

# ShenZhen HuaXingAn Electronics CO.,LTD

## SPECIFICATTON FOR APPROVAL

CUSTOMER NAME: \_\_\_\_\_

PRODUCT NAME: SMD Varistor

HuaXingAn P/N : 4032Kxx1

Date : 2022-10-09

### Customer

Manufacturing Department: \_\_\_\_\_

Quality Assurance Department: \_\_\_\_\_

Engineering Department: \_\_\_\_\_

company seal:

### Supplier

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# SMD Varistors



## Features

- Improved component design in a compact case
- High surge current capability
- Superior performance at high temperature
- SMD mountable disk varistors, suitable for lead-free reflow / wave soldering



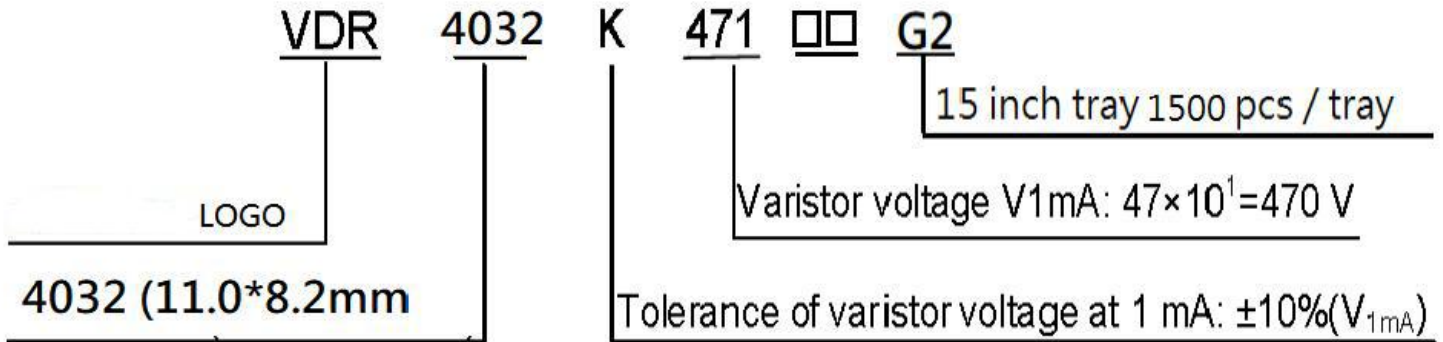
## Applications

- Power supplies for telecommunication systems
- Protection for LED circuits
- Protection for consumer, industrial equipment
- Protection for automotive electronics

## Applicable Standards

- UL1449 TYPE5
- TUV B115439 001 IEC61051-1, -2, -2-2, IEC60950-1Annex Q IEC 62368-1:2018/G.8.1
- IEC61000-4-5
- GB/T10193-1997 GB/T10194-1997/GB8898 GB4943.1

## Type code Designation

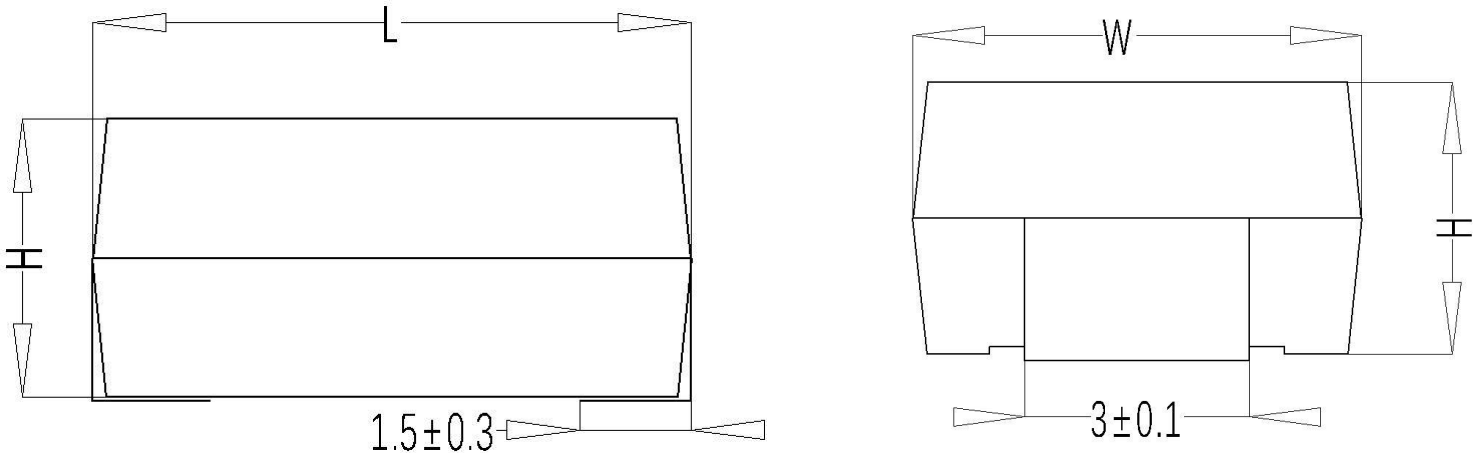




General parameters

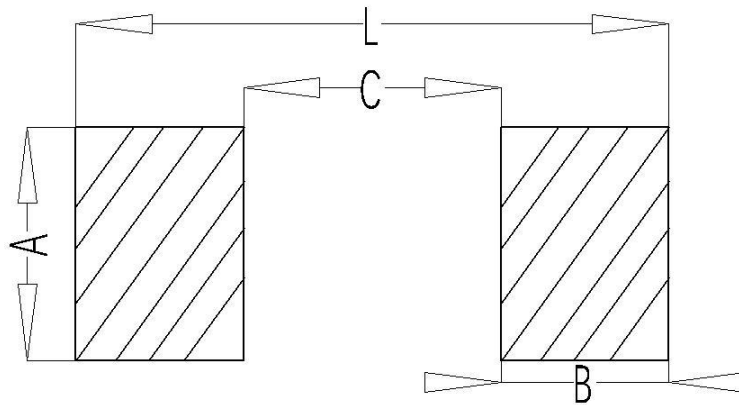
Parameter name	Parameter value
working temperature	-55℃ — +125℃
Storage temperature	-55℃ — +125℃
Withstand voltage	≥2.5KVRMS
Insulation resistance	≥100MΩ

Structure and Size



Size	Part number	L	W	H
4032	4032K201 ~ 4032K681	11.0mm±0.3	8.2mm±0.3	4.8mm±0.3
	4032K751~ 4032K821			5.5mm±0.3

Welding Size



Size	A	B	C	L
4032	3.5mm	2.8mm	6.5mm	12.1mm

## Electrical Characteristics (Standard)



Part Number	Maximum Allowable Voltage		Varistor Voltage V <sub>1mA</sub> (V)	Maximum Clamping Voltage V <sub>c</sub> (V)AT 25A	Max Surge Current 8/20μs I <sub>max</sub>	Maximum Energy (10/1000μs) (J)	Typical Capacitance (Reference) 1KHz(pf)	Safety Certification	
	V <sub>AC</sub> (V)	V <sub>DC</sub> (V)						UL / CUL	VDE
<b>4032K201</b>	130V	170V	200V(180~220)	340V	2500A	25	500	√	√
<b>4032K221</b>	140V	180V	220V(198~242)	360V	2500A	27	450	√	√
<b>4032K241</b>	150V	200V	240V(216~264)	395V	2500A	30	420	√	√
<b>4032K271</b>	175V	225V	270V(243~297)	455V	2500A	35	370	√	√
<b>4032K301</b>	195V	250V	300V(270~330)	500V	2500A	40	330	√	√
<b>4032K331</b>	210V	275V	330V(297~363)	550V	2500A	42	300	√	√
<b>4032K361</b>	230V	300V	360V(324~396)	595V	2500A	45	280	√	√
<b>4032K391</b>	250V	320V	390V(351~429)	650V	2500A	50	260	√	√
<b>4032K431</b>	275V	350V	430V(387~473)	710V	2500A	55	230	√	√
<b>4032K471</b>	300V	385V	470V(423~517)	775V	2500A	60	210	√	√
<b>4032K511</b>	320V	415V	510V(459~561)	845V	2500A	67	200	√	√
<b>4032K561</b>	350V	460V	560V(504~616)	925V	2500A	69	180	√	√
<b>4032K621</b>	385V	505V	620V(558~682)	1025V	2500A	70	160	√	-
<b>4032K681</b>	420V	560V	680V(612~748)	1120V	2500A	72	150	√	-
<b>4032K751</b>	460V	615V	750V(675~825)	1240V	2500A	75	130	√	-

## Electrical Characteristics (High energy)



Part Number	Maximum Allowable Voltage		Varistor Voltage V <sub>1mA</sub> (V)	Maximum Clamping Voltage V <sub>c</sub> (V)AT 10A	Max Surge Current 8/20μs I <sub>max</sub>	Maximum Energy (10/1000μs) (J)	Typical Capacitance (Reference) 1KHz(pf)	Safety Certification	
	V <sub>AC</sub> (V)	V <sub>DC</sub> (V)						UL / CUL	VDE
High energy MOV									
<b>4032K201-H</b>	130V	170V	200V(180~220)	340V	3500A	35	500	√	√
<b>4032K221-H</b>	140V	180V	220V(198~242)	360V	3500A	39	450	√	√
<b>4032K241-H</b>	150V	200V	240V(216~264)	395V	3500A	42	420	√	√
<b>4032K271-H</b>	175V	225V	270V(243~297)	455V	3500A	49	370	√	√
<b>4032K301-H</b>	195V	250V	300V(270~330)	500V	3500A	54	330	√	√
<b>4032K331-H</b>	210V	275V	330V(297~363)	550V	3500A	58	300	√	√
<b>4032K361-H</b>	230V	300V	360V(324~396)	595V	3500A	65	280	√	√
<b>4032K391-H</b>	250V	320V	390V(351~429)	650V	3500A	70	260	√	√
<b>4032K431-H</b>	275V	350V	430V(387~473)	710V	3500A	80	230	√	√
<b>4032K471-H</b>	300V	385V	470V(423~517)	775V	3500A	85	210	√	√
<b>4032K511-H</b>	320V	415V	510V(459~561)	845V	3500A	90	200	√	√
<b>4032K561-H</b>	350V	460V	560V(504~616)	925V	3500A	92	180	√	√
<b>4032K621-H</b>	385V	505V	620V(558~682)	1025V	3500A	95	160	√	-
<b>4032K681-H</b>	420V	560V	680V(612~748)	1120V	3500A	98	150	√	-
<b>4032K751-H</b>	460V	615V	750V(675~825)	1240V	3500A	100	130	√	-

Electrical Characteristics (combined wave)

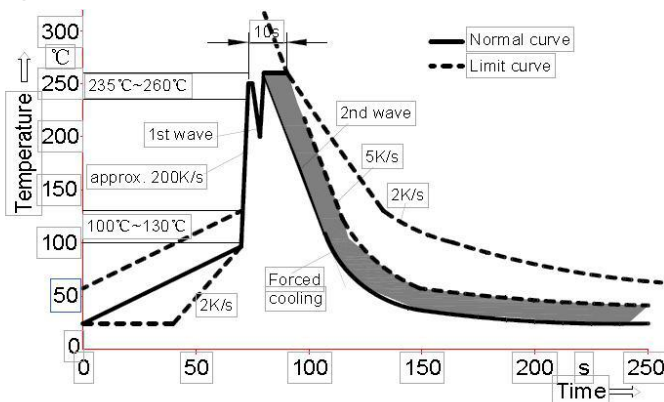


Part Number	Maximum Allowable Voltage		Varistor Voltage V <sub>1mA</sub> (V)	Maximum Clamping Voltage V <sub>c</sub> (V)AT 10A	Surge Current 4KV/2KA 1.2/50us & 8/20us	Maximum Energy (10/1000μs) (J)	Typical Capacitance (Reference) 1KHz(pf)	Safety Certification	
	V <sub>AC</sub> (V)	V <sub>DC</sub> (V)						UL / CUL	VDE
4032K201-EC	130V	170V	200V(180~220)	340V	40Times	25	500	√	√
4032K221-EC	140V	180V	220V(198~242)	360V	40Times	27	450	√	√
4032K241-EC	150V	200V	240V(216~264)	395V	40Times	30	420	√	√
4032K271-EC	175V	225V	270V(243~297)	455V	40Times	35	370	√	√
4032K301-EC	195V	250V	300V(270~330)	500V	40Times	40	330	√	√
4032K331-EC	210V	275V	330V(297~363)	550V	40Times	42	300	√	√
4032K361-EC	230V	300V	360V(324~396)	595V	40Times	45	280	√	√
4032K391-EC	250V	320V	390V(351~429)	650V	40Times	50	260	√	√
4032K431-EC	275V	350V	430V(387~473)	710V	40Times	55	230	√	√
4032K471-EC	300V	385V	470V(423~517)	775V	40Times	60	210	√	√
4032K511-EC	320V	415V	510V(459~561)	845V	40Times	67	200	√	√
4032K561-EC	350V	460V	560V(504~616)	925V	40Times	69	180	√	√
4032K621-EC	385V	505V	620V(558~682)	1025V	40Times	70	160	√	-
4032K681-EC	420V	560V	680V(612~748)	1120V	40Times	72	150	√	-
4032K751-EC	460V	615V	750V(675~825)	1240V	40Times	75	130	√	-

Soldering Guidelines

The usage of mild, non-activated fluxes for soldering is recommended, as well as proper cleaning of the PCB. The components are suitable for reflow soldering per JEDEC J-STD-020C.

- Wave soldering



Temperature characteristics at component terminal with dual-wave soldering