

Solutions
tailored
to every
need



Film Capacitors

for television and monitors

Let's make things better.

Philips
Components



PHILIPS

Film capacitors for television and monitor applications

With more than 30 years' experience in the design and manufacture of film capacitors for TV and monitor applications, Philips Components is uniquely placed to support today's setmakers in their drive for ever improved product performance and reliability. Our experience in interference-suppression capacitors, AC & pulse capacitors for TV power control and coupling/decoupling capacitors has been built up over many years' cooperation with our own Consumer Electronics division. This experience has led today to the development of one of the most extensive and advanced ranges of film capacitors tailored specifically to the specialized needs of setmakers.



In addition, our global distribution-network assures our customers of fast, reliable and flexible supply, wherever they're located in the world. Providing them with the vital support they need to achieve world-class performance in their markets.



In the following pages you'll find our complete range of film capacitors for TV and monitor applications in a clear, easy-to-follow format. If you have any difficulties in making a selection, our Application-Support Group will happily advise you. To supplement this support we also have available a selection of designer's sample boxes to enable quick design-in.





Film capacitors for interference suppression

Our MKP 336 metallized polypropylene film capacitor series for interference suppression offers the ultimate in safety. Outstanding features of this series include:

- **Full international approvals** including IEC 384-14 (2nd edition) and UL1414 suiting the series for worldwide application.
- **Outstandingly high resistance to internal burning.** Metallized polypropylene film technology pioneered by Philips Components has been shown to meet anti-flammability requirements far exceeding those specified in IEC 384-14 (2nd edition). Severe DC/AC active flammability testing has conclusively shown that their resistance to burning easily matches that of the much more expensive and bulkier metallized paper technology.
- **Ultra small size.** As a plastic-based technology, metallized polypropylene already offers high potential for miniaturization. In addition, we have optimized the design to allow us to supply a range of capacitances in smaller pitch sizes (e.g. 220 μF in 15 mm pitch, 470 nF in 22.5 mm pitch, 2.2 μF in 27.5 mm pitch) making these probably the smallest interference-suppression capacitors in the world today.



Flyback capacitors

Specially designed for television power supplies, the KP/MKP 375 series uses a film/foil construction based on polypropylene dielectric. The series is characterised by high DC voltage rating, excellent AC performance and low dissipation. Features include:

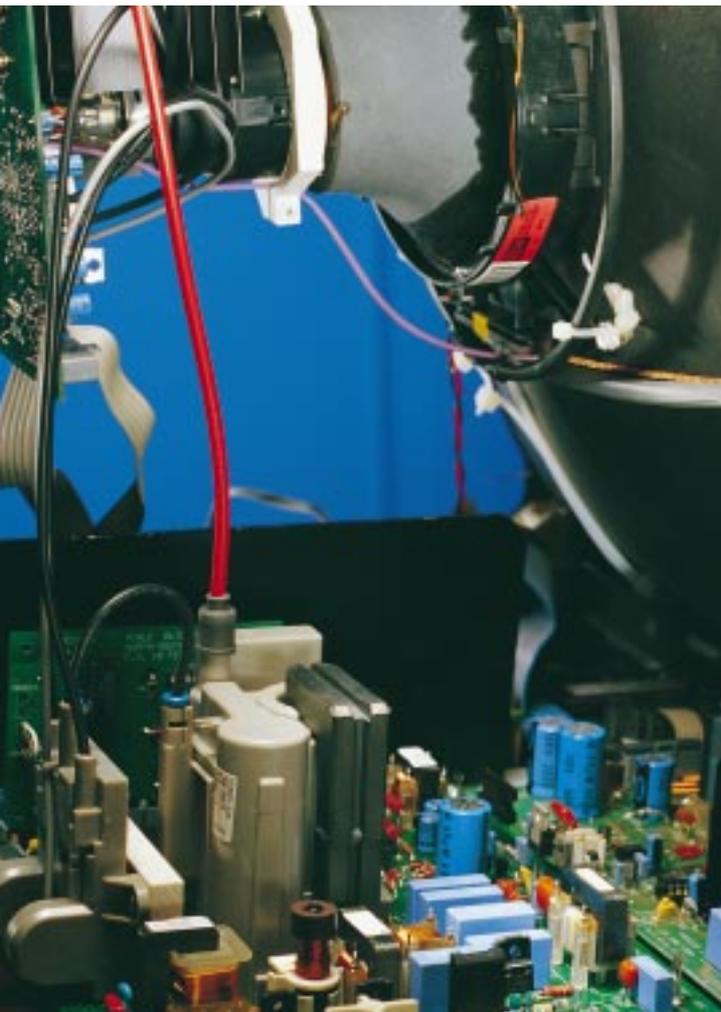
- **Kinked leads** to minimize stresses on the PC board and provide optimum reliability even when handling high currents and voltages.
- **Epoxy dipped casing** for optimum quality/price ratio.
- **Available in a choice of packing suiting different mounting methods** including loose packing, tape-on-reel and tape-in-ammopack.



Film capacitors for S correction

Combining the high voltage handling capability and compactness of metallized polypropylene film technology, the MKP 479 series offers the ideal solution for S-correction in TVs and monitors. Features of this series include:

- **Kinked leads** to minimize stresses on the PC board and provide optimum circuit reliability.
- **Epoxy-dipped casing** for optimum quality/price ratio
- **Available in a choice of packing suiting different mounting methods** including loose packing and tape-on-reel.



Film capacitors for coupling and decoupling

With our epoxy-dipped MKT 365 and MKT 465 - 468 series and boxed MKT 370 series, we offer an exceptionally broad programme for all coupling and decoupling applications. Specific benefits offered by these series include:

- **Significant size reduction** compared with former series. The MKT 465 - 468 series in particular has been introduced as a miniature alternative to the well-known MKT 365 - 369 series. Not only has body size been reduced but several capacitances are now available in smaller pitch sizes creating a real design advantage.
- **Superior specifications.** As a result of recent breakthroughs in material technology, the MKT 465 - 468 series offer significantly better pulse-load capability and reliability than their predecessors.

As with our other series in our range, these products are available in various packaging options including loose packing, tape-on-reel and tape-in-ammopack, and with customized lead lengths if needed.

Film Capacitors

Interference Suppression



Series	MKP 336 6				MKP 336 1				MKP 336 2			
Applications	Class Y 2				Class X 1				Class X 2			
Rated Voltage U_R	250 V _{AC}				275 V _{AC}				275 V _{AC}			
Safety approvals												
	Tested and approved according to IEC 384-14 (2nd edition) and EN 132400				Tested and approved according to IEC 384-14 (2nd edition) and EN 132400				Tested and approved according to IEC 384-14 (2nd edition) and EN 132400			
Capacitance												
0.001 μ F	10				10				10			
0.0015 μ F	10				10				10			
0.0022 μ F	10				10				10			
0.0033 μ F	10				10				10			
0.0047 μ F	10				10				10			
0.0068 μ F	10	15			10				10			
0.010 μ F		15			10	15			10	15		
0.015 μ F		15				15			10	15		
0.022 μ F		15				15			10	15		
0.033 μ F		15				15			10	15		
0.047 μ F		15				15				15		
0.068 μ F						15				15		
0.10 μ F						15	22.5			15		
0.15 μ F							22.5			15	22.5	
0.22 μ F							22.5	27.5		15	22.5	
0.33 μ F								27.5			22.5	
0.47 μ F								27.5			22.5	27.5
0.68 μ F								27.5				27.5
1.0 μ F								27.5				27.5
1.5 μ F	in columns : pitch size (mm)											27.5
2.2 μ F												27.5
	<div style="background-color: #cccccc; width: 15px; height: 10px; display: inline-block;"></div> preferred											
Tolerance ¹⁾ / E-series ²⁾	10%, 20% / E 6				10%, 20% / E 6				10%, 20% / E 6			
Dielectric	metallized / polypropylene				metallized / polypropylene				metallized / polypropylene			
Climatic category	55 / 100 / 21/ C				55 / 100 / 21/ C				55 / 100 / 21/ C			
Tan δ (10 kHz)	$\leq 10 \times 10^{-4}$				$\leq 70 \times 10^{-4}$				$\leq 70 \times 10^{-4}$			
Reference specification	IEC 384-14 2nd edition, EN 132400											
Packing	loose taped on reel (ammopack available on request)											
Insulation- R: C \leq 330 nF resist. R x C: C $>$ 330 nF	$> 15\ 000\ M\Omega$				$> 15\ 000\ M\Omega$				$> 15\ 000\ M\Omega$			
Pulse rise time at U_R	200 V/ μ s				200 V/ μ s				100 V/ μ s			
Lead length	3.5 mm, 25 mm (lead lengths between 3.2 and 35 mm are available on request)											
Note	¹⁾ 5% tolerance available on request ²⁾ E 12 capacitance values available on request											

Film Capacitors

AC & Pulse



Series	KP/MKP 375					MKP 479			
Features	high energy & repetition rate, dipped					low voltage dipped			
U_R (V _{DC})	630	1000	1600	2000	2500	160	250	400	630
U_R (V _{AC})	300	400	500	600**	880	100	160	200	200
Capacitance									
100 pF									
120 pF									
560 pF									
680 pF		10							
820 pF				15					
1 nF									
1.2 nF	10								
1.5 nF			15						
1.8 nF									
2.2 nF									
2.7 nF									
3.3 nF		15							
3.9 nF									
4.7 nF									
5.6 nF									
6.8 nF				22.5					
8.2 nF			22.5						
10 nF	15								
12 nF									
15 nF				27.5					10
18 nF									
22 nF									
27 nF		22.5	27.5						
33 nF								10	
39 nF									
47 nF									15
56 nF	22.5	27.5					10		
68 nF									
82 nF									
100 nF									
120 nF						10			
150 nF								15	
180 nF							15		22.5
220 nF	27.5								
270 nF									
330 nF									
390 nF									
470 nF									27.5
560 nF								22.5	
680 nF							22.5		
820 nF								27.5	
1.0 μF		in columns: pitch size (mm)				22.5			
1.2 μF									
1.5 μF									
1.8 μF							27.5		
2.2 μF									
2.7 μF						27.5			
3.3 μF									
3.9 μF									
Tolerance / E-series	3.5%, 5% / E 24					5% / E 24			
Dielectric	film foil polypropylene					metallized polypropylene			
Climatic category	55 / 100 / 56					55 / 100 / 56			
Tan δ (10 kHz)	$\leq 4 \times 10^{-4}$					$\leq 30 \times 10^{-4}$			
Reference specification	IEC 384 - 17					IEC 384 - 17			
Packing	loose, reel					loose, reel			
Insulation- R : C \leq 1 μF	> 100 000 MΩ					> 100 000 MΩ			
resist. R x C : C>1 μF	-					> 100 000 s			
Pulse slope at U_R	> 10 000 V/μs					15 to 100 V/μs			
Lead length	3.5, 5 mm					3.5 mm			
Encapsulation	epoxy dipped					epoxy dipped			
Note	* 27.5 mm pitch size available on request / ** 700 V _{AC} for special flyback applications available on request (cat. nr. 2222 375 92...)								