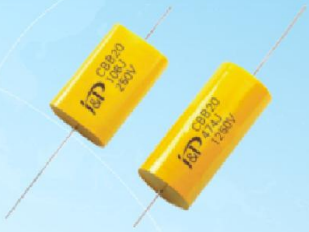
AXIAL METALLIZED POLYPROPYLENE FILM CAPACITOR

CBB20

FEATURES

- Metalized Polypropylene film, non-inductive type, axial
- Excellent self-healing property

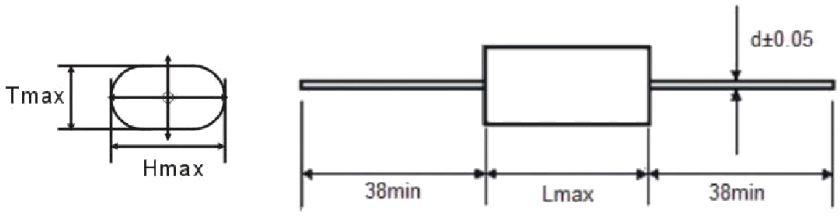


● Wrapped with polyester adhesive tape and ends filled with Flame retardant epoxy resin

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℃
Climatic Category	40/105/21
Rated Voltage	100/160, 250V, 400V, 630V, 1 000V, 1 250V
Capacitance Range	0.0010μF~15μF
Capacitance Tolerance	±5%(J), ±10%(K), ±20%(M)
Voltage Proof	$1.6U_R$ (5_s)
Dissipation Factor	$\leq 10\times10^{-4}$(20℃,1kHz)
Insulation Resistance	≥50 000MΩ, C_R≤0.33μF ≥15 000s, C_R≤0.33μF (20℃,100V,1min)

TEST METHOD AND PERFORMANCE

No.	Item	Performance	Test method(IEC 60384-16)
1	Solderability	Good quality of tinning	Solder temperature:245℃±5℃ Immersion time: 2.0s±0.5s
2	Initial measurement	Capacitance Tgδ:1kHz, C＞1.0μF 10kHz, C≤1.0μF	
	Terminal strength	There shall be no visible damage	Tension: 10N(0.6≤φd≤0.8) 20N(φd=1.0) Bend: 5N(0.6≤φd≤0.8) 10N(φd=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℃±5℃ Immersion time: 10s±1s
	Final measurement	△C/C≤±3%(relative to the initial value) Increase of tgδ: ≤0.004 (C≤1.0μF,10kHz) ≤0.004 (C>1.0μF,1kHz)	
3	Initial measurement	Capacitance, Tgδ:1kHz, C＞1.0μF 10kHz, C≤1.0μF	
	Rapid change of temperature	There shall be no evidence of deterioration.	θ_A=-40℃,θ_B =+85℃ 5 cycles Duration: t=30min
	Vibration	There shall be no evidence of deterioration.	Amplitude 0.75mm or acceleration 98m/s² (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/s² ,Pulse duration, 6ms
	Final measurement	△C/C≤±3%(relative to the initial value) Increase of tgδ: ≤0.004 (10kHz,C≤1.0μF) ≤0.004 (1kHz, C>1.0μF) IR:≥50%of the rated value	

No.	Item		Performance	Test method(IEC 60384-16)
4	Climate sequence	Initial measurement	Capacitance, Tgδ:1kHz, C>1.0μF 10kHz, C≤1.0μF	
		Dry heat		+85℃, 16h
		Damp heat,Cyclic		Test Db, Severity: b, the first cycle
		Cold		-40℃, 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℃~ 35℃, 8.5kPa, 1h,
	climate sequence (continue)	Damp heat, cyclic other	Applying UR for 1 minute after 15 minutes the test finished .	Test Db, Severity b, the other cycles,
		Final measurement	There shall be no evidence of deterioration and the marking shall be legible. △C/C≤±5%(relative to the initial value) Increase of tgδ: ≤0.005(C≤1.0μF,10kHz) ≤0.005 (C＞1.0μF, 1kHz) I.R: ≥50% of the rated value	
5	Damp heat steady state		There shall be no evidence of deterioration and the marking shall be legible. △C/C≤±5%(relative to the initial value) Increase of tgδ≤0.002 (1kHz) I.R:≥50%of the rated valueIR:≥50% of the rated value	Temperature:40℃±2℃ Humidity: 93^{+2}_{-3} %RH Duration: 21days
6	Endurance		There shall be no visible damage, legible marking △C/C≤±5%(relative to the initial value) Increase of tgδ: ≤0.004 (10kHz, C≤1.0μF) ≤0.004 (1kHz, C>1.0μF) IR:≥50%of the rated value	Temperature: +85℃ Voltage: 1.25×U_R Duration: 1 000h
7	Temperature characteristic		Measuring capacitance at test point b, d, f:Characteristic at lower category temperature -40°C: 0≤(C_b-C_d)/C_d≤+3% Characteristic at upper category temperature +110°C: -3.25%≤(C_f-C_d)/C_d≤0	Static method: The capacitors should be kept at the following temperature in turn: a.(+20±2)℃ b.(－40±2) ℃ d.(20±2) ℃ f.(+85±2)℃ g.(+20±2) ℃
8	Charging and discharging		△C/C≤±5%(relative to the initial value) Increase of tgδ:≤0.005 (10kHz) I.R.:≥50% of the rated valueIR:≥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 (whichever is the greater) C_R: rated capacitance (μF)