

Ø d ±0.05	p ≤ 15	22.5 ≤ p ≤ 27.5	p = 37.5
	0.6 or 0.8*	0.8	1

*See size table.
All dimensions are in mm.

GENERAL TECHNICAL DATA

- Dielectric:** polypropylene film.
- Plates:** metal layer deposited by evaporation under vacuum.
- Winding:** non-inductive type.
- Leads:** tinned wire.
- Protection:** plastic case, thermosetting resin filled.
Box material is solvent resistant and flame retardant according to UL94 V0.
- Marking:** Manufacturer's logo, series, capacitance, tolerance, rated voltage, capacitor class, dielectric code, climatic category, passive flammability category, manufacturing date code, approvals, manufacturing plant.
- Climatic category:** 40/110/56 IEC 60068-1

Operating temperature range: -40 to +110°C
Related documents: IEC 60384-14, EN 60384-14.

ELECTRICAL CHARACTERISTICS

Rated voltage (V_R): 275Vac (50/60Hz) / 560 Vdc
300Vac (50/60Hz) / 630 Vdc

Capacitance range: 0.01µF to 10µF
Capacitance values: E6 series (IEC 60063 Norm).
Capacitance tolerances (measured at 1 kHz):
±10% (K); ±20% (M);
tolerance ±5% (J) available upon request

Dissipation factor (DF):
tgδ 10⁻⁴ at +25°C ±5°C: ≤10 (6)* at 1kHz*
Typical value

Insulation resistance:
Test conditions
Temperature: +25°C±5°C
Voltage charge time: 1 min
Voltage charge: 100 Vdc

Performance
≥1x10⁵ MΩ (5x10⁵ MΩ)* for C≤0.33µF
≥30000 s (150000 s)* for C>0.33µF
* Typical value

Test voltage between terminations (on all pieces):
1500Vac for 1 s + 2200Vdc for 1 s at +25°C±5°C

09/2008

**X2 CLASS (IEC 60384-14) - MKP Series
METALLIZED POLYPROPYLENE FILM CAPACITOR
SELF-HEALING PROPERTIES**

Typical applications: interference suppression and «across-the-line» applications. Suitable for use in situations where failure of the capacitor would not lead to danger of electric shock.

PRODUCT CODE: R46

Note: R.46 series has replaced the 1.40 series and 1.47 series. For new design we suggest the use of the R.46 series.

Pitch (mm)	Box thickness (B) (mm)	Maximum dimensions (mm)		
		B max	H max	L max
10.0	All	B +0.2	H +0.1	L +0.2
15.0	<7.5	B +0.2	H +0.1	L +0.3
15.0	≥7.5	B +0.2	H +0.1	L +0.5
22.5	All	B +0.2	H +0.1	L +0.3
27.5	All	B +0.2	H +0.1	L +0.3
37.5	All	B +0.3	H +0.1	L +0.3

TEST METHOD AND PERFORMANCE

Damp heat, steady state:

Test conditions 1st
Temperature: +40°C ± 2°C
Relative humidity (RH): 93% ±2%
Test duration: 56 days

Test conditions 2nd
Temperature: +60°C ± 2°C
Relative humidity (RH): 95% ±2%
Test duration: 500 hours

Performance
Dielectric strength: no dielectric breakdown or flashover at 4.3 x V_R (d.c.)/1 min
Capacitance change |ΔC/C|: ≤5%
Insulation resistance: ≥50% of initial limit.

Endurance:

Test conditions
Temperature: +110°C ± 2°C
Test duration: 1000 h
Voltage applied: 1.25 x V_R +1000Vac 0.1 s/h

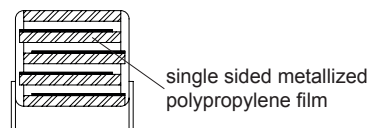
Performance
Dielectric strength: no dielectric breakdown or flashover at 4.3 x V_R (d.c.)/1 min
Capacitance change |ΔC/C|: ≤10%
Insulation resistance: ≥50% of initial limit.

Resistance to soldering heat:

Test conditions
Solder bath temperature: +260°C ± 5°C
Dipping time (with heat screen): 10 s ± 1 s

Performance
Capacitance change |ΔC/C|: ≤2%

Winding scheme



**X2 CLASS (IEC 60384-14) - MKP Series
METALLIZED POLYPROPYLENE FILM CAPACITOR
SELF-HEALING PROPERTIES**

APPROVALS

Not for use in series with the mains.
See www.kemet.com for more information.

Rated Cap.	275 Vac / 560 Vdc Std dimensions					Ø d	Max dv/dt at 390Vdc (V/µs)	Part Number		
	B	H	L	p						
0.010 µF	4.0	9.0	13.0	10.0	0.6	500	R46 KF	2100	-- N0	-
0.015 µF	4.0	9.0	13.0	10.0	0.6	500	R46 KF	2150	-- N0	-
0.022 µF	4.0	9.0	13.0	10.0	0.6	500	R46 KF	2220	-- N0	-
0.033 µF	5.0	11.0	13.0	10.0	0.6	500	R46 KF	2330	-- M1	-
0.047 µF	5.0	11.0	13.0	10.0	0.6	500	R46 KF	2470	-- N0	-
0.068 µF	6.0	12.0	13.0	10.0	0.6	500	R46 KF	2680	-- M1	-
0.10 µF	6.0	12.0	13.0	10.0	0.6	500	R46 KF	3100	-- M1	M
0.010 µF	5.0	11.0	18.0	15.0	0.6	400	R46 KI	2100	-- 01	-
0.015 µF	5.0	11.0	18.0	15.0	0.6	400	R46 KI	2150	-- 01	-
0.022 µF	5.0	11.0	18.0	15.0	0.6	400	R46 KI	2220	-- 01	-
0.033 µF	5.0	11.0	18.0	15.0	0.6	400	R46 KI	2330	-- 01	-
0.047 µF	5.0	11.0	18.0	15.0	0.6	400	R46 KI	2470	-- 01	-
0.068 µF	5.0	11.0	18.0	15.0	0.6	400	R46 KI	2680	-- 01	-
0.10 µF	5.0	11.0	18.0	15.0	0.6	400	R46 KI	3100	-- M1	-
0.15 µF	6.0	12.0	18.0	15.0	0.6	400	R46 KI	3150	-- M2	-
0.15 µF	9.0	12.5	18.0	15.0	0.6	400	R46 KI	3150	-- L2	-
0.22 µF	7.5	13.5	18.0	15.0	0.6	400	R46 KI	3220	-- M2	-
0.22 µF	9.0	12.5	18.0	15.0	0.6	400	R46 KI	3220	-- L2	-
0.22 µF	6.0	17.5	18.0	15.0	0.6	400	R46 KI	3220	-- 02	-
0.33 µF	8.5	14.5	18.0	15.0	0.6	400	R46 KI	3330	-- N0	-
0.33 µF	10.0	16.0	18.0	15.0	0.8	400	R46 KI	3330	-- M1	-
0.33 µF	9.0	12.5	18.0	15.0	0.6	400	R46 KI	3330	-- N1	M
0.33 µF	7.5	18.5	18.0	15.0	0.8	400	R46 KI	3330	-- 02	-
0.33 µF	13.0	12.0	18.0	15.0	0.8	400	R46 KI	3330	-- 01	-
0.47 µF	7.5	18.5	18.0	15.0	0.8	400	R46 KI	3470	-- 02	M
0.47 µF	10.0	16.0	18.0	15.0	0.8	400	R46 KI	3470	-- N0	M
0.47 µF	11.0	19.0	18.0	15.0	0.8	400	R46 KI	3470	-- M1	-
0.56 µF	11.0	19.0	18.0	15.0	0.8	400	R46 KI	3560	-- N0	-
0.60 µF	11.0	19.0	18.0	15.0	0.8	400	R46 KI	3600	-- N0	-
0.15 µF	6.0	15.0	26.5	22.5	0.8	200	R46 KN	3150	-- 01	-
0.22 µF	6.0	15.0	26.5	22.5	0.8	200	R46 KN	3220	-- M1	-
0.33 µF	6.0	15.0	26.5	22.5	0.8	200	R46 KN	3330	-- N0	-
0.47 µF	7.0	16.0	26.5	22.5	0.8	200	R46 KN	3470	-- N0	-
0.68 µF	10.0	18.5	26.5	22.5	0.8	200	R46 KN	3680	-- M2	-
1.0 µF	10.0	18.5	26.5	22.5	0.8	200	R46 KN	4100	-- N2	M
1.0 µF	11.0	20.0	26.5	22.5	0.8	200	R46 KN	4100	-- N1	-
0.47 µF	9.0	17.0	32.0	27.5	0.8	150	R46 KR	3470	-- 01	-
0.68 µF	9.0	17.0	32.0	27.5	0.8	150	R46 KR	3680	-- M1	-
1.0 µF	11.0	20.0	32.0	27.5	0.8	150	R46 KR	4100	-- M1	-
1.5 µF	13.0	22.0	32.0	27.5	0.8	150	R46 KR	4150	-- M1	-
2.2 µF	13.0	25.0	32.0	27.5	0.8	150	R46 KR	4220	-- M2	-
2.2 µF	14.0	28.0	32.0	27.5	0.8	150	R46 KR	4220	-- M1	-
3.3 µF	18.0	33.0	32.0	27.5	0.8	150	R46 KR	4330	-- M2	-
4.7 µF	18.0	33.0	32.0	27.5	0.8	150	R46 KR	4470	-- M2	-
4.7 µF	22.0	37.0	32.0	27.5	0.8	150	R46 KR	4470	-- M1	-
1.5 µF	11.0	22.0	41.5	37.5	1.0	100	R46 KW	4150	-- M1	-
2.2 µF	11.0	22.0	41.5	37.5	1.0	100	R46 KW	4220	-- M2	M
2.2 µF	13.0	24.0	41.5	37.5	1.0	100	R46 KW	4220	-- M1	-
3.3 µF	16.0	28.5	41.5	37.5	1.0	100	R46 KW	4330	-- M1	-
4.7 µF	16.0	28.5	41.5	37.5	1.0	100	R46 KW	4470	-- M2	M
4.7 µF	19.0	32.0	41.5	37.5	1.0	100	R46 KW	4470	-- M1	-
6.8 µF	20.0	40.0	41.5	37.5	1.0	100	R46 KW	4680	-- M2	-
6.8 µF	24.0	44.0	41.5	37.5	1.0	100	R46 KW	4680	-- M1	-
10.0 µF	30.0	45.0	41.5	37.5	1.0	100	R46 KW	5100	-- M1	-

Rated voltage (K=275Vac) _____
Mechanical version and packaging (Table 1) _____
Tolerance: K (±10%); M (±20%) _____

All dimensions are in mm

E12 Series available upon request

	ENEC IEC 60384-14	Class X2	File No.V4413
	UL 1414 (up to 1µF, 85°C; 250Vac)	Across-the-line	File No.E97797
	CSA - C22.2 No.1 (up to 1µF, 85°C; 250Vac)	Across-the-line certified for Canada	File No.E97797
	UL 1283 (310 Vac)	Electromagnetic Interference Filters	File No.E85238
	CSA - C22.2 No.8 (310 Vac)	Electromagnetic Interference Filters certified for Canada	File No.E85238
	GB/T 14472	Class X2	File CQC03001008199 CQC03001008842

Approved according to IEC 60384-14
According to IEC 60065

(**) ENEC mark has replaced all the following European National marks:



Table 1

Standard packaging style	Lead length (mm)	Taping style			Ordering code (Digit 10 to 11)
		P ₂ (mm)	Fig. (No.)	Pitch (mm)	
AMMO-PACK		12.70	1	10.0/15.0	DQ
AMMO-PACK		19.05	2	22.5	DQ
REEL Ø500mm		12.70	1	10.0/15.0	CK
REEL Ø500mm		19.05	2	22.5/27.5	CK
Loose, short leads	4 ⁺²				00
Loose, long leads	25 ^{-1/+2}				50
Loose, long leads	30 ⁺⁵				40
Loose, insulated rigid leads	30 ⁺⁵				51
Loose, insulated flexible leads	150 ^{±5}				52

Note: Ammo-pack is the preferred packaging for taped version.

For "capacitor connected in serial with main line" (two - phase and three - phase net) application, please read the "SHORT GUIDE TO CHOOSE THE RIGHT FILM CAPACITORS" and contact our Technical Service for choosing the safest solution.

**X2 CLASS (IEC 60384-14) - MKP Series
METALLIZED POLYPROPYLENE FILM CAPACITOR
SELF-HEALING PROPERTIES**

APPROVALS

Rated Cap.	275 Vac / 560 Vdc Std dimensions				Ø d	Max dv/dt at 390Vdc (V/µs)	Part Number			
	B	H	L	p						
0.033 µF	4.0	9.0	13.0	10.0	0.6	500	R46 KF	2330 -- P0	-	
0.047 µF	4.0	9.0	13.0	10.0	0.6	500	R46 KF	2470 -- P0	-	
0.068 µF	5.0	11.0	13.0	10.0	0.6	500	R46 KF	2680 -- P0	-	
0.1 µF	5.0	11.0	13.0	10.0	0.6	500	R46 KF	3100 -- P1	M	
0.1 µF	6.0	12.0	13.0	10.0	0.6	500	R46 KF	3100 -- P0	-	
0.15 µF	6.0	12.0	13.0	10.0	0.6	500	R46 KF	3150 -- P0	M	
0.15 µF	5.0	11.0	18.0	15.0	0.6	400	R46 KI	3150 -- P0	-	
0.22 µF	6.0	12.0	18.0	15.0	0.6	400	R46 KI	3220 -- P0	-	
0.33 µF	7.5	13.5	18.0	15.0	0.6	400	R46 KI	3330 -- P0	-	
0.33 µF	9.0	12.5	18.0	15.0	0.6	400	R46 KI	3330 -- P1		
0.33 µF	6.0	17.5	18.0	15.0	0.6	400	R46 KI	3330 -- P2	-	
0.47 µF	8.5	14.5	18.0	15.0	0.6	400	R46 KI	3470 -- P0	-	
0.47 µF	9.0	12.5	18.0	15.0	0.6	400	R46 KI	3470 -- P1	M	
0.47 µF	6.0	17.5	18.0	15.0	0.6	400	R46 KI	3470 -- P2	M	
0.47 µF	7.5	18.5	18.0	15.0	0.8	400	R46 KI	3470 -- P3	-	
0.68 µF	10.0	16.0	18.0	15.0	0.8	400	R46 KI	3680 -- P1	M	
0.68 µF	11.0	19.0	18.0	15.0	0.8	400	R46 KI	3680 -- P0	-	
0.82 µF	11.0	19.0	18.0	15.0	0.8	400	R46 KI	3820 -- P0	M	
0.47 µF	6.0	15.0	26.5	22.5	0.8	200	R46 KN	3470 -- P1	-	
0.56 µF	6.0	15.0	26.5	22.5	0.8	200	R46 KN	3560 -- P1	M	
0.56 µF	7.0	16.0	26.5	22.5	0.8	200	R46 KN	3560 -- P0	-	
0.68 µF	7.0	16.0	26.5	22.5	0.8	200	R46 KN	3680 -- P0	-	
1.0 µF	8.5	17.0	26.5	22.5	0.8	200	R46 KN	4100 -- P1	M	
1.0 µF	10.0	18.5	26.5	22.5	0.8	200	R46 KN	4100 -- P0	-	
1.5 µF	10.0	18.5	26.5	22.5	0.8	200	R46 KN	4150 -- P1	M	
1.5 µF	11.0	20.0	26.5	22.5	0.8	200	R46 KN	4150 -- P0	-	
2.2 µF	13.0	22.0	26.5	22.5	0.8	200	R46 KN	4220 -- P0	M	
1.0 µF	9.0	17.0	32.0	27.5	0.8	150	R46 KR	4100 -- P0	-	
1.5 µF	11.0	20.0	32.0	27.5	0.8	150	R46 KR	4150 -- P0	-	
2.2 µF	13.0	22.0	32.0	27.5	0.8	150	R46 KR	4220 -- P0	-	
3.3 µF	14.0	28.0	32.0	27.5	0.8	150	R46 KR	4330 -- P0	-	
4.7 µF	14.0	28.0	32.0	27.5	0.8	150	R46 KR	4470 -- P1	M	
4.7 µF	18.0	33.0	32.0	27.5	0.8	150	R46 KR	4470 -- P0	-	
6.8 µF	22.0	37.0	32.0	27.5	0.8	150	R46 KR	4680 -- P0	-	
2.2 µF	11.0	22.0	41.5	37.5	1.0	100	R46 KW	4220 -- P0	-	
3.3 µF	13.0	24.0	41.5	37.5	1.0	100	R46 KW	4330 -- P0	-	
4.7 µF	16.0	28.5	41.5	37.5	1.0	100	R46 KW	4470 -- P0	-	
6.8 µF	19.0	32.0	41.5	37.5	1.0	100	R46 KW	4680 -- P0	-	
10.0 µF	20.0	40.0	41.5	37.5	1.0	100	R46 KW	5100 -- P0	-	

Rated voltage (K=275Vac)
Mechanical version and packaging (Table 1)
Tolerance: K (±10%); M (±20%)

	ENEC IEC 60384-14	Class X2	File No.V4413
	UL 1414 (up to 1µF, 85°C; 250Vac)	Across-the-line	File No.E97797
	CSA - C22.2 No.1 (up to 1µF, 85°C; 250Vac)	Across-the-line certified for Canada	File No.E97797
	UL 1283 (310 Vac)	Electromagnetic Interference Filters	File No.E85238
	CSA - C22.2 No.8 (310 Vac)	Electromagnetic Interference Filters certified for Canada	File No.E85238
		GB/T 14472	Class X2
			File CQC03001008199 CQC03001008842

Approved according to IEC 60384-14
According to IEC 60065
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National marks:



Table 1

Standard packaging style	Lead length (mm)	Taping style			Ordering code (Digit 10 to 11)
		P ₂ (mm)	Fig. (No.)	Pitch (mm)	
AMMO-PACK		12.70	1	10.0/15.0	DQ
AMMO-PACK		19.05	2	22.5	DQ
REEL Ø500mm		12.70	1	10.0/15.0	CK
REEL Ø500mm		19.05	2	22.5/27.5	CK
Loose, short leads	4 ⁺²				00
Loose, long leads	25 ^{-1/+2}				50
Loose, long leads	30 ⁺⁵				40
Loose, insulated rigid leads	30 ⁺⁵				51
Loose, insulated flexible leads	150 ^{±5}				52

Note: Ammo-pack is the preferred packaging for taped version.

All dimensions are in mm

E12 Series available upon request

For "capacitor connected in serial with main line" (two - phase and three - phase net) application, please read the "SHORT GUIDE TO CHOOSE THE RIGHT FILM CAPACITORS" and contact our Technical Service for choosing the safest solution.

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	B	H	L	p						
0.010 µF	4.0	9.0	13.0	10.0	0.6	500	R46 3F	2100	-- N0	-
0.015 µF	4.0	9.0	13.0	10.0	0.6	500	R46 3F	2150	-- N0	-
0.022 µF	4.0	9.0	13.0	10.0	0.6	500	R46 3F	2220	-- N0	-
0.033 µF	5.0	11.0	13.0	10.0	0.6	500	R46 3F	2330	-- M1	-
0.047 µF	5.0	11.0	13.0	10.0	0.6	500	R46 3F	2470	-- N0	-
0.068 µF	6.0	12.0	13.0	10.0	0.6	500	R46 3F	2680	-- M1	-
0.10 µF	6.0	12.0	13.0	10.0	0.6	500	R46 3F	3100	-- M1	M
0.010 µF	5.0	11.0	18.0	15.0	0.6	400	R46 3I	2100	-- 01	-
0.015 µF	5.0	11.0	18.0	15.0	0.6	400	R46 3I	2150	-- 01	-
0.022 µF	5.0	11.0	18.0	15.0	0.6	400	R46 3I	2220	-- 01	-
0.033 µF	5.0	11.0	18.0	15.0	0.6	400	R46 3I	2330	-- 01	-
0.047 µF	5.0	11.0	18.0	15.0	0.6	400	R46 3I	2470	-- 01	-
0.068 µF	5.0	11.0	18.0	15.0	0.6	400	R46 3I	2680	-- 01	-
0.10 µF	5.0	11.0	18.0	15.0	0.6	400	R46 3I	3100	-- M1	-
0.15 µF	6.0	12.0	18.0	15.0	0.6	400	R46 3I	3150	-- M2	-
0.15 µF	9.0	12.5	18.0	15.0	0.6	400	R46 3I	3150	-- L2	-
0.22 µF	7.5	13.5	18.0	15.0	0.6	400	R46 3I	3220	-- M2	-
0.22 µF	9.0	12.5	18.0	15.0	0.6	400	R46 3I	3220	-- L2	-
0.22 µF	6.0	17.5	18.0	15.0	0.6	400	R46 3I	3220	-- 02	-
0.33 µF	8.5	14.5	18.0	15.0	0.6	400	R46 3I	3330	-- N0	-
0.33 µF	10.0	16.0	18.0	15.0	0.8	400	R46 3I	3330	-- M1	-
0.33 µF	7.5	18.5	18.0	15.0	0.8	400	R46 3I	3330	-- 02	-
0.33 µF	13.0	12.0	18.0	15.0	0.8	400	R46 3I	3330	-- 01	-
0.47 µF	10.0	16.0	18.0	15.0	0.8	400	R46 3I	3470	-- N0	M
0.47 µF	11.0	19.0	18.0	15.0	0.8	400	R46 3I	3470	-- M1	-
0.56 µF	11.0	19.0	18.0	15.0	0.8	400	R46 3I	3560	-- N0	-
0.60 µF	11.0	19.0	18.0	15.0	0.8	400	R46 3I	3600	-- N0	-
0.15 µF	6.0	15.0	26.5	22.5	0.8	200	R46 3N	3150	-- 01	-
0.22 µF	6.0	15.0	26.5	22.5	0.8	200	R46 3N	3220	-- M1	-
0.33 µF	6.0	15.0	26.5	22.5	0.8	200	R46 3N	3330	-- N0	-
0.47 µF	7.0	16.0	26.5	22.5	0.8	200	R46 3N	3470	-- N0	-
0.68 µF	10.0	18.5	26.5	22.5	0.8	200	R46 3N	3680	-- M2	-
1.0 µF	10.0	18.5	26.5	22.5	0.8	200	R46 3N	4100	-- N2	M
1.0 µF	11.0	20.0	26.5	22.5	0.8	200	R46 3N	4100	-- N1	-
0.47 µF	9.0	17.0	32.0	27.5	0.8	150	R46 3R	3470	-- 01	-
0.68 µF	9.0	17.0	32.0	27.5	0.8	150	R46 3R	3680	-- M1	-
1.0 µF	11.0	20.0	32.0	27.5	0.8	150	R46 3R	4100	-- M1	-
1.5 µF	13.0	22.0	32.0	27.5	0.8	150	R46 3R	4150	-- M1	-
2.2 µF	13.0	25.0	32.0	27.5	0.8	150	R46 3R	4220	-- M2	-
2.2 µF	14.0	28.0	32.0	27.5	0.8	150	R46 3R	4220	-- M1	-
3.3 µF	18.0	33.0	32.0	27.5	0.8	150	R46 3R	4330	-- M2	-
4.7 µF	18.0	33.0	32.0	27.5	0.8	150	R46 3R	4470	-- M2	-
4.7 µF	22.0	37.0	32.0	27.5	0.8	150	R46 3R	4470	-- M1	-
1.5 µF	11.0	22.0	41.5	37.5	1.0	100	R46 3W	4150	-- M1	-
2.2 µF	11.0	22.0	41.5	37.5	1.0	100	R46 3W	4220	-- M2	M
2.2 µF	13.0	24.0	41.5	37.5	1.0	100	R46 3W	4220	-- M1	-
3.3 µF	16.0	28.5	41.5	37.5	1.0	100	R46 3W	4330	-- M1	-
4.7 µF	16.0	28.5	41.5	37.5	1.0	100	R46 3W	4470	-- M2	M
4.7 µF	19.0	32.0	41.5	37.5	1.0	100	R46 3W	4470	-- M1	-
6.8 µF	20.0	40.0	41.5	37.5	1.0	100	R46 3W	4680	-- M2	-
6.8 µF	24.0	44.0	41.5	37.5	1.0	100	R46 3W	4680	-- M1	-
10.0 µF	30.0	45.0	41.5	37.5	1.0	100	R46 3W	5100	-- M1	-

Rated voltage (3=300Vac) _____
 Mechanical version and packaging (Table 1) _____
 Tolerance: K (±10%); M (±20%) _____

All dimensions are in mm
 E12 Series available upon request

APPROVALS

	ENEC IEC 60384-14	Class X2	File No.V4413
	UL 1414 (up to 1µF, 85°C; 250Vac)	Across-the-line	File No.E97797
	CSA - C22.2 No.1 (up to 1µF, 85°C; 250Vac)	Across-the-line certified for Canada	File No.E97797
	UL 1283 (310 Vac)	Electromagnetic Interference Filters	File No.E85238
	CSA - C22.2 No.8 (310 Vac)	Electromagnetic Interference Filters certified for Canada	File No.E85238
	GB/T 14472	Class X2	FileCQC03001008199 CQC03001008842

Approved according to IEC 60384-14
 According to IEC 60065
 Not for use in series with the mains.
 See www.kemet.com for more information.

(**) ENEC mark has replaced all the following European
 National marks:



Table 1

Standard packaging style	Lead length (mm)	Taping style			Ordering code (Digit 10 to 11)
		P ₂ (mm)	Fig. (No.)	Pitch (mm)	
AMMO-PACK		12.70	1	10.0/15.0	DQ
AMMO-PACK		19.05	2	22.5	DQ
REEL Ø500mm		12.70	1	10.0/15.0	CK
REEL Ø500mm		19.05	2	22.5/27.5	CK
Loose, short leads	4 ⁺²				00
Loose, long leads	25 ^{-1/+2}				50
Loose, long leads	30 ⁺⁵				40
Loose, insulated rigid leads	30 ⁺⁵				51
Loose, insulated flexible leads	150 ⁺⁵				52

Note: Ammo-pack is the preferred packaging for taped version.

For "capacitor connected in serial with main line" (two - phase and
 three - phase net) application, please read the "SHORT GUIDE TO
 CHOOSE THE RIGHT FILM CAPACITORS" and contact
 our Technical Service for choosing the safest solution.

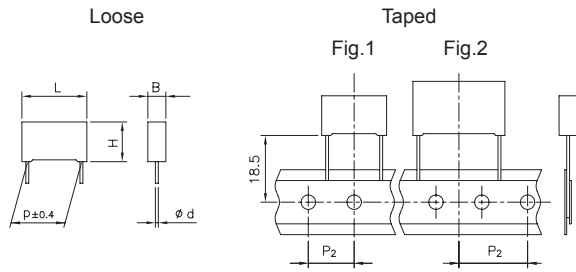
X2 CLASS (IEC 60384-14) - MKP METALLIZED POLYPROPYLENE FILM CAPACITOR SELF-HEALING PROPERTIES

Typical applications: interference suppression and «across-the-line» applications. Suitable for use in situations where failure of the capacitor would not lead to danger of electric shock.

PRODUCT CODE: **R46**

Not for use in series with the mains.
See www.kemet.com for more information.

NEW 125°C



Ø d ±0.05	p ≤15	p = 22.5
	0.6 or 0.8*	0.8

*See size table.
All dimensions are in mm.

GENERAL TECHNICAL DATA

- Dielectric:** polypropylene film.
- Plates:** metal layer deposited by evaporation under vacuum.
- Winding:** non-inductive type.
- Leads:** tinned wire.
- Protection:** plastic case, thermosetting resin filled. Box material is solvent resistant and flame retardant according to UL94 V0.
- Marking:** Manufacturer's logo, series, capacitance, tolerance, rated voltage, capacitor class, dielectric code, climatic category, passive flammability category, manufacturing date code, approvals, manufacturing plant.
- Climatic category:** 40/125/56 IEC 60068-1
- Operating temperature range:** -40 to +125°C
- Related documents:** IEC 60384-14; EN 60384-14

ELECTRICAL CHARACTERISTICS

Rated voltage (V_R): 275 Vac (50/60Hz) / 560 Vdc
Capacitance range: 0.01µF to 1µF

TEST METHOD AND PERFORMANCE

Endurance:

Test conditions

Temperature: +125°C±2°C
Test duration: 1000 h
Voltage applied: 1.25 x V_R +1000Vac 0.1 s/h

Performance

Dielectric strength: no dielectric breakdown or flashover at 4.3 x V_R (d.c.)/1 min
Capacitance change |ΔC/C|: ≤10%
Insulation resistance: ≥ 50% of initial limit.

APPROVALS

	 ENEC IEC 60384-14 (**)	Class X2	File No.CA08.00063
	UL 1414 (up to 1µF, 85°C; 250Vac)	Across-the-line	File No.E97797
	CSA - C22.2 No.1 (up to 1µF, 85°C; 250Vac)	Across-the-line certified for Canada	File No.E97797
	UL 1283 (310 Vac)	Electromagnetic Interference Filters	File No.E85238
	CSA - C22.2 No.8 (310 Vac)	Electromagnetic Interference Filters certified for Canada	File No.E85238

Approved according to IEC 60384-14
According to IEC 60065
(**) ENEC mark has replaced all the following European National marks:



Rated Cap.	275 Vac / 560 Vdc Std dimensions				Ø d	Max dv/dt at 390Vdc (V/µs)	Part Number
	B	H	L	p			
0.010 µF	5.0	11.0	13.0	10.0	0.6	500	R46 K F 2100 -- H1 -
0.015 µF	5.0	11.0	13.0	10.0	0.6	500	R46 K F 2150 -- H1 -
0.022 µF	5.0	11.0	13.0	10.0	0.6	500	R46 K F 2220 -- H1 -
0.033 µF	5.0	11.0	13.0	10.0	0.6	500	R46 K F 2330 -- H1 -
0.047 µF	6.0	12.0	13.0	10.0	0.6	500	R46 K F 2470 -- H1 -
0.068 µF	6.0	12.0	13.0	10.0	0.6	500	R46 K F 2680 -- H1 M
0.010 µF	5.0	11.0	18.0	15.0	0.6	400	R46 K I 2100 -- H1 -
0.015 µF	5.0	11.0	18.0	15.0	0.6	400	R46 K I 2150 -- H1 -
0.022 µF	5.0	11.0	18.0	15.0	0.6	400	R46 K I 2220 -- H1 -
0.033 µF	5.0	11.0	18.0	15.0	0.6	400	R46 K I 2330 -- H1 -
0.047 µF	5.0	11.0	18.0	15.0	0.6	400	R46 K I 2470 -- H1 -
0.068 µF	5.0	11.0	18.0	15.0	0.6	400	R46 K I 2680 -- H1 -
0.10 µF	6.0	12.0	18.0	15.0	0.6	400	R46 K I 3100 -- H1 -
0.15 µF	6.0	17.5	18.0	15.0	0.6	400	R46 K I 3150 -- H2 -
0.15 µF	9.0	12.5	18.0	15.0	0.6	400	R46 K I 3150 -- H3 -
0.15 µF	7.5	13.5	18.0	15.0	0.6	400	R46 K I 3150 -- H1 -
0.22 µF	8.5	14.5	18.0	15.0	0.6	400	R46 K I 3220 -- H1 -
0.22 µF	6.0	17.5	18.0	15.0	0.6	400	R46 K I 3220 -- H2 M
0.22 µF	9.0	12.5	18.0	15.0	0.6	400	R46 K I 3220 -- H3 M
0.22 µF	7.5	18.5	18.0	15.0	0.8	400	R46 K I 3220 -- H4 -
0.33 µF	10.0	16.0	18.0	15.0	0.8	400	R46 K I 3330 -- H1 M
0.33 µF	7.5	18.5	18.0	15.0	0.8	400	R46 K I 3330 -- H2 M
0.33 µF	13.0	12.0	18.0	15.0	0.8	400	R46 K I 3330 -- H3 M
0.47 µF	11.0	19.0	18.0	15.0	0.8	400	R46 K I 3470 -- H1 M
0.15 µF	6.0	15.0	26.5	22.5	0.8	200	R46 K N 3150 -- H1 -
0.22 µF	6.0	15.0	26.5	22.5	0.8	200	R46 K N 3220 -- H1 -
0.33 µF	7.0	16.0	26.5	22.5	0.8	200	R46 K N 3330 -- H1 -
0.47 µF	10.0	18.5	26.5	22.5	0.8	200	R46 K N 3470 -- H1 -
0.68 µF	11.0	20.0	26.5	22.5	0.8	200	R46 K N 3680 -- H1 -
1.0 µF	13.0	22.0	26.5	22.5	0.8	200	R46 K N 4100 -- H1 -

Rated voltage (K=275Vac) _____
Mechanical version and packaging (Table 1) _____
Tolerance: K (±10%); M (±20%) _____

300Vac available upon request
E12 Series available upon request
All dimensions are in mm

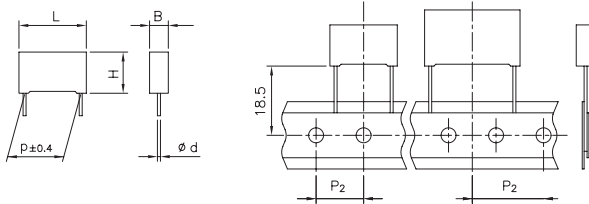
For "capacitor connected in serial with main line" (two - phase and three - phase net) application, please read the "SHORT GUIDE TO CHOOSE THE RIGHT FILM CAPACITORS" and contact our Technical Service for choosing the safest solution.

X2 CLASS (IEC 60384-14) - MKP Series
METALLIZED POLYPROPYLENE FILM CAPACITOR
SELF-HEALING PROPERTIES

Loose

Taped

Fig.1 Fig.2



Ø d ±0.05	p ≤ 15	22.5 ≤ p ≤ 27.5	p = 37.5
	0.6 or 0.8*	0.8	1.0

*See size table.
All dimensions are in mm.

PRODUCT CODE: **R46**

Not for new design.

Not for use in series with the mains.
See www.kemet.com for more information.

Pitch (mm)	Box thickness (B) (mm)	Maximum dimensions (mm)		
		B max	H max	L max
10.0	All	B +0.2	H +0.1	L +0.2
15.0	<7.5	B +0.2	H +0.1	L +0.3
15.0	≥7.5	B +0.2	H +0.1	L +0.5
22.5	All	B +0.2	H +0.1	L +0.3
27.5	All	B +0.2	H +0.1	L +0.3
37.5	All	B +0.3	H +0.1	L +0.3

GENERAL TECHNICAL DATA

- Dielectric:** polypropylene film.
- Plates:** metal layer deposited by evaporation under vacuum.
- Winding:** non-inductive type.
- Leads:** tinned wire.
- Protection:** plastic case, thermosetting resin filled.
- Box material is solvent resistant and flame retardant according to UL94 V0.
- Marking:** Manufacturer's logo, series, capacitance, tolerance, rated voltage, capacitor class, dielectric code, climatic category, passive flammability category, manufacturing date code, approvals, manufacturing plant.
- Climatic category:** 40/110/56 IEC 60068-1
- Operating temperature range:** -40 to +110°C
- Related documents:** IEC 60384-14, EN 60384-14.

ELECTRICAL CHARACTERISTICS

Rated voltage (V_R): 275Vac (50/60Hz) / 560 Vdc

- Capacitance range:** 0.022µF to 10µF
- Capacitance values:** E6 series (IEC 60063 Norm).
- Capacitance tolerances** (measured at 1 kHz):
±10% (K); ±20% (M).
tolerance ±5% (J) available upon request

Dissipation factor (DF):
tgδ 10⁻⁴ at +25°C ±5°C: ≤15 (8)* at 1kHz
* Typical value

Insulation resistance:

Test conditions
Temperature: +25°C±5°C
Voltage charge time: 1 min
Voltage charge: 100 Vdc

Performance
≥1x10⁵ MΩ (5x10⁵ MΩ)* for C≤0.33µF
≥30000 s (150000 s)* for C>0.33µF
* Typical value

Test voltage between terminations (on all pieces):
1500Vac for 1 s + 2200Vdc for 1 s at +25°C±5°C

TEST METHOD AND PERFORMANCE

Damp heat, steady state:

Test conditions 1st

Temperature: +40°C ± 2°C
Relative humidity (RH): 93% ±2%
Test duration: 56 days

Test conditions 2nd

Temperature: +60°C ± 2°C
Relative humidity (RH): 95% ±2%
Test duration: 500 hours

Test conditions 3rd

Temperature: +40°C ± 2°C
Relative humidity (RH): 93% ±2%
Test duration: 500 hours
Voltage value: 230 Vac, 50 Hz

Performance

Dielectric strength: no dielectric breakdown or flashover at 4.3 x V_R (d.c.)/1 min
Capacitance change |ΔC/C|: ≤5%
Insulation resistance: ≥50% of initial limit.

Endurance:

Test conditions

Temperature: +110°C ± 2°C
Test duration: 1000 h
Voltage applied: 1.25 x V_R +1000Vac 0.1 s/h

Performance

Dielectric strength: no dielectric breakdown or flashover at 4.3 x V_R (d.c.)/1 min
Capacitance change |ΔC/C|: ≤10%
Insulation resistance: ≥50% of initial limit.

Resistance to soldering heat:

Test conditions

Solder bath temperature: +260°C ± 5°C
Dipping time (with heat screen): 10 s ± 1 s

Performance

Capacitance change |ΔC/C|: ≤2%

X2 CLASS (IEC60384-14) - MKP Series
METALLIZED POLYPROPYLENE FILM CAPACITOR
SELF-HEALING PROPERTIES

APPROVALS

Not for new design.

Rated Cap. (*)	275 Vac / 560 Vdc Std dimensions					Ø d	Max dv/dt at 390Vdc (V/µs)	Part Number		
	B	H	L	p						
0.010 µF	5.0	11.0	18.0	15.0	0.6	400	R46 KI	2100 -- S0	-	
0.015 µF	5.0	11.0	18.0	15.0	0.6	400	R46 KI	2150 -- S0	-	
0.022 µF	5.0	11.0	18.0	15.0	0.6	400	R46 KI	2220 -- S0	-	
0.033 µF	5.0	11.0	18.0	15.0	0.6	400	R46 KI	2330 -- S0	-	
0.047 µF	5.0	11.0	18.0	15.0	0.6	400	R46 KI	2470 -- S1	-	
0.068 µF	5.0	11.0	18.0	15.0	0.6	400	R46 KI	2680 -- S0	-	
0.10 µF	5.0	11.0	18.0	15.0	0.6	400	R46 KI	3100 -- S1	M	
0.10 µF	6.0	12.0	18.0	15.0	0.6	400	R46 KI	3100 -- S0	-	
0.15 µF	6.0	12.0	18.0	15.0	0.6	400	R46 KI	3150 -- S1	M	
0.15 µF	7.5	13.5	18.0	15.0	0.6	400	R46 KI	3150 -- S0	-	
0.15 µF	9.0	12.5	18.0	15.0	0.6	400	R46 KI	3150 -- S3	-	
0.22 µF	7.5	13.5	18.0	15.0	0.6	400	R46 KI	3220 -- S1	M	
0.22 µF	8.5	14.5	18.0	15.0	0.6	400	R46 KI	3220 -- S0	-	
0.22 µF	6.0	17.5	18.0	15.0	0.6	400	R46 KI	3220 -- S2	-	
0.22 µF	9.0	12.5	18.0	15.0	0.6	400	R46 KI	3220 -- S3	-	
0.33 µF	13.0	12.0	18.0	15.0	0.8	400	R46 KI	3330 -- S1	-	
0.33 µF	8.5	14.5	18.0	15.0	0.8	400	R46 KI	3330 -- S3	M	
0.33 µF	10.0	16.0	18.0	15.0	0.8	400	R46 KI	3330 -- S0	-	
0.33 µF	7.5	18.5	18.0	15.0	0.8	400	R46 KI	3330 -- S2	-	
0.47 µF	11.0	19.0	18.0	15.0	0.8	400	R46 KI	3470 -- S0	-	
0.47 µF	10.0	16.0	18.0	15.0	0.8	400	R46 KI	3470 -- S1	M	
0.56 µF	11.0	19.0	18.0	15.0	0.8	400	R46 KI	3560 -- S0	-	
0.68 µF	11.0	19.0	18.0	15.0	0.8	400	R46 KI	3680 -- S0	M	
0.22 µF	6.0	15.0	26.5	22.5	0.8	200	R46 KN	3220 -- S0	-	
0.33 µF	6.0	15.0	26.5	22.5	0.8	200	R46 KN	3330 -- S1	M	
0.33 µF	7.0	16.0	26.5	22.5	0.8	200	R46 KN	3330 -- S0	-	
0.47 µF	7.0	16.0	26.5	22.5	0.8	200	R46 KN	3470 -- S1	M	
0.47 µF	8.5	17.0	26.5	22.5	0.8	200	R46 KN	3470 -- S0	-	
0.68 µF	10.0	18.5	26.5	22.5	0.8	200	R46 KN	3680 -- S0	-	
1.0 µF	10.0	18.5	26.5	22.5	0.8	200	R46 KN	4100 -- S2	M	
1.0 µF	11.0	20.0	26.5	22.5	0.8	200	R46 KN	4100 -- S1	-	
1.2 µF	13.0	22.0	26.5	22.5	0.8	200	R46 KN	4120 -- S0	-	
0.47 µF	9.0	17.0	32.0	27.5	0.8	150	R46 KR	3470 -- S0	-	
0.68 µF	9.0	17.0	32.0	27.5	0.8	150	R46 KR	3680 -- S1	-	
1.0 µF	11.0	20.0	32.0	27.5	0.8	150	R46 KR	4100 -- S1	-	
1.5 µF	13.0	22.0	32.0	27.5	0.8	150	R46 KR	4150 -- S1	-	
2.2 µF	13.0	25.0	32.0	27.5	0.8	150	R46 KR	4220 -- S2	-	
3.3 µF	18.0	33.0	32.0	27.5	0.8	150	R46 KR	4330 -- S2	-	
4.7 µF	18.0	33.0	32.0	27.5	0.8	150	R46 KR	4470 -- S2	-	
1.5 µF	11.0	22.0	41.5	37.5	1.0	100	R46 KW	4150 -- S1	-	
2.2 µF	11.0	22.0	41.5	37.5	1.0	100	R46 KW	4220 -- S2	M	
2.2 µF	13.0	24.0	41.5	37.5	1.0	100	R46 KW	4220 -- S1	-	
3.3 µF	16.0	28.5	41.5	37.5	1.0	100	R46 KW	4330 -- S1	-	
4.7 µF	16.0	28.5	41.5	37.5	1.0	100	R46 KW	4470 -- S2	M	
4.7 µF	19.0	32.0	41.5	37.5	1.0	100	R46 KW	4470 -- S1	-	
6.8 µF	20.0	40.0	41.5	37.5	1.0	100	R46 KW	4680 -- S2	-	
10.0 µF	30.0	45.0	41.5	37.5	1.0	100	R46 KW	5100 -- S1	-	

Rated voltage (K=275Vac) _____
Mechanical version and packaging (Table 1) _____
Tolerance: K (±10%); M (±20%) _____

300Vac Available upon request
E12 Series available upon request
All dimensions are in mm

	ENEC IEC 60384-14	Class X2	File No.V4413
	UL 1414 (up to 1µF, 85°C; 250Vac)	Across-the-line	File No.E97797
	CSA - C22.2 No.1 (up to 1µF, 85°C; 250Vac)	Across-the-line certified for Canada	File No.E97797
	UL 1283 (310 Vac)	Electromagnetic Interference Filters	File No.E85238
	CSA - C22.2 No.8 (310 Vac)	Electromagnetic Interference Filters certified for Canada	File No.E85238
	GB/T 14472	Class X2	File CQC03001008199 CQC03001008842

Approved according to IEC 60384-14
According to IEC 60065
Not for use in series with the mains.
See www.kemet.com for more information.

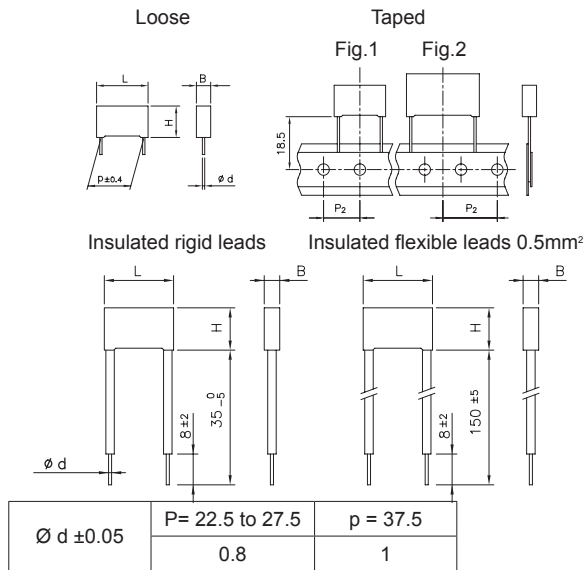
(**) ENEC mark has replaced all the following European
National marks:



Table 1

Standard packaging style	Lead length (mm)	Taping style			Ordering code (Digit 10 to 11)
		P ₂ (mm)	Fig. (No.)	Pitch (mm)	
AMMO-PACK		12.70	1	10.0/15.0	DQ
AMMO-PACK		19.05	2	22.5	DQ
REEL Ø500mm		12.70	1	10.0/15.0	CK
REEL Ø500mm		19.05	2	22.5/27.5	CK
Loose, short leads	4 ⁺²				00
Loose, long leads	25 ^{-1/+2}				50
Loose, long leads	30 ⁺⁵				40
Loose, insulated rigid leads	30 ⁺⁵				51
Loose, insulated flexible leads	150 ⁺⁵				52

Note: Ammo-pack is the preferred packaging for taped version.



All dimensions are in mm.

GENERAL TECHNICAL DATA

- Dielectric:** polypropylene film.
 - Plates:** metal layer deposited by evaporation under vacuum.
 - Winding:** non-inductive type.
 - Leads:** tinned wire.
 - Protection:** plastic case, thermosetting resin filled.
- Box material is solvent resistant and flame retardant according to UL94 V0.
- Marking:** Manufacturer's logo, series, capacitance, tolerance, rated voltage, capacitor class, dielectric code, climatic category, passive flammability category, manufacturing date code, approvals, manufacturing plant.

Climatic category: 40/110/56 IEC 60068-1

Operating temperature range: -40 to +110°C

Related documents: IEC 60384-14, EN 60384-14.

ELECTRICAL CHARACTERISTICS

Rated voltage (V_R): 275Vac (50/60Hz) / 560 Vdc
300Vac (50/60Hz) / 630 Vdc

Capacitance range: 0.22µF to 10µF

Capacitance values: E6 series (IEC 60063 Norm).

Capacitance tolerances (measured at 1 kHz):
±10% (K); ±20% (M).

Dissipation factor (DF):
tgδ 10⁻⁴ at +25°C ±5°C: ≤10 (6)* at 1kHz*
Typical value

Insulation resistance:

Test conditions

Temperature: +25°C±5°C

Voltage charge time: 1 min

Voltage charge: 100 Vdc

Performance

≥1x10⁵ MΩ (5x10⁵ MΩ)* for C≤0.33µF

≥30000 s (150000 s)* for C>0.33µF

* Typical value

Test voltage between terminations (on all pieces):

Capacitors with discharge resistor
X2 CLASS (IEC 60384-14) - MKP Series
METALLIZED POLYPROPYLENE FILM CAPACITOR
SELF-HEALING PROPERTIES

Typical applications: interference suppression and «across-the-line» applications. Suitable for use in situations where failure of the capacitor would not lead to danger of electric shock.

PRODUCT CODE: **R46**

Pitch (mm)	Box thickness (B) (mm)	Maximum dimensions (mm)		
		B max	H max	L max
22.5	All	B +0.2	H +0.1	L +0.3
27.5	All	B +0.2	H +0.1	L +0.3
37.5	All	B +0.3	H +0.1	L +0.3

TEST METHOD AND PERFORMANCE

Damp heat, steady state:

Test conditions 1st

Temperature: +40°C ± 2°C

Relative humidity (RH): 93% ±2%

Test duration: 56 days

Performance

Dielectric strength: no dielectric breakdown or flashover at 4.3 x V_R (d.c.)/1 min

Capacitance change |ΔC/C|: ≤5%

Insulation resistance: ≥50% of initial limit.

Endurance:

Test conditions

Temperature: +110°C ± 2°C

Test duration: 1000 h

Voltage applied: 1.25 x V_R +1000Vac 0.1 s/h

Performance

Dielectric strength: no dielectric breakdown or flashover at 4.3 x V_R (d.c.)/1 min

Capacitance change |ΔC/C|: ≤10%

Insulation resistance: ≥50% of initial limit.

Resistance to soldering heat:

Test conditions

Solder bath temperature: +260°C ± 5°C

Dipping time (with heat screen): 10 s ± 1 s

Performance

Capacitance change |ΔC/C|: ≤2%

APPROVALS

	ENEC IEC 60384-14	Class X2	File No.V4413
	UL 1283 (310Vac-105°C)	Electromagnetic Interference Filters	File No.E85238
	CSA - C22.2 No.8 (310Vac-105°C)	Electromagnetic Interference Filters certified for Canada	File No.E85238

Approved according to IEC 60384-14
According to IEC 60065.

Not for use in series with the mains.
See www.kemet.com for more information.

Capacitors with discharge resistor
X2 CLASS (IEC 60384-14) - MKP Series
METALLIZED POLYPROPYLENE FILM CAPACITOR
SELF-HEALING PROPERTIES

PRODUCT CODE: **R46**

Not for use in series with the mains.
See www.kemet.com for more information.

Rated Cap. (*)	275 Vac / 560 Vdc Std dimensions				Ø d	Max dv/dt at 390Vdc (V/µs)	Part Number		
	B	H	L	p					
0.22 µF	7.0	16.0	26.5	22.5	0.8	200	R46KN	3220	-- 01 - x
0.33 µF	8.5	17.0	26.5	22.5	0.8	200	R46KN	3330	-- 01 - x
0.47 µF	10.0	18.5	26.5	22.5	0.8	200	R46KN	3470	-- 01 - x
0.68 µF	11.0	20.0	26.5	22.5	0.8	200	R46KN	3680	-- 01 - x
0.47 µF	11.0	20.0	32.0	27.5	0.8	150	R46KR	3470	-- 01 - x
0.68 µF	11.0	20.0	32.0	27.5	0.8	150	R46KR	3680	-- M1 - x
1.0 µF	13.0	22.0	32.0	27.5	0.8	150	R46KR	4100	-- M1 - x
1.5 µF	13.0	22.0	32.0	27.5	0.8	150	R46KR	4150	-- M1 - x
2.2 µF	14.0	28.0	32.0	27.5	0.8	150	R46KR	4220	-- M1 - x
3.3 µF	18.0	33.0	32.0	27.5	0.8	150	R46KR	4330	-- M2 - x
4.7 µF	22.0	37.0	32.0	27.5	0.8	150	R46KR	4470	-- M1 - x
1.5 µF	11.0	22.0	41.5	37.5	1.0	100	R46KW	4150	-- M1 - x
2.2 µF	13.0	24.0	41.5	37.5	1.0	100	R46KW	4220	-- M1 - x
3.3 µF	16.0	28.5	41.5	37.5	1.0	100	R46KW	4330	-- M1 - x
4.7 µF	19.0	32.0	41.5	37.5	1.0	100	R46KW	4470	-- M1 - x
6.8 µF	20.0	40.0	41.5	37.5	1.0	100	R46KW	4680	-- M2 - x
10.0 µF	24.0	44.0	41.5	37.5	1.0	100	R46KW	5100	-- M1 - x

Rated voltage (K=275Vac) _____
 Mechanical version and packaging (Table 1) _____
 Tolerance: K (±10%); M (±20%) _____
 Value of discharge resistor (Table 2) _____

Rated Cap. (*)	300 Vac / 630 Vdc Std dimensions				Ø d	Max dv/dt at 390Vdc (V/µs)	Part Number		
	B	H	L	p					
0.22 µF	7.0	16.0	26.5	22.5	0.8	200	R463N	3220	-- 01 - x
0.33 µF	8.5	17.0	26.5	22.5	0.8	200	R463N	3330	-- 01 - x
0.47 µF	10.0	18.5	26.5	22.5	0.8	200	R463N	3470	-- 01 - x
0.68 µF	11.0	20.0	26.5	22.5	0.8	200	R463N	3680	-- 01 - x
0.47 µF	11.0	20.0	32.0	27.5	0.8	150	R463R	3470	-- 01 - x
0.68 µF	11.0	20.0	32.0	27.5	0.8	150	R463R	3680	-- M1 - x
1.0 µF	13.0	22.0	32.0	27.5	0.8	150	R463R	4100	-- M1 - x
1.5 µF	13.0	22.0	32.0	27.5	0.8	150	R463R	4150	-- M1 - x
2.2 µF	14.0	28.0	32.0	27.5	0.8	150	R463R	4220	-- M1 - x
3.3 µF	18.0	33.0	32.0	27.5	0.8	150	R463R	4330	-- M2 - x
4.7 µF	22.0	37.0	32.0	27.5	0.8	150	R463R	4470	-- M1 - x
1.5 µF	11.0	22.0	41.5	37.5	1.0	100	R463W	4150	-- M1 - x
2.2 µF	13.0	24.0	41.5	37.5	1.0	100	R463W	4220	-- M1 - x
3.3 µF	16.0	28.5	41.5	37.5	1.0	100	R463W	4330	-- M1 - x
4.7 µF	19.0	32.0	41.5	37.5	1.0	100	R463W	4470	-- M1 - x
6.8 µF	20.0	40.0	41.5	37.5	1.0	100	R463W	4680	-- M2 - x
10.0 µF	24.0	44.0	41.5	37.5	1.0	100	R463W	5100	-- M1 - x

Rated voltage (3=300Vac) _____
 Mechanical version and packaging (Table 1) _____
 Tolerance: K (±10%); M (±20%) _____
 Value of discharge resistor (Table 2) _____

Table 1

Standard packaging style	Lead length (mm)	Taping style			Ordering code (Digit 10 to 11)
		P ₂ (mm)	Fig. (No.)	Pitch (mm)	
REEL Ø500mm		19.05	2	22.5/27.5	CK
Loose, short leads	4 ⁺²				00
Loose, long leads	25 ^{-1/+2}				50
Loose, long leads	30 ⁺⁵				40
Loose, insulated rigid leads	30 ⁺⁵				51
Loose, insulated flexible leads	150 ^{±5}				52

PRODUCT CODE SYSTEM

The part number, comprising 15 digits, is formed as follows:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
R	4	6										-		-

- Digit 1 to 3 Series code.
- Digit 4 a.c. rated voltage:
K = 275Vac; 3 = 300Vac
- Digit 5 Pitch:
N = 22.5; R = 27.5; W = 37.5 mm
- Digit 6 to 9 Digits 7 - 8 - 9 indicate the first three digits of Capacitance value and the 6th digit indicates the number of zeros that must be added to obtain the Rated Capacitance in pF.
- Digit 10 to 11 Mechanical version and/or packaging (table 1)
- Digit 12 Identifies the dimensions and electrical characteristics.
- Digit 13 Internal use
- Digit 14 Capacitance tolerance:
K=±10%; M=±20%
- Digit 15 Value of the discharge resistor (tolerance±10%) according to the following table*:

Table 2

R	code (x)
470 kΩ	E
680 kΩ	F
1 MΩ	G
1.2 MΩ	L
1.5 MΩ	N
2.2 MΩ	P
3.3 MΩ	Q
4.7 MΩ	S
6.8 MΩ	T
10 MΩ	V

*Other resistors are available upon request.

All dimensions are in mm