



CHAMPION

承认书 (APPROVAL SHEET)

品名 PART NAME	METALLIZED POLYPROPYLENE FILM CAPACITOR (MPP-QP)
承认规格 APPROVE ITEM	104J2000V P=28.5
全鹏料号 CHAMPION PART NO	PPS104J2000D302013B2923
客户名称 CUSTOMER	立创商城
客户料号 PART NO	
送样承认日期 DATE	2020-3-23

承认印  
APPROVAL STAMP

供应商 VENDER	客户 CUSTOMER
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**东莞市全鹏电子科技有限公司**  
**DONGGUAN CHAMPION ELECTRONIC TECHNOLOGY CO., LTD.**

**承認書 (APPROVAL SHEET)**  
 ( Type MPPS)

QP-AP-15

1. Scope:

This specification applied to capacitor for type PPS(Metallized Polypropylene Film Capacitor(High Voltage))

2. Operation Temperature:

-40℃ ~ +105℃

3. Capacitance Range:

0.0001uF ~ 0.1 uF

4. Capacitance Tolerance:

±2%(G)、±3%(I)、±5%(J)、±10%(K)、±20%(M)

5. Rated Voltage:

1000VDC、1200VDC、1600VDC、2000VDC、2500VDC、3000VDC、

6. champion Part No.:

□□□  
1  
(tape)
□□□  
2  
(capacitance)
□  
3  
(tolerance)
□□□□  
4  
(rated voltage)
□  
5  
(Dc/Ac)
□□□□□□  
6  
(Size)
□  
7  
(lead forming)
□□  
8  
(lead pitch)
□□  
9  
(lead length)

6-1 tape:

<b>Code</b>	PEI	SMEF	MEM	MPP	PEN	PPN	PPS	MEC	MET
<b>Tape</b>	PEI	MEF	MEM	MPP	PEN	PPN	PPS	MEC	MET

6-2 Capacitance:

Code	101	102	103	104	105	106
Capacitance	0.0001uF	0.001uF	0.01uF	0.1uF	1uF	10uF

6-3 Tolerance:

Code	F	G	H	I	J	K	M
Tolerance	±1%	±2%	±2.5%	±3%	±5%	±10%	±20%

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6-4 Rated Voltage: Showing the real working voltage indicated. For example: 1200 -> 1.2KV, 2000 -> 2KV。

6-5 D→DC; A→AC

6-6 Size:090805→(W)9\*(H)8\*(T)5

6-7 Lead forming:

Code	B	K	R	U	W	T	S
Lead Forming						TAPING	Customer Special Require

6-8 Lead Pitch: Showing the capacitor lead pitch, For example:

Code	15	20	28	31
Pitch(mm)	15mm	20mm	27.5mm	31mm

6-9 Lead length: Showing the capacitor lead Length, For example:

Code	04	08	10	13	23	30	40
Length(mm)	4mm	8mm	10mm	13mm	23mm	30mm	40mm

**7. Specifications ( JIS 5115)**

No	Test items	Performance	Test Method
7-1	Withstand voltage (Between Terminals)	Shall be no abnormality	150% Of Rated Voltage, 60sec.
	Between terminal and Enclosure	Shall be no abnormality	UR×200%+1000VDC, 60sec.
7-2	Insulation resistance (Between Terminals)	$C_R \leq 0.33\mu F$ $IR \geq 15,000M\Omega$ $C_R > 0.33\mu F$ $IR \geq 5,000 (M\Omega \cdot \mu F)$	Measured at $100 \pm 15VDC$ , For 60sec / 25°C

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No	Test items	Performance	Test Method
7-3	Capacitance	Within the tolerance specified	1KHz, 1Vrms Max. at 25℃
7-4	Dissipation Factor	0.001 (0.1%) Max.	1KHz, 1Vrms Max. at 25℃
7-5	Tense Strength of Terminal	No wire breakage and No Damage of Capacitor	1. Load Force : 1.0 Kg 2. Holding Time : 10 ± 1sec
7-6	Bending Strength of Terminal	No wire breakage and No Damage of Capacitor	1. Load Force : 0.5 Kg 2. Bending Time : 4 x 90° in 5sec
7-7	Vibration	(1) Appearance : No Visible Damage (2) Contact : Normal	a. Frequency change : 1min. per cycle 10~55~10Hz b. Vibration distance : 1.5mm c. course: X、 Y、 Z (axis) d. Time : 2h / axis ( 6h in total)
7-8	Solder-ability	75% Of The Surface Tinning	a. Solder temperature: 270±5℃ b. Solder time: 2±0.5sec
7-9	Heat Shock test	(1) Appearance : No Visible Damage (2) Withstand Voltage : Normal (3) Capacitance Change : ≤ ±3% of The Initial Value	The terminal of capacitor shall be immersed in the melting solder. a. Solder temperature: 270±5℃ b. Solder time: 3±0.5sec c. Test Voltage: 150% of The Rate Voltage For 1min.

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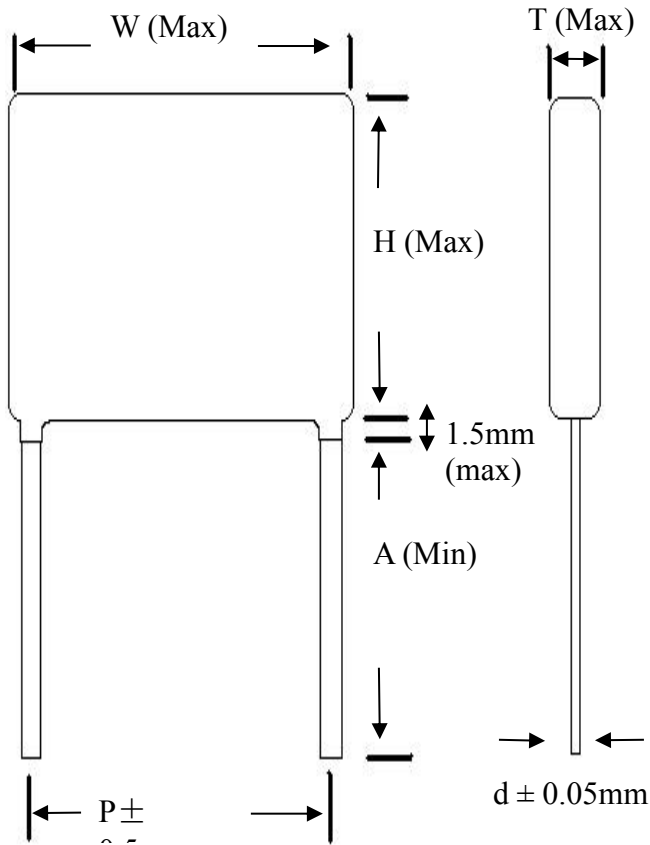
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No	Test items	Performance	Test Method
7-10	Cold Resistance	(1) Appearance : No Visible Damage (2) Capacitance Change : $\leq 0 \sim -10\%$ of The Initial Value	a. Test Temperature: $-40^{\circ}\text{C}$ b. Test Times: 2Hrs
7-11	Dry Heat Resistance	(1) Appearance : No Visible Damage (2) Withstand Voltage : Normal (3) Capacitance Change : $\leq +5 \sim -2\%$ Of The Initial Value (4) Insulation Resistance: $C_R \leq 0.33\mu\text{F}$ $IR \geq 2,700\text{M}\Omega$ $C_R > 0.33\mu\text{F}$ $IR \geq 900\text{M}\Omega$	a. TEST TEMPERATURE: $105^{\circ}\text{C} \pm 2^{\circ}\text{C}$ b. Test Times: 2Hrs
7-12	Humidity Resistance	(1) Appearance : No Visible Damage (2) Withstand Voltage : Normal (3) Capacitance Change : $\leq \pm 10\%$ of The Initial Value (4) Insulation Resistance: $C_R \leq 0.33\mu\text{F}$ $IR \geq 2,700\text{M}\Omega$ $C_R > 0.33\mu\text{F}$ $IR \geq 900\text{M}\Omega$ (5) $DF (\tan \delta) \leq 0.001$	a. TEST TEMPERATURE: $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ b. RELATIVE HUMIDITY: $90 \sim 95\%$ c. Test Times: $240 \pm 8\text{HRS}$ d. TEST VOLTAGE: 130% of The Rated Voltage for 1 min.
7-13	Heat Resistance (Charge & Discharge)	(1) Appearance : No Visible Damage (2) $DF (\tan \delta) \leq 0.001$ (3) Capacitance Change : $\pm 10\%$ of The Initial Value (4) Insulation Resistance: Over $3000\text{M}\Omega$	a. Test Voltage : Rated Voltage Charge for 2 sec. Discharge for 2 sec. Repeated For $100,000 \pm 1000$ cycles b. Test Temperature: $105^{\circ}\text{C} \pm 2^{\circ}\text{C}$
7-14	Heat Resistance ( Continuous)	(1) Appearance : No Visible Damage (2) $DF (\tan \delta) \leq 0.001$ (3) Capacitance Change : $\pm 7\%$ of The Initial Value (4) Insulation Resistance: Over $3000\text{M}\Omega$	a. Test Voltage : 125% of The Rated Voltage b. Test Temperature: $105^{\circ}\text{C} \pm 2^{\circ}\text{C}$ c. Test Times: $500 \pm 24\text{Hrs}$

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8. Dimensions:



CAPACITOR BODY SIZE (Unit:mm)					
CAP	RV	W (±1)	H (±1)	T (±1)	D (±0.05)
104	2000	30	19.5	12.7	0.8

Lead Style							
B		K	R	U	W	T	S
						TAPING (refer to next page)	Customer Require
CAP	RV	Lead Style	A(±0.05mm)		B(±0.05mm)		
104	2000		23			28.5	

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9. Marking:



104	CAPACITANCE
J	CAPACITANCE TOLERANCE
2000V	RATED VOLTAGE
QP	CHAMPION LOGO