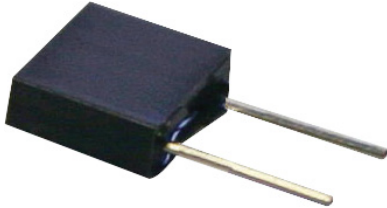


5mm Plastic Film Capacitor

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Features

- A range of industry standard, 5mm, pitch metallised polyester capacitors, stacked construction
- Epoxy resin encapsulated in flame retardant plastic cases with stand-off feet
- Metallised Polyester
- Industry standard pitch of 5mm
- Tolerance of 10%
- Body colour : Grey

Applications

- Bypassing
- Coupling
- Decoupling
- Timing
- Pulse Logic
- DC Motor Suppression

Specifications

Working Voltage at 85°C	: 63V DC / 40V AC
Capacitance Intolerance	: +10%
Full Operating Temperature Range	: -55°C to +85°C
Maximum Temperature with Voltage Derating	: +105°C
Insulation Resistance / Time Constant	: $\geq 15,000 \text{ M}\Omega$ ($\geq 5,000$ seconds C $\geq 0.33 \mu\text{F}$)
Dissipation Factor	: $\geq 1\%$ at 1 kHz

Test Method and Performance

Item	Performance	Test method GB/T 7332 (IEC60384-2)
Capacitance Tolerance	$\pm 5\%$	1kHz, 3%UR(Vrms) max.
Tangent of the Loss Angle	$\tan\delta \leq 0.01(1\text{kHz})$ $\tan\delta \leq 0.015(10\text{kHz})$ $\tan\delta \leq 0.03(100\text{kHz}, C < 0.1\mu\text{F})e$	1kHz or 10 kHz or 100 kHz $\leq 3\%UR(Vrms)$ or 1 Vrms(whichever is the minor)
Dielectric Strength	There shall be no breakdown or flashover	1.4UR, 5s
Insulation Resistance	$UR \leq 100V \geq 15\ 000M\Omega, CN \leq 0.33\mu\text{F}$ $\geq 5\ 000s, 0.33\mu\text{F} < CN \leq 1\mu\text{F}$ $\geq 1\ 000s, CN > 1\mu\text{F}$ $UR > 100V \geq 3\ 0000M\Omega, CN \leq 0.33\mu\text{F}$ $\geq 10\ 000s, CN > 0.33\mu\text{F}$	$UR \leq 100V$, Charging voltage 10V $UR > 100V$, Charging voltage 100V 20°C, measuring after applying voltage for 1 minute
Solderability	Good quality of tinning	Solder temperature: $245^\circ\text{C} \pm 5^\circ\text{C}$ Immersion time: $2.0s \pm 0.5s$
Initial Measurement	Capacitance, $\tan\delta(10\text{kHz})$	-

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Item	Performance	Test method GB/T 7332 (IEC60384-2)
Terminal Strength (straight lead)	There shall be no visible damage	Tension Ua1: Pull: Ød=0.5mm,5N; Ød=0.6mm,10N Bend Ub: The pull of bend: Ød=0.5mm, 2.5N Ød=0.6mm, 5N The terminals shall be bent 2 times in each direction.
Resistance to solder heat	There shall be no visible damage	Solder temperature:260°C±5°C Immersion time: 10s±1s
Final Measurement	$\Delta C/C \leq \pm 2\%$ (relative to the initial value) Increase of $\tan \delta: \leq 0.003(10\text{kHz})$	-
Component's Resistance of Solvents	The dimensions shall reach the requirement of Table 1, and the change of capacitor weight shall not beyond 1%.	Solvent: Industrial isopropanol. Solvent temperature:23°C±5°C Immersion time:5min±0.5min Reverting time:48h
Initial Measurement	Capacitance, $\tan \delta$ (10kHz)	-
Rapid Change of Temperature	There shall be no evidence of deterioration.	$\theta_A = -55^\circ\text{C}$, $\theta_B = +125^\circ\text{C}$ 5 cycles, Duration: t=30min
Vibration (Straight Lead)	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 (Straight Lead)	There shall be no evidence of deterioration.	4000 times, Acceleration: 390m/s ² , Pulse duration, 6ms
Final Measurement	$\Delta C/C \leq \pm 5\%$ (relative to the initial value) Increase of $\tan \delta:$ ≤ 0.003 (10kHz) IR: $\geq 50\%$ of the rated value	-
Climate Sequence	Initial Measurement	Capacitance, $\tan \delta$ (10kHz)
	Dry Heat	-
	Damp Heat, Cyclic	-
	Cold	-
	Low Air Pressure	There shall be no permanent break down, flashover or other harmful deformation when applying UR at the last 1 minute.
	Damp Heat, cyclic other	-
	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 $\tan \delta: \leq 0.005(10\text{kHz})$ IR: $\geq 50\%$ of the rated value

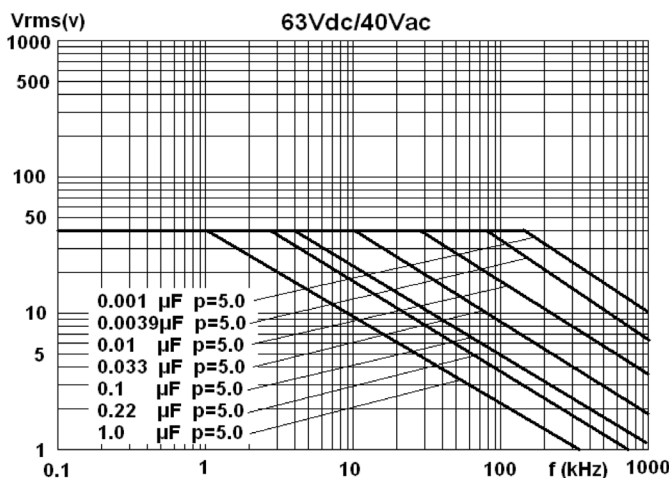
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Item	Performance	Test method GB/T 7332 (IEC60384-2)
Damp Heat Steady State	There shall be no evidence of deterioration and the marking shall be legible. $\Delta C/C \leq \pm 5\%$ (relative to the initial value) Increase of $\tan \delta$: ≤ 0.005 (10kHz) IR: $\geq 50\%$ of the rated value	Temperature: $40^\circ\text{C} \pm 2^\circ\text{C}$ Humidity: $93^{+2}_{-3} \% \text{RH}$ Duration: 56 days
Endurance	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 $\tan \delta$: ≤ 0.003 (10kHz) IR: $\geq 50\%$ of the rated value	Temperature: $+85^\circ\text{C}$ Voltage: $1.25 \times U_R$ Duration: 2000h or Temperature: $+125^\circ\text{C}$ Voltage: $1.25 \times U_c$ ($U_c = 0.5 U_R$) Duration: 2000h
Temperature Characteristic	Measuring capacitance at test point b, d, f: Characteristic at lower category temperature -55°C : $-10\% \leq (C_b - C_d) / C_d \leq 0\%$ Characteristic at upper category temperature $+125^\circ\text{C}$: $0\% \leq (C_f - C_d) / C_d \leq +18\%$ I.R. (test at point f): $U_R \leq 100\text{V}$: $\geq 15\text{M}\Omega$ ($C \leq 0.33\mu\text{F}$) $\geq 5\text{s}$ ($C > 0.33\mu\text{F}$) $U_R > 100\text{V}$: $\geq 30\text{M}\Omega$ ($C \leq 0.33\mu\text{F}$) $\geq 10\text{s}$ ($C > 0.33\mu\text{F}$)	Static method: The Capacitors should be kept at the following temperature in turn: a($20 \pm 2^\circ\text{C}$), b($-55 \pm 3^\circ\text{C}$), d($20 \pm 2^\circ\text{C}$), f($+125 \pm 2^\circ\text{C}$), g($20 \pm 2^\circ\text{C}$)
Charging and Discharging	$\Delta C/C \leq \pm 5\%$ (relative to the initial value) Increase of $\tan \delta$: ≤ 0.003 (10kHz, $C \leq 1.0\mu\text{F}$) ≤ 0.002 (1kHz, $C > 1.0\mu\text{F}$) 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: $220/C_N(\Omega)$ Discharging resistance: $R = 10/C_N(\Omega)$ or 20Ω (whichever is the greater) C_N : rated capacitance (μF)

Max. Voltage (Vr.m.s) Versus Frequency

Pattern I (High performance)



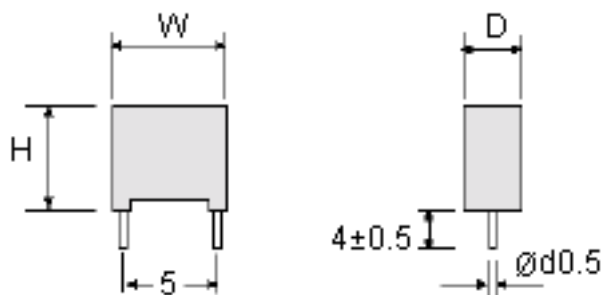
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Diagram



Part Number Table

Description	Type (μ F)	Max. Width (W)	Max. Height (H)	Max. Depth (D)	Part Number
Capacitor 0.001 μ F 63V	0.001	7.2mm	6.5mm	2.5mm	MCPBSFC-1J102KA45

Dimensions : Millimetres

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