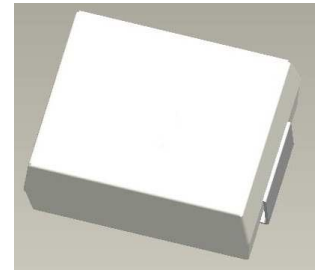


FEATURES

- Improved component design in a compact case
- High surge current capability of up to 3.5kA
- 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	4032	K	471	G2
JJ: Series		SV: SMD disk varistors		Tape and reel (1000 pcs/reel)	
4032: 40/100''×32/100''(10.4mm×8.2mm)			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($T_A=125^{\circ}\text{C}$)

SMD Types (EIA Case 40×32 in inch)	Continuous Voltage		Peak Current (8/20 μs)		Energy (2 ms)	Rated Power
	Max		Max		Max	
	V_{RMS}	V_{DC}	(1 time)	(2 times)	(1 time)	
	[V]	[V]	[A]	[A]	[J]	
JJSV4032K180G2	11	14	1000	500	2.2	50
JJSV4032K220G2	14	18	1000	500	2.6	50
JJSV4032K270G2	17	22	1000	500	3.2	50
JJSV4032K330G2	20	26	1000	500	4.0	50
JJSV4032K390G2	25	31	1000	500	4.7	50
JJSV4032K470G2	30	38	1000	500	5.6	50
JJSV4032K560G2	35	45	1000	500	6.7	50
JJSV4032K680G2	40	56	1000	500	8.2	50
JJSV4032K820G2	50	65	3500	2500	10	400
JJSV4032K101G2	60	85	3500	2500	12	400
JJSV4032K121G2	75	100	3500	2500	14.5	400
JJSV4032K151G2	95	125	3500	2500	18	400
JJSV4032K181G2	115	150	3500	2500	25	400
JJSV4032K201G2	130	170	3500	2500	25	400
JJSV4032K221G2	140	180	3500	2500	27.5	400
JJSV4032K241G2	150	200	3500	2500	30	400
JJSV4032K271G2	175	225	3500	2500	35	400
JJSV4032K331G2	210	270	3500	2500	42	400
JJSV4032K361G2	230	300	3500	2500	45	400
JJSV4032K391G2	250	320	3500	2500	50	400
JJSV4032K431G2	275	350	3500	2500	55	400
JJSV4032K471G2	300	385	3500	2500	60	400
JJSV4032K511G2	320	420	3500	2500	67	400
JJSV4032K561G2	350	460	3500	2500	67	400
JJSV4032K621G2	385	505	3500	2500	67	400
JJSV4032K681G2	420	560	3500	2500	67	400
JJSV4032K751G2	460	615	3500	2500	70	400

ELECTRICAL CHARACTERISTICS($T_A=25^{\circ}\text{C}$,continued)

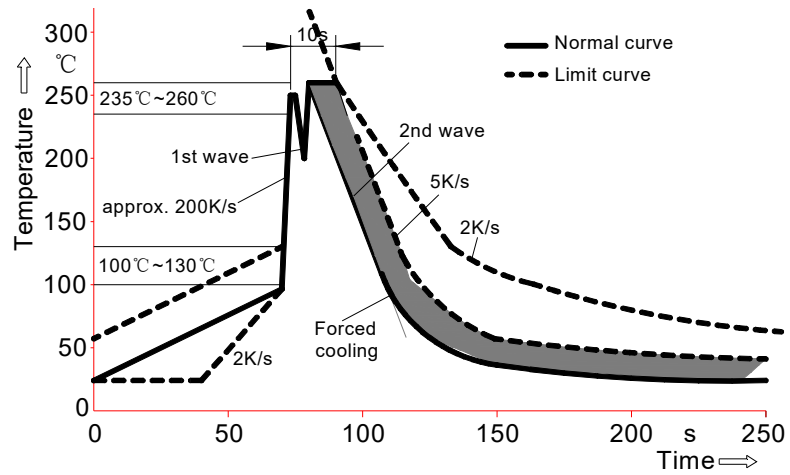
SMD Types (EIA Case 32×25 in inch)	Varistor Voltage at 1 mA	Clamping Voltage at Class Current (8/20μs)	Class Current (8/20μs)	Capacitance
	(±10%)			Max
	[V]	[V]	[A]	(at 1 kHz) [pF]
JJSV4032K180G2	18	36	5	16000
JJSV4032K220G2	22	43	5	11000
JJSV4032K270G2	27	53	5	8000
JJSV4032K330G2	33	65	5	6300
JJSV4032K390G2	39	77	5	5200
JJSV4032K470G2	47	93	5	4600
JJSV4032K560G2	56	110	5	3750
JJSV4032K680G2	68	135	5	2800
JJSV4032K820G2	82	135	25	2000
JJSV4032K101G2	100	165	25	1700
JJSV4032K121G2	120	200	25	1400
JJSV4032K151G2	150	250	25	1100
JJSV4032K181G2	180	300	25	430
JJSV4032K201G2	200	340	25	430
JJSV4032K221G2	220	360	25	410
JJSV4032K241G2	240	395	25	380
JJSV4032K271G2	270	455	25	350
JJSV4032K331G2	330	545	25	300
JJSV4032K361G2	360	595	25	300
JJSV4032K391G2	390	650	25	300
JJSV4032K431G2	430	710	25	270
JJSV4032K471G2	470	775	25	230
JJSV4032K511G2	510	845	25	210
JJSV4032K561G2	560	930	25	200
JJSV4032K621G2	620	1025	25	190
JJSV4032K681G2	680	1120	25	170
JJSV4032K751G2	750	1240	25	160

SOLDERING GUIDELINES

The usage of mild, non-activated fluxes for soldering is recommended, as well as proper cleaning of the PCB.

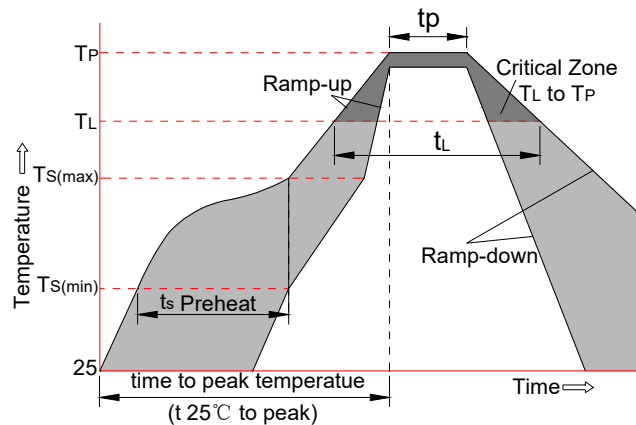
The components are suitable for reflow soldering per JEDEC J-STD-020C.

- Wave soldering



Temperature characteristics at component terminal with dual-wave soldering

- Reflow soldering



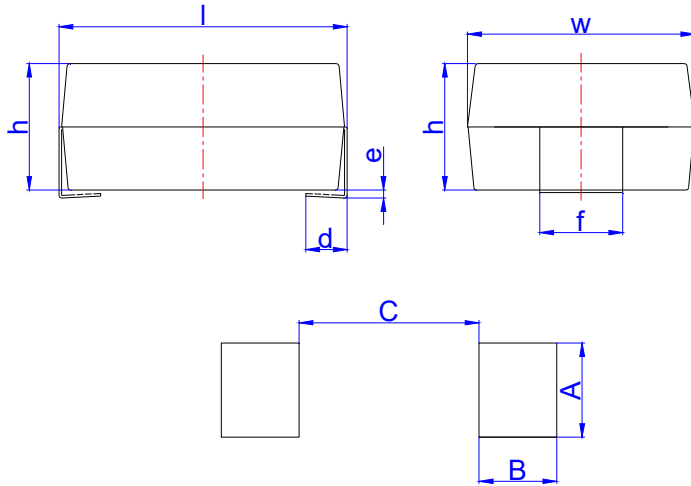
Profile feature		Sn-Pb assembly	Pb-Free assembly
Average ramp-up rate (T_{Smax} to T_p)		3°C/sec. Max	3°C/sec. Max
Preheat	-Temperature min. ($T_{s(min)}$)	+100°C	+150°C
	-Temperature max. ($T_{s(max)}$)	+150°C	+200°C
	-Time (t_{smin} to t_{smax})	60-120 secs.	60-180 secs.
$T_{s(max)}$ to T_L - Ramp-up 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

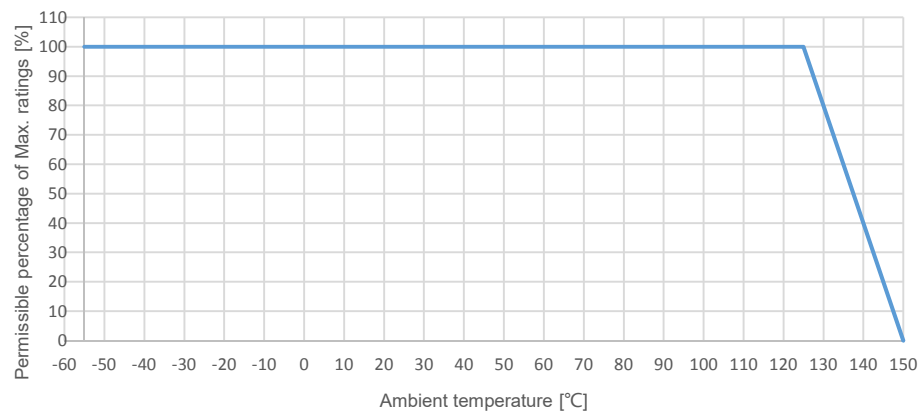


Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
l	10.20		11.00	0.402		0.433
w	7.90		8.50	0.311		0.335
h	4.40		5.00	0.173		0.197
d	1.20		1.80	0.047		0.071
e	0		0.30	0		0.012
f	2.70		3.30	0.106		0.130
A		3.50			0.138	
B		2.80			0.110	
C		6.50			0.256	

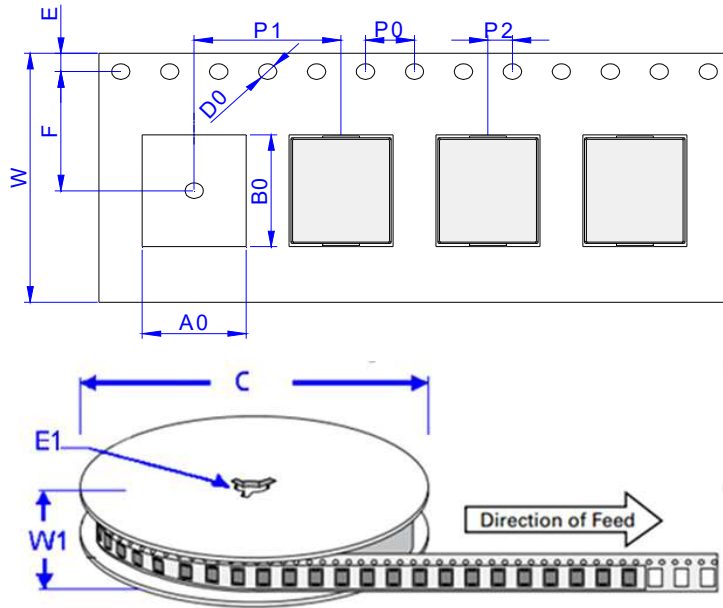
Recommended solder pad layout

TEMPERATURE RATING CURVE

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



TAPING AND PACKAGING SPECIFICATION-SMD-4032



Ref.	Dimensions	
	Millimeters	Inches
A0	8.50 ± 0.30	0.335 ± 0.012
B0	10.80 ± 0.30	0.425 ± 0.012
C	330.0	13.0
D0	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	11.50 ± 0.20	0.453 ± 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	24.00 ± 0.20	0.945 ± 0.008
W1	15.7 ± 2.0	0.618 ± 0.079

OUTLINE	UNIT WEIGHT (g/PCS) typ.	REEL (PCS)	PER CARTON (PCS)	DESCRIPTION
TAPING	0.8535	1,000	8,000	13 inch reel pack