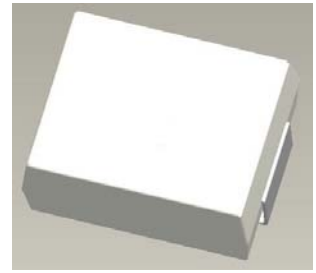




FEATURES

- Improved component design in a compact case
- High surge current capability of up to 1.25kA
- Superior performance at high temperature
- White package design without shadow in LED lighting application
- 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
- IEC61051-1, -2, -2-2, IEC60950-1 Annex Q
- GB/T10193, GB/T10194, GB4943.1, GB8898
- IEC61000-4-5

TYPE CODE DESIGNATION

JJ	SV	3225	K	471	G2
JJ: JieJie Semiconductor		SV: SMD disk varistors		Tape and reel (1000 pcs/reel)	
3225: 32/100''×25/100''(8.0mm×6.3mm)			Varistor voltage V _{1mA} : 47×10 ¹ =470 V		
			Tolerance of varistor voltage at 1 mA: ±10%(V _{1mA})		

GENERAL TECHNICAL DATA

Parameter	Value	Unit
Operating temperature	-55 to +125	°C
Storage temperature	-55 to +150	°C
Electric strength	≥2.5	kV _{RMS}
Insulation resistance	≥100	MΩ





ELECTRICAL CHARACTERISTICS (T_A=125°C)

SMD Types (EIA Case 32×25 in inch)	Varistor Voltage at 1 mA [V]	Continuous Voltage		Peak Current (8/20μs)		Energy (2 ms)	Rated Power [mW]	Clamping voltage at class current (8/20μs) [V]	Class Current (8/20μs) [A]	Capacitance
		Max		Max		Max				Max
		V _{RMS}	V _{DC}	(1 time)	(2 times)	(1 time)				(at 1 kHz)
		[V]	[V]	[A]	[A]	[J]				[pF]
JJSV3225K180G2	18(16~20)	11	14	500	250	0.4	20	36	2.5	3000
JJSV3225K220G2	22(20~24)	14	18	500	250	0.5	20	43	2.5	2500
JJSV3225K270G2	27(24~30)	17	22	500	250	0.7	20	53	2.5	2000
JJSV3225K330G2	33(30~36)	20	26	500	250	0.8	20	65	2.5	1800
JJSV3225K390G2	39(35~43)	25	31	500	250	0.9	20	77	2.5	1000
JJSV3225K470G2	47(42~52)	30	38	500	250	1.1	20	93	2.5	1500
JJSV3225K560G2	56(50~62)	35	45	500	250	1.3	20	110	2.5	1250
JJSV3225K680G2	68(61~75)	40	56	500	250	1.6	20	135	2.5	1200
JJSV3225K820G2	82(74~90)	50	65	1250	1000	2.5	200	135	10	900
JJSV3225K101G2	100(90~110)	60	85	1250	1000	3.0	200	165	10	600
JJSV3225K121G2	120(108~132)	75	100	1250	1000	3.5	200	200	10	420
JJSV3225K151G2	150(135~165)	95	125	1250	1000	4.5	200	250	10	350
JJSV3225K181G2	180(162~198)	115	150	1250	1000	4.5	200	300	10	300
JJSV3225K201G2	200(180~220)	130	170	1250	1000	6.0	200	340	10	240
JJSV3225K221G2	220(198~242)	140	180	1250	1000	6.5	200	360	10	220
JJSV3225K241G2	240(216~264)	150	200	1250	1000	7.5	200	395	10	200
JJSV3225K271G2	270(243~297)	175	225	1250	1000	8.0	200	455	10	170
JJSV3225K331G2	330(297~363)	210	270	1250	1000	9.5	200	545	10	155
JJSV3225K361G2	360(324~396)	230	300	1250	1000	11.0	200	595	10	140
JJSV3225K391G2	390(351~429)	250	320	1250	1000	12.0	200	650	10	120
JJSV3225K431G2	430(387~473)	275	350	1250	1000	13.5	200	710	10	120
JJSV3225K471G2	470(423~517)	300	385	1250	1000	15.0	200	775	10	110
JJSV3225K511G2	510(459~561)	320	420	1250	1000	16.0	200	845	10	105
JJSV3225K561G2	560(504~616)	350	460	1250	1000	16.5	200	930	10	100
JJSV3225K621G2	620(558~682)	385	505	1250	1000	17.0	200	1025	10	95
JJSV3225K681G2	680(612~748)	420	560	1250	1000	18.0	200	1120	10	90
JJSV3225K751G2	750(675~825)	460	615	1250	1000	18.5	200	1240	10	75



MARKING

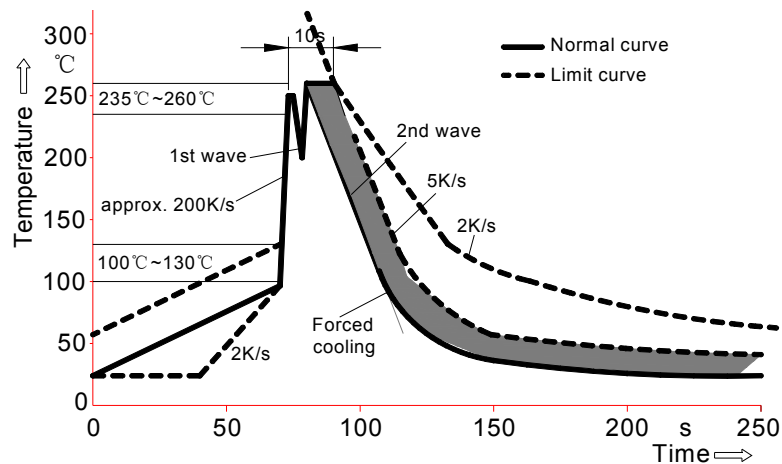
	Trademark	
	3225	JJSV3225 Series
	K	Tolerance of varistor voltage at 1 mA: $\pm 10\%(V_{1mA})$
	471	Varistor voltage
	2021	the 21th week,2020

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.

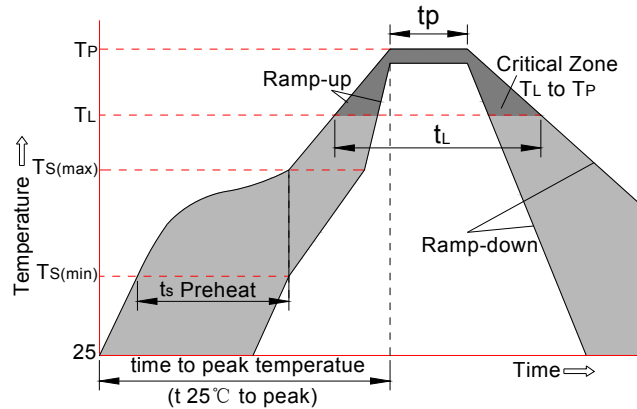
- Wave soldering



Temperature characteristics at component terminal with dual-wave soldering



- Reflow soldering



Profile feature		Sn-Pb assembly	Pb-Free assembly
Average ramp-up rate (T_{Smax} to T_p)		3°C/sec. Max	3°C/sec. Max
Preheat	-Temperature min. ($T_{S(min)}$)	+100°C	+150°C
	-Temperature max. ($T_{S(max)}$)	+150°C	+200°C
	-Time (t_{Smin} to t_{Smax})	60-120 secs.	60-180 secs.
$T_{S(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max	3°C/sec. Max
Time maintained above	-Temperature min. (T_L)	+183°C	+217°C
	-Time (t_L)	60-150 secs.	60-150 secs.
Peak classification temperature (T_p)		+220°C to +240°C	+240°C to +260°C
Time within 5°C of actual peak temperature (t_p)		10 secs. to 30 secs.	20 secs. to 40 secs.
Ramp-down rate		6°C/sec. max.	6°C/sec. max.
Time 25°C to peak temperature		6 min. max.	8 min. max.

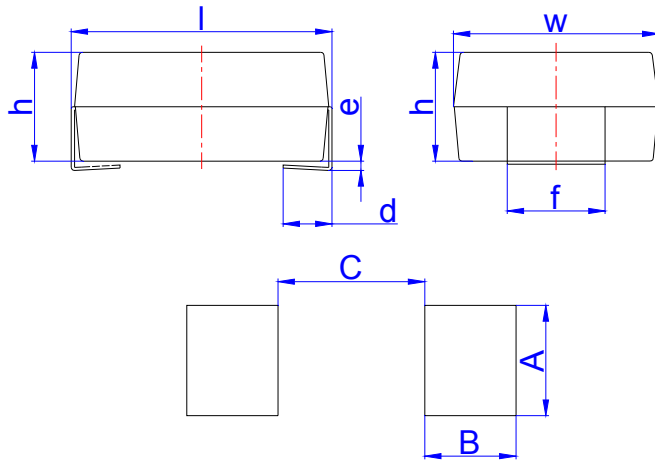
Notes: All temperature refer to topside of the package, measured on the package body surface
 Maximum number of reflow cycles: 3

STORAGE CONDITION

- As far as possible, the components should be employed within 24 months after delivery from JieJie Semiconductor.
- They should be left in their original packing to avoid soldering problems due to oxidized contacts.
- Storage temperature: - 25 up to + 45°C.
- Relative humidity: < 75 % annual average, < 95 % on max. 30 days in a year.



DIMENSIONAL DRAWINGS

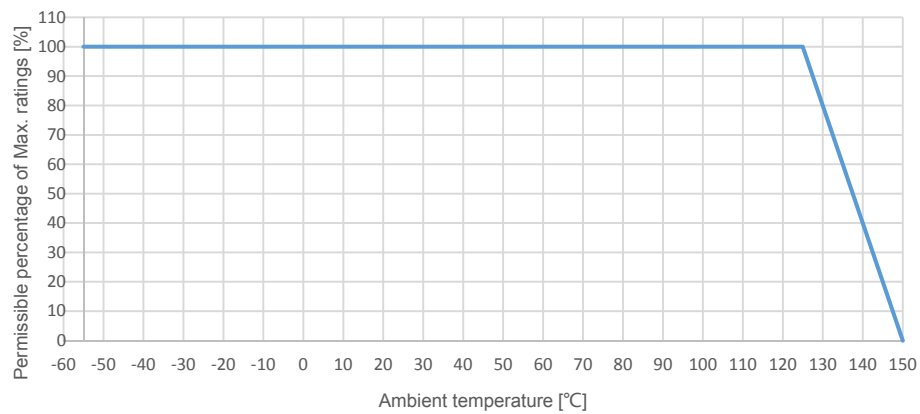


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
l	7.80		8.60	0.307		0.339
w	6.00		6.60	0.236		0.260
h	3.30		4.00	0.130		0.157
d	1.20		1.80	0.047		0.071
e	0		0.30	0		0.012
f	2.70		3.30	0.106		0.130
A		3.50			0.138	
B		2.80			0.110	
C		4.50			0.177	

Recommended solder pad layout

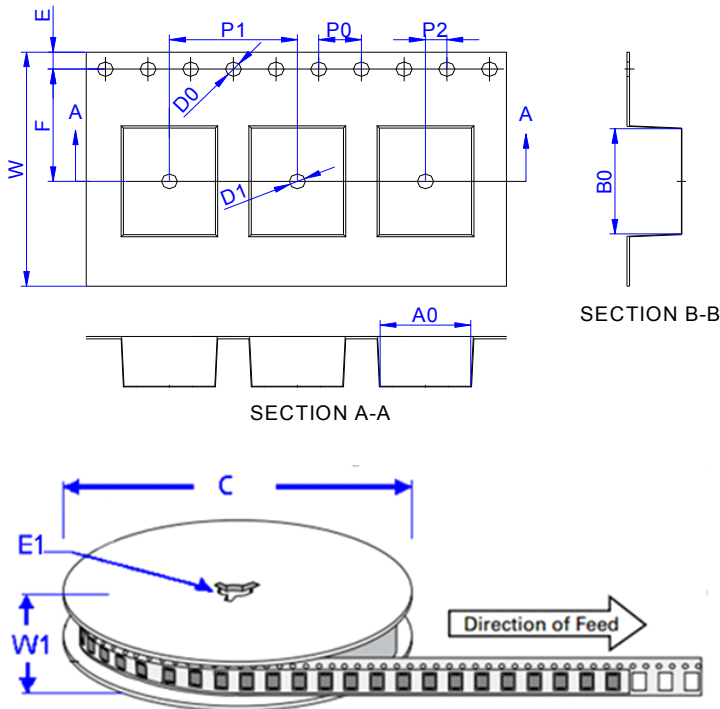
TEMPERATURE RATING CURVE

Max. current, energy, operating voltage and average power dissipation depending on ambient temperature





TAPING AND PACKAGING SPECIFICATION-SMD-3225



Ref.	Dimensions	
	Millimeters	Inches
A0	6.60±0.30	0.260±0.012
B0	8.40±0.30	0.331±0.012
C	330.0	13.0
D0	1.50±0.10	0.059±0.004
D1	1.50±0.10	0.059±0.004
E	1.75±0.20	0.069±0.008
E1	13.3±0.3	0.524±0.012
F	7.50±0.20	0.295±0.008
P0	4.00±0.20	0.157±0.008
P1	12.00±0.20	0.472±0.008
P2	2.00±0.20	0.079±0.008
W	16.00±0.20	0.630±0.008
W1	20.7±2.0	0.815±0.079

OUTLINE	UNIT WEIGHT (g/PCS) typ.	REEL (PCS)	PER CARTON (PCS)	DESCRIPTION
TAPING	0.5607	1,000	12,000	13 inch reel pack

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