



# 久亦電子有限公司

JOEY ELECTRONICS CO., LTD.

## 塑膠薄膜電容器規格承認書

SPECIFICATION OF PLASTIC FILM CAPACITOR FOR APPROVAL

立创商城

客 戶 名 稱 : 深 圳 市 立 创 电 子 商 务 有 限 公 司  
( Customer )  
項 目 : MPP 系 列  
( Item )  
客 戶 料 號 :  
( Customer Part No )  
久 亦 料 號 :  
( Joey Parts No )  
送 樣 日 期 :  
( Date )  
備 注 :  
( Remark )

CUSTOMER APPROVAL 廠商認可

請確認後簽回，若不簽回，視同默認。

PLEASE SIGNATURE AFTER CHECKING, NO SIGNATURE IS EQUAL PRETERMIT.

承認章 ( Approved By )

承認章 ( Approved By )

廣東省東莞市企石鎮舊圍村東湖路1號2號樓201室

Room 201, Building 2, No. 1, Donghu Road, Jiuwei Village, Qishi Town, Dongguan, Guangdong

TEL : 0769 - 83729966 FAX : 0769 - 83729969



Unit : mm

立創編號	久亦料號	規格	W	H	T	dØ	P	FIG	備注
			max	max	max	±0.05		1	
C4355314	MPP102K2J3AA320MA1	MPP102K630V	11	10	6	0.6	7.5	1	7.5AA7.5
C18185850	MPP103G2G3ES5031A1	MPP103G400V	11	9	6	0.6	5	2	7.5ES5
C18185851	MPP103G2G2KS2028A1	MPP103G400V	7.5	8	5	0.5	5	4	5KS5
C4355315	MPP103J3A4AA420MA1	MPP103J1000V	13	11	8	0.6	10	1	10AA10
C4355316	MPP103J2G3AA320MA1	MPP103J400V	11	8	5	0.6	7.5	1	7.5AA7.5
C4355318	MPP103J2J3AA320MA1	MPP103J630V	10	9	6	0.6	7.5	1	7.5AA7.5
C18185852	MPP103K2G3KS3050A1	MPP103K400V	10	8	5	0.6	5	4	7.5KS7.5
C4355320	MPP103K2G2AA220MA1	MPP103K400V	8	7.5	5	0.5	5	1	5AA5
C18185853	MPP103K2J4KS4050A1	MPP103K630V	12.5	10	7.5	0.6	10	4	10KS10
C18185854	MPP104J3V8AA820MA1	MPP104J1600V	23	16.5	9.5	0.8	20	1	20AA20
C4355321	MPP104J2G4AA420MA1	MPP104J400V	13	12	7	0.6	10	1	10AA10
C4355322	MPP104J2G3AA320MA1	MPP104J400V	10	10.5	7.5	0.6	7.5	1	7.5AA7.5
C18185855	MPP104J2L4KS4050A1	MPP104J450V	12.5	10.5	5.5	0.6	10	4	10KS10
C18185856	MPP104J2L3KS3035A1	MPP104J450V	9.5	10.5	5	0.6	7.5	4	7.5KS7.5
C18185857	MPP104J2J4AS4035A1	MPP104J630V	12.5	12	6	0.6	10	1	10AS10
C18185858	MPP104J2J6AS6080A1	MPP104J630V	18	13	8	0.8	15	1	15AS15
C4355323	MPP104J2J4AA420MA1	MPP104J630V	13	11	8	0.6	10	1	10AA10
C4355324	MPP104J2J6AA620MA1	MPP104J630V	18	12	8	0.6	15	1	15AA15
C4355325	MPP104J2J8AA820MA1	MPP104J630V	23	14.5	9	0.8	20	1	20AA20
C4355328	MPP104K3A9AA920MA1	MPP104K1000V	25	20	8.5	0.8	22.5	1	22.5AA22.5
C4355329	MPP104K3A8AA820MA1	MPP104K1000V	23	16	11	0.8	20	1	20AA20
C18185859	MPP104K3B9AA920MA1	MPP104K1200V	25	15	10	0.8	22.5	1	22.5AA22.5
C18185860	MPP104KAM4ES3035A1	MPP104K125VAC	13	11	7	0.6	7.5	2	10ES7.5
C18185861	MPP104KA66AS6073A1	MPP104K250VAC	17.5	11.5	6.5	0.8	15	1	15AS15
C18185862	MPP104K2G4AS4035A1	MPP104K400V	13	11	7.5	0.6	10	1	10AS10

C4355330	MPP104K2L4AA420MA1	MPP104K450V	13	13	7	0.6	10	1	10AA10
C4355331	MPP104K2L6AA620MA1	MPP104K450V	18	12	6	0.8	15	1	15AA15
C4355332	MPP104K2L6AA620MA2	MPP104K450V	18	10	6.5	0.6	15	1	15AA15
C4355334	MPP104K2J8AA820MA1	MPP104K630V	23	16	9	0.8	20	1	20AA20
C18185863	MPP105J3ADAAD20MA1	MPP105J1000V	37	35.5	28.5	1	32.5	1	32.5AA32.5
C18185864	MPP105J2E8AS8050A1	MPP105J250V	23	13	8	0.6	20	1	20AS20
C18185865	MPP105J2L4KS4050A1	MPP105J450V	17.5	11	8	0.8	10	4	15KS15
C18185866	MPP105K2E8KS8050A1	MPP105K250V	24	21	11	0.8	20	4	20KS20
C18185867	MPP105K2G8KS8035A1	MPP105K400V	25	19	11	0.8	20	4	20KS20
C4355336	MPP105K2L6AA620MA2	MPP105K450V	17.5	16	8.5	0.6	15	1	15AA15
C18185868	MPP123G2G2KS2028A1	MPP123G400V	7.5	8	3.8	0.5	5	4	5KS5
C18185870	MPP153G2G2YS2028A1	MPP153G400V	9.5	9	5	0.5	5		5YS5
C18185871	MPP153G2G3ES2031A1	MPP153G400V	11	9	6	0.6	5	2	7.5ES5
C4355341	MPP153K3A4AA420MA1	MPP153K1000V	13	9	6	0.6	10	1	10AA10
C4355342	MPP153K2G4AA420MA1	MPP153K400V	12.5	9	6	0.6	10	1	10AA10
C4355343	MPP153K2G3AA320MA1	MPP153K400V	11	9	5	0.6	7.5	1	7.5AA7.5
C18185872	MPP154J2G4AS4035A1	MPP154J400V	12.5	11.5	6	0.6	10	1	10AS10
C4355345	MPP154KA14AA420MA1	MPP154K300VAC	13	11	8	0.6	10	1	10AA10
C18185873	MPP154K2L3AS3035A1	MPP154K450V	10.5	9	6	0.6	7.5	1	7.5AS7.5
C18185874	MPP163G2J3ES2027A1	MPP163G630V	9.5	10	5	0.6	5	2	7.5ES5
C18185875	MPP163J2J3ES2027A1	MPP163J630V	9.5	10	5	0.6	5	2	7.5ES5
C4355346	MPP184J2E4AA420MA1	MPP184J250V	12.5	11	6.5	0.6	10	1	10AA10
C4355347	MPP184K2E8AA820MA1	MPP184K250V	24.5	10	8	0.8	20	1	20AA20
C18185876	MPP222K2G4AS4045A1	MPP222K400V	14	9	6	0.6	10	1	10AS10
C18185877	MPP223J3A7KA720MA1	MPP223J1000V	23	17	9.5	0.6	17.5	4	18KA17.5
C4355349	MPP223J3A6AA620MA1	MPP223J1000V	17	10	7	0.6	15	1	15AA15
C18185878	MPP223J2G4AS4080A1	MPP223J400V	13	9	6	0.6	10	1	10AS10
C4355350	MPP223J2G3AA320MA1	MPP223J400V	11	9	6	0.6	7.5	1	7.5AA7.5
C18185879	MPP223J2L3KT3000A1	MPP223J450V	9.5	8.3	4.8	0.6	7.5	8	7.5KT7.5
C4355351	MPP223J2L4AA420MA1	MPP223J450V	12.5	10.5	5.1	0.6	10	1	10AA10
C4355352	MPP223J2J4AA420MA1	MPP223J630V	12.5	10.5	5.1	0.6	10	1	10AA10
C4355353	MPP223J2J6AA620MA1	MPP223J630V	17.5	10.5	6.5	0.6	15	1	15AA15
C4355354	MPP223K2G4AA420MA1	MPP223K400V	13	10	5	0.6	10	1	10AA10
C4355355	MPP223K2G3AA320MA1	MPP223K400V	10.5	8	4.5	0.6	7.5	1	7.5AA7.5
C4355356	MPP223K2J4AA420MA1	MPP223K630V	13	12	7	0.6	10	1	10AA10
C18185880	MPP224J3A9AS9040A1	MPP224J1000V	24	15	9	0.8	22.5	1	22.5AS22.5

C18185881	MPP224J2E6AS610MA1	MPP224J250V	17	9	4.5	0.6	15	1	15AS15
C4355358	MPP224J2G6AA620MA1	MPP224J400V	18.5	13	9	0.8	15	1	15AA15
C18185882	MPP224J2L4KS4050A1	MPP224J450V	12.5	10	6	0.6	10	4	10KS10
C18185883	MPP224J2J6WS7045A1	MPP224J630V	19	21	16	0.8	17.5	5	15WS17.5
C18185884	MPP224J2J8WSB045A1	MPP224J630V	24	19	12	0.8	27.5	5	20WS27.5
C4355359	MPP224K3A8AA820MA1	MPP224K1000V	23	17	13	0.8	20	1	20AA20
C4355360	MPP224K3A6AA620MA1	MPP224K1000V	17.5	11.5	9	0.6	15	1	15AA15
C4355361	MPP224K2A4AA420MA1	MPP224K100V	13	13	9	0.6	10	1	10AA10
C18185885	MPP224KA16AS6025A1	MPP224K300VAC	16.6	10.65	5.9	0.8	15	1	15AS15
C18185886	MPP224K2G2AS2033A1	MPP224K400V	7.5	10.5	6.5	0.5	5	1	5AS5
C18185887	MPP224K2L6AS6035A1	MPP224K450V	17.5	11.5	6.5	0.6	15	1	15AS15
C18185888	MPP225K2E8AS8035A1	MPP225K250V	23	19.5	11.5	0.8	20	1	20AS20
C18185889	MPP273G2G3ES2027A1	MPP273G400V	9.5	8	5	0.6	5	2	7.5ES5
C4355363	MPP274J2G6AA620MA1	MPP274J400V	18	14	8	0.8	15	1	15AA15
C18185890	MPP332G2G2KS2028A1	MPP332G400V	7.5	8.6	4	0.5	5	4	5KS5
C18185891	MPP333G2G3ES2027A1	MPP333G400V	10	10	6	0.6	5	2	7.5ES5
C18185892	MPP333G2J4ES2034A1	MPP333G630V	11.5	9	5	0.6	5	2	10ES5
C4355365	MPP333J3A6AA628MA1	MPP333J1000V	19	12	7	0.8	15	1	15AA15
C18185893	MPP334J2G4KS4040A1	MPP333J400V	13	10	7	0.6	10	4	10KS10
C18185894	MPP333J2L4KS4035A1	MPP333J450V	12.5	9.5	6.5	0.6	10	4	10KS10
C18185895	MPP333J2J6AS6035A1	MPP333J630V	17.5	15	6	0.8	15	1	15AS15
C18185896	MPP333J2J4ES2033A1	MPP333J630V	11.5	10	7	0.6	5	2	10ES5
C18185897	MPP333J2J6AS6034A1	MPP333J630V	17.5	11	8	0.6	15	4	15KS15
C18185898	MPP334K2G3KS3050A1	MPP333K400V	10.5	9	6	0.6	7.5	4	7.5KS7.5
C18185899	MPP334J2L4KS4050A1	MPP334J450V	12.5	10	6	0.6	10	4	10KS10
C18185900	MPP334K3ABASB035A1	MPP334K1000V	31	21	11	0.8	27.5	1	27.5AS27.5
C4355368	MPP334K2A4AA420MA1	MPP334K100V	13	12.5	9	0.6	10	1	10AA10
C4355369	MPP334KA29AA925MA1	MPP334K275VAC	25	16	10	0.8	22.5	1	22.5AA22.5
C18185901	MPP334K2L6AS6035A1	MPP334K450V	17.5	14.5	8	0.6	15	1	15AS15
C18185902	MPP392G2G2AS2027A1	MPP392G400V	7.5	7.5	4	0.5	5	1	5AS5
C4355370	MPP472J2J4AA420MA1	MPP472J630V	13	11	6	0.6	10	1	10AA10
C4355371	MPP472J2J2AA220MA1	MPP472J630V	7.5	8	5	0.5	5	1	5AA5
C18185903	MPP472K2J3KA320MA1	MPP472K630V	10	9	5	0.6	7.5	4	7.5KS7.5
C4355373	MPP473J2L4AA420MA1	MPP473J450V	13	8.5	6	0.6	10	1	10AA10
C4355374	MPP473J2L3AA320MA1	MPP473J450V	10.5	8.5	5	0.6	7.5	1	7.5AA7.5
C18185904	MPP473J2J4AS4035A1	MPP473J630V	12.5	10.5	5.1	0.6	10	1	10AS10

C4355375	MPP473J2J6AA620MA1	MPP473J630V	17.5	9.5	5.5	0.6	15	1	15AA15
C4355376	MPP473K2G4AA420MA1	MPP473K400V	13	11	8	0.6	10	1	10AA10
C4355379	MPP474J2G6AA620MA1	MPP474J400V	18	19	9	0.8	15	1	15AA15
C18185905	MPP474J2L4KS4050A1	MPP474J450V	12.5	11	7	0.6	10	4	10KS10
C4355380	MPP474K2E4AA420MA1	MPP474K250V	12	13.5	8	0.6	10	1	10AA10
C4355381	MPP474KA29AA925MA1	MPP474K275VAC	25	18	12	0.8	22.5	1	22.5AA22.5
C18185906	MPP474K2L6AS6034A1	MPP474K450V	17.5	12	7	0.6	15	1	15AA15
C18185907	MPP682J3A4AS4080A1	MPP682J1000V	13	10	6	0.6	10	1	10AS10
C18185908	MPP682J2A3ES2031A1	MPP682J100V	11	9	6	0.6	5	2	7.5ES5
C18185909	MPP682J2A2KA220MA1	MPP682J100V	8	7.5	3.5	0.5	5	4	5KA5
C18185910	MPP682J1H3ES2027A1	MPP682J50V	11	9	6	0.6	5	2	7.5ES5
C18185911	MPP683J2A2AT2000A1	MPP683J100V	8	10	6	0.5	5	9	5AT5
C4355383	MPP683J2E4AA420MA1	MPP683J250V	13	10	6	0.6	10	1	10AA10
C4355384	MPP683J2L4AA420MA1	MPP683J450V	13	10.5	7	0.6	10	1	10AA10
C4355385	MPP683J2J4AA420MA1	MPP683J630V	13	12	7.5	0.6	10	1	10AA10
C4355386	MPP683J2J6AA620MA1	MPP683J630V	17.5	14	10.5	0.8	15	1	15AS15
C4355387	MPP683J2K8AA825MA1	MPP683J800V	23	17	9.5	0.8	20	1	20AA20
C18185912	MPP683K2G3ET2000A1	MPP683K400V	11	12	8	0.6	5	6	7.5ET5
C4355388	MPP683K2G4AA420MA1	MPP683K400V	12.5	11	6	0.6	10	1	10AA10
C4355390	MPP684J2A4AA420MA1	MPP684J100V	13	14.5	6	0.6	10	1	10AA10
C4355391	MPP684J2G9AA920MA1	MPP684J400V	25	17	9	0.8	22.5	1	22.5AA22.5
C4355392	MPP684J2G6AA620MA1	MPP684J400V	17.5	14	8.5	0.6	15	1	15AA15
C18185913	MPP684J2L4KS4050A1	MPP684J450V	12.5	13	9	0.6	10	4	10KS10
C4355393	MPP684J2J9AA920MA1	MPP684J630V	24.5	18.5	8	0.8	22.5	1	22.5AA22.5
C18185914	MPP824J2G8AS8035A1	MPP824J400V	22.5	19	9.5	0.8	20	1	20AS20

# 產品編碼說明 Part number code system

## 1.各型號電容 Capacitor code of types

①②③		④⑤⑥		⑦	⑧⑨		⑩		⑪⑫		⑬	⑭⑮⑯		
M E F		1 0 5		J	2 E		8		A A		8	2 0 M		
<b>品名 Series</b>		<b>額定容量 Rated Cap.</b>			<b>額定電壓 Rated Voltage</b>		<b>腳距碼 (Pitch)P</b>		<b>腳型碼 Forming lead shapes</b>					
型號 Type	代碼 Code	容量(μf) Cap.	代碼 Code		電壓 Voltage	代碼 Code	腳距 P (mm)	代碼 Code	圖形 Fig.	備註 Note (mm)	代碼 Code			
PEI	PEI	0.0010	102		50 VDC	1H	5	2		L≥20 / P±1	AA			
PEN	PEN	0.0011	112		63 VDC	1J	7.5	3		L±1 / P±1	AS			
MEF	MEF	0.0012	122		100 VDC	2A	10	4		L≥20 / P±1	KA			
MET	MET		...		200 VDC	2D	12.5	5		L±1 / P±1	KS			
MEA	MEA	0.010	103		250 VDC	2E	15	6		L≥20 / P1±1	EA			
MEB	MEB	0.011	113		400 VDC	2G	20	8		L±1 / P±1	ES			
PPN	PPN	0.012	123		450 VDC	2L	22.5	9		L≥20 / P1±1	WA			
MPP	MPP		...		500 VDC	2H	25	A		L±1 / P±1	WS			
MPT	MPT	0.100	104		520VDC	2B	27.5	B		L≥20 / P1±1	NA			
MPA	MPA	0.110	114		630 VDC	2J	32.5	D		L±1 / P±1	NS			
MPB	MPB		...		800 VDC	2K	35	E		P+0.8~-0.2	AT			
X1	XX1	1.0	105		1000 VDC	3A	37.5	F		P+0.8~-0.2	KT			
X2	XX2		...		1200 VDC	3B	42.5	H		P+0.8~-0.2	ET			
MinBox	MIB				1250 VDC	3M	3	P		P+0.8~-0.2	ET			
MES	MES				1500 VDC	3C	4	Q		P+0.8~-0.2	ET			
MPS	MPS				1600 VDC	3V	6	S		P+0.8~-0.2	ET			
KPS	KPS				1800 VDC	3W	7	R		Axial(L≥28)	LA			
MPH	MPH				2000 VDC	3D	8	W		Axial軟導線	LX			
MHS	MHS				2500 VDC	3E	16	X						
KHS	KHS				3000 VDC	3F	21	Y						
KES	KES				300 VAC	A1	31.5	Z						
PPS	PPS				275 VAC	A2	43.5	V						
2PS	2PS				100 VAC	A3	橫軸 Axial	0						
3PS	3PS				160 VAC	A4								
4PS	4PS				200 VAC	A5								
5PS	5PS				250 VAC	A6								
6PS	6PS				450 VAC	A7								
VPF	VPF				310VAC	AE								
VPB	VPB				330VAC	A9								

容差碼 Cap.Tolerance	
F	±1%
G	±2%
H	±3%
J	±5%
K	±10%
M	±20%

腳長(mm)	代碼
3.2	032
直腳(L≥20)	20M
編帶(TAP)	000

第⑩碼⑬碼為腳距碼  
 第⑩碼為原始腳距碼  
 第⑬碼為整形後腳距碼

一. SCOPE: THIS SPECIFICATION APPLIED TO CAPACITOR FOR TYPE "MPP"  
(METALLIZED POLYPROPYLENE FILM CAPACITOR)

二. OPERATING TEMPERATURE: - 40°C ~ + 85°C (+ 105°C)

(Derating ratio of rated voltage to + 85°C ~ + 105°C : 1.5% per °C for Rated Voltage)

Rated Voltage: Rated voltage is defined the voltage which shall be capable of applying to capacitors continuously in the operating temperature range. However, rated voltage shall be derated 1.5% at each 1°C in the range of + 85°C ~ + 105°C as shown in the Fig. below.



三. WORKING VOLTAGE: MPP ( 50 ~ 1000VDC )

四. CAPACITANCE RANGE : MPP (0.001uF~10.0uF ).

五. CAPACITANCE TOLERANCE : ±1% (F), ±2%(G),±3%(H),±5%(J),±10%(K),±20%(M).

六. CONSTRUCTIONS & SHOW

(一) CONSTRUCTIONS.

A : ELEMENT (METALLIZED POLYPROYLENE FILM. )

B : METALS(SN.ZN.SB.CU).

C : EPOXY RESIN & WAX

D : WIRE .



(二) SHOWS:

CAPACITOR'S SHOWS, IT'S SHOWN. ATTACHED DRAWIN

七. MARKING:

CAPACITOR IS MARKING ON BODY FOR FOLLOWING ITEMS.

**W 103 J**

**MPP 400**

A : CAPACITANCE TOLERANCE.

B : CAPACITANCE.

C : MANUFACTURE'S NAME AND TRADE MARK.

(WE USE "W" AS OUR REGISTERED TRADE MARK.)

D : WORK VOLTAGE.

E : TYPE NAME.

八. STANDARD TESTING CONDITION:

CAPACITORS MAY BE MEASURED AT TEMPERATURE 20±5°C

AND HUMIDITY:65±5%RH

九. CHARACTERISTICS				
NO.	TEST ITEMS		CHARACTERISTICS	TEST METHOD
(一)	TESTING VOLTAGE (TV)	BETWEEN TERMINALS	NO BREAKDOWN OR FLASHOVER	150% RATED VOLTAGE FOR 2 SEC NOT EXCEED 15 mA FOR CHANGE 150% WORKING VOLTAGE FOR 60 SEC
		BETWEEN & ENCLOSURE TERMINALS	NO BREAKDOWN OR FLASHOVER	
(二)	INSULATION RESISTANCE (IR)	BETWEEN TERMINALS	$C \leq 0.33\mu F \geq 30\ 000M\Omega$ or more	CHARGING TIME : $60 \pm 5$ SEC CHARGING VOLTAGE : 100VDC
		BETWEEN & ENCLOSURE TERMINALS	$1.0\mu F \geq C > 0.33\mu F > 10\ 000M\Omega$ or more	
		BETWEEN & ENCLOSURE TERMINALS	$C > 1.0\mu F > 5\ 000M\Omega$ or more	
(三)	CAPACITANCE		PLEASE CONSULT PAGE THREE	FREQUENCY AT 1KHZ TEST VOLTAGE 1 V AT $20 \pm 5^\circ C$
(四)	DISSIPATION FACTOR (DF)		0.1%(MAX) AT 1KHZ	TEST VOLTAGE 1V AT $20 \pm 5^\circ C$
(五)	LOAD STRENGTH	PULL TEST	ELECTRICAL AND MECHANICAL CHARACTERISTICS NO CHANGE.	WIRE 0.5mm LOAD 0.5KG 10SEC WIRE 0.6mm LOAD 0.5KG 10SEC WIRE 0.8mm LOAD 0.5KG 10SEC WIRE 1.0mm LOAD 1.0KG 20SEC ACC.TO IEC 68-2-21,TEST UA.
		BENDING TEST	ELECTRICAL AND MECHANICAL CHARACTERISTICS NO CHANGE.	WIRE 0.5mm LOAD 5N : $4 \times 90^\circ$ WIRE 0.6&0.8mm LOAD 5N : $4 \times 90^\circ$ WIRE 1.0mm LOAD 5N : $4 \times 90^\circ$ ACC.TO IEC 68-2-21,TEST UB
(六)	VIBRATION		ELECTRICAL AND MECHANICAL CHARACTERISTICS NO CHANGE.	FREQUENCY RANGE 10-55-10HZ 2HRS FOR DIRECTION * 3 DIRECTIONS ACC.TO IEC 68-2-6, TEST FC&FD B4
(七)	SOLDERABILITY		AFTER THE IMMERSION COVER SOLDER OF 95% AROUND LEAD SURFACE DIPPING POINT.	SOLDERABILITY TEMP. FOR $245 \pm 5^\circ C$ TIME FOR $2 \pm 0.5$ SEC ACC. TO IEC68-2-20, TEST TA METHOD
(八)	RESISTANCE TO SOLDERING HEAT	CHANGE IN CAPACITANCE	CHANGE IN (max) $< \pm 3\%$	SOLDER TEMP. AT $260 \pm 5^\circ C$ DIPPING TIME FOR $5 \pm 1$ SEC HAND SOLDER TEMP. AT $350 \pm 10^\circ C$ TIME . AT $3 \pm 1$ SEC
		TANGENT OF THE LOSS ANGLE	0.1%(MAX) AT 1KHZ	
		DIELECTRIC STRENGTH	150% WORKING VOLTAGE	
		INSULATION RESISTANCE	$C \leq 0.33\mu F > 30G\Omega$ $1.0\mu f \geq C > 0.33\mu F > 10 G\Omega$ $C > 1.0\mu f > 5G\Omega$	
		APPEARANCE	NO VISIBLE	



## 九. CHARACTERISTICS

NO.	TEST ITEMS	CHARACTERISTICS	TEST METHOD
(九)	LOW TEMPERATURE TEST	CHANGE IN CAPACITANCE	CHANGE IN (max) $< \pm 3\%$
		TANGENT OF THE LOSS ANGLE	0.1%(MAX) AT 1KHZ
		DIELECTRIC STRENGTH	150% WORKING VOLTAGE
		INSULATION RESISTANCE	$C \leq 0.33\mu F > 30G\Omega$ $1.0\mu f \geq C > 0.33\mu F > 10 G\Omega$ $C > 1.0\mu f > 5G\Omega$
		APPEARANCE	NO VISIBLE
(十)	HIGH TEMPERATURE TEST	CHANGE IN CAPACITANCE	CHANGE IN (max) $< \pm 5\%$
		TANGENT OF THE LOSS ANGLE	0.1%(MAX) AT 1KHZ
		DIELECTRIC STRENGTH	150% WORKING VOLTAGE
		INSULATION RESISTANCE	$C \leq 0.33\mu F > 30G\Omega$ $1.0\mu f \geq C > 0.33\mu F > 10 G\Omega$ $C > 1.0\mu f > 5G\Omega$
		APPEARANCE	NO VISIBLE
(十一)	TEMPERATURE CYCLE	CHANGE IN CAPACITANCE	CHANGE IN (max) $< \pm 10\%$
		TANGENT OF THE LOSS ANGLE	0.1%(MAX) AT 1KHZ
		DIELECTRIC STRENGTH	150% WORKING VOLTAGE
		INSULATION RESISTANCE	$C \leq 0.33\mu F > 30G\Omega$ $1.0\mu f \geq C > 0.33\mu F > 10 G\Omega$ $C > 1.0\mu f > 5G\Omega$
		APPEARANCE	NO VISIBLE
(十二)	HUMIDITY RESISTANCE LOADING TEST	CHANGE IN CAPACITANCE	CHANGE IN (max) $< \pm 10\%$
		TANGENT OF THE LOSS ANGLE	0.1%(MAX) AT 1KHZ
		DIELECTRIC STRENGTH	150% WORKING VOLTAGE
		INSULATION RESISTANCE	$\Delta IR / IR \leq 50\%$
		APPEARANCE	NO VISIBLE
(十三)	HIGH TEMPERATURE LOADING	CHANGE IN CAPACITANCE	CHANGE IN (max) $< \pm 3\%$
		TANGENT OF THE LOSS ANGLE	0.1%(MAX) AT 1KHZ
		DIELECTRIC STRENGTH	150% WORKING VOLTAGE
		INSULATION RESISTANCE	$C \leq 0.33\mu F > 30G\Omega$ $1.0\mu f \geq C > 0.33\mu F > 10 G\Omega$ $C > 1.0\mu f > 5G\Omega$
		APPEARANCE	NO VISIBLE

ACC.TO IEC 68-2-1,TEST. Bb  
MEASURING CONDITION  
TEMP :  $-40^{\circ}C \pm 2^{\circ}C$   
DURATION :  $2 + 1/ - 0$  HOURS  
THEN RECOVERY AT ORDINARY  
CONDITION 1~2 HORUS

ACC.TO IEC 68-2-2,TEST. Bb  
MEASURING CONDITION  
TEMP :  $85^{\circ}C \pm 2^{\circ}C$   
DURATION :  $2 + 1/ - 0$  HOURS  
THEN RECOVERY AT ORDINARY  
CONDITION  $16 \pm 1$  HORUS

ACC TO IEC 68-2-14 METHOD  
TESTCYCLES

NO	TEMP	TIME
1	$+20^{\circ}C \pm 2^{\circ}C$	30m
2	$-40^{\circ}C \pm 2^{\circ}C$	30m
3	$+20^{\circ}C \pm 2^{\circ}C$	30m
4	$+85^{\circ}C \pm 2^{\circ}C$	30m
5	$+20^{\circ}C \pm 2^{\circ}C$	30m

THEN RECOVERY AT ORDINARY  
CONDITION 2 HORUS

ACC TO IEC 68-2-14 METHOD  
HUMIDITY OF 90~95% RH  
TEMP :  $40 \pm 2^{\circ}C$   
APPLIED VOLTAGE : R.V  
DURATION :  $500 + 24/ - 0$  HOURS  
THEN RECOVERY AT ORDINARY  
CONDITION 16 HORUS

VOLTAGE OF 125% OF RATED  
VOLTAGE 50 TO 60Hz SHALL BE  
APPLIED TO THE CAPACITOR FOR  
 $1000 + 48/0$  H THROUGH SERIAL  
RESISTOR OF 20 TO 1000 $\Omega$  PER 1V  
AT THE TEST TEMPERATURE OF  
 $85 \pm 2^{\circ}C$   
THEN RECOVERY AT ORDINARY  
CONDITION 16 HORUS

十. TESTING EQUIPMENT 檢測設備:

(一) CAPACITANCE AND 容量和損耗角 (CAP& DF) :

1. UAD TECH 1689 LCR METER.
2. TAI WAN ZENTECH 1062 LCR METER.
3. TAI WAN ZENTECH 1063 LCR METER.
4. TAI WAN ZENTECH 1075 LCR METER.

(二) INSULATION RESISTANCE 絕緣阻抗 (IR) :

1. DAN BRIDGE 602 METER
2. ZENTECH 705 IR METER.

(三) DIELECTRIC STRENGTH 耐電壓 (TV) :

1. ZENTECH 902
2. TAI WAN EXTECH 7450

(四) AUTO SORTING MACHINES 自動分選機(選別機)

1. TAI WAN URANUS SORTING AUTOMATIC
2. TAI WAN WELL DELL SORTING AUTOMATIC

(五) CHARACTERISTICS OF PERMISSIBLE CURRENT TO FREQUENCY

許容電流與頻率特性

1. CHROMA PROGRAMMABLE HF AC TESTER MODEL 11805  
可程式高頻交流測試器11805
2. CHROMA DIGIT MULTIMETER 12061  
六位半數位多功能電表
3. CHROMD CAPACITOR LEAKAGE CURRENT / IR METER MODEL 11200  
電容漏電流/絕緣電阻表11200

(六) RoHS & WITHOUT HALOGEN

RoHS和無鹵產品

1. SHIMADZU EDX-LE

十一. ACCEPTABLE QUALITY LEVEL 允收標準 (AQL):

AQL IS ACCORDING TO MIL-STD-105E-II, BY LOT GOING INSPECTION.

允收標準(AQL)是根據MIL-STD-105E-II抽樣方試檢驗

(一) APPEARANCE AQL : 1.0 AC

外觀不良低於1.0為允收

(二) DIMENSIONS AQL: 1.0 AC

尺寸不良低於1.0為允收

(三) MECHANICAL CHARACTERISTICS AQL: 1.0 AC

機械特性不良低於1.0為允收

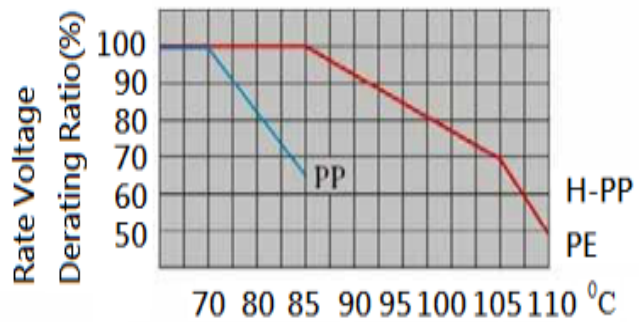
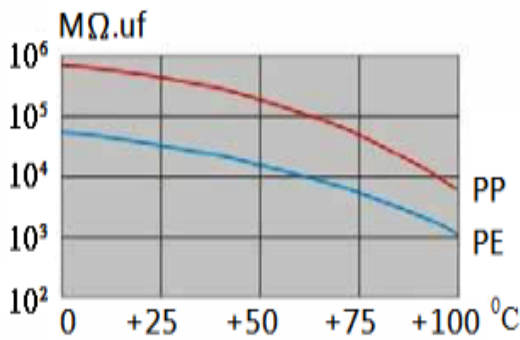
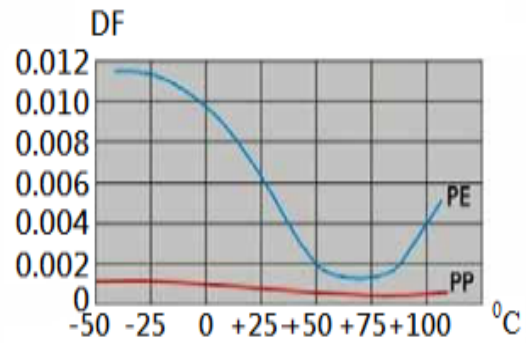
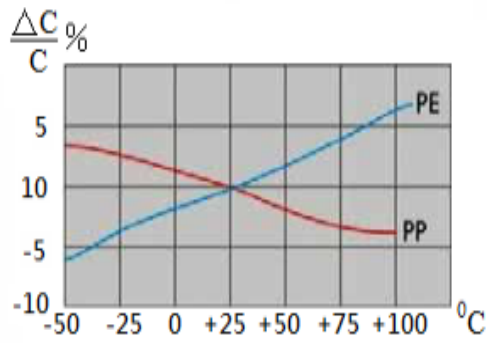
(四) ELECTRICAL CHARACTERISTICS AQL: 0.065 (INCLUDE CAP,DF,TV,IR)

電器特性不良低於 0.065 (包括 CAP,DF,TV,IR)

十二. Product electrical characteristic graph 產品電氣特性圖

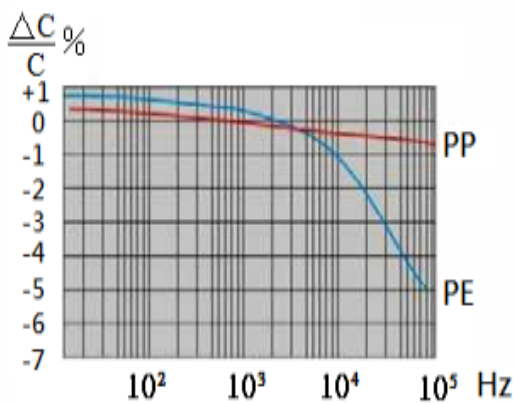
溫度性能

Temperature Characteristics



頻率性能

Frequency Characteristics



十三. Soldering suggestions - 焊接建議

When soldering a capacitor, heat in soldering is conducted to the element of the capacitor from wire lead and an enclosure, and hence it should be noted that soldering under high temperature and a long period may cause deterioration of breakdown of capacitors. Characteristic or Be sure to solder within the following temperature condition range.

當焊接電容時，焊錫熱會通過引線端子高溫和封裝層傳遞到電容素子，因此必須注意高溫和長時間焊接引起的電容器特性衰減或損壞，請確認焊錫在以下溫度範圍內。

Ts : Capacitor body maximum temperature at wave soldering  
電容器本體最高波峰焊溫度

Tp : Capacitor body maximum temperature at pre-heating  
電容器本體最高預熱溫度



Body temperature should follow the description below :  
電容器本體溫度應該符合以下描述：

PP 聚丙烯電容器

Duing pre-heating :  $T_p \leq 115^\circ\text{C}$

Duing soldering :  $T_s \leq 120^\circ\text{C}$  ,  $t_s \leq 45\text{ s}$

預熱期間溫度 :  $T_p \leq 115^\circ\text{C}$

焊接期間溫度 :  $T_s \leq 120^\circ\text{C}$  ,  $t_s \leq 45\text{ 秒}$



	X s	X s
T 產品厚度 $\geq 6\text{mm}$	10 s	
$6\text{mm} > T$ 產品厚度 $\geq 5\text{mm}$ 且 K 3.5mm	10 s	
$6\text{mm} > T$ 產品厚度 $\geq 5\text{mm}$		5 s
$5\text{mm} > T$ 產品厚度 $\geq 4.5\text{mm}$ 且 K 3.5mm		5 s
<b>OPP P &lt; 7.5mm 或 T 產品厚度 &lt; 4.5 mm</b>	<b>3 s</b>	



十四. When SMD components are used together with leaded ones, the film capacitors should not pass into the SMD adhesive curing. The leaded components should be assembled after the SMD curing step.

當SMD元件與引腳式元件一起使用時，薄膜電容器不應進入SMD粘合劑固化爐。引腳式部件應在SMD固化步驟之後組裝。

十五. Leaded film capacitors are not suitable for reflow soldering.

引腳式薄膜電容器不適合回流焊。

十六. In order to ensure proper conditions for manual or selective soldering, the body temperature of the capacitor (Ts) must be  $\leq 120^\circ\text{C}$

為了確保手動或選擇性焊接的適當條件，電容器 (Ts) 的本體溫度必須是  $\leq 120^\circ\text{C}$

十七. One recommended condition for manual soldering is that the tip of the soldering iron should be  $< 360^\circ\text{C}$  and the soldering contact time should be no longer than 3 seconds.

手工焊接的一個推薦條件是烙鐵的頂端應該是  $< 360^\circ\text{C}$ ，焊接接觸時間不應超過3秒。

十八. Manufacturers製造商：JOEY ELECTRONICS CO,LTD. 久亦電子有限公司。  
Origin , including 產地：CHINA P .R .C 中國

十九. The compliance with enviroment requirement 環保要求符合性

- 19.1 Compliance with the requirement of RoHS.符合RoHS要求。
- 19.2 Compliance with the requirement of REACH.符合REACH要求。
- 19.3 Without Halogen ( as required ) 符合無鹵 ( 如要求 ) 。

二十. Storage conditions 存儲條件：

- 20.1 It should be noted that the solderability of the terminals may be deteriorated when Stored bardly in an atmosphere for a long periods.  
請注意，長時間暴露在空氣中會導致引線焊接性能衰減。
- 20.2 It shouldn't be located in particularly high temperature and high humidity , it must Submit to the following conditions ( keeping in the original package) :  
不能放置在高溫和高濕環境中，請遵循以下存儲條件 ( 原包裝下保存 )  
Temperature 溫度：35°C MAX.  
Relative humidity 相對濕度：80% MAX.
- 20.3 Storage period : (from the manufacturing date marked on the label in package bag )  
Loose : 12months MAX.  
存儲時間：( 包裝袋上標注的生產日期為準 ) 最長12個月。

二一. Characteristics and test conditions 電氣特性和測試條件：

Test condition : Unless otherwise specified , the standard range of atmospheric Conditions for marking measurements and test is as follows Ambient  
Temperature 環境溫度：15~35°C  
Relaive humidity 相對濕度：25~75%  
If there may be any doubt on the results , measurements shall be made within the Following limits.  
如對測試結果有任何疑問，則按以下限制測試：  
Ambient temperature 環境溫度：20 ~ 25 °C  
Relative humidity 環境濕度：60 ~ 70% .

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