ShenZhen HuaXingAn Electronics CO.,LTD

SPECIFICATTON FOR APPROVAL

CUSTOMER NAME: _____

PRODUCT NAME: SMD Varistor

HuaXingAn P/N : 4032Kxx1

Date : 2025-8-14

Customer	Supplier
Manufacturing Department: _____	Manufacturing Department: Lui Zhi Wei
Quality Assurance Department:_____	Quality Assurance Department:Wei Yu
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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

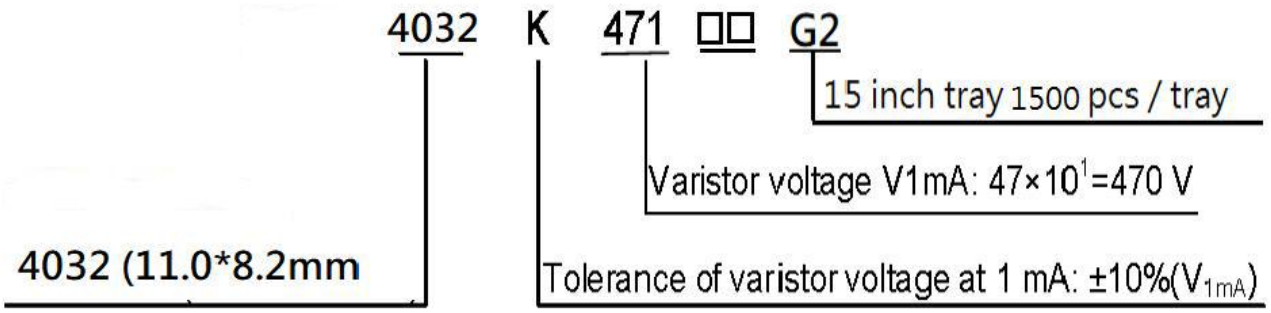
Applications

- 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

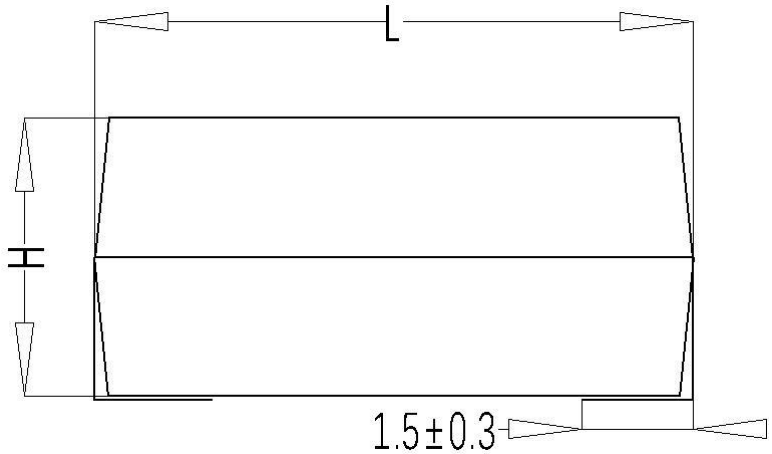
Type code Designation

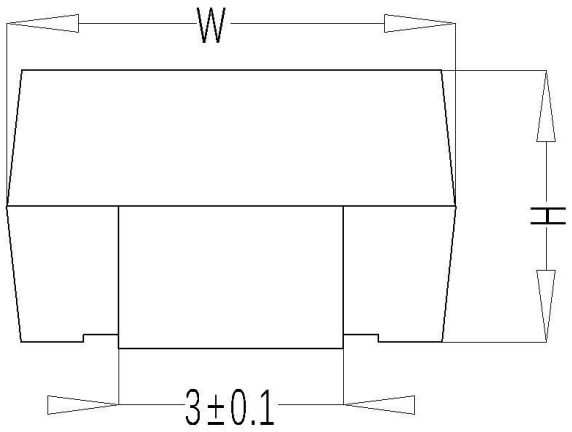


General parameters

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

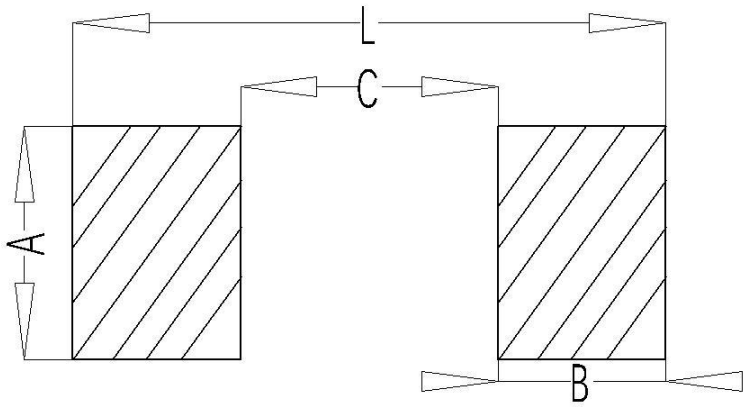
Structure and Size





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

Welding Size



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

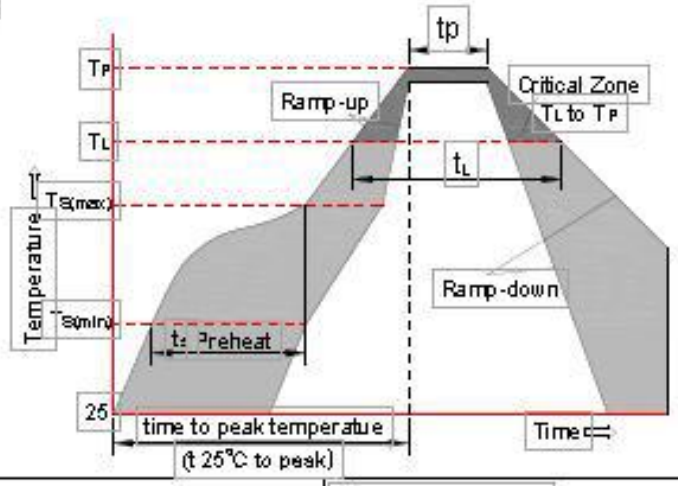
Electrical Characteristics (Standard)

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

Electrical Characteristics (High energy)

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

- 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

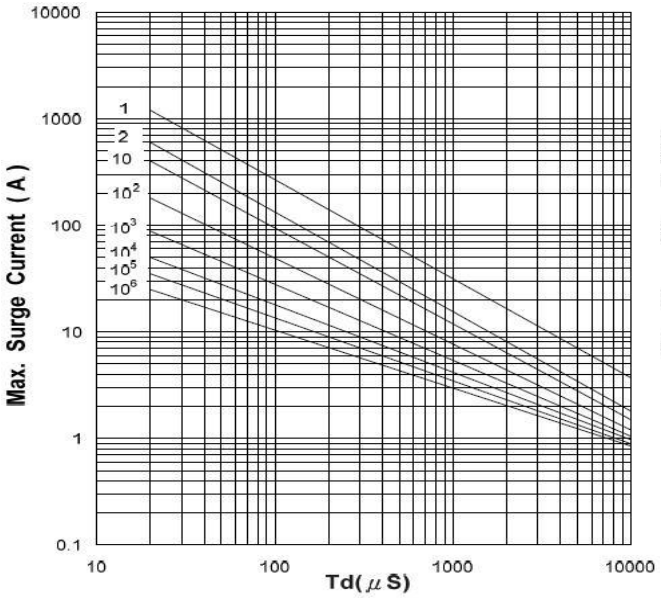
Maximum number of reflow cycles: 3

STORAGE CONDITION

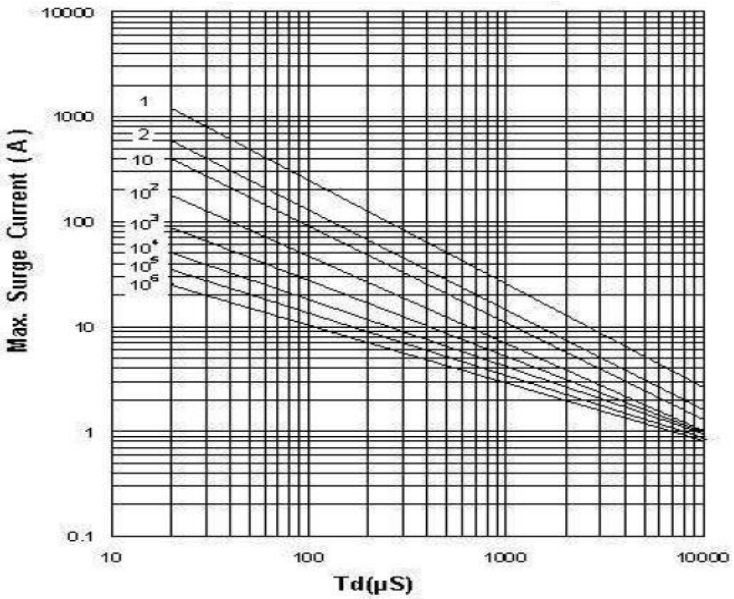
- As far as possible, the components should be employed within 24 months after delivery from Kangtai Semiconductor.
- They should be left in their original packing to avoid soldering problems due to oxidized contacts.
- Storage temperature: – 25 up to + 45°C.
- Relative humidity: < 75 % annual average,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

V/I CHARACTERISTICS V-I

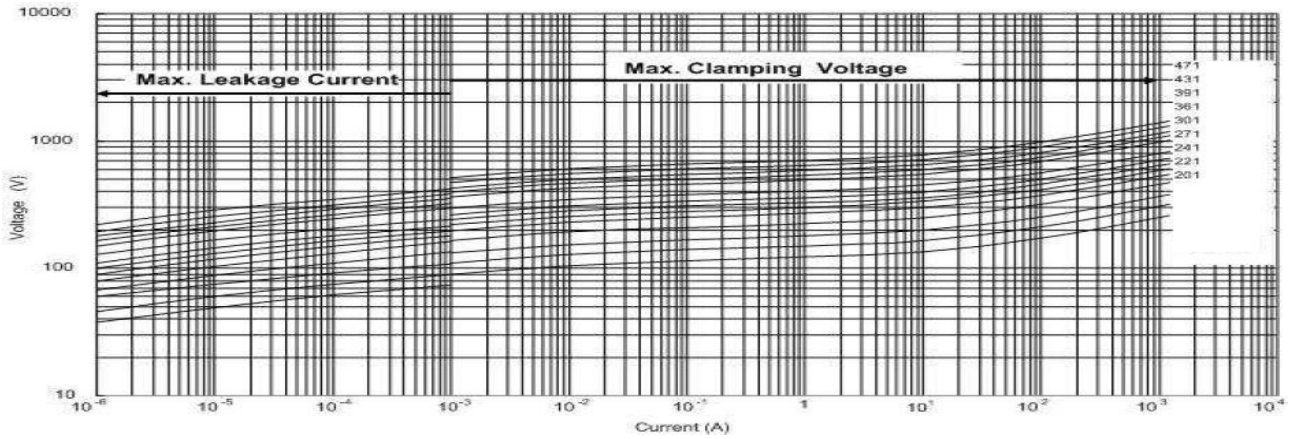
4032K201 – 4032K471(-H)



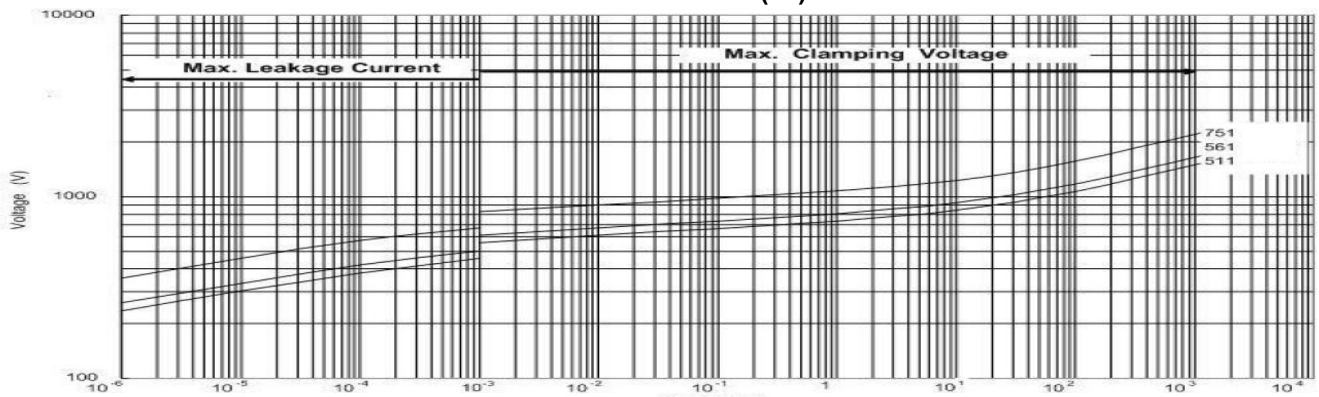
4032K511 – 4032K681(-H)



4032K201 – 4032K471(-H)

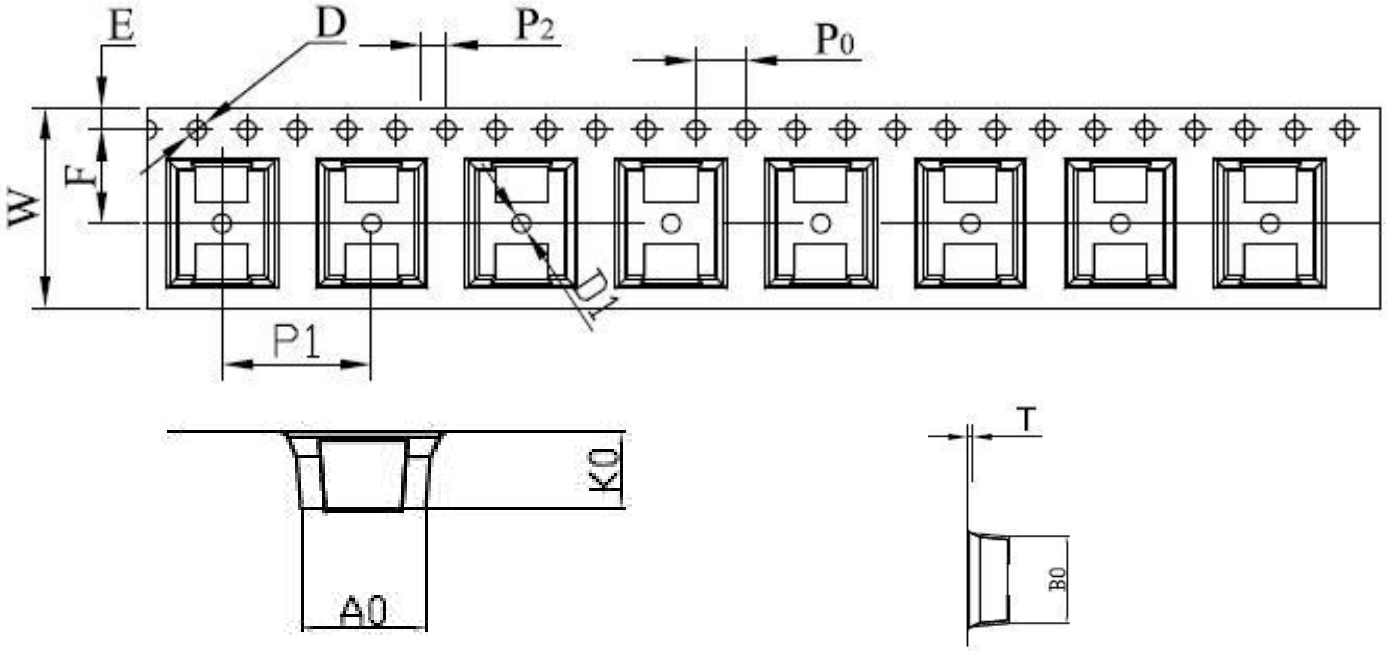


4032K511 – 4032K681(-H)

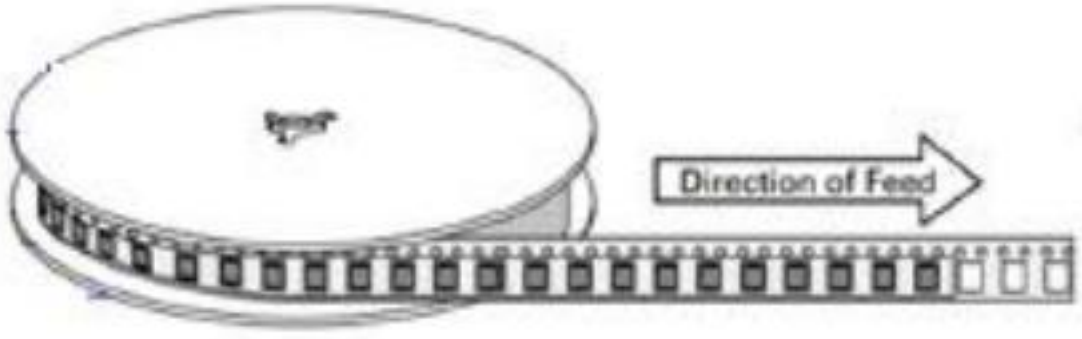


Packing

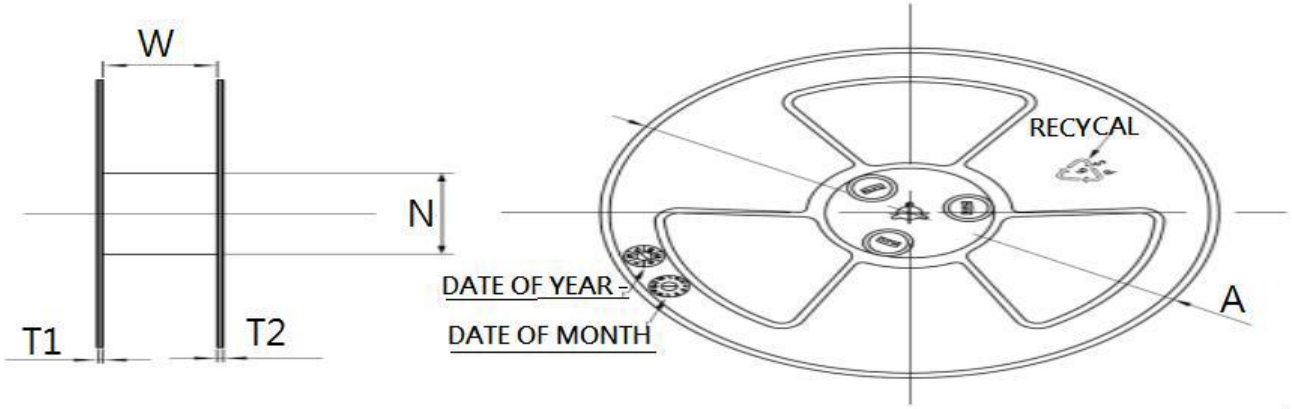
Tape packing method description 16mm tape size



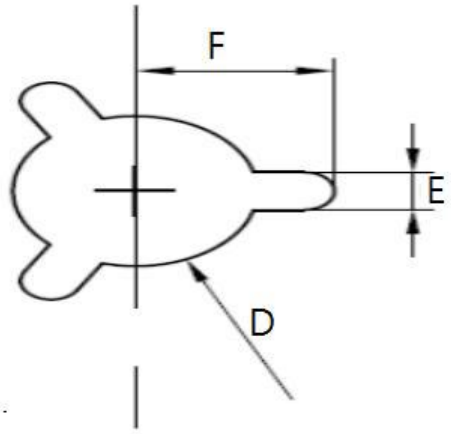
symbol	AO	BO	KO	PO	P1	P2	长度/盘
Spec	8.50±0.1	11.50±0.1	5.30±0.1	4.00±0.10	12.0±0.10	2.00±0.10	18300mm
symbol	W	T	E	F	DO	D1	元件/盘
Spec	24.0±0.3	0.40±0.05	1.75±0.10	11.50±0.1	$1.50^{+0.1}_{-0}$	1.50±0.10	1500 pcs



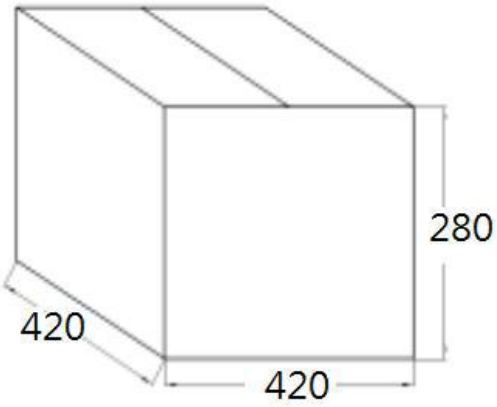
15 inch rubber disc size



SPEC	24.0
E±0.5	2.3
F±0.5	10.75
W±0.5	24.4
T1±0.3	2.2
T2±0.3	2.2
A +0-2	Ø 380
N ±3.0	Ø 100
D ±0.3	13.3



Packing carton



1500pcs*10

15000pcs