

# **KNSCHA ELECTRONICS CO., LIMITED.**

**CBB22 104J/630V P=10mm**

**Part No. 57CB5865**

**Customer's Name:**

**product use:**

**2025/2/24**

Receipt Stamp

**KNSCHA ELECTRONICS CO., LIMITED.**

**No. 3, Liaodong Road, 1st Industrial Zone, Pengwu Village,**

**Dongkeng Town, Dongguan, Guangdong, China**

**TEL:86-769-83697279 FAX:86-769-83697280**

**Email:betty@knscha.com Web:www.ajcgroup.com.cn**

Drawn by :

Checked by :

Approved by :

## ■ Product structure drawing

## ■ Outline style

[illegible]

## ■Feature:

- Excellent self-healing ability
- Excellent temperature characteristic ability
- Excellent flame resistance ability
- Lower DF value and high insulation resistance

## ■Application:

- Widely used in DC,AC and impulse circuits.

## ■Technical specification:

Standard refer	GB/T 14579 (IEC 60384-17)	
Climate category	40/105/21	
Flame resistance class	B	
Operating temp range	-40℃ ~ +105℃	
Rated voltage	100 V、 250V、 400V、 630V、 1000V、 1250V	
Cap range	0.001μF~3.3μF	
Cap tolerance	J (±5%) , K (±10%) , M (±20%)	
Withstand voltage	1.6UR (5S)	
DF Value	≤ 0.1% (1KHz , 20℃)	
Insulation resistance	≥ 30000MΩ; CR ≤ 0.33μF ≥ 10000S; CR > 0.33μF	20℃, 100V, 60S

## MPP/CBB22 Metallized polypropylene film capacitors

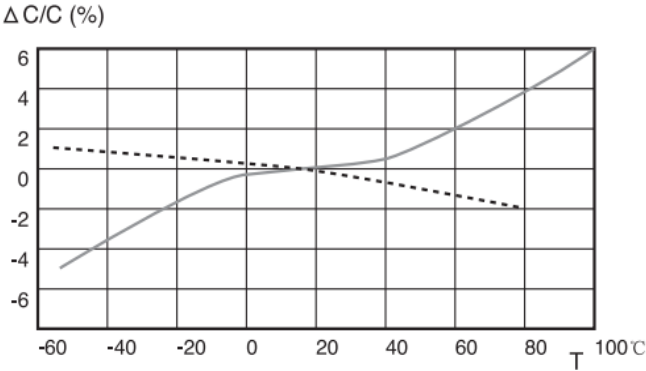
### ■ Feature test

No.	Item	Performance requirement	Test Method
1	Initial test	Capacitance DF:1KHz	
	Out end leading intensity	There is no damage in outline	Tension test Ual: Tension: $0.5 < \phi d \leq 0.8\text{mm}$ ; 10N Bending test Ub: Twice in every direction:two consecutive turn 180degree
	Welding heat resistant	There is no damage in outline, clear remark	Solder Tb, method1A $260 \pm 5^{\circ}\text{C}$ , 5 $\pm$ 1S
	Final test	Capacitance: $\Delta C/C \leq \text{initial test value} \pm 5\%$ DF value: DF increase $\leq 0.01$ (1KHz)	
2	Initial test	Capacitance DF Value: 1KHZ	
	Fast temp range	There is no damage in outline	$0_A = -40^{\circ}\text{C}$ , $0 = +105^{\circ}\text{C}$ 5 times cycles, time of duratio: t=30min
	Shake	There is no damage in outline	Amplitude 0.75mm or accelerated speed $98\text{m/s}^2$ , frequency 10~500Hz three direction, every direction 2h, total:6h
	Crash	There is no damage in outline	4000 times, accelerated speed $390\text{m/s}^2$ , impulse continue time: 6ms
	Final test	Capacitance: $\Delta C/C \leq \text{initil test value} \pm 5\%$ DF Value: DF increase $\leq 0.01$ IR: $\geq \text{rated value} 50\%$	
3	Initial test	Capacitance DF Value: 1KHz	
	Heat dry		$+105^{\circ}\text{C}$ , 16h
	Cyclic damp heat		Test Db,Severity 7 b, primary circulation
	Cold		$-40^{\circ}\text{C}$ , 2h
	ow air pressure	In the last minutes of the test,UR is not permanent	$15 \sim 35^{\circ}\text{C}$ , 8.5Kpa,1h
	Cyclic damp heat	After the experiment is over,apply the UR 1 minute.	Test Db,severity b, other circulation

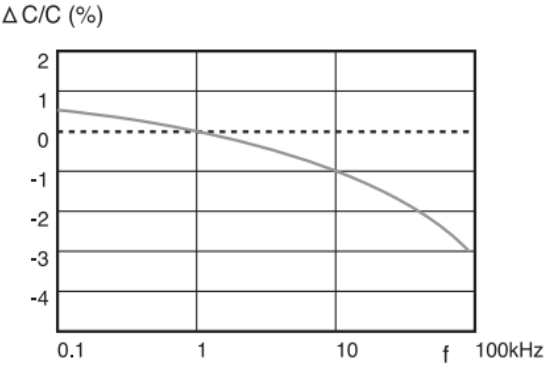
## MPP/CBB22 Metallized polypropylene film capacitors

No.	Item	Performance requirement	Test method
4	Final test	There is no damage in outline,clear mark Capacitance: $\Delta C/C \leq \text{initial test value} \pm 5\%$ DF Value: $DF \leq 0.01$ Withstand voltage: $1.6U_R DC, 5S$ no breakdown or arc IR: $\geq \text{Rated value } 50\%$	
5	Stable damp heat	There is no damage in outline,clear mark Capacitance: $\Delta C/C \leq \text{initial test value} \pm 5\%$ DF Value (1KHz): $DF \text{ increase} \leq 0.01$ Withstand voltage: $1.6U_R DC, 5S$ no break or arc IR: $\geq \text{Rated value } 50\%$	Temp: $40 \pm 2^\circ C$ Humidity: $93 \pm 2\% RH$ Duration time: 56 days
6	durability	There is no damager in outline,clear mark Capacitance: $\Delta C/C \leq \text{initial test value} \pm 10\%$ DF Value(1KHz): $DF \text{ increase} \leq 0.01$ Withstand voltage: $1.6U_R DC, 5S$ no breakdown or arc IR: $\geq \text{Rated value } 50\%$	$+105^\circ C$ , 1000h Applied voltage: $1.25U_R$ rated voltage
7	Charge and discharge	Cap: $\Delta C/C \leq \text{initial test value} \pm 10\%$ DF Value (1KHz) : $DF \text{ increase} \leq 0.01$ IR: $\geq \text{Rated value } 50\%$	Time: 10000times Durable charge time: 0.5S Durable discharge time: 0.5S Charge voltage is the rated voltage Charge resistance: $220/C_R (\Omega)$ or $20\Omega$ (the bigger one) $C_R$ is the mark of capacitance ( $\mu F$ )
8	Flame resistant test	After leaving the flame,any capacitor will continue to burn for no more than 10s and the dripping of the capacitor should not be ignited in the laid cotton paper	IEC695-2-2 needle flame method Flame resistance class: B Capacitor volume: $V (\text{mm}^3) \leq 250$ , Applied flame time is 5S Capacitor volume: $250 < V (\text{mm}^3) \leq 500$ , Applied flame time is 20s Capacitor volume: $500 < V (\text{mm}^3) \leq 1750$ , Applied flame time is 30s Capacitor volume: $V (\text{mm}^3) > 1750$ , Applied flame time is 60s

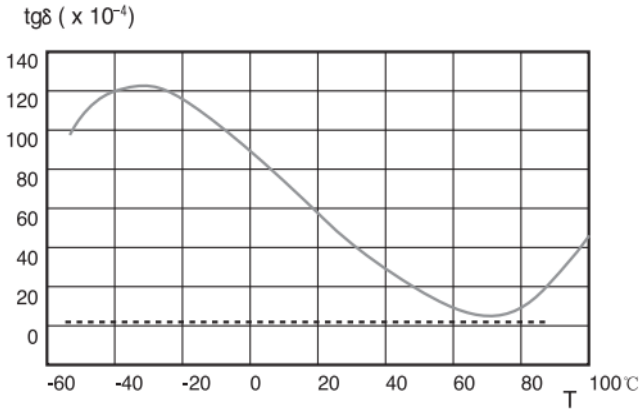
■ Capacitor feature diagram:



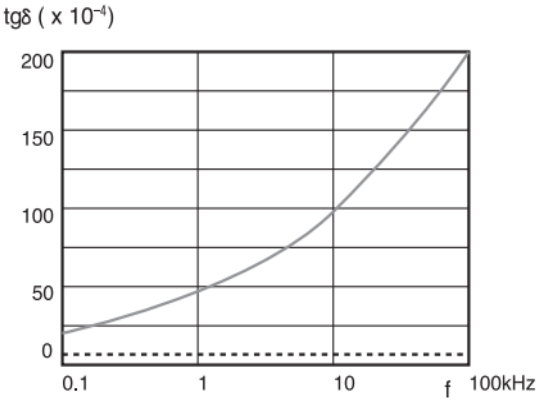
Capacitance vs. temperature at 1kHz



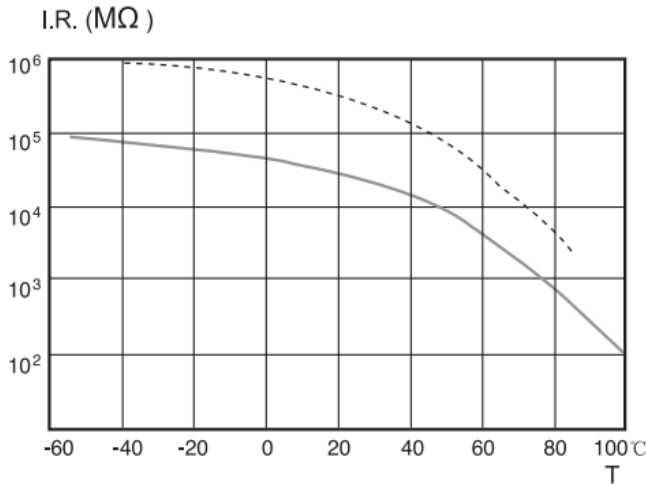
Capacitance vs. frequency (Room temperature)



Dissipation factor vs. temperature at 1kHz



Dissipation factor vs. frequency (Room temperature)



I.R. vs. temperature

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聚丙烯薄膜 (Polypropylene Film)

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聚酯薄膜 (Polyester Film)