

WEIDY[®]

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Metallized polyester film capacitor(dipped)

Datasheet for film capacitor W27

Customer

WEIDY PART NO	Product specification	CUSTOMER'S PART NO.
W272G474JM8L00A0EC	CL21S-400V-474J-P15	

Seller

Approval	
Date	7/18/2022
Ratify	Tao Wentao
Audit	Chen Haiyong
Maker	Li Huayan

Buyer

Approval	
Date	
Ratify	
Title	
Remark	Pls send copy to us after approval

Company information

Company name : Shenzhen Weidy Industrial Development Co.,Ltd
Company Address : 5/F, New Asia Electronic Town, Zhenzhong Rd, Futian, Shenzhen, Guangdong, China.
TEL:0755-82811688 FAX: 0755-82812688 <http://www.weidy.net>
Factory Address : No8,Songyin Rd., Pingshan Community, Tangxia

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③ Rated capacitance value(Digit 6 to 8)

According to JIS

101=10x10 ¹ pF=0.1nF	102=10x10 ² pF=1.0nF= 0.001uF	103=10x10 ³ pF=10nF=0.01uF
104=10x10 ⁴ pF=100nF=0.1uF	105=10x10 ⁵ pF=1000nF=1uF	106=10x10 ⁶ 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						

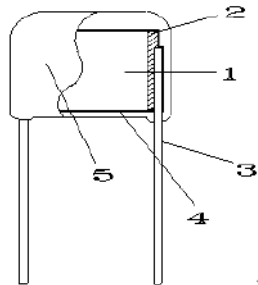
⑦ Package type and code of Lead Configuration(Digit 12)

Code	Remarks
S	Straight leads, lead Cut (L ≤ 8mm)
M	Straight leads, lead Cut (20mm > L > 8mm)
L	Straight leads, lead Cut (L ≥ 20mm)
W	Leads bent into 90 Degree
K	Forming lead(tolerance of lead length ±0.5mm)
Y	Forming lead(tolerance of lead length ±0.3mm)
T	Taping packing

⑧ Internal use (Digit 13 ~ 18)

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✧ Features

Product name	Metallized polyester film capacitor(dipped)					
Reference Standard	GB/T 2693 (IEC 60384-1) GB/T 7332 (IEC 60384-2)					
Construction				<ol style="list-style-type: none"> 1. Metallized polyester film 2. Metal spray 3. Pin wire 4. Internal epoxy resin 5. Flame retardant Epoxy resin coating(UL94V-0) 		
Atmospheric conditions IEC 68-1	Standard atmospheric conditions (IEC 68-1-5.3)		Base condition (IEC 68-1-5.1)			
	Temperature : 15°C ~ 35°C		Temperature : 20°C			
	Humidity : 25% ~ 75%		Atmospheric pressure : 101.3KPa			
	Atmospheric pressure : 86KPa ~ 106KPa					
Technology Specifications	<p>Climatic category : 55/105/21</p> <p>Rated limit temperature : 85°C</p> <p>Operating Temperature Range : -55°C ~ 105°C</p> <p style="text-align: center;">(+85°C to 105°C: decreasing factor 1.25% per °C for V_R(dc))</p> <p>Rated Voltage : 50/63V、100V、250V、400V/450V、630V</p> <p>Capacitance Range : 0.01μF~10.0μF</p> <p>Capacitance Tolerance : ±5% (J) ; ±10% (K)</p> <p>Voltage Proof : 1.6U_R (5s) Voltage Applied Speed : 100V/S; Cut off current : 5mA</p> <p>Dissipation Factor : ≤1.0% (20°C , 1KHz)</p> <p>Insulation Resistance : $U_R \leq 100V \quad \geq 15000M\Omega ; C_R \leq 0.33\mu F$ $\geq 5000S ; C_R > 0.33\mu F \quad (20^\circ C , 10V,1min)$</p> <p style="padding-left: 100px;">$UR > 100V \quad \geq 30000M\Omega ; C_R \leq 0.33\mu F$ $\geq 10000S ; C_R > 0.33\mu F \quad (20^\circ C , 100V,1min)$</p>					
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.					

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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 : $\Delta C/C : \leq \pm 2\%$ DF change : $\tan \delta : \leq 0.3\%$ at 1 KHZ		
Temperature Cycling IEC 68-2-14	Temperature: $\theta A = -55^{\circ}\text{C}$; $\theta B = +105^{\circ}\text{C}$ Time duration : 30min ; Cycle times : 5 次 ; Cycle times Capacitance change : $\Delta C/C : \leq \pm 5\%$ DF change : $\tan \delta : \leq 0.3\%$ at 1 KHZ Insulation Resistance: $\geq 50\%$ 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 : 16h	No breakdown or flashover ; No visible damage and deterioration in appearance and the marking shall be legible Capacitance change : $\Delta C/C : \leq \pm 5\%$ DF change : $\Delta \tan \delta : \leq 0.3\%$ at 1 KHZ . Insulation Resistance : $\geq 50\%$ of the value before test
	Damp heat cycle	Test Db, Severity b, the first cycle	
	Cold IEC 68-2-1	Temperature : -55°C duration : 2h	
	Low Air pressure IEC 68-2-13	Temperature : 15°C—35°C Pressure : 8.5KPa Duration : 1h apply UR at the last 1 minute.	
	Damp heat cycle IEC 68-2-30	Test Db, Severity b, the other cycles, apply UR for 1minute after the test finished.	

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Damp Heat Test
IEC 68-2-3

Temperature : $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$

Humidity : $93 \pm 2/-3 \%$

Duration : 21 days

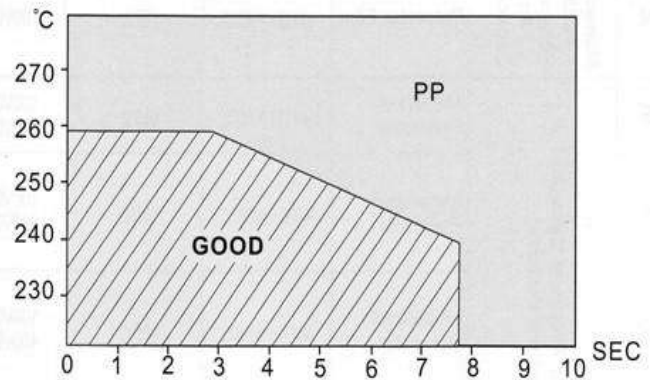
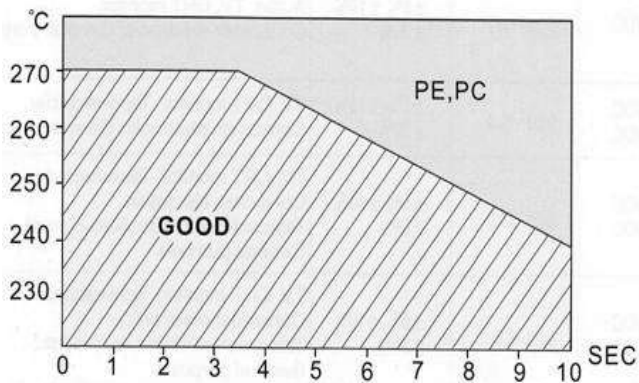
No visible damage and deterioration in appearance and the marking shall be legible

Capacitance change : $\Delta C/C : \leq \pm 5\%$

DF Change : $\tan \delta : \leq 0.5\%$ at 1 KHZ

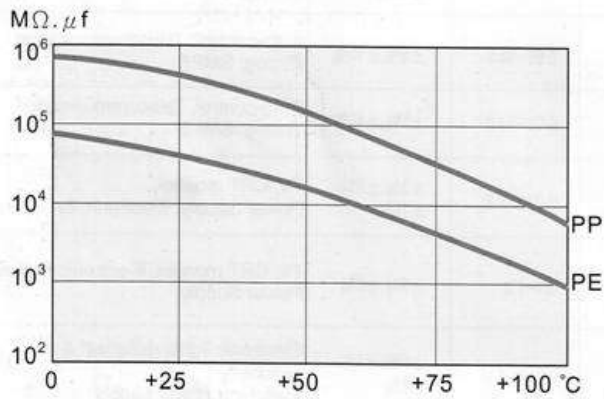
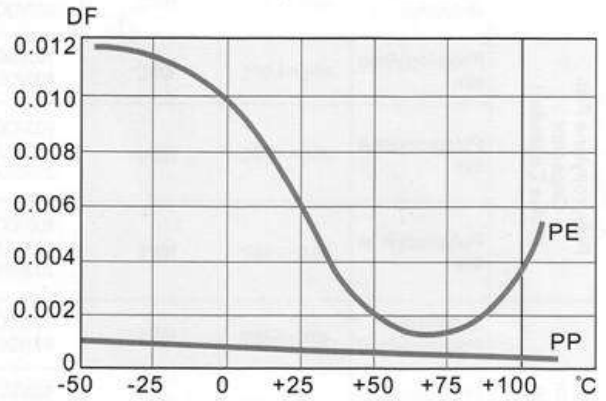
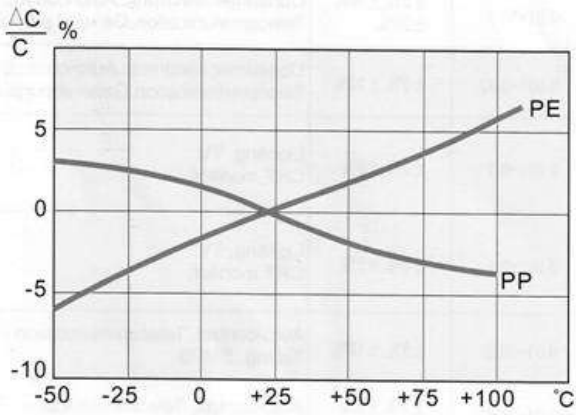
Insulation Resistance: $\geq 50\%$ of the value before test

❖ Soldering Temperature VS Time



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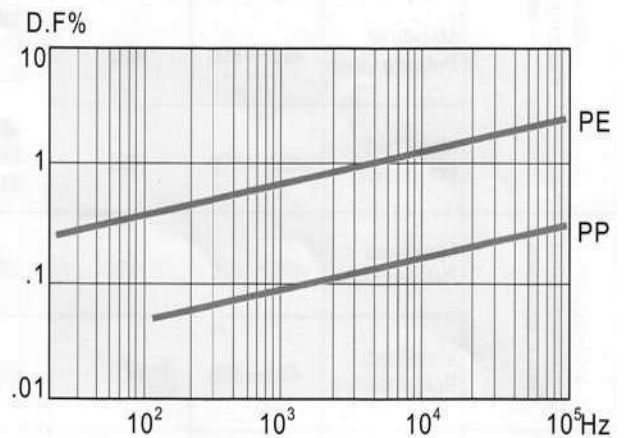
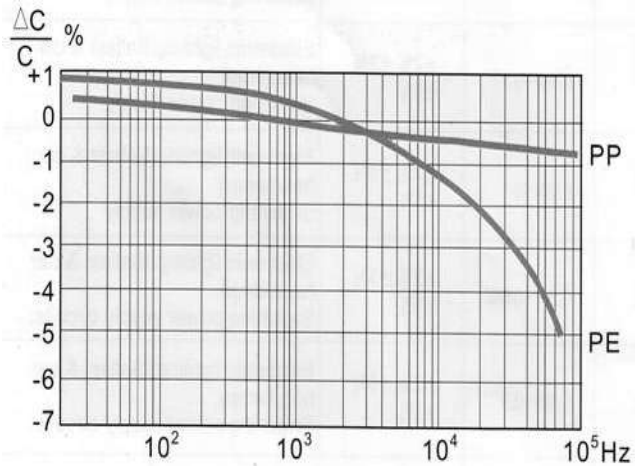
✧ Temperature Characteristics



PP: 聚丙烯薄膜 (Polypropylene Film)

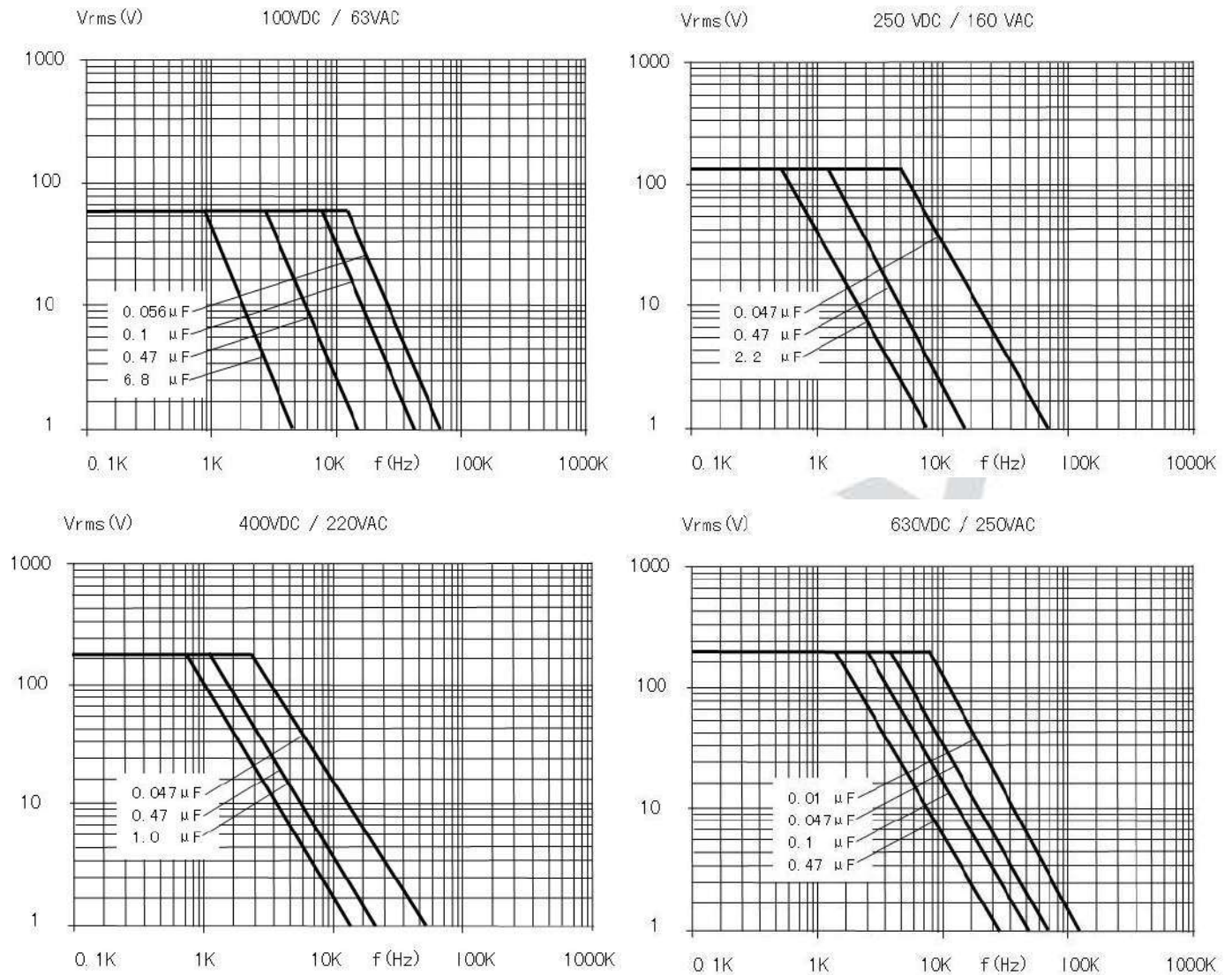
PE: 聚酯薄膜 (Polyester Film)

✧ Frequency Characteristics



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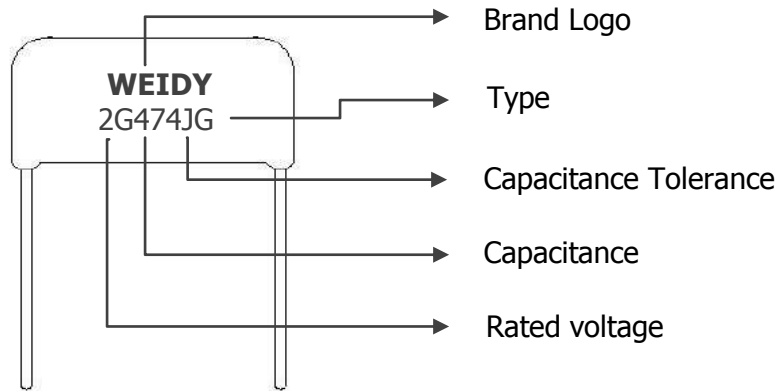
✧ Permissible AC Voltage VS Frequency Curve



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

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◇ Marking Specification



◇ Taping Drawing & Dimensions

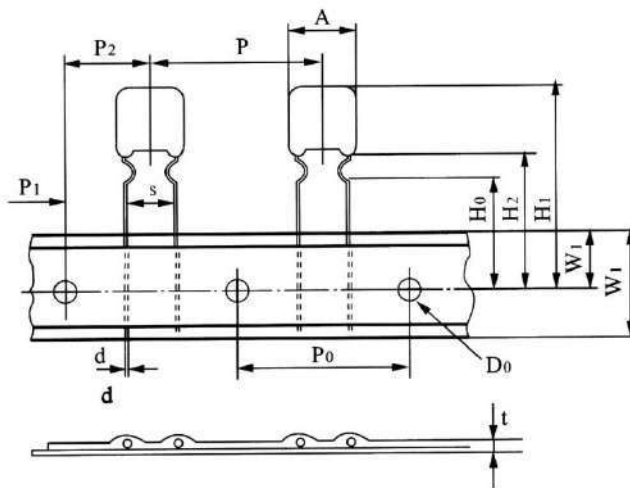


Fig.1

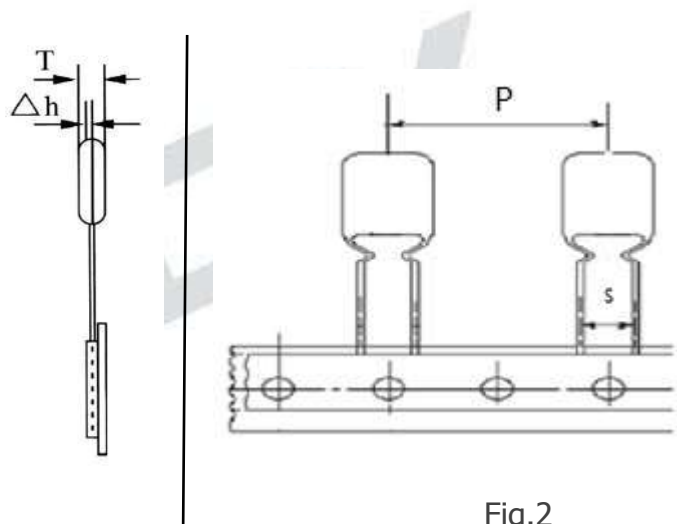


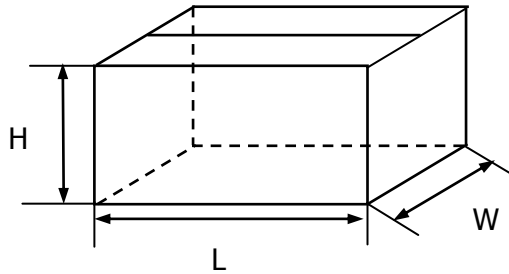
Fig.2

Technique Data	Code	(mm) Size					Technique Data	Code	(mm) Size				
		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	P	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	S	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	Δ h	0	0	0	0	±0.2	Tape thickness	t	0.7	0.7	0.7	0.7	±0.2

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◇ Carton Size

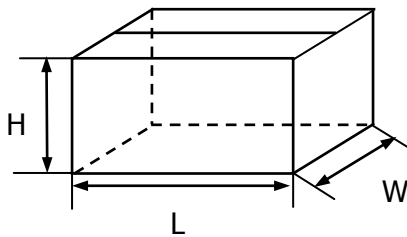


Out packaging box for bulk

L: 480mm

W: 320mm

H: 280mm

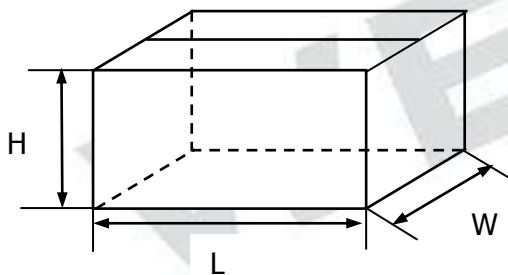


Inner packing box for bulk

L: 280mm

W: 225mm

H: 120mm

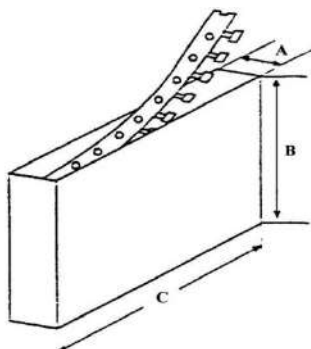


Out packaging box for taping

L: 640mm

W: 360mm

H: 290mm



Inner packing box for taping

A: 50mm

B: 320mm

C: 330mm