	150
10D751K	10D751KJ	460	615	750(675~825)	25	1240	2500	1250	3500	2500	70.0	100.0	0.4	130

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10D78 1K	10D78 1KJ	485	640	780(702~858)	25	1290	2500	1250	3500	2500	80.0	105.0	0.4	130
10D82 1K	10D82 1KJ	510	670	820(738~902)	25	1355	2500	1250	3500	2500	85.0	110.0	0.4	120
10D91 1K	10D91 1KJ	550	745	910(819~1001)	25	1500	2500	1250	3500	2500	93.0	130.0	0.4	110
10D10 2K	10D10 2KJ	625	825	1000(900~1100)	25	1650	2500	1250	3500	2500	102.0	140.0	0.4	100
10D11 2K	10D11 2KJ	680	895	1100(990~1210)	25	1814	2500	1250	3500	2500	115.0	155.0	0.4	90



About Varistor

Varistor is a semiconductor voltage-limiting surge device made of sintered zinc oxide. It is widely used in electronic circuits for protection due to its excellent nonlinear characteristics and super surge absorption capabilities.

Advantages of varistor:

1. The flow rate is large (100A~70kA). The larger the volume, the greater the surge current it can withstand.
2. Complete varieties and wide range of uses

Disadvantages of varistor:

1. The nonlinear characteristics of the varistor are poor (the dynamic resistance is large)
2. The limiting voltage (clamping voltage) is higher when the current is large.
3. The leakage current is larger at low voltage and is easier to age.

Description:

The 10D series radial leaded varistors provides an ideal circuit protection solution for lower DC voltage applications by offering higher surge ratings than ever before available in such small discs.

The maximum peak surge current rating can reach up to 3.5KA (8/20 μ s pulse) to protect against high peak surges, including indirect lightning strike interference, system switching transients and abnormal fast transients from the power source.

Features:

- u Wide operating voltage (V1mA) range from 18V to 1100V
- u Fast responding to transient over-voltage
- u Large absorbing transient energy capability
- u Low clamping ratio and no following-on current
- u Meets MSL level 1, per J-STD-020

Applications:

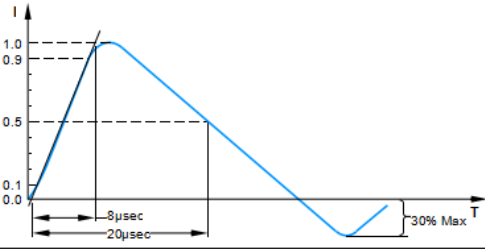
Power protection, Switches, POS machines, Lightning arresters, Building intercoms, Monitoring systems, Parking cards, Transmission systems, Instrumentation, Meters, Communication products, Control panels.

Material	No Radioactive Material
Operating Temperature	-40 ~ +85

Storage Temperature	-55 ~ +125
Body	Nickel Plated
Leads	Tin Plated
Devices with No lead	Nickel Plated

Part Number	Quantity	Packaging Option	Packaging Specification
10DXXXXX	500	Plastic bag	Bulk Pack

Electrical Rating

Item	Test Condition / Description	Requirement																								
Maximum Allowable Voltage	The recommended maximum sine wave voltage (RMS) or the maximum DC voltage can be applied continuously.	To meet the specified value																								
Varistor Voltage	The voltage between two terminals with the specified measuring current 1mA.DC applied is call Vb.																									
Maximum Clamping Voltage	The maximum voltage between two terminals with the specification standard impulse current. Applied waveform: 8/20μs 																									
Rated Wattage	The maximum average power that can be applied within the specified ambient temperature.																									
Energy	The maximum energy within the varistor voltage change of ±10% when one impulse of 10/1000μs. or 2 msec. is applied.																									
Withstanding Surge Current	The maximum current within the varistor voltage change of ±10% with the standard impulse current (8/20μsec.) applied one time	0.05% / °C max																								
Varistor Voltage Temp. Coefficient	$\frac{V_b \text{ at } 20^{\circ}\text{C} - V_b \text{ at } 70^{\circ}\text{C}}{V_b \text{ at } 20^{\circ}\text{C}} \times \frac{1}{50} \times 100(\% / ^{\circ}\text{C})$																									
Surge Life	The change of Vb shall be measured after the impulse listed below is applied 10,000 times continuously with the interval of ten seconds at room temperature. <table><tr><td rowspan="2">5D Series</td><td>180K to 680K</td><td>10A (8/20μs)</td></tr><tr><td>820K to 751K</td><td>20A (8/20μs)</td></tr><tr><td rowspan="2">7D Series</td><td>180K to 680K</td><td>25A (8/20μs)</td></tr><tr><td>820K to 821K</td><td>50A (8/20μs)</td></tr><tr><td rowspan="2">10D Series</td><td>180K to 680K</td><td>50A (8/20μs)</td></tr><tr><td>820K to 112K</td><td>100A (8/20μs)</td></tr><tr><td rowspan="2">14D Series</td><td>180K to 680K</td><td>75A (8/20μs)</td></tr><tr><td>820K to 182K</td><td>150A (8/20μs)</td></tr><tr><td rowspan="2">20D Series</td><td>180K to 680K</td><td>100A (8/20μs)</td></tr><tr><td>820K to 182K</td><td>200A (8/20μs)</td></tr></table>		5D Series	180K to 680K	10A (8/20μs)	820K to 751K	20A (8/20μs)	7D Series	180K to 680K	25A (8/20μs)	820K to 821K	50A (8/20μs)	10D Series	180K to 680K	50A (8/20μs)	820K to 112K	100A (8/20μs)	14D Series	180K to 680K	75A (8/20μs)	820K to 182K	150A (8/20μs)	20D Series	180K to 680K	100A (8/20μs)	820K to 182K
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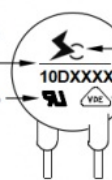
Part Numbering

10 D XXX K J

J: High Surge, without: Standard
Tolerance:
K: ±10%, L: ±15%, M: ±20%
Varistor Voltage
Type:
D: Disk, S: Square
Element Diameter

Part Marking

With a line: High Surge
Without: Standard
UL Accreditation Logo
Logo
Product Type
VDE Accreditation Logo



Package Dimensions Unit: mm

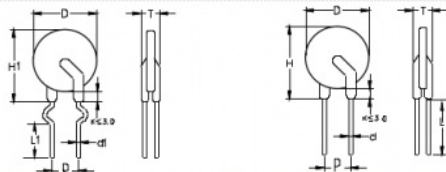


TABLE1

Symbol	Dimensions
H(max.)	16.0
H1(max.)	16.0
L(min.)	15.0
L1(min.)	15.0
D(max.)	13.0
P(±0.8)	7.5
T(max.)	TABLE2
d(±0.05)	0.8
d1(±0.05)	0.8

TABLE2

Model	T(max.)	Model	T(max.)
180K	4.6	301K	5.5
220K	4.7	331K	5.8
270K	4.8	361K	6.0
330K	5.0	391K	6.2
390K	5.3	431K	6.5
470K	5.4	471K	6.7
560K	5.5	511K	6.8
680K	5.6	561K	7.0
820K	4.7	621K	7.3
101K	4.9	681K	7.6
121K	5.1	751K	8.0
151K	5.4	781K	8.1
181K	4.8	821K	8.3
201K	5.0	911K	8.8
221K	5.1	102K	9.3
241K	5.2	112K	9.9
271K	5.4		



Shenzhen Socay Electronics Co., Ltd.



+8618126201429



sylvia@socay.com



socaydiode.com

4/F, Block C, HeHengXing Science & Technology Park, 19 MinQing Road, LongHua District, Shenzhen City, Guangdong Province, China