

Application: MKP-AC capacitor for general use in power electronics also for nonsinusoidal voltages and currents with low self inductance

Standard: acc. to IEC 61071:2007

Characteristics

Rated capacitance	C_N	500 $\mu\text{F} \pm 10\%$
Rated a.c. voltage	U_N	900 V a.c.
Rms voltage, sinusoidal	U_{rms}	640 V
Insulation voltage	U_i	1000 V
Non-recurrent surge voltage	u_s	1800 V
Rated energy	W_N	203 Ws
Maximum current	I_{max}	210 A
Maximum peak current	\hat{i}	10 kA
Maximum surge current	I_s	60 kA
Series resistance	R_s	0.3 m Ω
Dielectric loss factor	$\tan\delta_o$	2×10^{-4}
Loss factor at 50Hz	$\tan\delta_{50\text{Hz}}$	2.3×10^{-4}
Self discharge time const.	$C \times R_{is}$	10000 s
Self inductance	L_e	~ 60 nH
Resonance frequency	f_r	~ 29 kHz

Thermal conditions

Lowest operating temperature	Θ_{min}	-25 $^{\circ}\text{C}$
Maximum operating temperature	Θ_{max}	75 $^{\circ}\text{C}$
Thermal resistance	R_{th}	0.8 K/W ¹⁾

Maximum power loss	P_{max} ¹⁾	at Θ_{amb}
	38 W	45 $^{\circ}\text{C}$
	31 W	50 $^{\circ}\text{C}$
	19 W	60 $^{\circ}\text{C}$
	6.3 W	70 $^{\circ}\text{C}$

Storage temperature	$\Theta_{storage}$	-40..+85 $^{\circ}\text{C}$
Humidity class		C

Service life

Load duration	100000 h
at $\Theta_{hotspot}$	≤ 70 $^{\circ}\text{C}$
Failure quota	300 FIT

Test data

Voltage test between terminals	U_{BB}	1935 V DC/10s
A.C. voltage test terminal/cont.	U_{BG}	3000 V AC/10s

Dimensions²⁾

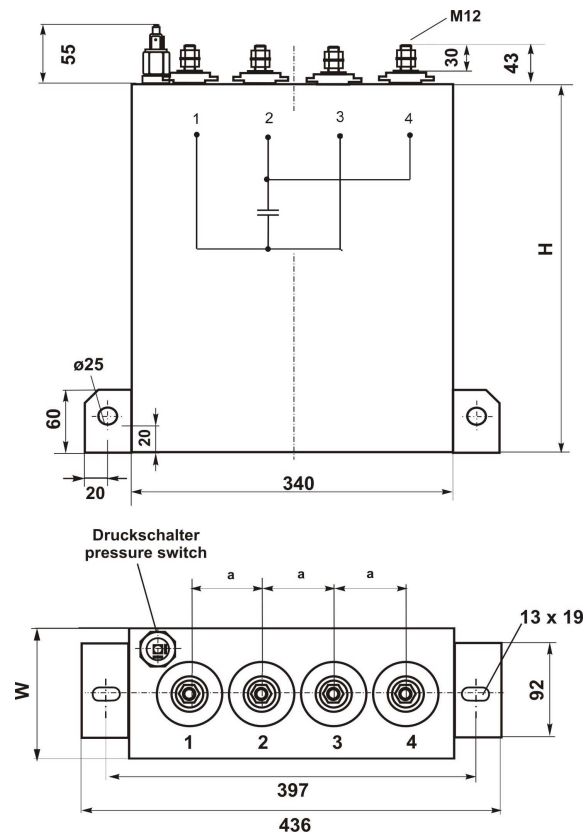
Height of the case	H	280 mm
Length of the case	L	340 mm
Width of the case	W	125 mm
Distance of terminals	a	80 mm
Clearance in air	L	26 mm
Creepage distance	K	48 mm

Approx weight 17 kg

Mechanical characteristics

Construction	MKP-AC - metallized polypropylene capacitor, self-healing, metallic case
Protection	pressure switch for monitoring of the internal pressure (opener)
Impregnant	dry type ,resin moulded (Non PCB)
Fire load	450MJ

outline drawing



1) exact values have to be determined at the type test