

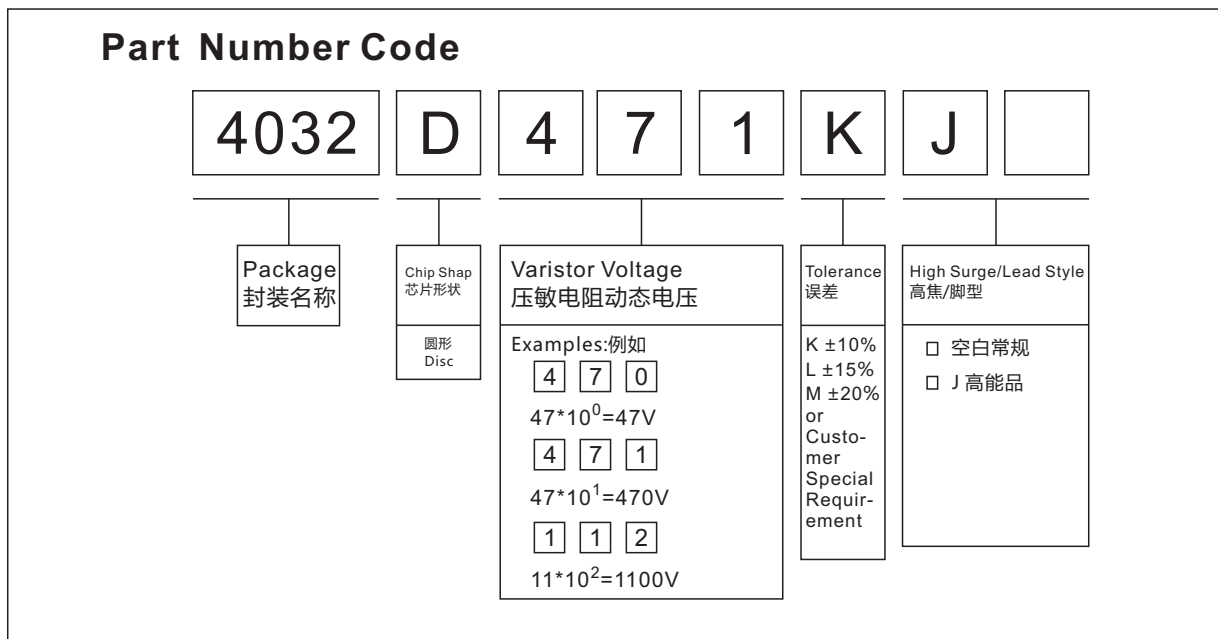


## Applications

- Surge protection in consumer electronics.
- Surge protection in industrial electronics.
- Surge protection in electronics home
- Appliances, gas and petroleum appliances.
- Relay and electromagnetic valve surge absorption

## Features

- RoHS compliant
- Varistor Voltage (V1mA) range from 18V to 820V.
- Fast responding to transient over-voltage.
- Large absorbing transient energy capability.
- Low clamping ratio and no following-on current.





### Mechanical Requirements

Solderability	Min. 95% of The Terminal Should Be Covered With Solder Uniformly	Solder Temp: 265±5°C Immersed Time: 2±0.5Sec.
Resistance of soldering heat	$\Delta V1mA/V1mA \leq \pm 5\%$	Solder Temp: 260±5°C
		Immersed Time: 10±1Sec.

### Environmental Requirements

High Temperature Storage	$\Delta V1mA/V1mA \leq \pm 5\%$	Ambient Temp: 125±2°C Duration: 1000h
Low Temperature Storage	$\Delta V1mA/V1mA \leq \pm 5\%$	Ambient Temp: -40±2°C Duration: 1000h
High Humidity Storage/Damp Heat	$\Delta V1mA/V1mA \leq \pm 5\%$	Ambient Temp: 40±2°C 90-95% R.H. Duration: 1000h
Temperature Cycle	$\Delta V1mA/V1mA \leq \pm 5\%$	Step   Temperature   Period
		1   -50°C   30min
		2   Room Temp   15min
		3   150°C   30min
4   Room Temp   15min		
High Temperature Load	$\Delta V1mA/V1mA \leq \pm 10\%$	Ambient temp: 85±2°C Duration: 1000h Load: Max. Allowable Voltage
Damp Heat Load/ Humidity Load	$\Delta V1mA/V1mA \leq \pm 10\%$	1. Temperature : 40±2°C 2. Humidity : 90~95% RH 3. Rated working voltage applied 4. Time : 500±2 hours 5. Test after placing in ambient temperature for 24 hours.
Operating Temperature Range	-40°C ~ +85°C	-40°C ~ +85°C
Storage Temperature Range	-55°C ~ +125°C	-55°C ~ +125°C



Characteristics at Ta = 25°C

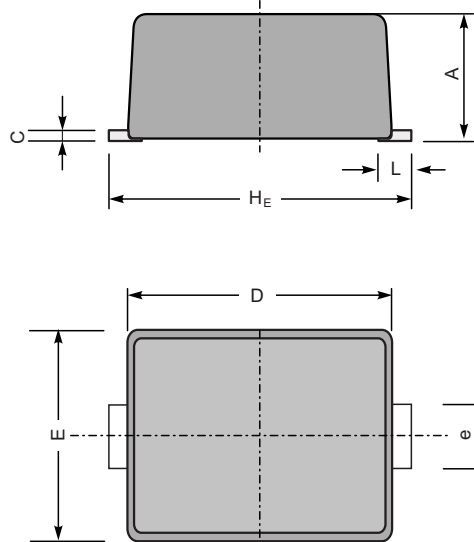
Type Number		Marking		Maximum Allowable Voltage		Varistor Voltage V <sub>1mA</sub>	Maximum Clamping Voltage		Withstanding Surge Current		Maximum Energy		Rated Power W	Typical Capacitance (Reference) @1KHz(pF)
				V <sub>AC</sub>	V <sub>DC</sub>		I <sub>T</sub>	V <sub>C</sub>	I(A) Standard	I(A) High Surge	(J) Standard	(J) High Surge		
Standard	High Surge	Standard	High Surge	V	V	V	A	V						
4032D180K	4032D180KJ	4032D180K	4032D180KJ	11	14	18(15~21.6)	2.5	36	250	500	0.9	2	0.02	2800
4032D220K	4032D220KJ	4032D220K	4032D220KJ	14	18	22(19.5~26)	2.5	43	250	500	1.1	2.4	0.02	2300
4032D270K	4032D270KJ	4032D270K	4032D270KJ	17	22	27(24~30)	2.5	53	250	500	1.4	3	0.02	1800
4032D330K	4032D330KJ	4032D330K	4032D330KJ	20	26	33(29.5~36.5)	2.5	66	250	500	1.7	3.5	0.02	1500
4032D390K	4032D390KJ	4032D390K	4032D390KJ	25	31	39(35~43)	2.5	77	250	500	2.1	4	0.02	1300
4032D470K	4032D470KJ	4032D470K	4032D470KJ	30	38	47(42~54)	2.5	93	250	500	2.5	5	0.02	1100
4032D560K	4032D560KJ	4032D560K	4032D560KJ	35	45	56(50~62)	2.5	110	250	500	3.1	6	0.02	900
4032D680K	4032D680KJ	4032D680K	4032D680KJ	40	56	68(61~75)	2.5	135	250	500	3.6	7	0.02	740
4032D820K	4032D820KJ	4032D820K	4032D820KJ	50	65	82(74~90)	10	135	1200	1750	5.5	10	0.25	600
4032D101K	4032D101KJ	4032D101K	4032D101KJ	60	85	100(90~110)	10	165	1200	1750	6.5	12	0.25	500
4032D121K	4032D121KJ	4032D121K	4032D121KJ	75	100	120(108~132)	10	200	1200	1750	7.8	13	0.25	420
4032D151K	4032D151KJ	4032D151K	4032D151KJ	95	125	150(135~165)	10	250	1200	1750	9.7	13	0.25	330
4032D181K	4032D181KJ	4032D181K	4032D181KJ	115	150	180(162~198)	10	300	1200	1750	11.7	16	0.25	280
4032D201K	4032D201KJ	4032D201K	4032D201KJ	130	170	200(180~220)	10	340	1200	1750	13	17	0.25	250
4032D221K	4032D221KJ	4032D221K	4032D221KJ	140	180	220(198~242)	10	360	1200	1750	14	19	0.25	230
4032D241K	4032D241KJ	4032D241K	4032D241KJ	150	200	240(216~264)	10	395	1200	1750	15	21	0.25	210
4032D271K	4032D271KJ	4032D271K	4032D271KJ	175	225	270(243~297)	10	455	1200	1750	18	24	0.25	185
4032D301K	4032D301KJ	4032D301K	4032D301KJ	190	250	300(270~330)	10	500	1200	1750	20	26	0.25	165
4032D331K	4032D331KJ	4032D331K	4032D331KJ	210	275	330(297~363)	10	550	1200	1750	23	28	0.25	150
4032D361K	4032D361KJ	4032D361K	4032D361KJ	230	300	360(324~396)	10	595	1200	1750	25	32	0.25	140
4032D391K	4032D391KJ	4032D391K	4032D391KJ	250	320	390(351~429)	10	650	1200	1750	25	35	0.25	130
4032D431K	4032D431KJ	4032D431K	4032D431KJ	275	350	430(387~473)	10	710	1200	1750	28	40	0.25	115
4032D471K	4032D471KJ	4032D471K	4032D471KJ	300	385	470(423~517)	10	775	1200	1750	30	42	0.25	105
4032D511K	4032D511KJ	4032D511K	4032D511KJ	320	415	510(459~561)	10	845	1200	1750	30	45	0.25	100
4032D561K	4032D561KJ	4032D561K	4032D561KJ	350	460	560(504~616)	10	925	1200	1750	30	49	0.25	90
4032D621K	4032D621KJ	4032D621K	4032D621KJ	385	505	620(558~682)	10	1025	1200	1750	33	55	0.25	80
4032D681K	4032D681KJ	4032D681K	4032D681KJ	420	560	680(612~748)	10	1120	1200	1750	33	60	0.25	75
4032D751K	4032D751KJ	4032D751K	4032D751KJ	460	615	750(675~825)	10	1240	1200	1750	67.2	65	0.25	70
4032D781K	4032D781KJ	4032D781K	4032D781KJ	485	640	780(702~858)	10	1290	1200	1750	67.2	65	0.25	70
4032D821K	4032D821KJ	4032D821K	4032D821KJ	510	670	820(738~902)	10	1355	1200	1750	67.2	70	0.25	60



PACKAGE OUTLINE

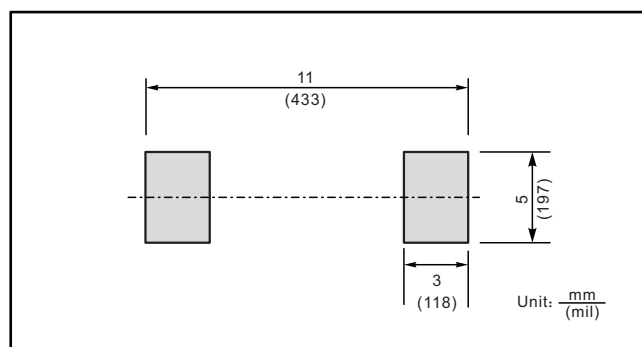
Plastic surface mounted package; 2 leads

4032



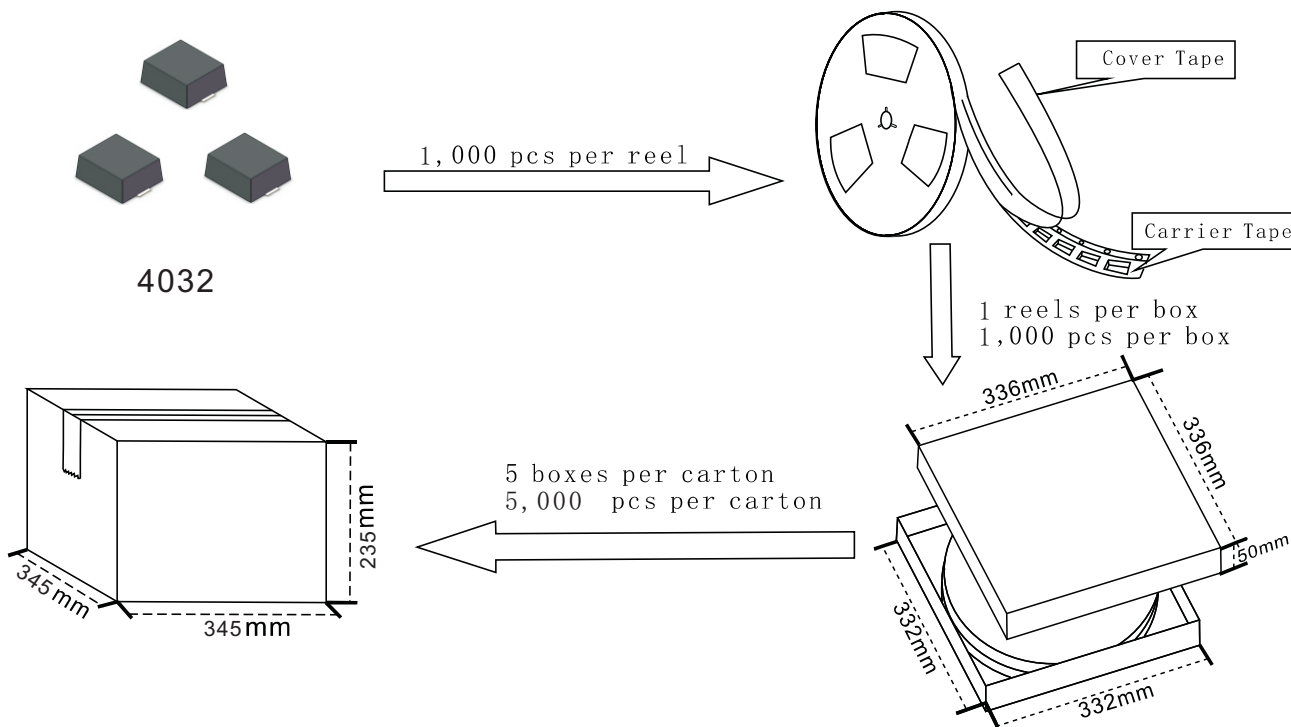
UNIT		A	H <sub>E</sub>	D	E	e	L	C
mm	max	4.4	11	10	8.7	2.7	1.15	0.15 (ref)
	min	3.8	10.6	9.6	8.3	2.3	0.85	
mil	max	173	433	394	343	106	45	9.8 (ref)
	min	150	417	378	302	90.5	33	

The recommended mounting pad size

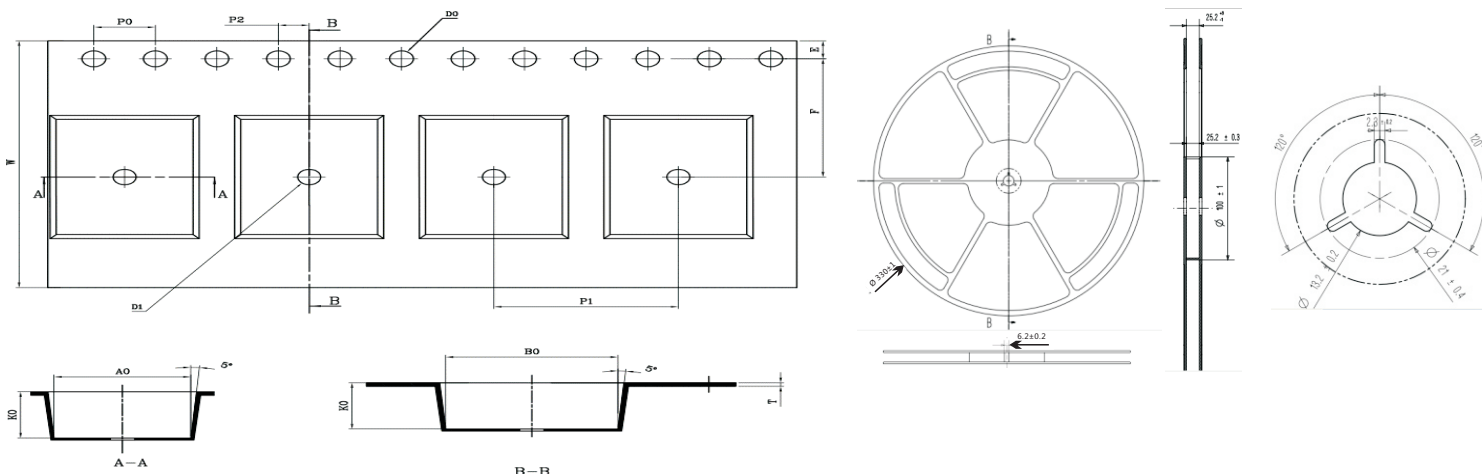




1. The method of packaging and dimension are shown as below figure. (Dimension in mm)



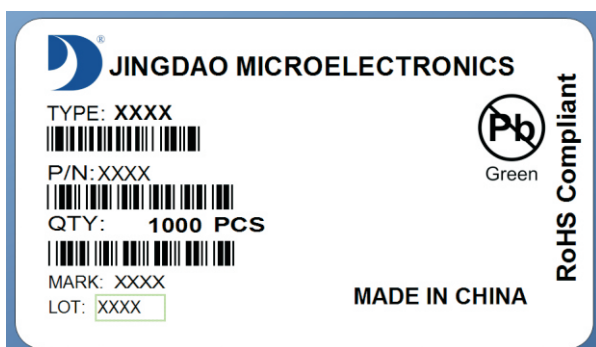
## 2. Tape and reel data (Units: mm)



W	E	F	D0	D1	P0	P1	P2	A0	B0	K0	T	10P0
24.0±0.1	1.75±0.10	11.5±0.10	1.50 <sup>+0.10/-0</sup>	1.50 <sup>+0.1/-0</sup>	4.0±0.1	12.0±0.1	2.0±0.1	8.90±0.1	11.20±0.1	4.50±0.1	0.35±0.05	40.0±0.2

## 3. Label

3.1 The information of inner box label must be listed: (Description of a sample label)



TYPE : Part number  
P/N: Customer part number  
QTY: Total quantity  
MARK: Marking code  
LOT-D/C: Lot number - Date code

3.2 The information of carton label must be listed

3.2.1 TYPE  
3 2 2 QTY

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