

**MMK****RoHS**  
Compliant

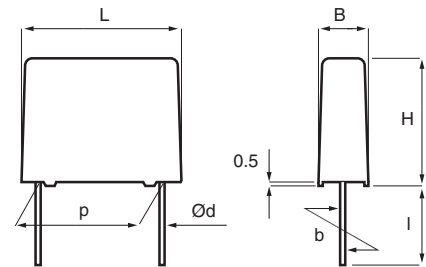
- Metallized polyester
- According to IEC 60384-2, DIN 44122

**TYPICAL APPLICATIONS**

Bypassing, signal coupling. General purpose for highest reliability.

**CONSTRUCTION**

Metallized polyester film capacitor. Radial leads of tinned wire are electrically welded to the contact metal layer on the ends of the capacitor winding. Encapsulation in self-extinguishing material meeting the requirements of UL 94V-0.

**TECHNICAL DATA**

Rated voltage $U_R$ , VDC	50	63	100	250	400	630	1000
Rated voltage $U_R$ , VAC	30	40	63	160	200	220	250
Capacitance, $\mu\text{F}$	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	-10.0	-82	-82	-39	-18	-6.8	-4.7

Capacitance tolerance  $\pm 20\%$ ,  $\pm 10\%$  standard,  $\pm 5\%$ .

Category temperature range  $-55 \dots +100^\circ\text{C}$

Voltage derating Above  $+85^\circ\text{C}$  DC and AC voltage derating is  $1.25\%/^\circ\text{C}$ .

Rated temperature  $+85^\circ\text{C}$

Climatic category IEC 60068-1, 55/100/56  
DIN 40040, FME  
 $-55 \dots +100^\circ\text{C}$  ( $+125^\circ\text{C}$ )  
Average relative humidity  $\leq 75\%$   
RH = 95% for 30 days per year.  
RH = 85% for further days limited by average value per year, occasional slight condensation permitted.

Test voltage  $1.6 \times U_R$  VDC for 2s

Capacitance drift Max. 2% after a 2 year storage period at a temperature of  $+10 \dots +40^\circ\text{C}$  and a relative humidity of 40...60%.

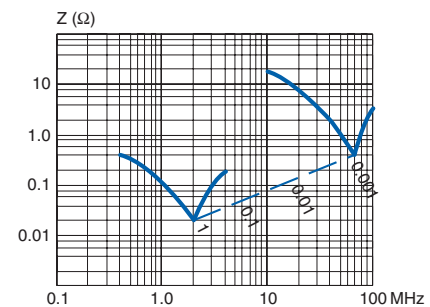
Reliability Operational life  $> 200\,000$  h.  
Failure rate  $< 3$  FIT,  $T = +40^\circ\text{C}$ ,  $U = 0.5 \times U_R$ .  
Failure criteria according to DIN 44122.

Maximum pulse steepness:  $dU/dt$  according to article table. For peak to peak voltages lower than rated voltage ( $U_{pp} < U_R$ ), the specified  $dU/dt$  can be multiplied by the factor  $U_R/U_{pp}$

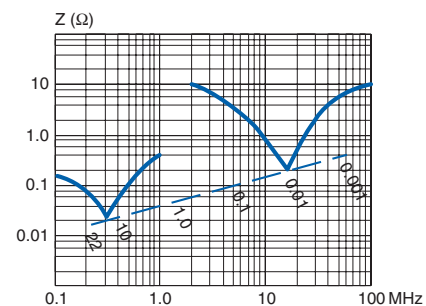
Temperature coefficient  $+400 (\pm 200)$  ppm/ $^\circ\text{C}$  at 1 kHz

Self inductance Approximately 6 nH/cm for the total length of capacitor winding and the leads.

p	d	std l	max l	b
$5.0 \pm 0.4$	0.5	$4^{+1}$	20	$\pm 0.4$
$7.5 \pm 0.4$	0.6	$4^{+1}$	20	$\pm 0.4$
$10.0 \pm 0.4$	0.6	$4^{+1}$	30	$\pm 0.4$
$15.0 \pm 0.4$	0.8	$4^{+1}$	30	$\pm 0.4$
$22.5 \pm 0.4$	0.8	$4^{+1}$	30	$\pm 0.4$
$27.5 \pm 0.4$	0.8	$4^{+1}$	30	$\pm 0.4$
$37.5 \pm 0.5$	1.0	$4^{+1}$	30	$\pm 0.7$



Resonance frequencies  
MMK 5



Resonance frequencies  
MMK7.5 ... 37.5

**ENVIRONMENTAL TEST DATA**

Damp heat test  
Test conditions:  $T = +40^\circ\text{C}$ , RH = 93%,  $t = 56$  days.  
Test criteria:  $\Delta C/C \leq \pm 5\%$ ,  
 $\Delta \tan \delta \leq 0.005$  (1kHz),  
IR after test  $0.5 \times \text{IR min.}$

Endurance test  
Test conditions:  $T = +100^\circ\text{C}$ ,  $U = 1.25 \times (0.8 \times U_R)$ ,  
 $t = 2000$  h.  
Test criteria:  $\Delta C/C \leq \pm 5\%$ ,  
 $\Delta \tan \delta \leq 0.005$  (1kHz)  
 $\Delta \tan \delta \leq 0.010$  (100kHz)  
IR after test  $0.5 \times \text{IR min.}$