PRODUCT SPECIFICATIONS

Customer：GANGDA Products Co., Ltd

Model No.：Metallized Polypropylene Film Capacitor（CBB21）

Customer Code：

Our Customer Code：

Date：10. 01, 2022

	“√”	Signature	Remarks
Perfect approval			
Condition approval			
Reject			

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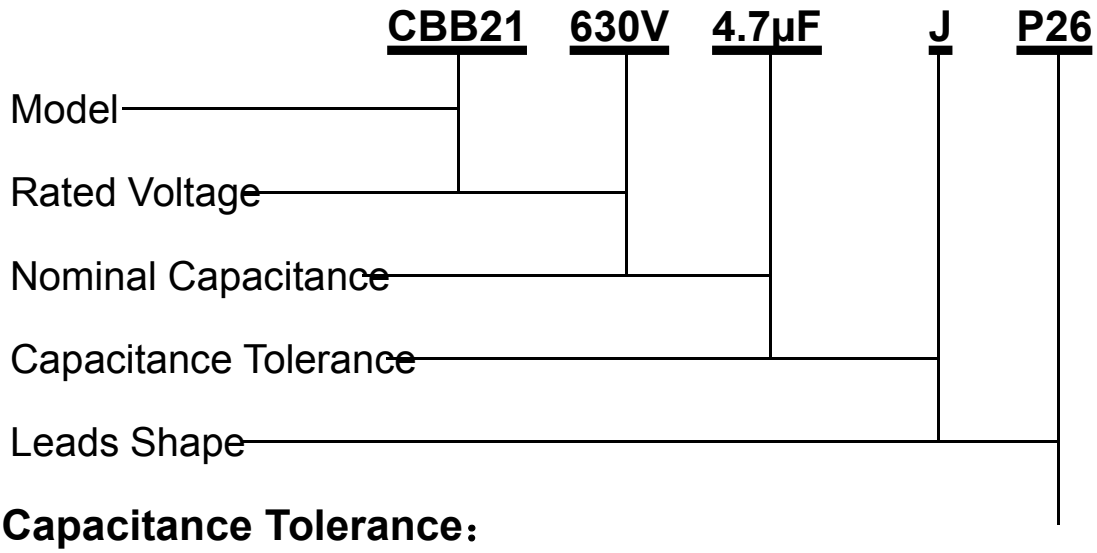
Metallized Polypropylene Film Capacitor



1. Capacitance Tolerance：

Tolerance	±2%	±5%	±10%	±20%
Code	G	J	K	M

2. Leads Shape：(in mm)

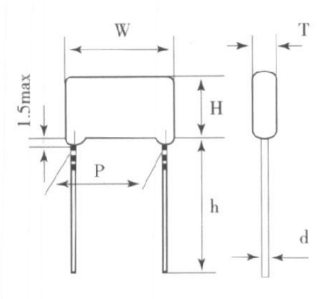
Code	P	F	F5.0	F7.5	F10.0	F15.0	F22.5	F27.5
Leads shape	Natural pitch	Leads-shaped	Pitch 5.0	Pitch 7.5	Pitch 10	Pitch 15	Pitch 22.5	Pitch 27.5

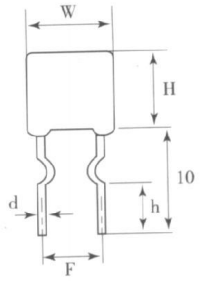
3. Capacitance Code Table：

Code	102	103	104	105
μF	0.001	0.01	0.1	1.0

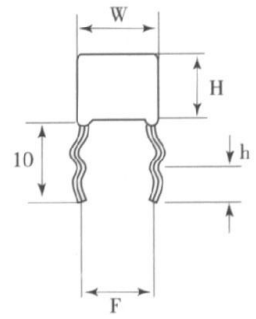
PRODUCT OUTLINES

1、Radial Dipped Capacitors：

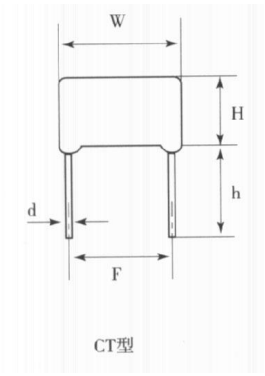




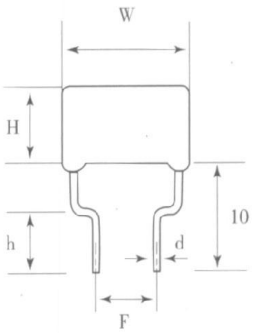
CK型



CS 型



CT型



CY型

Metallized Polypropylene Film Capacitor

1.Features：

This capacitor is winded with the aluminum-coated polypropylene film, sealed with epoxy resin. It has radial leads, good outlook consistency and high reliability. Its low DF under high frequency, low inner temperature rise and self-healing are best suitable for all kinds of DC, pulse and high-frequency circuits.

2.Quoted Standards：

GB2693 “Part 1: General, Fixed Capacitors for Electronic Equipment”
IEC384-1
GB10190 “Part 16: Metallized Polypropylene Film Fixed Capacitor, Fixed Capacitors for Electronic Equipment”
SJ/T10353 “Specification Details for Electronic Components: CBB21 Metallized Polypropylene Film Fixed Capacitor (assessment level E)”
GB2828 “Batch Check Sampling Procedures and Sampling Table”
IEC410 “Sampling Project and Procedures”

3.Dimensions: See Table 1

4.Technical Requirement: See Table 2

5.Quality Guarantee Test(Outgoing check)：

Check Item (per batch)	Check Level (GB2828)	
	IL	AQL
1.Visual Check 2.Dimensions	S-4	2.5%
1.Capacitance 2.Disipation Factor 3.Voltage 4.Insulation Resistance	II	1.0%
1.Solderability	S-3	2.5%

Table1：Dimensions for CBB21

Item No	Model and specification	Grade	W MAX	H MAX	T MAX	P ±0.8	D ±0.05
	475J630V	J	28.0	25.0	15.5	26.0	1.0

Table 2：Technical Requirements for CBB21

NO.	Item	Performance Requirements	Test Method（GB10190）
1	Operating Temp. Range	-40℃～+100℃	
2	Rated Voltage U_R	100V/250V/400V/630V	
3	Cap. Range	0.01μF～10.0μF	
4	Cap. Tolerance	J(±5%)，K(±10%)，M（±20%）	Ref.item4.2.2 1KHz，3%U_R（Vrms）max
5	Dissipation Factor	C≤1.0μF，tgδ≤0.0015	Ref.item4.2.3 1KHz，3%U_R（Vrms）max
6	Voltage Endurance	No breakdown or flash arc	Ref.item4.2.1　$2U_R$，5S
7	Insulation Resistance	C≤0.33μF，IR≥75000MΩ C>0.33μF，IR≥25000MΩ.μF	Ref.item4.2.4 20℃，after 1 min charge
8	Solderability	Tin-coated well, solder will flow when terminals wetting or will flow in 2S	Ref.item4.5 Solder slot method Ta，method 1 Solder temp.: 235±5℃ Dipping time: 2.0±0.5S
9	Initial Test	Cap.　DF (10KHz)	
	Terminals Intensity	No visual defects	Ref.item4.3　Pull Test Ual Pull:. φd=0.5mm，5N φd≥0.6mm，10N Bend Test Ub Bend Strength: φd=0.5mm，2.5N φd≥0.6mm，5N Two-times bending in each direction
	Solder heat endurance	No visual defects, marking in focus	Ref.item4.4 Solder slot method Tb, method 1A 260±5℃，10±1S
	Final measurement	Cap.: ΔC/C≤±3% of initials DF: Δtgδ≤0.004（10KHz）	
10	Initial measurement	Capacitance Dissipation factor: 10KHz	
	Fast Temp. change	No visual defects	Ref.item4.6 θ_A=-55℃，θ=+85℃ 5 cycles, Duration: t=30min
	Vibration	No visual defects	Ref.item4.7 Swing 0.75mm or Velocity 98m/s² (adopt lower asperity) F 10~500Hz in 3 directions, 2 hrs in each direction, 6 hrs in total

Table 2(continued)

NO.	Item		Performance Requirement	Test method（GB10190）
10 (continued)	Shock		No visual defects	Ref.item4.8 4000 times， velocity 390 m/s^2，pulse duration：6ms
	Final test		Cap： ΔC/C≤±5% of the initial measurement DF（10KHz）： Δtg δ ≤0.005 Insulation Resistance： IR≥50% of rated value (No.7)	
11	Climate sequence	Initial test	Cap., DF(10KHz)	
		Dry heat		Ref.item 4.10.2 +85℃，16h
		Cycle wet & heat		Ref.item4.10.3 Test Db， Asperity b， first cycle
		Cold		Ref.item4.10.4 -55℃，2h
		Low air pressure	Exert U_R in last 5 min(s), No permanent breakdown, flash arc or crust distortion	Ref.item4.10.5 15～35℃，8.5KPa，1h
		Cycle wet & dry	After cycles, exert U_R for 1 min.	Ref.item4.10.6 Test Db， Asperity b， rest cycles
	Climate sequence	Final test	No visual defects, marking in focus Cap： ΔC/C≤±5% of the initial measurement DF(10KHz)：tg δ ≤0.008 or 1.2 times of initial measurement (adopt bigger value) Insulation Resistance： IR≥50% of rated value (No.7)	
12	Steady wet heat		No visual defects, marking in focus Cap： ΔC/C≤±5% of the initial measurement DF(10KHz)： Δtg δ ≤0.002 Insulation Resistance： IR≥50% of rated value (No.7)	Ref.item4.11 Temp.：40±2℃ Humidity：93^{+2}_{-3}%RH Duration：21 days
13	Endurance		No visual defects, marking in focus Cap： ΔC/C≤±5% of the initial measurement DF(10KHz)： Δtg δ ≤0.004 Insulation Resistance:IR≥50% of rated value (No.7)	Ref.item4.12 +85℃，1000h exerting voltage： 1.25×rated voltage
14	Charge & discharge		Cap： ΔC/C≤±5% of the initial measurement DF(10KHz)： Δtg δ ≤0.005 Insulation Resistance:IR≥50% of rated value (No.7)	Ref.item4.13 times：10000 times Charging time: 0.5S Discharging time: 0.5S Charging voltage is rated voltage Charging resistor: 220/CR(Ω) or 20Ω (adopt bigger value) CR is nominal Cap. (μF)

6. Packaging and Shipping:

6.1 Capacitors should be packed with Product Certificate each in a plastic bag in which the quantity should be a integral time(s) of 100. Those capacitors packed in plastic bags should be packaged in cartons.

6.2 Carton dimensions: Please refer to the drawing below.

6.3 Capacitors packaged in cartons are allow to shipped in any way, but should avoid direct rain and snow or mechanical damages.

Sketch of carton:

A：L×B×H=45×30×21（cm）

B： L×B×H=45×30×25（cm）