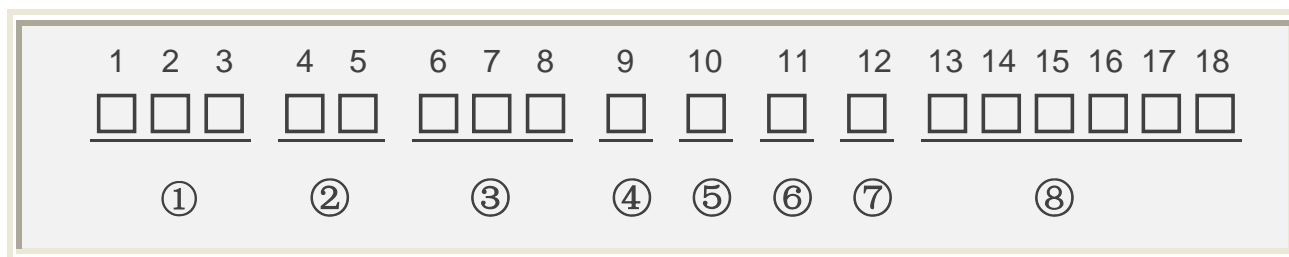


2 Part number system

For example:



① Series code(Digit 1 to 3)

Series	CH11	CL11	CBB11	CBB13	CBB81	CBB81B	WDQB	WDQC	PSR	CL20T	CL21	CL21X
Code	W10	W11	W12	W13	W14	W15	W16	W17	W18	W20	W21	W22
Series	CL21B	CL23B	CL25	CL20A	CBB20T	CBB21	CBB21B	CBB20A	MKP2 5	CBB22	RCS	X2(E)
Code	W23	W24	W25	W26	W30	W31	W32	W33	W35	W36	W40	W41
Series	X2	Y2	X1	X1/440V	X1/760V	CL21B(E)	CBB21B (E)	CBB21(E)	CLN51	CBS52	CBB60	CBB61
Code	W42	W43	W44	W45	W46	W47	W48	W49	W51	W52	W60	W61
Series	CBB65	CBB71	CBB72	MMKP82	MMKP84	CLN21	C92	CBB13B	CBB62	RCP	CBB28	CL21 (E)
Code	W65	W71	W72	W82	W84	W91	W92	W19	W62	W39	W28	W50
Series	CBB22 (E)											
Code	W53											

② Rated Voltage(Digit 4-5) (Remark : number and then letter indicate DC, letter and then number indicate AC)

	A	B	C	D	E	F	G	H	J	K	L	M	N
1			16V	20V	25V			50V	63V	80V			
2	100V	125V	160V	200V	250V		400V	500V	630V	800V		120V	
3	1000V	1250V	1600V	2000V	2500V	3000V	4000V					1200V	
	P	Q	R	S	T	U	V	W	X	Y			
1	240V	300V	330V	440V	540V	600V							

2	275V	305V	350V	450V	550V								
3	280V	310V											

③ Rated capacitance value(Digit 6 to 8)

According to JIS

101=10x10¹ pF=0.1nF 102=10x10² pF=1.0nF = 0.001uF 103=10x10³ pF=10nF=0.01uF
 104=10x10⁴ pF=100nF=0.1uF 105=10x10⁵ pF=1000nF=1uF 106=10x10⁶ pF=10000nF=10uF
 107 =100uF 108 =1000uF 109 =10000uF

④ Capacitance tolerance (Digit 9)

Tolerance	± 1%	± 2%	± 3%	± 5%	±10%	±15%	± 20%	0~+10%	0~-10%		
Code	F	G	H	J	K	L	M	T	P		

⑤ Pitch/ Length of Axial products (Digit 10)

Pitch	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	10.0	12.5	15.0	20.0
Code	A	B	C	D	E	F	G	H	J	K	L	M	N
Pitch	22.0	22.5	25.0	27.0	27.5	30.0	31.0	32	37	26	8		
Code	P	Q	R	S	T	U	V	W	X	Y	1		
Pitch	15	19	21	27	32	37	42	46	24	50	56		
Code	1	2	3	4	5	6	7	8	9	A	B		

*When the products are axial products, it stands for the length of the products

⑥ Lead (Digit 11)

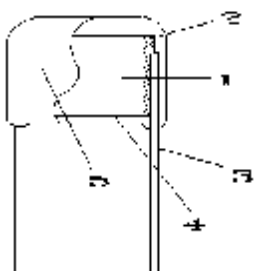
Lead	CP 0.5	CP 0.6	CP 0.7	CP 0.8	CU 1.0	CU 0.8						
code	5	6	7	8	1	9						

⑦ Package type and code of Lead Configuration(Digit 12)

Code	Description
S	Straight lead , Cut lead
K	Bent lead
T	Taping package

⑧ Internal use (Digit 13 ~ 18)

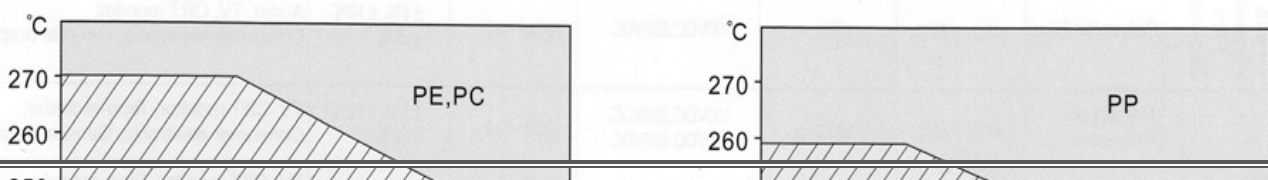
2 Features

Product name	Metalized Polyester Film Capacitor	
Reference Standard	GB/T 2693 (IEC 60384-1) GB/T 7332 (IEC 60384-2)	
Construction		<ol style="list-style-type: none">1. Metalized polyester film2. Metal spray layer3. lead4. Flame retardant Epoxy resin5. Flame retardant Plastic casing
Atmospheric conditions IEC 68-1	Standard atmospheric conditions (IEC 68-1-5.3) Temperature : 15°C ~ 35°C Humidity : 25% ~ 75% Atmospheric pressure : 86KPa ~ 106KPa	Base condition (IEC 68-1-5.1) Temperature : 20°C Atmospheric pressure : 101.3KPa
Technology Specifications	Climatic category : 55/85/21 Upper temperature : 105°C Operating Temperature Range : -55°C ~ 105°C (+85°C to +105°C: decreasing factor 1.25% per °C for Vr (DC)) Rated Voltage : 63V、100V、250V、400V Capacitance Range : 0.001μF~1.0μF Capacitance Tolerance : ±5% (J) ; ±10% (K) Voltage Proof : 100VDC (5s) Dissipation Factor : ≤1.0% (20°C , 1KHz) Insulation Resistance : $U_R \leq 100V \quad \geq 15000M\Omega$; $C_R \leq 0.33\mu F$ $\geq 5000S$; $C_R > 0.33\mu F \quad (20^\circ C , 10V, 1min)$ $U_R > 100V \quad \geq 15000M\Omega$; $C_R \leq 0.33\mu F$ $\geq 5000S$; $C_R > 0.33\mu F \quad (20^\circ C , 100V, 1min)$	

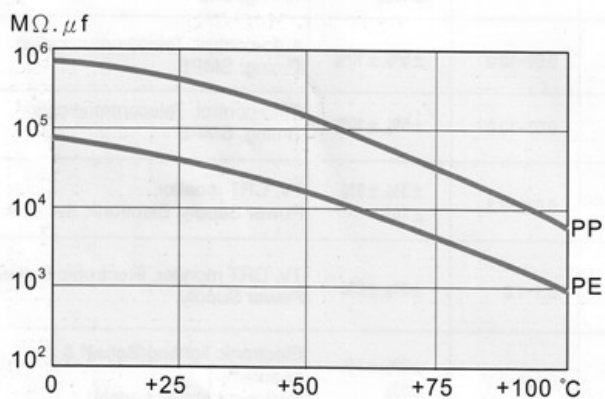
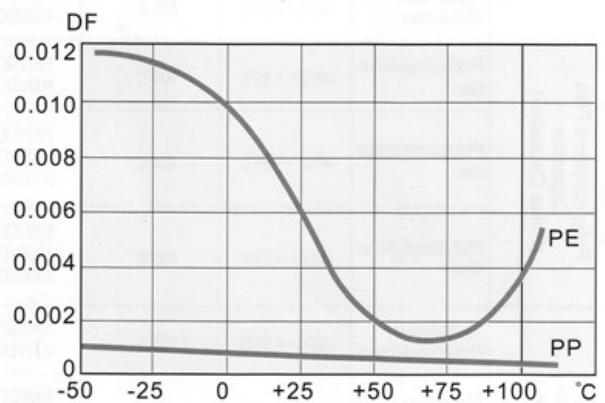
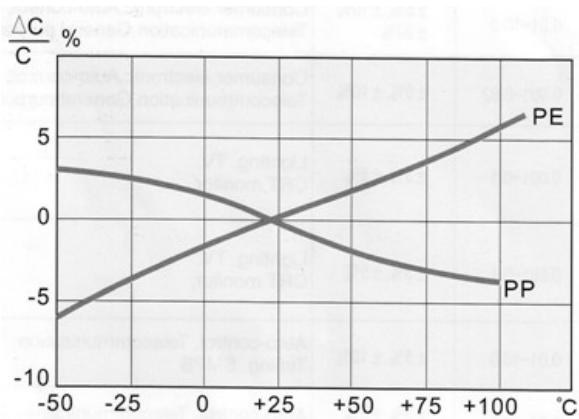
Terminal Strength IEC 68-2-21	Tension	Dia. (mm)	Tension	Bend	Dia. (mm)	Load
		0.3 < d ≤ 0.5	5N		0.3 < d ≤ 0.5	2.5N
		0.5 < d ≤ 0.8	10N		0.5 < d ≤ 0.8	5N
		0.8 < d ≤ 1.25	20N		0.8 < d ≤ 1.25	10N
Time duration : 10±1second Bending for twice in two direction After above test, no visible damage.						
Solder ability IEC 68-2-20	Soldering temperature : 235°C±5°C Immersion duration : 2.0s±0.5s Good Tinning					
Soldering heat IEC 68-2-20	Soldering temperature : 260°C±5°C Immersion duration : 10s±1s Dip depth from the mounting surface 2+0/-0.5mm, using the thickness of 1.5mm ± 0.5mm insulation shielding plate Capacitance change : Δ C/C : ≤ ± 2% DF change : Δtan δ : ≤ 0.3% at 1 KHZ					
Temperature Cycling IEC 68-2-14	Temperature: θ A = -55°C ; θ B = +105°C Time duration : 30min ; Cycle times : 5 times ; Capacitance change : Δ C/C : ≤ ±5% of the value before test. DF change : Δtan δ : ≤ 0.3% at 1 KHZ Insulation Resistance : ≥50% of the value before test.					
Vibration IEC 68-2-6	Frequency : 10 ~ 500Hz Direction and Duration: Per direction 2hrs , Total 6hrs ; Amplitude 0.75mm OR acceleration 98m/s ² (Taking the severity of lower) No visible damage and deterioration in appearance					
Bump IEC 68-2-29	Bump times : 4000 times Acceleration : 390m/s ² Pulse duration : 6ms No visible damage and deterioration in appearance					
Climatic Sequence	Dry heat IEC 68-2-2	Temperature : +105°C Duration : 16hs				No breakdown or flashover ; No visible damage and deterioration in appearance and the marking shall be legible
	Damp heat cycle	Test Db, Severity b, the first cycle				
	Cold IEC 68-2-1	Temperature : -55°C duration : 2h				

	<p>Low Air pressure IEC 68-2-13</p>	<p>Temperature : 15°C—35°C Pressure : 8.5KPa Duration : 1h apply UR at the last 1 minute.</p>	<p>Capacitance change : $\Delta C/C : \leq \pm 5\%$ DF change : $\Delta \tan \delta : \leq 0.3\%$ at 1 KHZ . Insulation Resistance: $\geq 50\%$ of the value before test</p>
	<p>Damp heat cycle IEC 68-2-30</p>	<p>Test Db, Severity b, the other cycles, apply UR for 1minute after the test finished.</p>	
<p>Damp Heat Test IEC 68-2-3</p>	<p>Temperature : 40°C $\pm 2^\circ\text{C}$ Humidity : 93 +2/-3 % Duration : 21 days No visible damage and deterioration in appearance and the marking shall be legible Capacitance change : $\Delta C/C : \leq \pm 5\%$ DF Change : $\Delta \tan \delta : \leq 0.5\%$ at 1 KHZ Insulation Resistance: $\geq 50\%$ of the value before test</p>		
<p>Durability</p>	<p>Temperature : +85°C Voltage : 1.25U_R Duration: 1000Hrs No visible damage and deterioration in appearance and the marking shall be legible Capacitance change : $\Delta C/C : \leq \pm 8\%$ DF change : $\Delta \tan \delta : \leq 0.5\%$ at 1 KHZ Insulation Resistance: $\geq 50\%$ of the value before test</p>		
<p>Charge & Discharge</p>	<p>Charging Times : 10000 times Charging Voltage : U_R Charging duration : 0.5s Discharging duration : 0.5s Charging resistance : $220/C_R \Omega$ C_R: rated capacitance (μF) Discharging resistance : $R=10/CR(\Omega)$ or 20Ω(Whichever is greater) CR: rated Capacitance (μF) Capacitance change : $\Delta C/C : \leq \pm 5\%$ DF change : $\Delta \tan \delta : \leq 0.3\%$ at 1 KHZ Insulation Resistance: $\geq 50\%$ of the value before test</p>		

2 Soldering Temperature VS Time



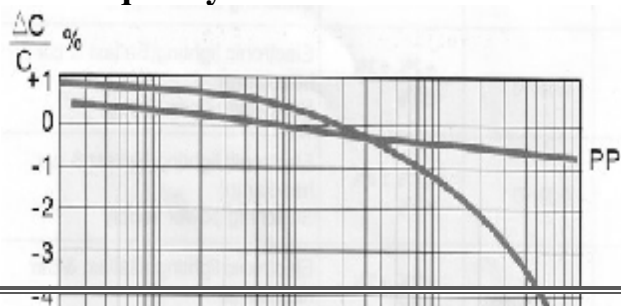
2 Temperature Characteristics

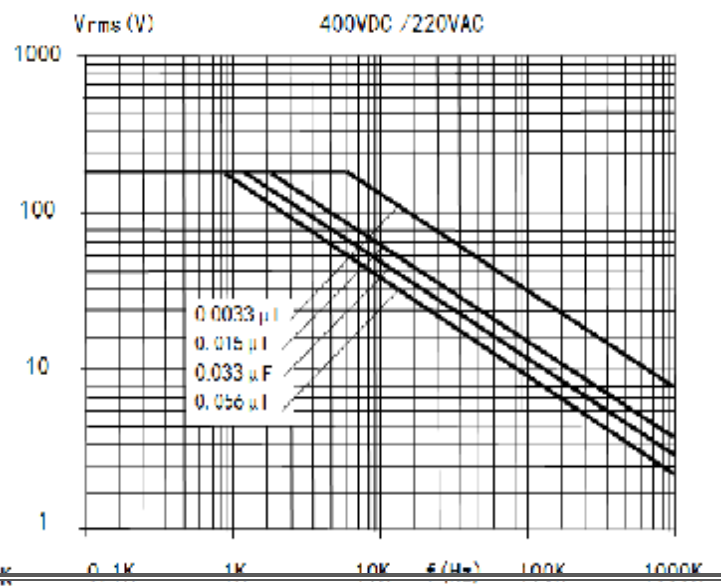
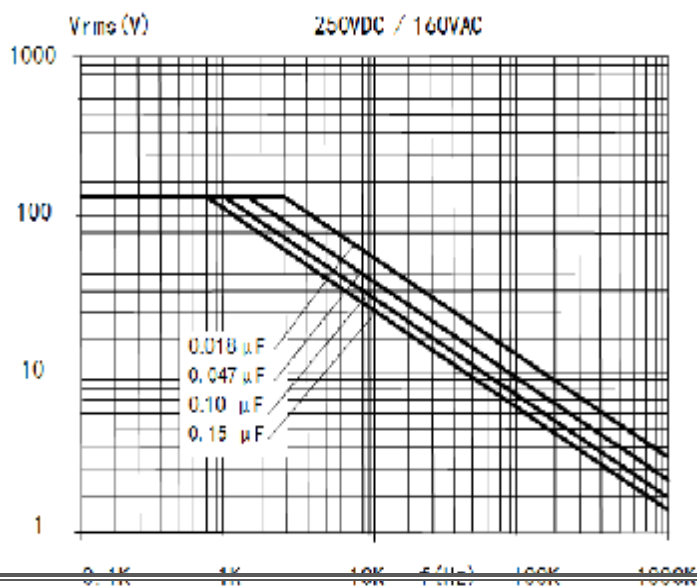
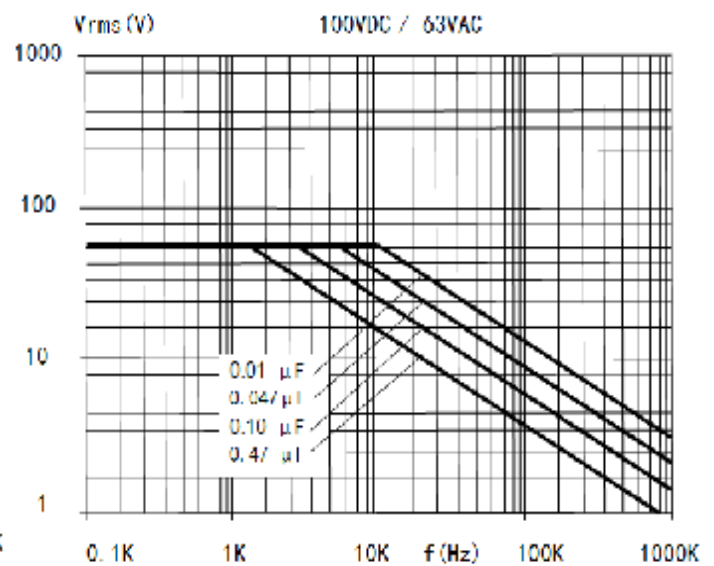
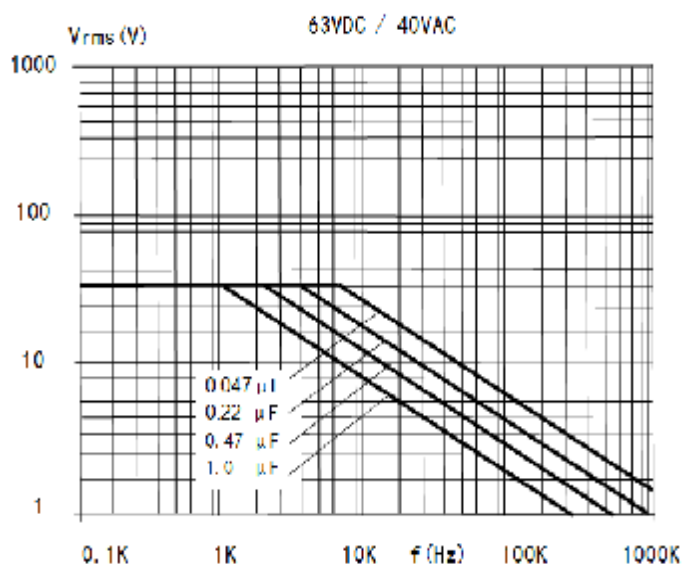


PP: 聚丙烯薄膜 (Polypropylene Film)

PE: 聚酯薄膜 (Polyester Film)

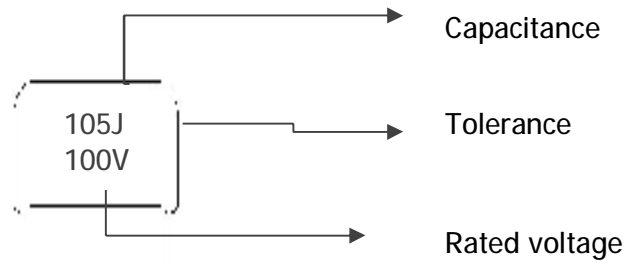
2 Frequency Characteristics





Remark : Sine wave , Environmental temperature $\leq 85^{\circ}\text{C}$

2 标志说明 Marking Specification



2 Taping Drawing & Dimensions

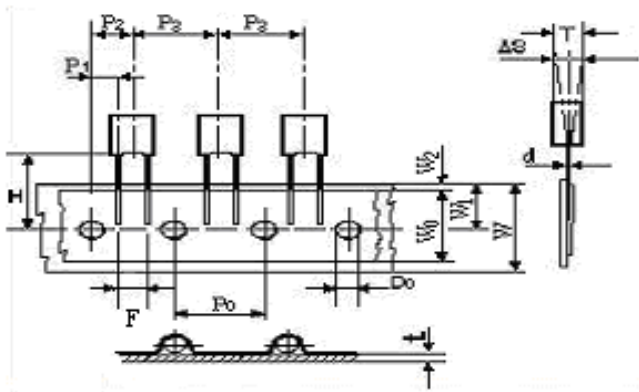


Fig.1

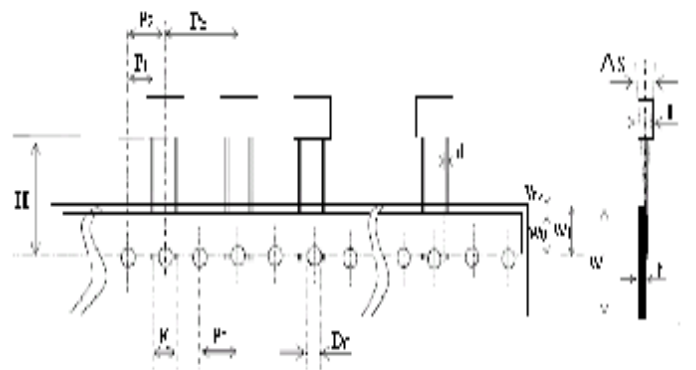
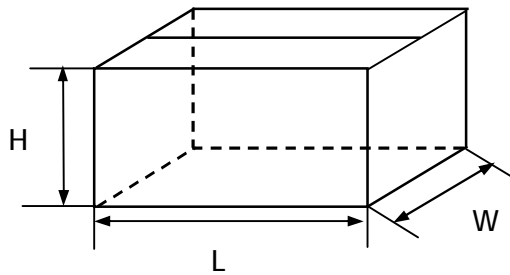


Fig.2

Technique Data	Code	Size (mm)					Technique Data	Code	Size (mm)				
		P=5	P=7.5	P=10	P=15	Tolerance			P=5	P=7.5	P=10	P=15	Tolerance
Taping Type		Fig1	Fig1	Fig2	Fig2		Taping Type		Fig1	Fig1	Fig2	Fig2	
Section distance	P3	12.7	12.7	25.4	25.4	± 1.0	Tape width	W	18.0	18.0	18.0	18.0	± 0.5
Distance between two hole	P0	12.7	12.7	12.7	12.7	± 0.3	Jack position	W1	9.0	9.0	9.0	9.0	± 0.5
Leads position	P1	3.85	2.6	7.7	5.2	± 0.7	Bending height	H0	16	16	16	16	± 0.5
Pitch for forming type	F	5.0	7.5	10.0	15.0	± 0.5	Upper size	H1	39	39	39	39	max
Body position	P2	6.35	6.35	12.7	12.7	± 1.3	Dia. Of the hole	D0	4.0	4.0	4.0	4.0	± 0.3

Product Inclination	ΔS	0	0	0	0	± 0.2	Tape thickness	t	0.7	0.7	0.7	0.7	± 0.2
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2 Carton Size

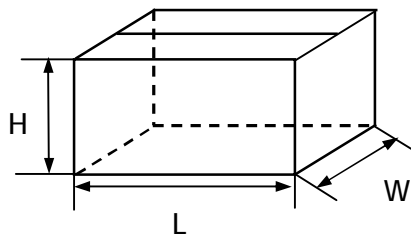


Out packaging box for bulk

L: 480mm

W: 320mm

H: 280mm

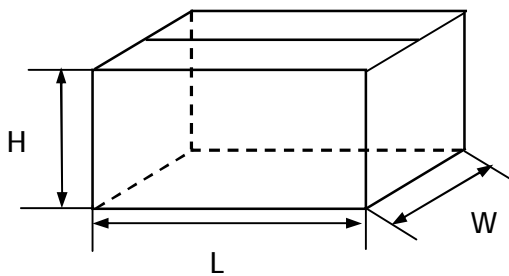


Inner packing box for bulk

L: 280mm

W: 225mm

H: 120mm

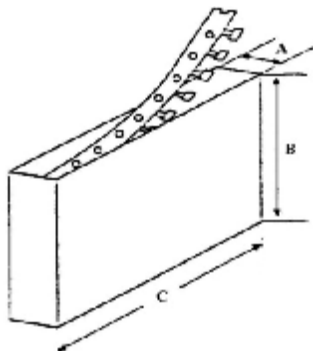


Out packaging box for taping

L: 640mm

W: 360mm

H: 290mm



Inner packing box for taping

A: 50mm

B: 320mm

C: 330mm