



Film Capacitors

Metallized Polypropylene Film Capacitor

Series/Type: B32641B
Ordering code: B32641A0333J501
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Version: b

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Technical data

Reference: IEC60384-16: 2005. All data given at T = 20 °C, unless otherwise specified.

Rated Temperature	85°C		
Operation temperature range: $T_{max}^{op} = T_{amb} + T_{self-heating}$	Upper Category Temperature	T_{max}	+110 °C
	Maximum Operating Temperature	T_{max}^{op}	+110 °C
	Lower Category Temperature	T_{min}	-55 °C
Rated Capacitance C	33nF		
Capacitance tolerance	± 5 % (J)		
Continuous operating voltage / Rated Voltage $V_{R,DC}$ Rated Voltage $V_{R,AC}$	1000 V DC @ 85°C 500 V AC @85°C		
Dissipation factor $\tan \delta$ (in 10^{-3}) at 20 °C (upper limit values)	0.6 (at 1 kHz) 1.5 (at 100kHz)		
Category voltage V_C (continuous operation with V_{DC} or V_{AC} at $f \leq 1$ KHz)	T_{op} (°C)	DC voltage derating	
	$T_{op} \leq 85$ $85 < T_{op} \leq 110$	$V_C = V_R$ $V_C = V_R \cdot (165 - T_{op})/80$	
Operating voltage V_{op} for short operating periods (V_{DC} or V_{AC} at $f \leq 1$ KHz)	T_{op} (°C)	DC voltage (max. hours)	
	$T_{op} \leq 85$ $85 < T_{op} \leq 110$	$V_{op} = 1.25 \cdot V_R$ (1000h) $V_{op} = 1.25 \cdot V_C$ (1000h)	
Insulation resistance R_{ins} at 500 VDC, rel. humidity ≤ 65%	> 100 GΩ		
Test voltage (Terminal to terminal), duration	$1.6 \cdot V_R$, 2 s		
Test voltage (Terminal to case)	2000Vac, 60s		
Maximum Pulse Handling Capability (V/μs)	6200 V / (μs)		
Damp Heat Steady State passing Criteria	1000hrs/60°C /95% relative humidity $V_{R,DC}$ $\left \frac{\Delta C}{C_0} \right \leq 5 \%$, $\tan \delta \leq 1.5 \cdot$ upper limit values(100kHz), $R_{ins} \geq 50 \%$ of initial limit		
Reliability: Failure rate λ Service life t_{SL} For conversion to other operating conditions and temperatures, refer to chapter "Reliability"	1 fit ($\leq 1 \cdot 10^{-9}$) @ $0.5 \cdot V_R$, 40°C 200 000 h @ $1.0 \cdot V_R$, 85 °C		

Cautions and warnings

- Do not exceed the upper category temperature (UCT).
- Do not apply any mechanical stress to the capacitor terminals.
- Avoid any compressive, tensile or flexural stress.
- Do not move the capacitor after it has been soldered to the PC board.
- Do not pick up the PC board by the soldered capacitor.
- Do not place the capacitor on a PC board whose PTH hole spacing differs from the specified lead spacing.
- Do not exceed the specified time or temperature limits during soldering.
- Avoid external energy inputs, such as fire or electricity.
- Avoid overload of the capacitors.

The table below summarizes the safety instructions that must always be observed. A detailed description can be found in the relevant sections of the chapters "General technical information" and "Mounting guidelines".

Topic	Safety information	Reference chapter "General technical information"
Storage conditions	Make sure that capacitors are stored within the specified range of time, temperature and humidity conditions.	4.5 "Storage conditions"
Flammability	Avoid external energy, such as fire or electricity (passive flammability), avoid overload of the capacitors (active flammability) and consider the flammability of materials.	5.3 "Flammability"
Resistance to vibration	Do not exceed the tested ability to withstand vibration. The capacitors are tested to IEC 60068-2-6. EPCOS offers film capacitors specially designed for operation under more severe vibration regimes such as those found in automotive applications. Consult our catalog "Film Capacitors for Automotive Electronics".	5.2 "Resistance to vibration"
Topic	Safety information	Reference chapter "Mounting guidelines"
Soldering	Do not exceed the specified time or temperature limits during soldering.	1 "Soldering"
Cleaning	Use only suitable solvents for cleaning capacitors.	2 "Cleaning"
Embedding of capacitors in finished assemblies	When embedding finished circuit assemblies in plastic resins, chemical and thermal influences must be taken into account. Caution: Consult us first, if you also wish to embed other uncoated component types!	3 "Embedding of capacitors in finished assemblies"

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