

# Metallized Polypropylene Film Capacitor

Series/Type: B32641B Ordering code: B32641A0333J501

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# **②TDK**

## **Film Capacitors**

### Metallized Polypropylene Film Capacitor

# B32641A0333J501 B32641B

#### Automotive Customer: HANG ZHOU EV-TECH CO., LTD

#### Applications

- Electronic ballasts (resonant circuits)
- LLC typology in resonant circuits
- High frequency applications with high current stress
- SMPS

#### Climatic

- Max. operating temperature: 110 °C
- Climatic category (IEC 60068-1): 40/110/56

#### Construction

- Polypropylene(PP) dielectric with double side metallized polyester(PET) film as electrodes
- Wound capacitor technology
- Plastic case (UL 94 V-0)
- Epoxy resin sealing

#### Features

- Very compact design
- High pulse strength
- High current withstand capability

#### Terminals

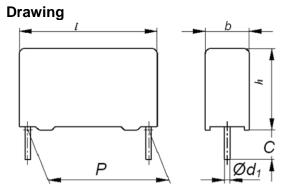
- Parallel wire leads
- lead-free tinned

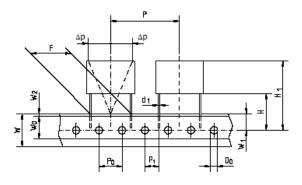
#### Marking

- Manufacturer's logo
- Lot number, series number
- Rated capacitance (coded)
- Capacitance Tolerance (code letter)
- Rated DC voltage
- Date of manufacture (coded)

#### **Delivery mode**

- Reel packing
- MOQ: 8×PU (8×800pcs)





#### Dimensions

Lead spacing (P):	10.0 ±	0.4 mm
Width max. (b):	8.5	mm
Height max. (h):	17.5	mm
Length max. (I)	13.0	mm

- Lead diameter (Ød1): 0.6 ± 0.05 mm
- H: 18.5 ± 0.5 mm
- P0: 12.7 ± 0.2 mm

CAP FILM I&A DC PD



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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:	Upper C	ategory Temperature	$T_{max}$	+110 °C
$T_{max}^{op} = T_{amb} + T_{self-heating}$	Maximum	Maximum Operating Temperature T		
	Lower Category Temperature		$T_{min}$	−55 °C
Rated Capacitance C	33nF			
Capacitance tolerance	± 5 % (J)			
Continuous operating voltage /	1000 V DC @ 85°C			
Rated Voltage V <sub>R, DC</sub>	500 V AC @85°C			
Rated Voltage $V_{R, AC}$				
Dissipation factor tan $\delta$ (in 10 <sup>-3</sup> ) at 20 °C (upper limit values)	0.6 (at 1 kHz) 1.5 (at 100kHz)			
	T (90)			
Category voltage V <sub>C</sub>	T <sub>op</sub> (°C)	DC voltage derating		
(continuous operation with $V_{\text{DC}}$ or	$T_{op} \leq 85$	$V_{\rm C} = V_{\rm R}$		
V <sub>AC</sub> at f ≤ 1 KHz)	$85 < T_{op} \leq 110$	$V_{C} = V_{R} \cdot (165 - T_{op})/80$		
Operating voltage $V_{op}$ for	T <sub>op</sub> (°C)	DC voltage (max. hours)		
short operating periods	$T_{op} \leq 85$	$V_{op} = 1.25 \cdot V_{R} (1000h)$		
$(V_{DC} \text{ or } V_{AC} \text{ at } f \le 1 \text{ kHz})$	85 <t<sub>op≤110</t<sub>	$V_{op} = 1.25 \cdot V_{C} (1000h)$		
Insulation resistance R <sub>ins</sub>				
at 500 VDC, rel. humidity ≤ 65%	> 100 GΩ			
Test voltage (Terminal to terminal),	$1.6 \cdot V_R$ , $2 s$			
duration	$1.6 \cdot V_R, \qquad 2 s$			
Test voltage (Terminal to case)	2000Vac, 60s			
Maximum Pulse Handling Capability (V/µs)	6200 V / (μs)			
Damp Heat Steady State	1000hrs/60°C /95% relative humidity V <sub>R.DC</sub>			
passing Criteria				
		$\left \frac{\Delta C}{C_0}\right  \le 5 \%,$		
	$\tan \delta \le 1.5 \cdot \text{upper limit values}(100 \text{kHz}),$			
Doliobility #		$R_{ins} \ge 50 \% of initial limit$		
Reliability: Failure rate $\lambda$				
Service life t <sub>SI</sub>				
For conversion to other operating	$\begin{array}{ll} 1 \ fit \ (\leq 1 \cdot 10^{-9}) \ @ \ 0.5 \cdot V_R, & 40^{\circ}C \\ 200 \ 000 \ h \ @ \ 1.0 \cdot V_R, & 85 \ ^{\circ}C \end{array}$			
conditions and temperatures, refer to				
chapter "Reliability"				



#### **Metallized Polypropylene Film Capacitor**

#### 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.

Торіс	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"
Торіс	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"

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".



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