POLYPROPYLENE FILM/FOIL CAPACITOR(INDUCTIVE)

CBB11

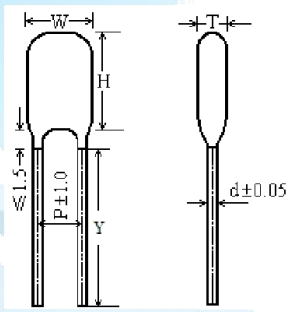
FEATURES

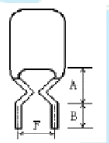
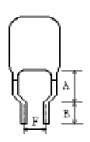
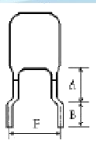
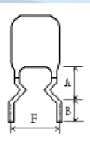
- Film/foil capacitor，inductive wound，dipped
- Excellent frequency and temperature characteristics
- Epoxy resin vacuum-dipped enhances the mechanical strength, humidity resistance

TYPICAL APPLICATIONS

- Suitable for timing circuit and oscillation circuit

OUTLINE DRAWING



Forming Lead Shapes			
I	II	III	IV
			
P ≥ F		P < F	
0mm≤P-F≤3mm	3mm<P-F≤8mm	3mm<F-P≤5mm	0mm<F-P≤3mm
F±1.0mm; A≤5.0mm; B=4.5±0.5mm			

SPECIFICATIONS

Reference Standard	GB 10188(IEC 60384-13)
Climatic Category	40/100/21
Rated temperature	85℃
Operating Temperature	-40℃~105℃ (+85℃ to +105℃：decreasing factor 1.25% per ℃ for VR(DC))
Rated Voltage	50/63/100V
Capacitance Range	0.0010μF～0.10μF
Capacitance Tolerance	±2%(G), ±5%(J), ±10%(K)
Voltage Proof	$2.0U_R$ (5_s)
Dissipation Factor	≤10×10^{-4}(1kHz, 20℃)
Insulation Resistance	≥50 000MΩ (20℃, 10V,1min)

TEST METHOD AND PERFORMANCE

No.	Item		Performance	Test method (IEC60384-2)
1	Solderability		Good quality of tinning	Solder temperature:245℃±5℃ Immersion time: 2.0s±0.5s
2	Terminal strength		There shall be no visible damage △C/C≤±2%(relative to the initial value)	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.
3	Resistance to solder heat		There shall be no visible damage, legible marking △C/C≤±2%(relative to the initial value)	Solder temperature:260℃±5℃ Immersion time: 10s±1s
4	Rapid change of temperature		There shall be no visible damage △C/C≤±2%(relative to the initial value) Tgδ:≤0.0010(1kHz)	θ_A=-40℃,θ_B =+85℃5 cycles Duration: t=30min
5	Vibration		There shall be no visibledamage. △C/C≤±(2%+2pF)(relative to the initial value) Tgδ:≤0.0010(1kHz)	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.
6	Bump		There shall be no visibledamage. △C/C≤±(2%+2pF)(relative to the initial value) Tgδ:≤0.0010(1kHz)	4000 times,Acceleration: 390m/s^2 ,Pulse duration, 6ms
7	Climate sequence	Dry heat		+85℃, 16h
		Damp heat,Cyclic		Test Db, Severity: b, the first cycle
		Cold		-40℃, 2h

No.	Item	Performance	Test method (IEC60384-2)
	Low air pressure	There shall be no permanent breakdown, flashover or other harmful deformation when applying U_R at the last 5 minute.	15℃~ 35℃, 8.5kPa, 1h,
7	Climate sequence	There shall be no evidence of deterioration and the marking shall be legible. △C/C≤±(2%+2pF)(relative to the initial value) Tgδ:≤0.0010 or 1.4times initial value (whichever is the greater) I.R.:≥50%of the rated value	Test Db, Severity b, the other cycles
8	Damp heat steady state	There shall be no visible damage and the marking shall be legible., △C/C≤±(2%+2pF)(relative to the initial value) Tgδ:≤0.0010 or 1.4times initial value (whichever is the greater) I.R.:≥50%of the rated value	Temperature:40℃±2℃ Humidity: 93 $^{+2}_{-3}$ %RH Duration: 21days
9	Endurance	There shall be no visible damage and the marking shall be legible. △C/C≤±(2%+2pF)(relative to the initial value) Tgδ:≤0.0010 or 1.4times initial value (whichever is the greater) I.R.:≥50%of the rated value	Temperature: +85℃ Voltage: 1.25×U_R Duration: 1 000h
10	Temperature characteristic	Measuring capacitance and temperature at test point a, b, d, f, g.: 1. Temperature coefficient of the capacitance(α):At lower category Temperature: $\alpha_h=\frac{C_b-C_d}{C_d\ (\theta_h-\theta_d)}$ At upper category Temperature: $\alpha_l=\frac{C_f-C_d}{C_d\ (\theta_l-\theta_d)}$ $-500\times10^{-6}/℃\leq\alpha_b$ and $\alpha_a\leq0\times10^{-6}/℃$ 2. Temperature cycle excursion of the capacitance (δ): $\delta_{da}=\frac{C_c-C_a}{C_d}$, $\delta_{bd}=\frac{C_b-C_c}{C_d}$ $\delta_{fa}=\frac{C_f-C_a}{C_d}$ $\delta_{da},\delta_{bd},\delta_{fa}\leq\pm$ {2%+2PF}	Static method: The Capacitors should be kept at the following temperature in turn: a(20±2)℃, b(−40±3)℃, d(20±2) ℃, f(85±2)℃, g(20±2)℃