

- Metallized polyester
- According to CECC 30401-042, IEC 60384-2, DIN 44122

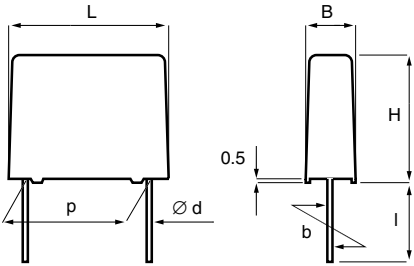


TYPICAL APPLICATIONS

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.

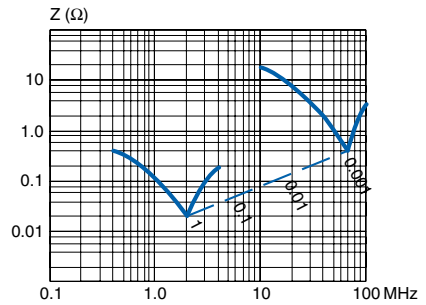


TECHNICAL DATA

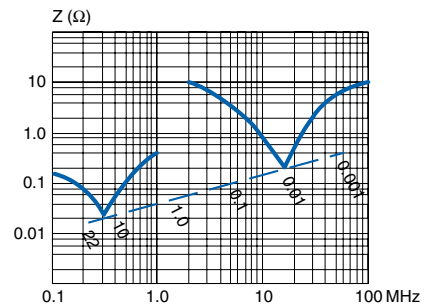
Rated voltage U_R , VDC	50	63	100	250	400	630	1000
Rated voltage U_R , VAC	30	40	63	160	200	220	250
Capacitance, μF	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	-10.0	-82	-82	-39	-18	-6.8	-4.7

Capacitance tolerance	$\pm 20\%$, $\pm 10\%$ standard, $\pm 5\%$.
Category temperature range	-55 ... +100°C
Voltage derating	Above +85°C DC and AC voltage derating is 1.25%/°C.
Rated temperature	+85°C
Climatic category	IEC 60068-1, 55/100/56 DIN 40040, FME -55 ... +100°C (+125°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 x U_R VDC for 2s
Capacitance drift	Max. 2% after a 2 year storage period at a temperature of +10 ... +40°C and a relative humidity of 40...60%.
Reliability	Operational life > 200 000 h. Failure rate < 3 FIT, T = +40°C, U = 0.5 x 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 (± 200) ppm/°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 ± 0.4	0.5	4 ⁺¹	20	± 0.4
7.5 ± 0.4	0.6	4 ⁺¹	20	± 0.4
10.0 ± 0.4	0.6	4 ⁺¹	30	± 0.4
15.0 ± 0.4	0.8	4 ⁺¹	30	± 0.4
22.5 ± 0.4	0.8	4 ⁺¹	30	± 0.4
27.5 ± 0.4	0.8	4 ⁺¹	30	± 0.4
37.5 ± 0.5	1.0	4 ⁺¹	30	± 0.7



Resonance frequencies
MMK 5



Resonance frequencies
MMK7.5 ... 37.5

ENVIRONMENTAL TEST DATA

Damp heat test	Test conditions: T = +40°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 x IR min.
Endurance test	Test conditions: T = +100°C, U = 1.25 x (0.8 x 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 x IR min.

TECHNICAL DATA

Dissipation factor $\tan\delta$

Maximum values at +23°C
 $C \leq 0.1 \mu\text{F}$ $0.1 \mu\text{F} < C \leq 1.0 \mu\text{F}$ $C > 1.0 \mu\text{F}$

MMK5	1 kHz	0.8%	0.8%	0.8%
	10 kHz	1.2%	1.2%	1.5%
	100 kHz	2.5%	3.0%	
MMK7.5 ... 37.5	1 kHz	0.8%	0.8%	1.0%
	10 kHz	1.5%	1.5%	
	100 kHz	3.0%		

Insulation resistance

Minimum values between terminals.
 Measured at +20°C, according to IEC 60384-2.
 $C \leq 0.33 \mu\text{F}$ $C > 0.33 \mu\text{F}$

$U_R \leq 100\text{V}$	15000 MΩ	5000 s
$U_R > 100\text{V}$	30000 MΩ	10000 s

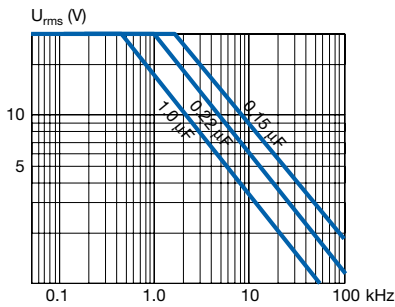
ORDERING INFORMATION

See article table and pages 10 to 14 for options and article code construction.

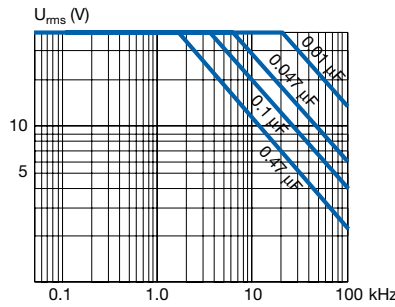
MARKING

- Capacitance
- Tolerance code
- Rated voltage
- Capacitor family code MMK
- Manufacturing date code

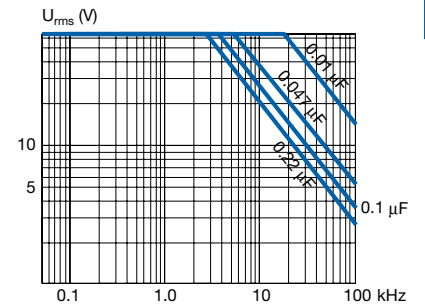
RATED AC VOLTAGE VS. FREQUENCY



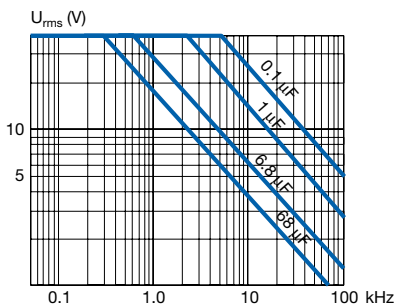
MMK5 50/30



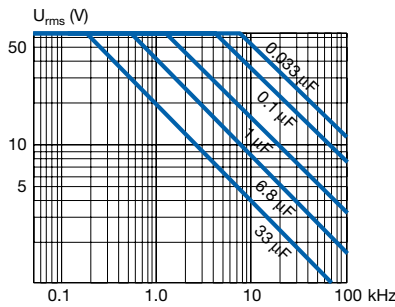
MMK5 63/40



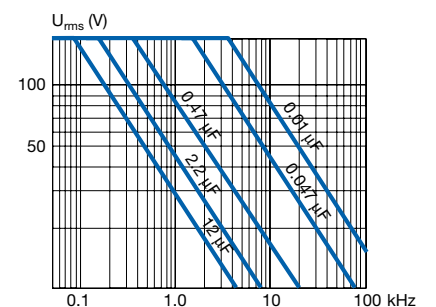
MMK5 100/63



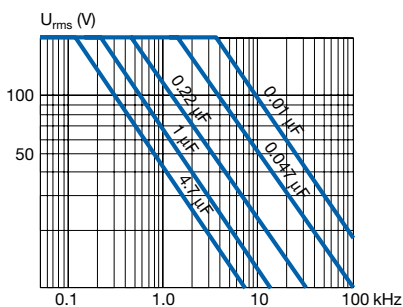
MMK7.5 ... 37.5 63/40



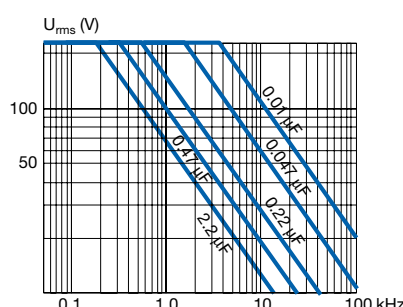
MMK7.5 ... 37.5 100/63



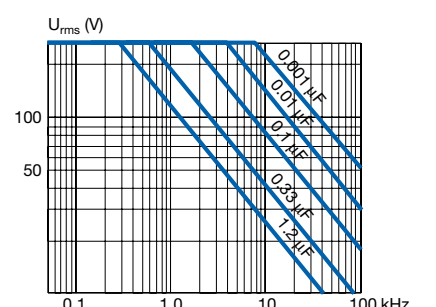
MMK7.5 ... 37.5 250/160



MMK7.5 ... 37.5 400/200



MMK7.5 ... 37.5 630/220



MMK7.5 ... 37.5 1000/250

ARTICLE TABLE

Capacitance Box Max dimensions in mm Max dU/dt
µF code B H L V/µs Article code

Capacitance Box Max dimensions in mm Max dU/dt
µF code B H L V/µs Article code

100 VDC/63 VAC

100 VDC/63 VAC

LEAD SPACING 7.5 MM

LEAD SPACING 10 MM

Table with 7 columns: capacitance, box code, dimensions B, H, L, V/µs, article code. Includes rows like 0.0068 K00, 0.0082 K00, etc.

Table with 7 columns: capacitance, box code, dimensions B, H, L, V/µs, article code. Includes rows like 0.39 A01, 0.47 A01, etc.

LEAD SPACING 15 MM

Table with 7 columns: capacitance, box code, dimensions B, H, L, V/µs, article code. Includes rows like 0.27 B04, 0.33 B04, etc.

LEAD SPACING 10 MM

LEAD SPACING 22.5 MM

Table with 7 columns: capacitance, box code, dimensions B, H, L, V/µs, article code. Includes rows like 0.0010 A01, 0.0012 A01, etc.

Table with 7 columns: capacitance, box code, dimensions B, H, L, V/µs, article code. Includes rows like 1.2 D13, 1.5 D13, etc.

LEAD SPACING 27.5 MM

Table with 7 columns: capacitance, box code, dimensions B, H, L, V/µs, article code. Includes rows like 3.9 F11, 4.7 F11, etc.

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Northeast Asia

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Beijing, China
Tel: 86-10-5829-1711

Shanghai, China
Tel: 86-21-6447-0707

Taipei, Taiwan
Tel: 886-2-27528585

Southeast Asia

Singapore
Tel: 65-6586-1900

Penang, Malaysia
Tel: 60-4-6430200

Bangalore, India
Tel: 91-806-53-76817

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Other KEMET Resources

Tools	
Resource	Location
Configure A Part: CapEdge	http://capacitoredge.kemet.com
SPICE & FIT Software	http://www.kemet.com/spice
Search Our FAQs: KnowledgeEdge	http://www.kemet.com/keask

Product Information	
Resource	Location
Products	http://www.kemet.com/products
Technical Resources (Including Soldering Techniques)	http://www.kemet.com/technicalpapers
RoHS Statement	http://www.kemet.com/rohs
Quality Documents	http://www.kemet.com/qualitydocuments

Product Request	
Resource	Location
Sample Request	http://www.kemet.com/sample
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