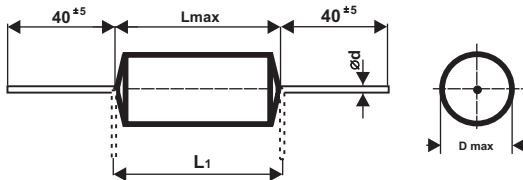


MKP Metallized Polypropylene Film Capacitors

MKP 380S - 386S



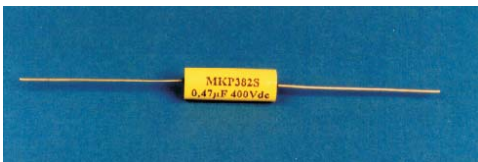
L max (mm)	11	14	19	26	31	36
d (mm)	0,6	0,6	0,6	0,8	0,8	0,8
L ₁ (mm)	16	20	25	32,5	37,5	41

Maximum pulse rise time dU/dt [V/μsec]

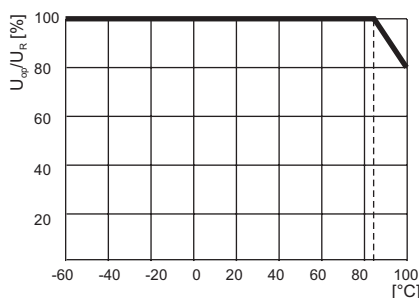
Lmax (mm)	≤ 14	19	26	≥ 31
U _r	dU/dt [V/ μs] max.			
160	100	75	45	30
250	120	100	60	45
400	200	150	100	60
630	250	200	120	100
1000	300	250	160	140
1600	500	300	200	175
2000	750	650	450	250

Dissipation factor tgδ at +25°C max.

	C _r ≤ 0,1 μF	0,1 μF ≤ C _r ≤ 1 μF	C _r > 1 μF
1 kHz	0,0006	0,0006	0,0006
10 kHz	0,0010	0,0020	
100 kHz	0,0030		



Operating voltage dependence on ambient temperature



Construction of capacitors:

Metallized polypropylene film capacitors noninductive construction, cylindrical shape, self-healing ability, Leads: tinned cooper wire Surface coating by yellow polyester film tape wrapped, epoxy resin sealed Flame retardant construction available upon request also UL 94 V-0

Reference standards:

General specifications: IEC 60384-1, EN 130 000
 Sectional specifications: IEC 60386-16, CECC 31 200

Nominal capacitance C_r:

see table
 Other values on request. Nominal capacitance values are based on the E6 serie in accordance to IEC 63 publ. or arbitrary values in capacitance range on request.

Tolerance of capacitance: ± 20% (M), ± 10% (K), ± 5% (J), arbitrary tolerances on request

Insulation resistance Ris:

C ≤ 0,33 μF Ris min. 100 000 MΩ
 C > 0,33 μF Ris min. 30 000 sec.

Time constant tis: tis = Ris · C [sec; MΩ; μF]

Rated voltage U_r [DC/AC 50-60 Hz] - see table.

Climatic category: 55/100/56 (IEC 60068-1)

Working Temperature range: - 55°C + +100°C

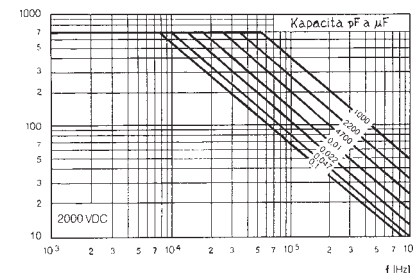
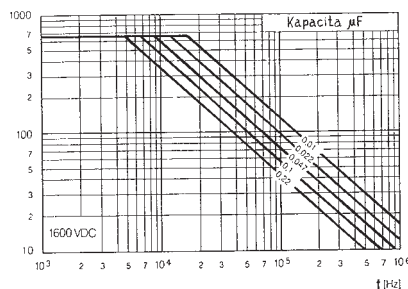
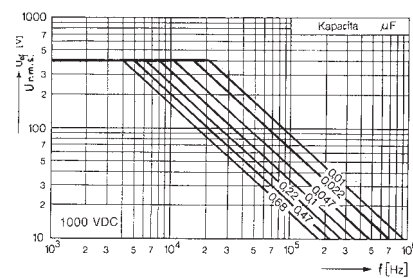
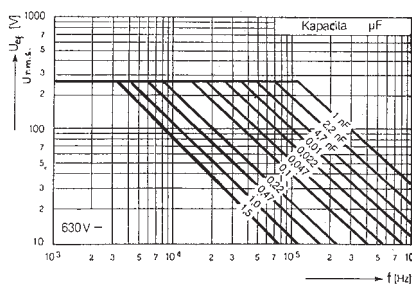
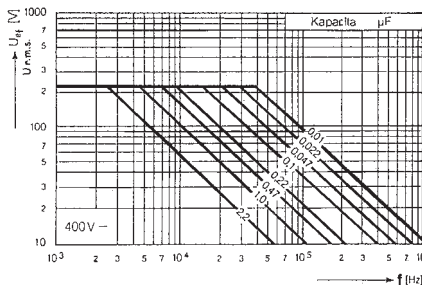
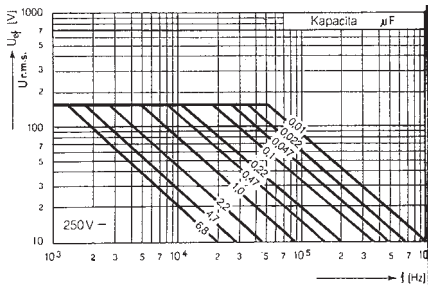
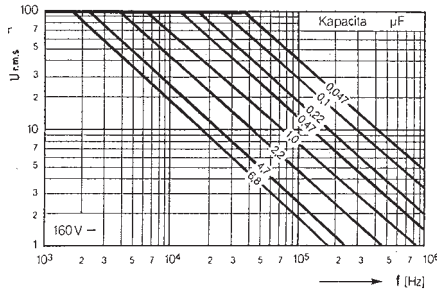
Test voltage between terminations: U_t = 1,6 × U_r for 2 sec. at ambient temperature +25°C ± 5°C

Type	MKP 380S	MKP 381S	MKP 382S	MKP 383S	MKP 384S	MKP 385S	MKP 386S
Nominal voltage U _r DC/AC	160 100	250 160	400 220 *	630 250 *	1000 400 *	1600 630	2000 700
Nom. capac. C _r	Maximal dimensions D x L (mm)						
1000 pF				5x11	5x11	5x19	5x26,5
1500				5x11	5x14	5x19	5x26,5
2200				5x11	5x14	5x19	5x26,5
3300				5x11	5x14	6x19	7x26,5
4700				5,5x11	5,5x19	5x26,5	5x31,5
6800				5,5x14	5,5x19	5,5x26,5	6,5x31,5
0,010 μF			5x11	5,5x14	5,5x19	6,5x26,5	7x31,5
0,015			5x14	6x14	5,5x19	7x26,5	7,5x31,5
0,022			5,5x14	5,5x19	7x26	8x26,5	8x31,5
0,033		5x11	6,5x14	6,5x19	8x26	9,5x26,5	9x31,5
0,047		5x14	5,5x19	7x19	9x26	10,5x26,5	10,5x31,5
0,068		6x14	6x19	8x19	8x31	13,5x26,5	12,5x31,5
0,10 μF	7x11	8,5x14	6,5x19	7,5x26	9,5x31	12,5x31,5	15x31,5
0,15	7,5x14	5x19	7x19	8x26	11x31	15,5x31,5	18x31,5
0,22	8,5x14	6x19	7x26	8,5x26	13x31	16x31,5	22x31,5
0,33	10x14	7x19	8x26	9x31	14,5x31		
0,47	8x19	7,5x26	9,5x26	10x31	17x31		
0,68	9x19	8x26	10x31	12x31	19x36		
1,0 μF	10,5x19	9x26	11,5x31	15x31	21x36		
1,5	10x26	9,5x31	14x31	17,5x36			
2,2	12,5x26	11x31	16x31	20,5x36			
3,3	14,5x26	13,5x31	18x36				
4,7	16x31	16x31	21,5x36				
6,8	19x31	17,5x36					
10 μF	21x36						

* this capacitors are not suitable for across the line applications
 The manufacturer is not responsible for any damages, caused by the improper installation and application.

MKP Metallized Polypropylene Film Capacitors

Maximum AC voltage dependence on frequency



Upper operating temperature:

The max. temperature measured on the case surface at which the capacitor can work continually. MKP capacitors have the upper operating temperature +100°C, at any rate +105°C and corresponds to the upper category temperature

Category voltage U_c :

The maximum direct voltage, or the maximum r.m.s. voltage or the max. value of a voltage pulse, which may be continuously applied to the terminals of a capacitors till to the rated temperature. For the MKP up to +85°C $U_c=U_R$. For temperatures between +85°C and +100°C a decreasing factor of 1,25%/°C on the rated voltage U_R has to be applied.

Pulse loading:

The capacitors charged which sinusoidal voltage pulses with quick rise (high dU/dt) will be loaded with high current pulses. The current pulse must be limited in order to not overload or not destroy the internal contact and connections. The limit of allowed current loading is given with allowed voltage rise in time dU/dt [V/μsec] Minimum resistance in series with capacitor is

$$R_s = U_R / C_R \times dU/dt$$

U_R - rated voltage [V]
 C_R - nominal capacitance [μF]
 R_s - [Ohm]

If the max. pulse voltage is less than the rated voltage, higher dU/dt values can be permitted

$$dU_{OP}/dt = dU_R/dt \times U_R / U_{OP}$$

U_R - rated voltage
 U_{OP} - working voltage amplitude

Permissible AC Voltage:

It is the pure sine wave voltage that may be applied to the capacitor at the frequency up to 50/60 Hz. For the operation at higher frequencies refer to permissible AC voltage versus frequency graphs.

Time constant t_{is} :

The time constant is used to express the quality of insulation for higher capacities and is expressed in second with the following formula:

$$t_{is} = R_{is} \cdot C \text{ [sec; M}\Omega; \mu\text{F]}$$