

ShenZhen HuaXingAn Electronics CO.,LTD

SPECIFICATTON FOR APPROVAL

CUSTOMER NAME: _____

PRODUCT NAME: SMD Varistor

HuaXingAn P/N : 3225Kxx1

Date : 2022-10-10

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



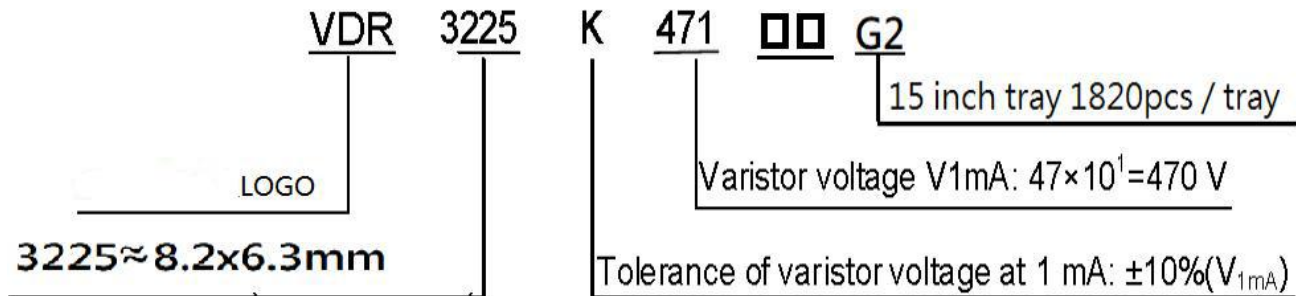
Applications

- 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

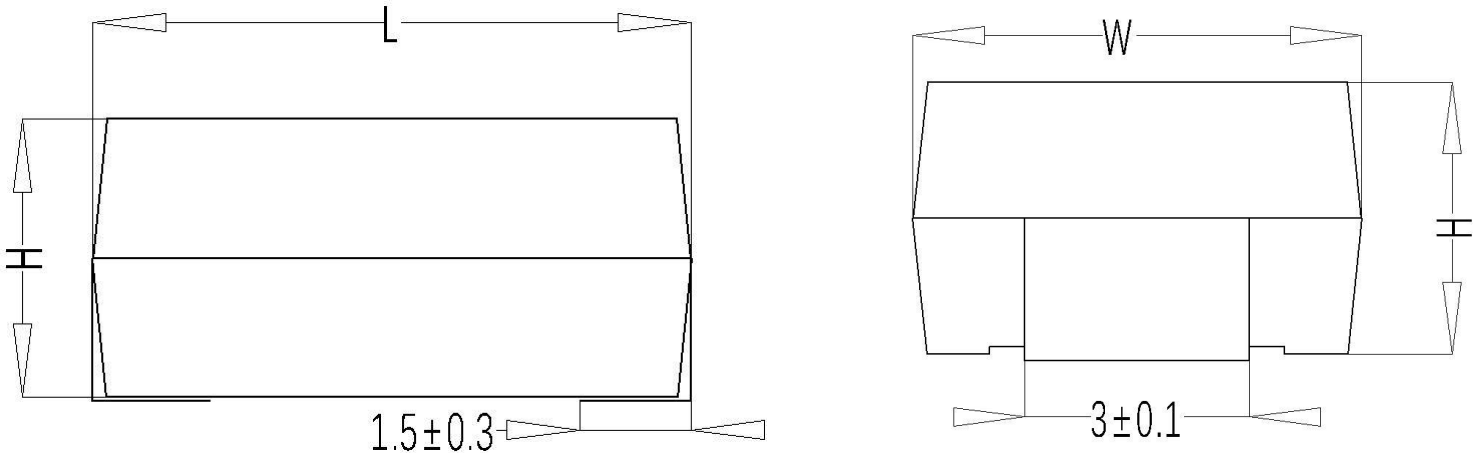




General parameters

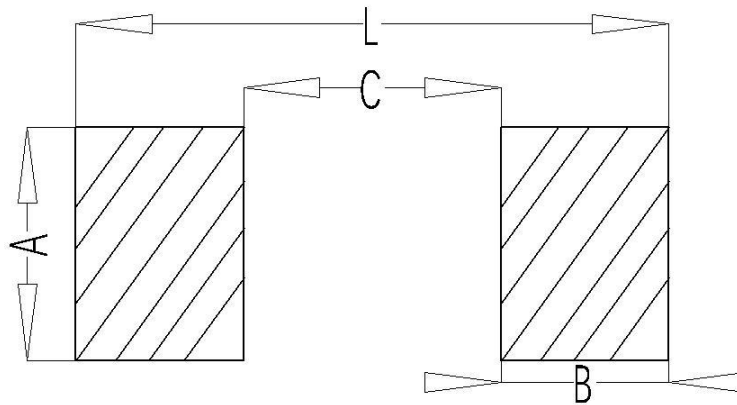
Parameter name	Parameter value
working temperature	-55℃ — +125℃
Storage temperature	-55℃ — +125℃
Withstand voltage	≥2.5KVRMS
Insulation resistance	≥100MΩ

Structure and Size



Size	Part number	L	W	H
3225	3225K201 ~ 3225K681	8.2mm±0.3	6.3mm±0.3	4.3mm±0.3
	3225K751~ 3225K821			5.2mm±0.3

Welding Size



Size	A	B	C	L
3225	3.5mm	2.8mm	4.5mm	10.1mm

Electrical Characteristics (Standard)



Part Number	Maximum Allowable Voltage		Varistor Voltage V _{1mA} (V)	Maximum Clamping Voltage V _c (V)AT 10A	Max Surge Current 8/20µs I _{max}	Maximum Energy (10/1000µs) (J)	Typical Capacitance (Reference) 1KHz(pf)	Safety Certification	
	V _{AC} (V)	V _{DC} (V)						UL / CUL	VDE
3225K201	130V	170V	200V(180~220)	340V	1200A	15	200	√	√
3225K221	140V	180V	220V(198~242)	360V	1200A	18	180	√	√
3225K241	150V	200V	240V(216~264)	395V	1200A	18.5	170	√	√
3225K271	175V	225V	270V(243~297)	455V	1200A	21	150	√	√
3225K361	230V	300V	360V(324~396)	595V	1200A	23	115	√	√
3225K391	250V	320V	390V(351~429)	650V	1200A	25	105	√	√
3225K431	275V	350V	430V(387~473)	710V	1200A	29	95	√	√
3225K471	300V	385V	470V(423~517)	775V	1200A	30	90	√	√
3225K511	320V	415V	510V(459~561)	845V	1200A	33	85	√	√
3225K561	350V	460V	560V(504~616)	925V	1200A	33	80	√	√
3225K621	385V	505V	620V(558~682)	1025V	1200A	35	78	√	-
3225K681	420V	560V	680V(612~748)	1120V	1200A	35	75	√	-
3225K751	460V	615V	750V(675~825)	1240V	1200A	50	70	√	-
3225K781	485V	640V	780V(702~858)	1290V	1200A	51	65	√	-
3225K821	510V	670V	820V(738~902)	1355V	1200A	52	60	√	-

Electrical Characteristics (High energy)



Part Number	Maximum Allowable Voltage		Varistor Voltage V _{1mA} (V)	Maximum Clamping Voltage V _c (V)AT 10A	Max Surge Current 8/20μs I _{max}	Maximum Energy (10/1000μs) (J)	Typical Capacitance (Reference) 1KHz(pf)	Safety Certification	
	V _{Ac} (V)	V _{Dc} (V)						UL / CUL	VDE
High energy MOV									
3225K201-H	130V	170V	200V(180~220)	340V	1750A	17	200	√	√
3225K221-H	140V	180V	220V(198~242)	360V	1750A	19	180	√	√
3225K241-H	150V	200V	240V(216~264)	395V	1750A	21	170	√	√
3225K271-H	175V	225V	270V(243~297)	455V	1750A	24	150	√	√
3225K361-H	230V	300V	360V(324~396)	595V	1750A	26	115	√	√
3225K391-H	250V	320V	390V(351~429)	650V	1750A	28	105	√	√
3225K431-H	275V	350V	430V(387~473)	710V	1750A	32	95	√	√
3225K471-H	300V	385V	470V(423~517)	775V	1750A	35	90	√	√
3225K511-H	320V	415V	510V(459~561)	845V	1750A	40	85	√	√
3225K561-H	350V	460V	560V(504~616)	925V	1750A	42	80	√	√
3225K621-H	385V	505V	620V(558~682)	1025V	1750A	45	78	√	-
3225K681-H	420V	560V	680V(612~748)	1120V	1750A	49	75	√	-
3225K751-H	460V	615V	750V(675~825)	1240V	1750A	55	70	√	-
3225K781-H	485V	640V	780V(702~858)	1290V	1750A	60	65	√	-
3225K821-H	510V	670V	820V(738~902)	1355V	1750A	67	60	√	-

Electrical Characteristics (Combined wave)

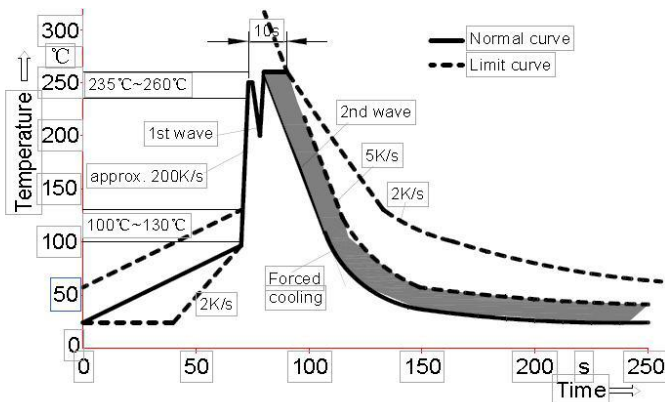


Part Number	Maximum Allowable Voltage		Varistor Voltage V _{1mA} (V)	Maximum Clamping Voltage V _c (V)AT 10A	Surge Current 2KV/1KA 1.2/50us & 8/20us	Maximum Energy (10/1000μs) (J)	Typical Capacitance (Reference) 1KHz(pf)	Safety Certification	
	V _{AC} (V)	V _{DC} (V)						UL / CUL	VDE
3225K201-BC	130V	170V	200V(180~220)	340V	40Times	17	200	√	√
3225K221-BC	140V	180V	220V(198~242)	360V	40Times	19	180	√	√
3225K241-BC	150V	200V	240V(216~264)	395V	40Times	21	170	√	√
3225K271-BC	175V	225V	270V(243~297)	455V	40Times	21	150	√	√
3225K361-BC	230V	300V	360V(324~396)	595V	40Times	35	115	√	√
3225K391-BC	250V	320V	390V(351~429)	650V	40Times	39	105	√	√
3225K431-BC	275V	350V	430V(387~473)	710V	40Times	40	95	√	√
3225K471-BC	300V	385V	470V(423~517)	775V	40Times	42	90	√	√
3225K511-BC	320V	415V	510V(459~561)	845V	40Times	45	85	√	√
3225K561-BC	350V	460V	560V(504~616)	925V	40Times	49	80	√	√
3225K621-BC	385V	505V	620V(558~682)	1025V	40Times	55	78	√	-
3225K681-BC	420V	560V	680V(612~748)	1120V	40Times	60	75	√	-
3225K751-BC	460V	615V	750V(675~825)	1240V	40Times	67	70	√	-
3225K781-BC	485V	640V	780V(702~858)	1290V	40Times	67	65	√	-
3225K821-BC	510V	670V	820V(738~902)	1355V	40Times	80	60	√	-

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