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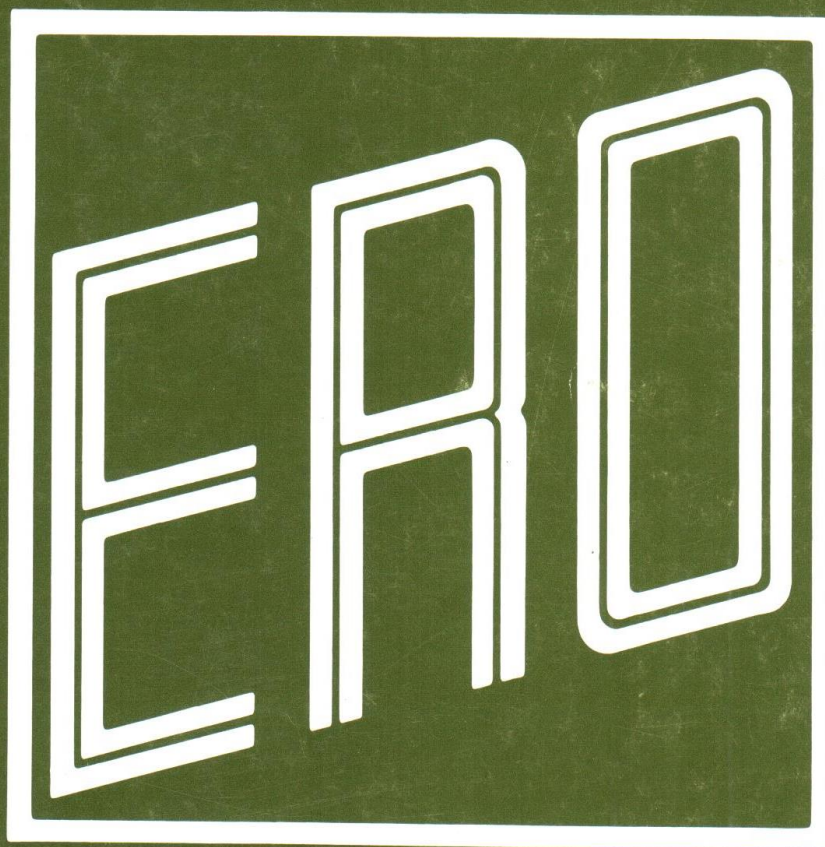


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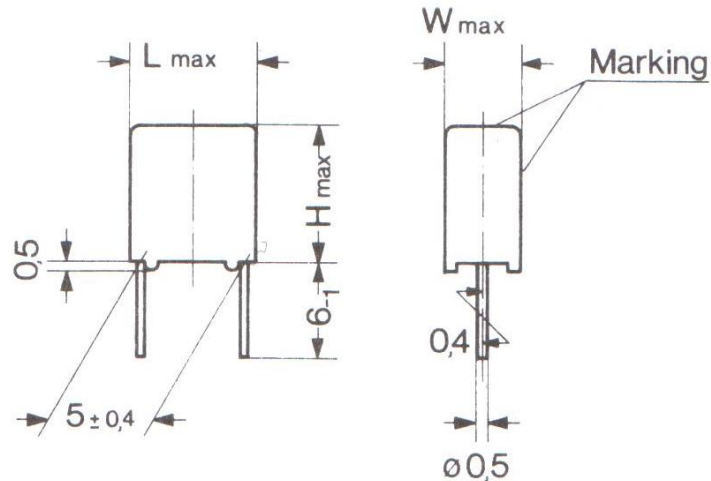
## Film-Capacitors



**ERNST ROEDERSTEIN**

Spezialfabrik für Kondensatoren GmbH  
a company of FIRMENGRUPPE ROEDERSTEIN

## Dimensions in mm



Also available on tape

## Main applications:

Oscillator, timing and LC/RC filter circuits, high frequency coupling for fast digital and analog IC's.  
Replacement for multilayer ceramic capacitors (e.g. NPO).

## Marking:

Manufacturer / type / C-value / rated voltage / tolerance

## Dielectric:

Polypropylene film

## Electrodes:

Metal foil

## Coating:

plastic case, blue, epoxy-resin-sealed, flame-retardant

## Construction:

extended foil (refer to general information)

## Leads:

tinned nickel silver wire

## DIN classification:

FMD according to DIN 40040

## IEC test classification:

55 / 100 / 56, according to IEC publ. 68

## Temperature range:

-55°C to +100°C

## Humidity range:

Max. value 100% relative humidity but only 30 days per year;  
90% for 60 days, yearly average  $\leq$  80%.  
Dewfall permitted.

## Capacitance range:

100 pF to 10000 pF

## Capacitance tolerance:

normal:  $\pm 10\%$ ,  $\pm 5\%$ 

## (Marking see general information)

close:  $\pm 2,5\%$ ,  $\pm 1\%$  on requestRated voltage:  
( $U_R$ )

63 VDC, 100 VDC

Permissible AC voltage  
up to 60 Hz:

40 VAC, 63 VAC

Test voltage:  
(electrode / electrode)2 x  $U_R$  for 2 sec.

## Pulse rise time:

 $d_u / dt = 1000 \text{ V} / \mu \text{ sec.}$



Dissipation factor $\tan \delta$ :		
measured at	$C \leq 1000 \text{ pF}$	$C > 1000 \text{ pF}$
1 kHz	$0,3 \times 10^{-3}$	$0,4 \times 10^{-3}$
10 kHz	$0,3 \times 10^{-3}$	$0,4 \times 10^{-3}$
100 kHz	$0,4 \times 10^{-3}$	$0,8 \times 10^{-3}$
1 MHz	$1 \times 10^{-3}$	
maximum value		
<b>Insulation resistance:</b>	measured at 100 VDC (63 VDC series at 50 VDC) after 1 min. 500000 M $\Omega$ minimum value	
<b>Temperature coefficient:</b>	$-200 \times 10^{-6}/^{\circ}\text{C}$ (typical value)	
<b>Capacitance drift:</b>	up to $+40^{\circ}\text{C}$ , $\pm 0,3\%$ for a period of 2 years	
<b>Derating for DC and AC category voltage <math>U_C</math>:</b>	at $+85^{\circ}\text{C}$ : $U_C = 1,0 U_R$ at $+100^{\circ}\text{C}$ : $U_C = 0,8 U_R$	
<b>Storage temperature:</b>	$-55^{\circ}\text{C}$ to $+100^{\circ}\text{C}$	
<b>Self inductance:</b>	$\sim 6 \text{ nH}$ measured with 2 mm long leads	
<b>Pull test on leads:</b>	$\geq 30 \text{ N}$ in direction of leads according to DIN 40046/19 and IEC publ. 68	
<b>Solder conditions:</b>	refer to general information	
<b>Taping:</b>	refer to general information	
<b>Suitable cleaning solvents:</b>	refer to general information	
For further information please refer to typical graphs on KP capacitors.		

Capacitance	Capacitance code	Voltage code 06 63 VDC / 40 VAC			Voltage code 01 100 VDC / 63 VAC		
		W	H	L	W	H	L
100 pF	- 110				4,5	6	7,2
150 pF	- 115				4,5	6	7,2
220 pF	- 122				4,5	6	7,2
330 pF	- 133				4,5	6	7,2
470 pF	- 147				4,5	6	7,2
680 pF	- 168				4,5	6	7,2
1 000 pF	- 210				4,5	6	7,2
1 500 pF	- 215				4,5	6	7,2
2 200 pF	- 222				4,5	6	7,2
3 300 pF	- 233	4,5	6	7,2			
4 700 pF	- 247	4,5	6	7,2			
6 800 pF	- 268	4,5	6	7,2			
10 000 pF	- 310	5,5	7	7,2			

**Ordering code:**

C = 100 pF, U<sub>R</sub> = 100 VDC, ± 10 %

KP 1830-110/015

Impedance versus frequency  $Z = f(f)$  (Lead length 2 mm)

