53mm Zinc Oxide Varistor SPD Lightning Protection Type Round Copper Feet High Power

Our Product Introduction

Basic Information

- Place of Origin: Dongguan China
- Brand Name: linkun
- Certification: CE / ROHS / UL / TUV / SGS
- Model Number: LKD 53D511K
- Minimum Order Quantity: Negotiation
- Price: Negotiation
- Packaging Details: 60pcs/box 480pcs/carton
- Delivery Time: Negotiation
- Payment Terms: T/T, L/C, Western Union
- Supply Ability: 24 million per year

Product Specification

- Features: Strong Surge Withstand Capacity
- Material: Zinc Oxide
- MAX ALLOWABLE VOLTAGE: Vrms 320V DC: 415(V)
- VARISTOR VOLTAGE: 459V~510V~561(V)
- Max. Clamping Voltage (8/20μs): Vp: 845V; Ip: 500A
- Rated Power: 1.4W
- Surge Current (1×8/20μs): 80000 A
- MAX ENERGY: 1150(J)
- TYPICAL CAPACITANCE: 6000(pf)
- LEAKAGE CURRENT: ≦ 20(μA)
- Operating Temperature: -40°C ~ +85°C
- IStorage Temperature: -55°C ~ +125°C
- Highlight: **53mm zinc oxide varistor**, **SPD Lightning Protection MOV varistor**,

More Images

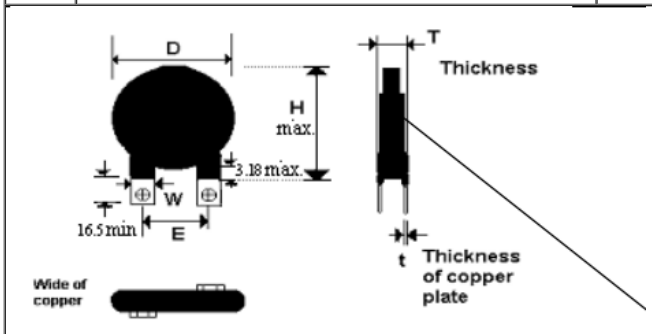
Product Description

SPECIFICATION FOR APPROVAL

	SPECIFICATION	NO.	
PART NO.	53D511K	PAGE 1 OF 2	
		DATE: September 03, 2023	
UL		CSA	

1.OUTLINE

1.1	APPEARANCE	WITHOUT ANY CRACK, MARKING SHOULD BE CLEAR
1.2	DIMENSIONS	DIMENSIONS (mm)



D (Max)	60
H (Max)	78.2
T (Max)	8.0
W (±0.05)	9.7
t	0.7
E (±1.0)	25.4
Φ (M4)	4.3

2.ELETRICAL PARAMETER

2.1	MAX ALLOWABLE VOLTAGE	AC: 320(V) DC: 415(V)	At 1mA DC
2.2	VARISTOR VOLTAGE	459~561(V)	V0.1mA □ V1mA ■
2.3	MAX CLAMPING VOLTAGE	IP: 500(A)	Test Current Waveform

		Vc: 845(V)	8/20μs
2.4	WITHSTANDING SURGE CURRENT	In: 40000(A) IMax: 80000(A)	Test Current Waveform 8/20μs
2.5	MAX ENERGY	1150(J)	Test Current Waveform 10/1000μs
2.6	TYPICAL CAPACITANCE	6000(pf)	@1KHz
2.7	LEAKAGE CURRENT	≦ 20(μA)	At 80% of Varistor Voltage
2.8	NONLINEAR EXPONENT (α)	≧21	$\alpha=\log \frac{I_1}{I_2} \Big/ \log \frac{V_1}{V_2}$
2.9	TEMPERATURE COEFFICENT OF VARISTOR VOLTAGE	≦±0.05%/℃ max	$\frac{Vc85℃-Vc25℃}{Vcat25℃} \times \frac{1}{60} \times 100(℃)$
2.10	IMPULSE LIFE	≦±10% (V1mA)	Test Current Waveform 8/20μs

SPECIFICATION FOR APPROVAL

	SPECIFICATION		NO.	
PART NO.	LK-53D511K		PAGE 2 OF 2	
			DATE: September 03, 2023	
UL			CSA	
3.Mechenical Requirements				
3.1	Tensile of Terminations	No Outstanding Damage	1Kgf; 10Sec.	
3.2	Bending of Terminations	No Outstanding Damage	0.5Kgf; 90° ,3 Times	
3.3	Vibration	No Outstanding Damage	Freq:10-55hz; Amp:0.75mm,1Min.	
3.4	Solderability	Min. 95% of The Terminal Should Be Covered With Solder Uniformly	Solder Temp:260±5℃ Immersed Time: 2±0.5Sec.	
3.5	Resistance of soldering heat	V1mA/V1mA ≦±5%	Solder Temp: 260±5℃	
			Immersed Time: 10±1Sec.	
4.Enviromental Requirements				
4.1	High Temperature Storage	△V1mA/V1mA ≦±5%	Ambient Temp: 125±2℃ Duration:1000h	
4.2	Low Temperature Storage	△V1mA/V1mA ≦±5%	Ambient Temp: -40±2℃ Duration:1000h	
4.3	High Humidity Storage/Damp Heat	△V1mA/V1mA ≦±5%	Ambient Temp: 40±2℃ 90-95% R.H. Duration:1000h	
4.4	Temperature Cycle	△V1mA/V1mA ≦±5%	Step	Temperature / Period
			1	-40℃ / 30 min
			2	Room Temp / 15 min
			3	125℃ / 30 min
			4	Room Temp / 15 min
4.5	High Temperature Load	△V1mA/V1mA ≦±10%	Ambient temp:85±2℃ Duration:1000h Load: MAx. Allowable Voltage	
4.6	High Humidity Load	△V1mA/V1mA ≦±10%	Ambient Temp:40±2℃90-95% R.H. Duration:1000H Load: MAX. AllowableVoltage	
4.7	Operating Temperature Range	-40℃ ~ +85℃	-40℃ ~ +85℃	
4.8	Storage Temperature Range	-40℃ ~ +125℃	-40℃ ~ +125℃	

Strong Surge Withstand Capacity 53D MOV Metal Oxide Varistor Wide Working Voltage Range
SPD varistor manufacturers believe that semiconductor devices are also one of the new components introduced into automobiles, mainly used to protect the electrical system of automobiles and avoid damage to the system by overvoltage and surge energy. The application of varistors in automobiles can avoid the use of various techniques to adjust the electrical system. The low-voltage high-energy zinc oxide varistor (MYN1) is directly used to adjust the voltage and current of the ab terminal of the power supply to protect the entire electrical system. Even if the battery is disconnected from the power supply or the load drops sharply, and there is a large surge energy at both ends of AB, the varistor can also protect semiconductor devices and various electronic devices from surge impact, thereby reducing the volume and weight of the vehicle, and reducing driving fuel consumption.

The application of varistors in automobiles can not only protect automobiles, but also improve automobile manufacturing technology and performance. SPD varistor manufacturers believe that rheostats can also protect the voltage and suppress the overvoltage of electronic ignition. When the ignition system is in normal working condition, the ignition ring will generate counter electromotive force. If the voltage across the secondary L2 calculated by the turns ratio exceeds 20kV, the high voltage will cause instantaneous breakdown of the spark plug, and the ignition will start normally. However, if the ignition system fails and the ignition is not normal, the induced voltage will cause a high overvoltage at the primary end of the ignition system, thereby shortening the life. By applying varistors and directly connecting varistors at both ends of the composite tube,

it is possible to protect the ignition system, suppress overvoltage, and protect the automotive electrical system.

Basic properties of varistors:

(1) Protection characteristics. When the impact strength of the impact source (or the impact current Isp=Usp/Zs) does not exceed the specified value, the limited voltage of the varistor is not allowed to exceed the impact withstand voltage (Urp) that the protected object can withstand. .
(2) Impact resistance characteristics, that is, the varistor itself should be able to withstand the specified impact current, impact energy, and the average power when multiple impacts occur one after another.
(3) There are two life characteristics. One is the continuous working voltage life, that is, the varistor can meet the specified working time (hours) under the specified ambient temperature and system voltage conditions. The second is the impact life, that is, the number of times it can reliably withstand the specified impact.

Model Number	53D 181K 241K 431K 471K 511K 561K 681K 751K 781K 821K 911K 102K 112K 152K 182K
Package	Varistors
D/C	Newest
Condition	New & Original
Lead time	Within 1 day
Unit Price	Contact us for latest price
More details	Please contact us

Applications

Transistor, diode, IC, thyristor or triac semiconductor protection
Surge protection in consumer electronics Surge protection in industrial electronics
Surge protection in electronic home appliances, gas and petroleum appliances
Relay and electromagnetic valve surge absorption

Competitive Advantage:
Factory supply directly
Completed certificates such as UL,VDE,SGS,etc and high quality available
Quick delivery
Best after-sales services
OEM & ODM available
Specifications:

Part Number	Vac (V)	Vdc (V)	V1mA(V)	Ip(A)	Vac (V)	I(A)Standard	I(A)High Surge	(J)Standard	(J)High Surge	Rated power(W)	C@1KHz (pf)
20D180K(J)	11	14	18(15-21.6)	20	36	2000	3000	11	13	0.2	28500
20D220K(J)	14	18	22(19.5-26)	20	43	2000	3000	14	16	0.2	18500
20D270K(J)	17	22	27(24-31)	20	53	2000	3000	16	19	0.2	13000
20D330K(J)	20	26	33(29.5-36.5)	20	65	2000	3000	23	24	0.2	11500
20D390K(J)	25	31	39(35-43)	20	77	2000	3000	26	28	0.2	8500
20D470K(J)	30	38	47(42-52)	20	93	2000	3000	30	34	0.2	7400
20D560K(J)	35	45	56(50-62)	20	110	2000	3000	41	41	0.2	6500
20D680K(J)	40	56	68(61-75)	20	135	2000	3000	46	49	0.2	5800
20D820K(J)	50	65	82(74-90)	100	135	6500	10000	38	56	1.0	4900
20D101K(J)	60	85	100(90-110)	100	165	6500	10000	45	70	1.0	4000
20D121K(J)	75	100	120(108-132)	100	200	6500	10000	55	85	1.0	3300
20D151K(J)	95	125	150(135-165)	100	250	6500	10000	70	106	1.0	2700
20D181K(J)	115	150	180(162-198)	100	300	6500	10000	85	130	1.0	2200
20D201K(J)	130	170	200(180-220)	100	340	6500	10000	95	140	1.0	2000
20D221K(J)	140	180	220(198-242)	100	360	6500	10000	100	155	1.0	1800
20D241K(J)	150	200	240(216-264)	100	395	6500	10000	108	168	1.0	1650
20D271K(J)	175	225	270(243-297)	100	455	6500	10000	127	190	1.0	1500
20D301K(J)	190	250	300(270-330)	100	500	6500	10000	136	210	1.0	1300

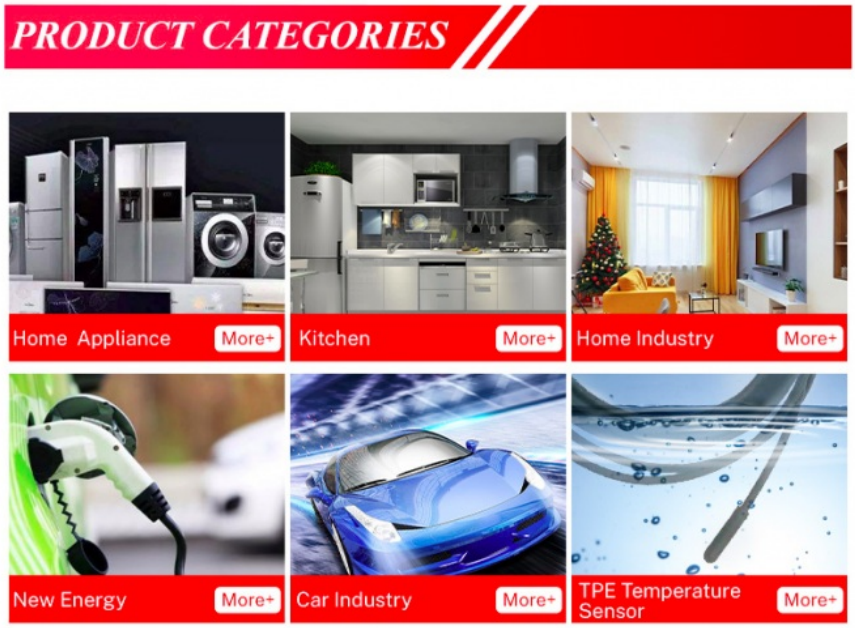
20D331 K(J)	210	275	330(297-363)	100	550	6500	10000	150	228	1.0	1200
20D361 K(J)	230	300	360(324-396)	100	595	6500	10000	163	255	1.0	1100
20D391 K(J)	250	320	390(351-429)	100	650	6500	10000	180	275	1.0	1000
20D431 K(J)	275	350	430(387-473)	100	710	6500	10000	190	305	1.0	930
20D471 K(J)	300	385	470(423-517)	100	775	6500	10000	220	350	1.0	850
20D511 K(J)	320	415	510(459-561)	100	845	6500	10000	220	360	1.0	780
20D561 K(J)	350	460	560(504-616)	100	925	6500	10000	220	380	1.0	710
20D621 K(J)	385	505	620(558-682)	100	1025	6500	10000	220	390	1.0	650
20D681 K(J)	420	560	680(612-748)	100	1120	6500	10000	230	400	1.0	600
20D751 K(J)	460	615	750(675-825)	100	1240	6500	10000	255	420	1.0	530
20D781 K(J)	485	640	780(702-858)	100	1290	6500	10000	265	440	1.0	510
20D821 K(J)	510	670	820(738-902)	100	1355	6500	10000	282	460	1.0	500
20D911 K(J)	550	745	910(819-1001)	100	1500	6500	10000	310	510	1.0	440
20D102 K(J)	625	825	1000(900-1100)	100	1650	6500	10000	342	565	1.0	400
20D112 K(J)	680	895	1100(990-1210)	100	1815	6500	10000	383	620	1.0	360
20D122 K(J)	750	990	1200(1080-1320)	100	1980	6500	10000	408	660	1.0	350
20D142 K(J)	880	1140	1400(1260-1540)	100	2310	6500	10000	532	784	1.0	340
20D162 K(J)	1000	1280	1600(1440-1760)	100	2640	6500	10000	606	896	1.0	330
20D182 K(J)	1100	1465	1800(1620-1980)	100	2970	6500	10000	625	990	1.0	320

Production Process / Quality Control

Application

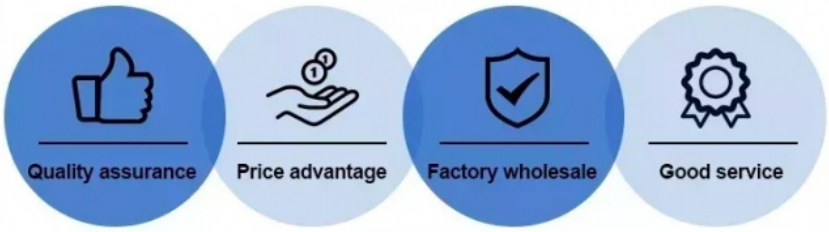
1. Varistor voltage: refers to the voltage value across the varistor at a specified temperature and DC (generally 1mA or 0.1mA). Recorded as V1mA or V0.1mAo
2. Maximum continuous voltage: refers to the maximum effective value of sinusoidal AC voltage or the maximum DC voltage

value that can be continuously applied to both ends of the varistor for a long time under the specified ambient temperature
3. Limiting voltage: refers to the maximum peak voltage at both ends of the varistor when a specified surge current (8,20μs) passes through it.
4. Rated power: refers to the maximum average impact power that can be applied to the varistor under the specified ambient temperature.
5. Maximum energy: the maximum impact energy that can be applied to the varistor under the condition that the varistor voltage does not change more than ±10% and the impulse current waveform is 10, 1000μs or 2ms.
6. Current capacity (maximum inrush current)



OUR PARTNERS

Our advantage:



Dongguan Linkun Electronic Technology Co., Ltd.

13423305709 huangju@lk-ptc.com lk-thermistor.com

Room 101, No. 21, Huayuanzai Road, Chongmei, Chashan Town, Dongguan City, Guangdong Province