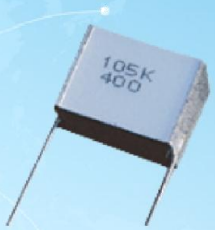
UNCOATED METALLIZED POLYESTER FILM CAPACITOR(STACKED VERSION)

SHANGHAI JINPEI ELECTRONICS CO., LTD

CL25

FEATURES

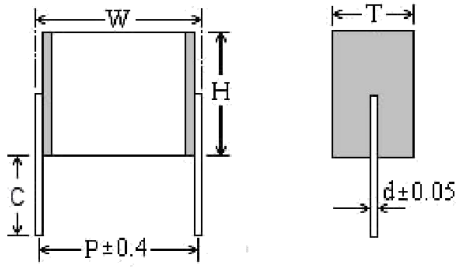
- metallized polyester film, stacked construction, Uncoated
- High impulse and pulse strength



TYPICAL APPLICATIONS

- DC impulse and pulse circuits
- SMPS, converter, Electronic ballasts, compact fluorescent lamps

OUTLINE DRAWING



SPECIFICATIONS

Reference Standard	GB/T 7332(IEC 60384-2)		
Climatic Category	55/125/56		
Rated temperature	85℃ for V_R(dc) 75℃ for V_R(ac)		
Operating Temperature	-55℃~125℃ (+85℃ to +125℃: decreasing factor 1.25% per ℃ for VR(dc)) (+75℃ to +125℃: decreasing factor 1.35% per ℃ for VR(ac))		
Rated Voltage	63V, 100V, 250V, 400V, 630V, 1 000V		
Capacitance Range	0.0010μF~10.0μF		
Capacitance Tolerance	1.40U_R(2s)		
Voltage Proof	±5%(J), ±10%(K), ±20%(M)		
Dissipation Factor	≤0.0100 (1kHz) ≤0.0150 (10kHz, C_R≤1μF) ≤0.0300 (100kHz, C_R≤0.1μF)		
Insulation Resistance	U_R≤100V	≥3750MΩ, C≤0.33μF ≥1250s， C＞0.33μF	U_R＜100V, charge voltage is 10V U_R≥100V, charge voltage is 100V (20℃, 1min)
	U_R＞100V	≥7500MΩ, C≤0.33μF ≥2500s, C＞0.33μF	

TEST METHOD AND PERFORMANCE

No.	Item	Performance	Test method(GB 7332(IEC 60384-2))
1	Solderability	Good quality of tinning	Solder temperature:245℃±5℃ Immersion time: 2.0s±0.5s
2	Initial measurement	Capacitance, Tgδ	
	Terminal strength	There shall be no visible damage	Tension Ua1: Pull:Φd=0.5mm,5N Φd≥0.6mm, 10N Bend Ub: The pull of bend:Φd=0.5mm, 2.5N Φd≥0.6mm, 5N The terminals shall be bent 2 times in each direction.
	Resistance to solder heat	There shall be no visible damage, legible marking	Solder temperature:260℃±5℃ Immersion time: 10s±1s
	Final measurement	△C/C≤±2%(relative to the initial value) Increase of tgδ: ≤0.003 (C≤1.0μF) ≤0.002 (C>1.0μF)	
3	Initial measurement	Capacitance, Tgδ	
	Rapid change of temperature	There shall be no evidence of deterioration.	θ_A=-55℃,θ_B =+125℃ 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

No.	Item		Performance	Test method(GB 7332(IEC 60384-2))
3	Final measurement		△C/C≤±5%(relative to the initial value) Increase of tgδ: ≤0.003 (C≤1.0μF) ≤0.002 (C>1.0μF) IR:≥50%of the rated value	
4	Climate sequence	Initial measurement	Capacitance, Tgδ	
		Dry heat		+125℃, 16h
		Damp heat,Cyclic		Test Db, Severity: b, the first cycle
		Cold		-55℃, 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,
		Damp heat, cyclic other		Test Db, Severity b, the other cycles, Applying U_R for 1 minute after the test finished.
	climate sequence (continue)	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) ≤0.003(C>1.0μF) IR:≥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≤0.005 IR:≥50%of the rated value	Temperature:40℃±2℃ Humidity: 93^{+2}_{-3}%RH Duration: 56days
6	Endurance		There shall be no evidence of deterioration and the marking shall be legible. △C/C≤±5%(relative to the initial value) Increase of tgδ: C≤1.0μF,≤0.003; C＞1.0μF,≤0.002 IR:≥50%of the rated value	+85℃,1.25×U_R 2 000h +100℃,1.25×U_c (U_c =0.8U_R) 2 000h +125℃:0.5× U_R 1 000h
7	Temperature characteristic		Measuring capacitance at test point b, d, f: Characteristic at lower category temperature -55°C: -10%≤(Cb-Cd)/Cd≤0% Characteristic at upper category temperature +105°C: 0%≥(Cf-Cd)/Cd≤+10% I.R. (test at point f): U_R≤100V: ≥75 MΩ (C≤0.33μF) ≥25s (C>0.33μF) U_R>100V:≥150 MΩ (C≤0.33μF) ≥50s (C>0.33μF)	Static method: The Capacitors should be kept at the following temperature in turn: a(20±2) ℃, b(–55±3) ℃, d(20±2) ℃, f(105±2)℃, g(20±2)℃
8	Charging and discharging		△C/C≤±5%(relative to the initial value) Increase of tgδ: ≤0.003 (≤1.0μF) ≤0.002 (C>1.0μF) IR:≥50%of the rated value	Ref.item 4.13 Times: 10 000 Duration of charging: 0.5s Duration of discharging: 0.5s Charging voltage: rated voltageCharging resistance: 220/CR(Ω) or current intensity≤1A(whichever is the less current intensity) Discharging resistance: $R=U_R/(10\times CR\times dU/dt)$ C_R: rated capacitance (μF)