05D High-Energy Chip Varistor 05D271 05D471 05D511 For Instruments

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: Lin Kun
- Certification: UL,VDE,CSA
- Model Number: SPVDRH 05D271/5D471K/5D511K/05D561K/05D621K
- Minimum Order Quantity: 3000pcs
- Price: Negotiable
- Packaging Details: 3000pcs/plate
- Delivery Time: 5-7 Days
- Payment Terms: T/T,Paypal, Western Union
- Supply Ability: 1000000PCS/Month

Product Specification

- Product Name: SMD Chip Varistor
- Part Number: 5D Series 05D271/05D431K/05D471K/05D511K/05D561K/(
- Tolerance Of Varistor Voltage: ±10%
- Varistor Voltage (v): V1mA=270-620V 271-681V
- Varistor Voltage AC: 175-385V
- Varistor Voltage DC: 225-510V
- Max. Allowable Voltage: Dc :225v-510v
- Max.fiow Circulation Energy (40 Times): 1KV/0.5KA
- Leakage Current: ≤20
- Max. Clamping Voltage: IP: 5A) Vp: 475-1050 (V)
- Energy 10/1000us): 25-72 (J)

More Images

Our Product Introduction

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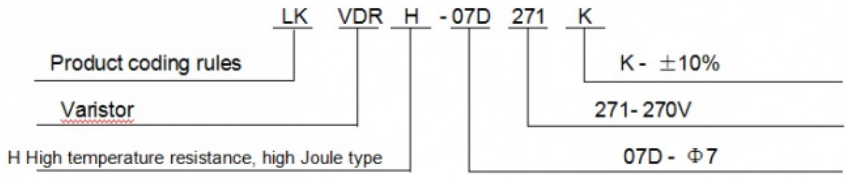
Product Description

1 Application areas
1.1 LED, DOB LED
1.2 Electrical instruments
1.3 Security equipment
1.4 Communication equipment
1.5 Home appliances

2 product features
2.1 Meet RoHS requirements
2.2 SMD packaging, convenient for automation
2.3 Use saves labor and has high cost performance
2.4 Using high-energy pressure-sensitive chips, it has high energy absorption density and good pulse performance.
2.5 Performance remains stable for a long time
2.6 Wide operating temperature range: -40℃ 125℃
2.7 Safety certification: UL/cUL, TUV, CQC

3 Product coding rules



4 Product Identification:LK

5 Dimensions

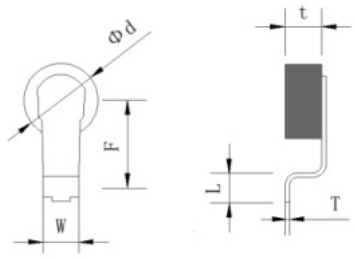


Fig. 1 Aperance

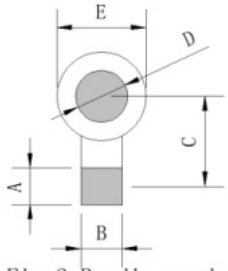


Fig. 2 Bonding pad

5.1 Product size and appearance(unit:mm)

Model Specifications	F±0.3	W±0.2	d±0.3	T±0.2	t±0.2	L±0.3	Color
LKVDRH-05D271K	5.75	2.5	5.0	0.3	1.4	2	Blue
LKVDRH-05D431K	5.75	2.5	5.0	0.3	2.4	2	Lavender
LKVDRH-05D471K	5.75	2.5	5.0	0.3	2.4	2	White
LKVDRH-05D511K	5.75	2.5	5.0	0.3	2.5	2	Light yellow
LKVDRH-05D561K	5.75	2.5	5.0	0.3	2.5	2	Pink
LKVDRH-05D621K	5.75	2.5	5.0	0.3	2.5	2	blue
LKVDRH-07D271K	6.75	2.8	7.0	0.3	1.4	2	Blue
LKVDRH-07D431K	6.75	2.8	7.0	0.3	2.4	2	Lavender
LKVDRH-07D471K	6.75	2.8	7.0	0.3	2.4	2	White
LKVDRH-07D511K	6.75	2.8	7.0	0.3	2.5	2	Light yellow
LKVDRH-07D561K	6.75	2.8	7.0	0.3	2.5	2	Pink

LKVDRH-07D621K	6.75	2.8	7.0	0.3	2.5	2	blue
LKVDRH-10D271K	8.25	3.0	10.0	0.3	1.4	2	Blue
LKVDRH-10D431K	8.25	3.0	10.0	0.3	2.4	2	Lavender
LKVDRH-10D471K	8.25	3.0	10.0	0.3	2.4	2	White
LKVDRH-10D511K	8.25	3.0	10.0	0.3	2.5	2	Light yellow
LKVDRH-10D561K	8.25	3.0	10.0	0.3	2.5	2	Pink
LKVDRH-10D621K	8.25	3.0	10.0	0.3	2.5	2	blue

5.2 Pad size design recommendations

Model Specifications	**A**	**B**	**C**	**D**	**E**
LKVDRH-05D series	2.5	3.5	5.75	2.7	5.0
LKVDRH-07D series	2.5	3.8	6.75	3.3	7.0
LKVDRH-10D series	2.5	4	8.25	4.0	10.0

6 Main electrical properties

Model Specifications	**Varistor voltage @1mA**	maximum Operating Voltage		**leakage current**	**rated power**	**Capacitance value**	**Maximum limit voltage@8/20μs**		**Maximum inrush current@8/20μs**		**Maximum flow capacity**
	VDC	VAC	VDC	μA	W	pF	VDC	Ip-A	I1:1time	I2:2times	KV/KA
LKVDRH-5D271K	270±10%	175	225	≤20	0.10	75	475	5	800	500	1.0/0.5
LKVDRH-5D431K	430±10%	275	350	≤20	0.10	60	745	5	800	500	1.0/0.5
LKVDRH-5D471K	470±10%	300	385	≤20	0.10	55	810	5	800	500	1.0/0.5
LKVDRH-5D511K	510±10%	320	410	≤20	0.10	55	875	5	800	500	1.0/0.5
LKVDRH-5D561K	560±10%	350	450	≤20	0.10	50	960	5	800	500	1.0/0.5
LKVDRH-5D621K	620±10%	385	510	≤20	0.10	50	960	5	800	500	1.0/0.5
LKVDRH-7D271K	270±10%	175	225	≤20	0.25	150	455	10	1750	1250	2.0/1.0
LKVDRH-7D431K	430±10%	275	350	≤20	0.25	100	745	10	1750	1250	2.0/1.0
LKVDRH-7D471K	470±10%	300	385	≤20	0.25	90	775	10	1750	1250	2.0/1.0
LKVDRH-7D511K	510±10%	320	410	≤20	0.25	85	845	10	1750	1250	2.0/1.0
LKVDRH-7D561K	560±10%	350	450	≤20	0.25	80	925	10	1750	1250	2.0/1.0
LKVDRH-7D621K	620±10%	385	510	≤20	0.25	80	1025	10	1750	1250	2.0/1.0
LKVDRH-10D271K	270±10%	175	225	≤20	0.40	350	455	25	3500	2500	4.0/2.0
LKVDRH-10D431K	430±10%	275	350	≤20	0.40	250	745	25	3500	2500	4.0/2.0
LKVDRH-10D471K	470±10%	300	385	≤20	0.40	230	775	25	3500	2500	4.0/2.0
LKVDRH-10D511K	510±10%	320	410	≤20	0.40	210	845	25	3500	2500	4.0/2.0
LKVDRH-10D561K	560±10%	350	450	≤20	0.40	200	925	25	3500	2500	4.0/2.0

LKVDRH-10D621K	620±10 %	385	510	≤20	0.40	190	1025	25	3500	2500	4.0/2.0

7 Reliability

Type	Project	Experiment method	Skills requirement
7.1	Exterior	visual inspection	The surface is bright and smooth, the printing is straight and clear, and there is no visible damage that reduces usability.
7.2	Terminalstrength	Apply an axial pulling force of 10N between the terminal of the pressure-sensitive welding part and the thermal body for 10S.	No mechanical damage Varistor voltage change rate ≤5%
7.3	Vibration test	The vibration frequency is 10Hz-55 Hz-10 Hz; the amplitude is simple harmonic vibration of 0.75. Follow 4.16 in GB10193-88	No mechanical damage Varistor voltage change rate ≤5%
7.4	Solderability	According to GB2423-28 test Ta, the soldering bath method is used for the experiment, the temperature is 260±5°C; the end of the chip pressure-sensitive terminal is immersed in solder, the immersion time is 2±0.5 seconds; the immersion depth is 2±0.5mm.	At least 90% continuous new solder on terminals
7.5	Resistant to welding heat	Conduct an experiment according to GB2423-29 test Tb. Dip the end of the pressure-sensitive terminal into solder at a temperature of 260±5°C and a immersion time of 10±1 seconds. After leaving it at room temperature for 4-5 hours, re-measure the zero-power resistance value.	No mechanical damage Varistor voltage change rate ≤5%
7.6	High temperature storage	After leaving it at 125±2°C without load for 1000 hours, take it to room temperature and humidity, leave it for more than 1 hour and within 2 hours, and measure its characteristics.	No mechanical damage Varistor voltage change rate ≤5%
7.7	High temperature load	At 125±2°C, apply the maximum continuous working voltage, power on for 90 minutes, and power off for 30 minutes. After a total of 1000 hours, take it to room temperature and humidity, place it for more than 1 hour and within 2 hours, and measure its characteristics.	No mechanical damage Varistor voltage change rate ≤10%

8 Pulse resistance performance test method

8.1 Maximum inrush current (8/20μs lightning wave)

Experimental method: Extract two groups of 10 chip varistors each from the batch number, and test the varistor voltage and leakage current parameters. One group is applied with a peak current I1 lightning pulse once, and the other group is applied with a peak current I2 lightning pulse twice (interval of 60 seconds), and test the pressure-sensitive parameters of the sample after cooling. After the test, the sample is required to have no visible damage on its appearance, a varistor voltage change rate of ≤10%, a leakage current of ≤30μA after the test, and a nonlinear coefficient of ≥20.

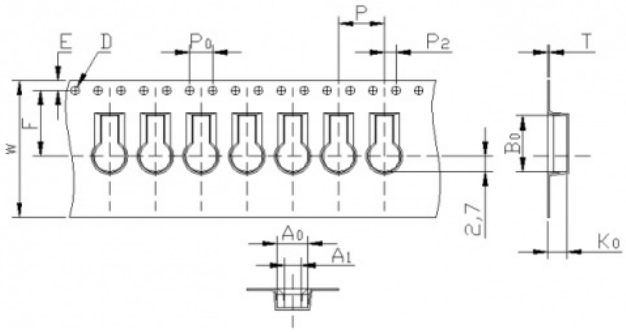
8.2 Maximum flow capacity (8/20 -1.2/50μs combined wave)

Experimental method: Extract 10 chip varistors from the batch number, test the varistor parameters, apply combined wave pulses with the open-circuit voltage and short-circuit current peaks respectively being the maximum current capacity voltage/current values 40 times (the interval between two times is 60 seconds, changing the direction of the pulse signal every 5 times), and test the pressure-sensitive parameters of the sample after cooling. After the test, the sample is required to have no visible damage on its appearance, a varistor voltage change rate of ≤10%, a post-test leakage current of ≤50μA, and a nonlinear coefficient of ≥20.

9 Packing

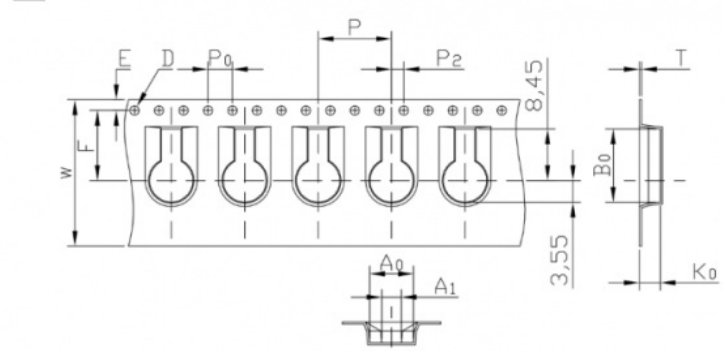
9.1 Tape packaging size (unit:mm)

9.1.1 5D series



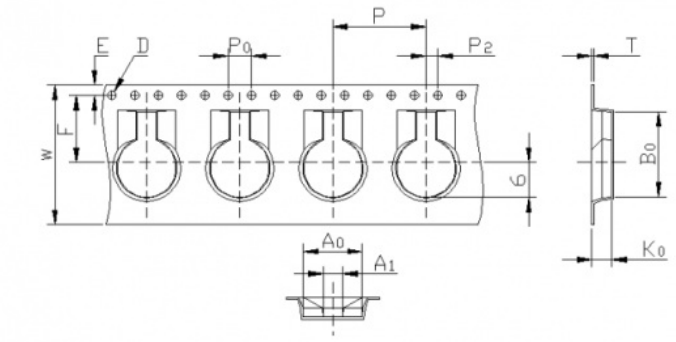
Type	W±0.3	E±0.1	F±0.1	T±0.1	P±0.1	P_0±0.1	P_2±0.1	D_0±0.1	A_0±0.1	A_1±0.1	K_0±0.1	B_0±0.1
5D series	24.00	1.75	11.50	0.35	8.00	4.00	2.00	Φ1.50	5.35	2.85	3.40	9.80

9.1.2 7D series



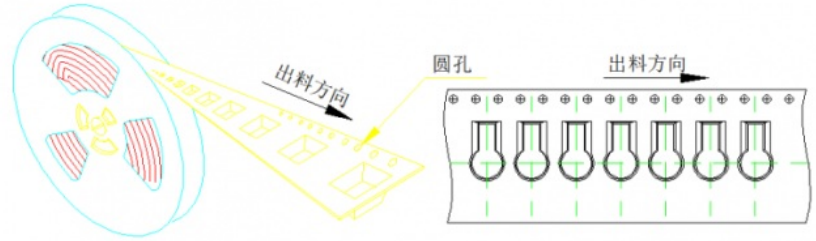
Type	W±0.3	E±0.1	F±0.1	T±0.1	P±0.1	P_0±0.1	P_2±0.1	D_0±0.1	A_0±0.1	A_1±0.1	K_0±0.1	B_0±0.1
7D series	24.00	1.75	11.50	0.35	12.00	4.00	2.00	Φ1.50	7.10	3.20	3.40	12.00

9.1.3 10D series



Type	W±0.3	E±0.1	F±0.1	T±0.1	P±0.1	P_0±0.1	P_2±0.1	D_0±0.1	A_0±0.1	A_1±0.1	K_0±0.1	B_0±0.1
10D series	24.00	1.75	11.50	0.35	16.00	4.00	2.00	Φ1.50	10.10	3.40	3.40	14.65

9.2 Packing quantity



Product number	LKVDRH-05D series	LKVDRH-07D series	LKVDRH-10D series
Number of single rolls	3000PCS/plate	2000PCS/plate	1500PCS/plate
Reel size	15 inches	15 inches	15 inches

10 Precautions

10.1 Conventional

■ LKVDRH is suitable for LED lights, electrical instruments, security equipment, communication equipment, home appliances and other products. Considering product applicability and reliability, it should not be used in other aspects unless permitted by the company during the design stage.

■ In order to ensure the reliability of chip varistor in actual use, extreme working conditions should be taken into consideration during the design stage and a certain margin should be left.

■ To avoid arcing, the edge of the varistor chip should be at least 2.5mm away from other conductive components. If space permits, the larger the distance, the better.

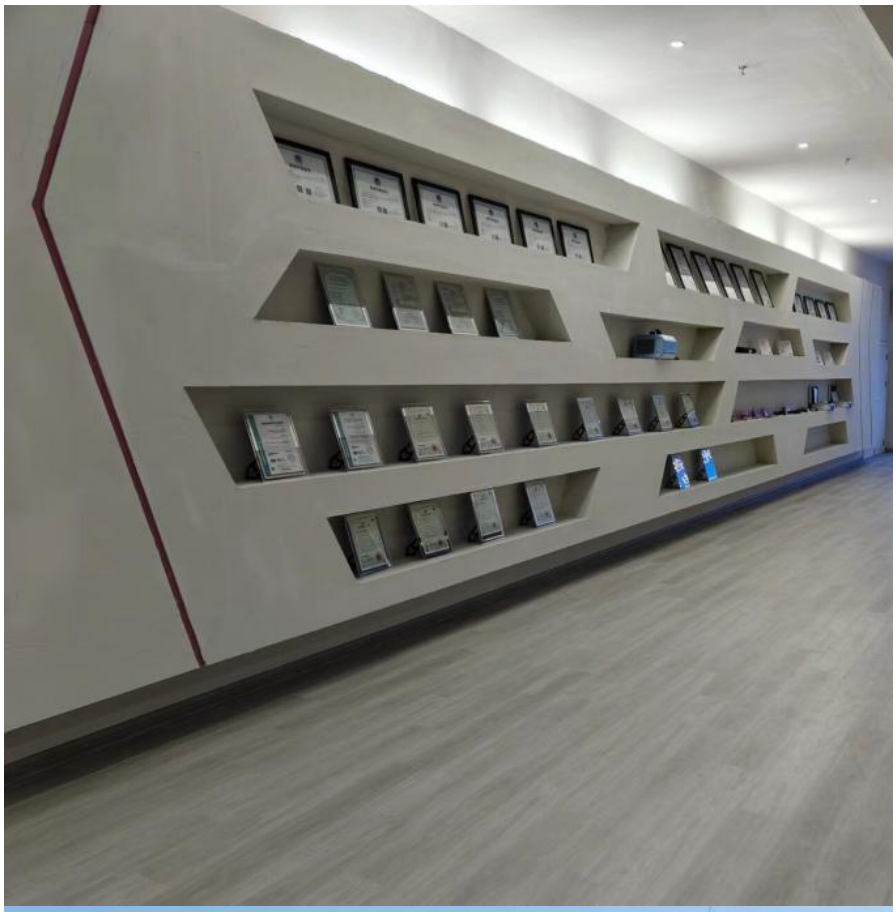
■ In order to improve product safety and reliability, it is recommended that the circular electrode of the chip body be used as the L line and the square hardware terminal be used as the N line when designing the pad.

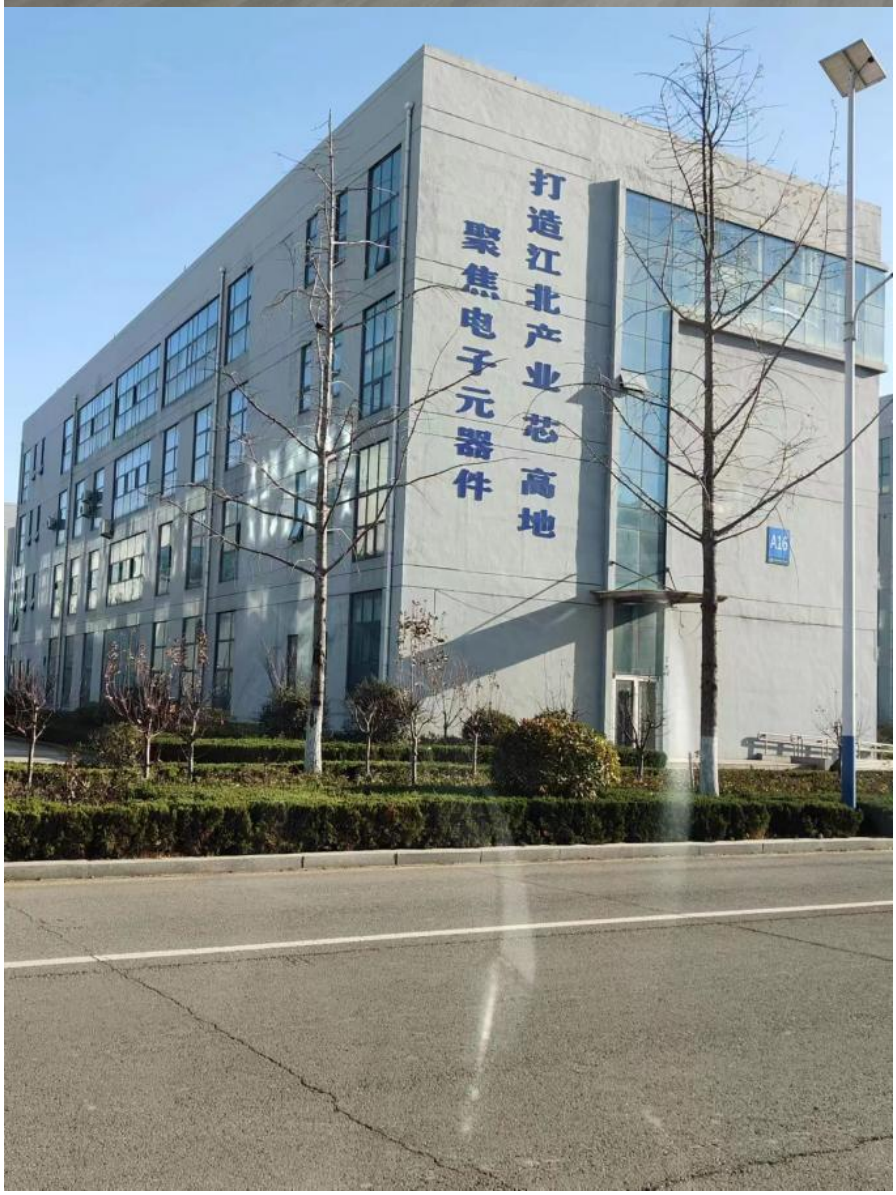
■ To reduce the chance of damage to the silicon bridge, it is not recommended to install the varistor in a rectified DC circuit.

10.2 Usage environment
■ Ambient temperature: -40-125℃
■ Relative humidity: ≤95%
■ Atmospheric pressure: 86-106Kpa
■ Vibration frequency: 10-50Hz
■ Acceleration: 98m/S²

10.3 Storage
■ Should be stored in the original packaging of the varistor and do not open the packaging for storage;
■ Original packaging storage conditions: storage temperature -25 °C to +45 °C, average annual relative humidity ≤75%, maximum not exceeding 95%;
■ For chip varistors, contamination of the varistor surface during storage, handling and processing should be avoided;
■ Varistors should avoid being stored in other harmful environments that may affect their performance;
■ Please use the varistor within 6 months after receiving the goods.
10.4 Transport
■ The varistor should avoid falling and collision during transportation;
■ It is recommended to wear gloves when handling varistor;
■ For chip type varistor, contamination of the silver surface of the varistor should be avoided during transportation.
10.5 Welding (where applicable)
■ It is recommended to use medium and low temperature solder paste as soldering material;
■ Insufficient preheating may cause cracks in the varistor ceramic chip;
■ The recommended welding temperature is 255±5℃. Excessive welding temperature may cause the varistor electrode to corrode silver;
■ Rapid cooling by immersion in solvent is not advisable;
■ It is recommended to completely remove the flux after soldering.

roduct Description




打造江北产业芯高地
聚焦电子元器件

The **QV0402~2220H Series SMD Varistor Element** is a surface mounted varistor device that is available in a wide range of sizes from 0402 to 2220, and with a varistor voltage @1mA DC from 12V to 102V. This surface mounted varistor element also offers an external dimension of 1206 0.12×0.06 (3.2×1.6) and 1812 0.18×0.12 (4.5×3.2) inch (mm). It comes with a peak current (8/20μs) IP of 20 to 1200 (A), making it suitable for a large variety of applications. With its excellent electrical characteristics and high reliability, this QV Series SMD Varistor Element is a great choice for any surface mounted varistor application.

Features:

Surface Mounted Varistor Element
Surface Mounted Varistor Device
SMD Varistor Device
Varistor Voltage: 12V-102V at 1mA DC
External Dimension: 1206 (0.12×0.06 inches / 3.2×1.6 mm) and 1812 (0.18×0.12 inches / 4.5×3.2 mm)
Max. Working Voltage: DC 5.5V-85V and AC 4V-60V
Tolerance of Varistor Voltage: ±10% and ±15%
Size: 0402- 2220

Technical Parameters:

Parameter	Value
Product Name	SMD Chip Varistor
Varistor Voltage @1mA DC	12V-102V
Size	0402-2220
Max. Working Voltage (DC)	5.5V-85V
Max. Working Voltage (AC)	4V-60V
Max. Clamping Voltage (8/20μs)	Vc : 24-175 (V) IP : 20-5(A)
Part Number	QV0402 2220H Series
Typical Capacitance @1MHz	Cp : 150- 5(J)
Peak Current (8/20μs)	IP : 20- 1200 (A)
External Dimension (inch/mm)	1206 0.12×0.06 (3.2×1.6) 1812 0.18×0.12 (4.5×3.2)
Tolerance of Varistor Voltage	±10% ±15%

Applications:

Lin Kun SMD Varistor is a surface mount varistor device, which is widely used in various applications. It is a surface mounted varistor component with high-quality and reliable performance. The brand name Lin Kun is UL, VDE, and CSA certified and has a minimum order quantity of 4000/3000/2000pcs/plate. This SMD varistor has a peak current of 20-1200 (A) for 8/20μs and a maximum clamping voltage of 24-175 (V) for 8/20μs. Its part number is QV0402 2220H Series and the maximum working voltage is DV: 5.5V-85V and AC: 4V-60V, and the varistor voltage @1mA DC is 12V-102V. The price of the SMD Varistor is negotiable and it has a fast delivery time of 5-7 days. The payment terms are T/T, Paypal, and Western Union. The supply ability of the SMD Varistor is 1000000PCS/Month.

Customization:

Lin Kun SMD Surface Mount Varistors

Brand Name: Lin Kun
Model Number: SMD Surface Mount Varistors
Place of Origin: China
Certification: UL, VDE, CSA
Minimum Order Quantity: 4000/3000/2000pcs/plate
Price: Negotiable
Packaging Details: 4000/3000/2000pcs/plate

Delivery Time: 5-7 Days
Payment Terms: T/T, Paypal, Western Union
Supply Ability: 1000000PCS/Month
Varistor Voltage @1mA DC: 12V-102V
Max. Clamping Voltage (8/20μs): Vc : 24-175 (V) IP : 20-5(A)
Inch (mm) External Dimension L×W: 1206 0.12×0.06 (3.2×1.6) 1812 0.18×0.12 (4.5×3.2)
Peak Current (8/20μs): IP : 20- 1200 (A)
Tolerance of Varistor Voltage: ±10%, ±15%
Highlights

Surface Mount Device Varistor

Surface Mounted Varistor Device

Lin Kun

UL, VDE, CSA

4000/3000/2000pcs/plate

5-7 Days

T/T, Paypal, Western Union

1000000PCS/Month

12V-102V

24-175V

20-5A

1206 0.12×0.06 (3.2×1.6)

1812 0.18×0.12 (4.5×3.2)

20- 1200 (A)

±10%, ±15%

Support and Services:

SMD Varistor Technical Support and Service

We provide technical support and service for SMD Varistor products to our customers. Our support team is staffed with product experts who are available to answer your questions, provide product information, and help with troubleshooting and installation.
We also have a library of technical documents and resources available to our customers, including user manuals, product datasheets, and application notes. If you need additional assistance, our team is available to provide personalized technical support.
We provide a complete satisfaction guarantee for all SMD Varistor products. If you're not completely satisfied with your purchase, we'll work to find the best solution for you.

Packing and Shipping:

SMD Varistor Packaging and Shipping:

The SMD Varistor is packaged in moisture-proof and sealed bags. The bags are then placed in a cardboard box for shipping. The box is marked with the product name and part number. The box is then secured with packing tape, placed in an outer corrugated shipping box, and labeled with the destination address.

FAQ:

SMD Varistor

Brand Name: Lin Kun
Model Number: SMD Surface Mount Varistors
Place of Origin: China
Certification: UL,VDE,CSA
Minimum Order Quantity: 4000/3000/2000pcs/plate
Price: Negotiable
Packaging Details: 4000/3000/2000pcs/plate
Delivery Time: 5-7 Days
Payment Terms: T/T,Paypal, Western Union
Supply Ability: 1000000PCS/Month

Questions & Answers

Q1: What is SMD Varistor?

A1: SMD Varistor is a surface-mount varistor that is used to protect circuits from transient overvoltage or to suppress EMI/RFI noise.

Q2: What are the application of SMD Varistor?

A2: SMD Varistor can be used in consumer electronics, automotive, telecom, medical, lighting, and many other applications.

Q3: What is the Brand Name of SMD Varistor?

A3: The Brand Name of SMD Varistor is Lin Kun.

Q4: What certifications do SMD Varistors have?

A4: SMD Varistors have certifications of UL,VDE,CSA.

Q5: What is the minimum order quantity for SMD Varistors?
A5: The minimum order quantity for SMD Varistors is 4000/3000/2000pcs/plate.

Dongguan Linkun Electronic Technology Co., Ltd.

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