

## Compact, High-Voltage, Metallized Polypropylene Power Capacitors

KPST

### Applications

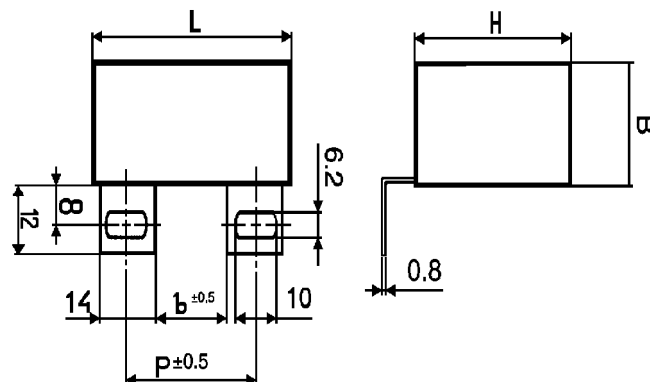
- AC applications with high peak, RMS current
- High pulse loading, snubber applications
- Directly mount to IGBT the bus module or across bus

### 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



$$U_{MAX} = \sqrt{\frac{P_L}{2\pi \times f \times C_R \times \text{tgD}}}$$

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 $\mu$ F - 22 $\mu$ F (see table below)	
Tolerances	Typically $\pm 10\%$ or $\pm 20\%$ , but other tolerances available on request	
Dissipation Factor	Tg $\delta$	<0.001 at 1kHz and + 25°C.
ESR	At 100kHz and +25°C < m $\Omega$	
Insulation resistance $R_{IS}$	30 000/C [M $\Omega$ ]	
Operating Temperature	-40 $\div$ +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	2000VDC, 2 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 above, the capacitor may not survive.
Test voltage between terminals and case	2000VDC, 1 min. at +25°C	
Max. repetitive rate of voltage rise dU/dt	< 25V/ $\mu$ sec at $U_R$ and +25°C	
Max. peak current $I_P$	< $C_R \times dU/dt$	
Related standards	IEC 60384-1	

**Leclanché Capacitors for Critical Applications and Extreme Environments.**

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Capacity CR [ $\mu$ F]	Dimensions <sup>±1</sup> [mm]				
	B	H	L	P	PL [W]
3.3	21	30	42.5	18 ÷ 25	1.6
4.7	28	37	42.5	18 ÷ 25	2
6.8	28	37	42.5	18 ÷ 25	2
10	30	45	42.5	18 ÷ 25	2.5
15	30	45	42.5	18 ÷ 25	2.5
22	40	50	42.5	18 ÷ 25	3