

Compact, High-Voltage, Metallized Polypropylene Power Capacitors

KPST

Applications

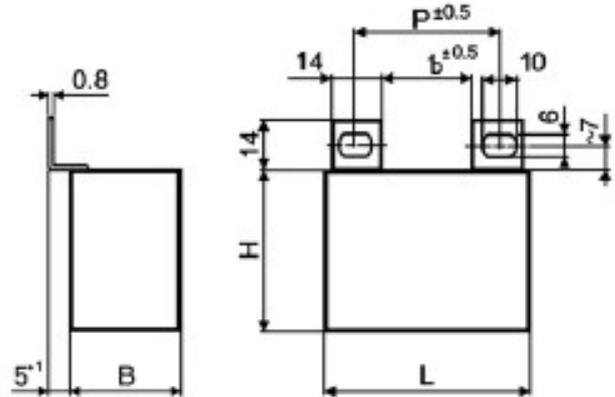
- AC applications with high peak, RMS current
- High pulse loading, snubber applications
- Directly mount to IGBT or across the bus

Main Characteristics

- AC, DC voltage
- Insulation resistance
- Protection against over voltages

Design

- Metallized film electrodes
- Polypropylene film dielectric
- Non-inductive, self-healing construction
- Plastic flame retardant case
- Epoxy resin sealed



Nominal Voltage DC	250VDC	This is the max DC or peak voltage for which capacitor is designed. If the capacitor works with DC and also super-imposed AC voltage U_{AC} , then the sum of DC and the amplitude of AC must not exceed U_R
Nominal Voltage AC	160VAC	50/60Hz. If the working frequency is higher, the permissible AC voltage must be decreased, not to exceed the maximum loss power of the capacitor.
Rated Capacitances	3.3 μ F - 50 μ F (see table below)	
Tolerances	Typically $\pm 10\%$ or $\pm 20\%$, but other tolerances available on request	
Dissipation Factor	Tg δ	<0.00061 at 1kHz and + 25°C.
ESR	At 100kHz and +25°C < m Ω	
Insulation resistance R_{IS}	30 000/C [M Ω]	
Operating Temperature	-40...+85°C on case. The highest permissible capacitor temperature at the hottest point of the case must not exceed +85°C.	
Max. permitted dissipation power of the capacitor P_L :	Depends on the cooling conditions	
Test voltage between terminals	1.6x U_R , 1 min at +25°.	
Protection against over-voltages	The capacitors are built using self-healing films.	
Non Recurrent Surge Voltage	U_{PK} 400V	If the over-voltages exceed the permissible value, the capacitor may not survive.
Test voltage between terminals and case	3000VDC, 1 min. at +25°C	
Max. repetitive rate of voltage rise dU/dt	< 25V/ μ sec at U_R and +25°C	
Max. peak current I_P	< $C_R \times dU/dt$	
Related standards	IEC 60384-1	

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Capacity CR [μF]	Dimensions ± 1 [mm]					du/dt V/ μs	ESR (mOhm)	I_{RMS} (A)
	B	H	L	P				
3.3	21	30	42.5	18 ÷ 25				
4.7	28	37	42.5	18 ÷ 25				
6.8	28	37	42.5	18 ÷ 25				
10	30	45	42.5	18 ÷ 25				
15	30	45	42.5	18 ÷ 25				
22	40	50	42.5	18 ÷ 25				
50	35	45	58	27.5	15	2.1	33	

Ordering code : KPST 345 SE 25-50.0 cs2a (K)