

AXIAL METALLIZED POLYPROPYLENE FILM CAPACITOR

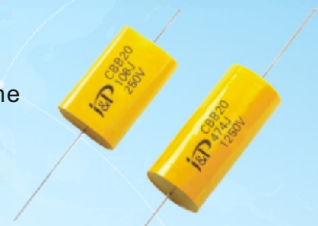
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FEATURES

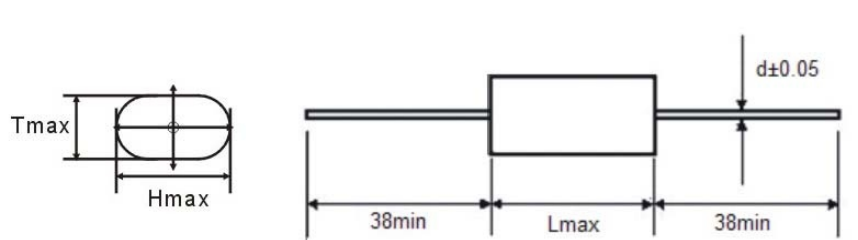
- Metalized Polypropylene film, non-inductive type, axial
- Excellent self-healing property
- Wrapped with polyester adhesive tape and ends filled with Flame retardant epoxy resin

TYPICAL APPLICATIONS

- Temperature compensation circuits
- Time, oscillator circuits
- Power factor correction and coupling capacitor in SMPS applications



OUTLINE DRAWING



SPECIFICATIONS

Reference Standard	GB 10190(IEC 60384-16)
Rated temperature	85°C
Climatic Category	40/105/21
Rated Voltage	100/160, 250V, 400V, 630V, 1 000V, 1 250V
Capacitance Range	0.0010 μ F~15 μ F
Capacitance Tolerance	\pm 5%(J), \pm 10%(K), \pm 20%(M)
Voltage Proof	1.6U _r (5 _s)
Dissipation Factor	\leq 10 \times 10 ⁻⁴ (20°C, 1kHz)
Insulation Resistance	\geq 50 000M Ω , C _r \leq 0.33 μ F (20°C, 100V, 1min) \geq 15 000s, C _r \leq 0.33 μ F

TEST METHOD AND PERFORMANCE

No.	Item	Performance	Test method(IEC 60384-16)
1	Solderability	Good quality of tinning	Solder temperature: 245°C \pm 5°C Immersion time: 2.0s \pm 0.5s
2	Initial measurement	Capacitance Tg δ : 1kHz, C > 1.0 μ F 10kHz, C \leq 1.0 μ F	
	Terminal strength	There shall be no visible damage	Tension: 10N(0.6 \leq ϕ d \leq 0.8) 20N(ϕ d = 1.0) Bend: 5N(0.6 \leq ϕ d \leq 0.8) 10N(ϕ d = 1.0) The terminals shall be bent 2 times in each direction.
	Resistance to solder heat	There shall be no visible damage	Solder temperature: 260°C \pm 5°C Immersion time: 10s \pm 1s
	Final measurement	Δ C/C \leq \pm 3%(relative to the initial value) Increase of tg δ : \leq 0.004 (C \leq 1.0 μ F, 10kHz) \leq 0.004 (C > 1.0 μ F, 1kHz)	
3	Initial measurement	Capacitance, Tg δ : 1kHz, C > 1.0 μ F 10kHz, C \leq 1.0 μ F	
	Rapid change of temperature	There shall be no evidence of deterioration.	θ_A = -40°C, θ_B = +85°C 5 cycles Duration: t = 30min
	Vibration	There shall be no evidence of deterioration.	Amplitude 0.75mm or acceleration 98m/s ² (whichever is the smaller severity), f: 10Hz to 500Hz. Three directions, 2h for each direction, total 6h.
	Bump	There shall be no evidence of deterioration.	4000 times, Acceleration: 390m/s ² , Pulse duration, 6ms
	Final measurement	Δ C/C \leq \pm 3%(relative to the initial value) Increase of tg δ : \leq 0.004 (10kHz, C \leq 1.0 μ F) \leq 0.004 (1kHz, C > 1.0 μ F) IR: \geq 50% of the rated value	

No.	Item	Performance	Test method(IEC 60384-16)
4	Climate sequence	Initial measurement	Capacitance, Tg δ : 1kHz, C>1.0 μ F 10kHz, C \leq 1.0 μ F
		Dry heat	+85 $^{\circ}$ C, 16h
		Damp heat,Cyclic	Test Db, Severity: b, the first cycle
		Cold	-40 $^{\circ}$ C, 2h
	Low air pressure	There shall be no permanent breakdown, flashover or other harmful deformation when applying U_R at the last 1 minute.	15 $^{\circ}$ C~ 35 $^{\circ}$ C, 8.5kPa, 1h,
	climate sequence (continue)	Damp heat, cyclic other	Applying UR for 1 minute after 15 minutes the test finished .
Final measurement		There shall be no evidence of deterioration and the marking shall be legible. $\Delta C/C \leq \pm 5\%$ (relative to the initial value) Increase of tg δ : ≤ 0.005 (C \leq 1.0 μ F, 10kHz) ≤ 0.005 (C > 1.0 μ F, 1kHz) I.R: $\geq 50\%$ of the rated value	
5	Damp heat steady state	There shall be no evidence of deterioration and the marking shall be legible. $\Delta C/C \leq \pm 5\%$ (relative to the initial value) Increase of tg $\delta \leq 0.002$ (1kHz) I.R: $\geq 50\%$ of the rated value IR: $\geq 50\%$ of the rated value	Temperature: 40 $^{\circ}$ C $\pm 2^{\circ}$ C Humidity: 93 $^{+2}_{-3}$ %RH Duration: 21days
6	Endurance	There shall be no visible damage, legible marking $\Delta C/C \leq \pm 5\%$ (relative to the initial value) Increase of tg δ : ≤ 0.004 (10kHz, C \leq 1.0 μ F) ≤ 0.004 (1kHz, C>1.0 μ F) IR: $\geq 50\%$ of the rated value	Temperature: +85 $^{\circ}$ C Voltage: 1.25 $\times U_R$ Duration: 1 000h
7	Temperature characteristic	Measuring capacitance at test point b, d, f: Characteristic at lower category temperature -40 $^{\circ}$ C: $0 \leq (C_b - C_d)/C_d \leq +3\%$ Characteristic at upper category temperature +110 $^{\circ}$ C: $-3.25\% \leq (C_f - C_d)/C_d \leq 0$	Static method: The capacitors should be kept at the following temperature in turn: a. (+20 \pm 2) $^{\circ}$ C b. (-40 \pm 2) $^{\circ}$ C d. (20 \pm 2) $^{\circ}$ C f. (+85 \pm 2) $^{\circ}$ C g. (+20 \pm 2) $^{\circ}$ C
8	Charging and discharging	$\Delta C/C \leq \pm 5\%$ (relative to the initial value) Increase of tg δ : ≤ 0.005 (10kHz) I.R: $\geq 50\%$ of the rated value IR: $\geq 50\%$ of the rated value	Times: 10 000 Duration of charging: 0.5s Duration of discharging: 0.5s Charging voltage: rated voltage Charging resistance: 220/ C_R (Ω) Discharging resistance: R=10/ C_R (Ω) or 20 \square (whichever is the greater) C_R : rated capacitance (μ F)