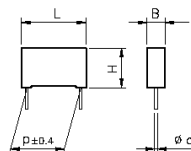


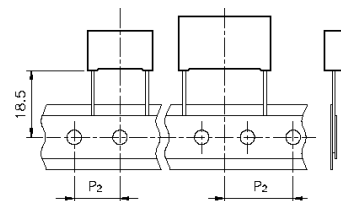
Loose



Taped

Fig.1

Fig.2



$\varnothing d \pm 0.05$	$p = 10$	$p = 15$	$15 < p \leq 27.5$	$p = 37.5$
	0.6	0.6 or 0.8*	0.8	1

All dimensions are in mm.

*See size table

GENERAL TECHNICAL DATA

Dielectric: polypropylene film.

Plates: metal layer deposited by evaporation under vacuum.

Winding: non-inductive type.

Leads: tinned wire.

Protection: plastic case, epoxy 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, EN132400.

ELECTRICAL CHARACTERISTICS

Rated voltage (V_R): 300Vac; 50/60Hz

Capacitance range: 0.001 μ F to 1.0 μ F

Capacitance values: E6 series (IEC 60063 Norm).

Capacitance tolerances (measured at 1 kHz):

$\pm 10\%$ (K); $\pm 20\%$ (M).

Dissipation factor (DF):

$\text{tg} \delta \times 10^{-4}$ at +25°C $\pm 5^\circ\text{C}$: ≤ 20 (15)* at 1kHz

* Typical value

Insulation resistance:

Test conditions

Temperature: +25°C $\pm 5^\circ\text{C}$

Voltage charge time: 1 min

Voltage charge: 100 Vdc

Performance

$\geq 1 \times 10^5 \text{ M}\Omega$ ($5 \times 10^5 \text{ M}\Omega$)* for $C \leq 0.33 \mu\text{F}$

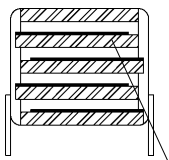
$\geq 30000 \text{ s}$ (150000 s)* for $C > 0.33 \mu\text{F}$

* Typical value

Test voltage between terminations (on all pieces):

2500Vac for 1 s + 5000Vdc for 1 s at +25°C $\pm 5^\circ\text{C}$

Winding scheme



300Vac

single sided metallized
polypropylene film

Y2 / X1 CLASS (EN132400) MKP Series

METALLIZED POLYPROPYLENE FILM CAPACITOR

SELF-HEALING PROPERTIES

Typical applications: Interference suppression and «across-the-line» and «line to ground» applications. Suitable for use in situations where failure of the capacitor could lead to danger of electric shock.

PRODUCT CODE: R41

Note: R.41 series has replaced the R73 series (available only upon request). For new design we suggest the use of the R.41 series.

TEST METHOD AND PERFORMANCE

Damp heat, steady state:

Test conditions

Temperature: +40 $\pm 2^\circ\text{C}$

Relative humidity (RH): 93 $\pm 2\%$

Test duration: 56 days

Performance

Dielectric strength: no dielectric breakdown or flashover at 1500Vac/1 min

Capacitance change $|\Delta C/C|$: $\leq 5\%$

Insulation resistance: $\geq 50\%$ of initial limit.

Endurance:

Test conditions

Temperature: 110°C $\pm 2^\circ\text{C}$

Test duration: 1000 h

Voltage applied: $1.7 \times V_R + 1000\text{Vac}$ 0.1 s/h

Performance

Dielectric strength: no dielectric breakdown or flashover at 1500Vac/1 min

Capacitance change $|\Delta C/C|$: $\leq 10\%$

Insulation resistance: $\geq 50\%$ of initial limit.

Resistance to soldering heat:

Test conditions

Solder bath temperature: +260°C $\pm 5^\circ\text{C}$

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

Performance

Capacitance change $|\Delta C/C|$: $\leq 2\%$

APPROVALS

	ENEC-IMQ IEC 60384-14	Class Y2 / X1	File No. V4160
	CSA C22.2 N°1	Across-the-line	File No. LR83890
	UL 1414	Across-the-line	File No. E 97797
	GB IT 14472-1998	Class Y2 / X1	File No. pending

CSA and UL 1414 for 250Vac only.

Approved according to IEC 60384-14:1993+ A1:1995

(EN132400:1994+A2:1998+A3:1998).

According to IEC 60065.

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



Y2 / X1 CLASS (EN132400) MKP Series
METALLIZED POLYPROPYLENE FILM CAPACITOR
 SELF-HEALING PROPERTIES

Typical applications: Interference suppression and «across-the-line» and «line to ground» applications. Suitable for use in situations where failure of the capacitor could lead to danger of electric shock.

PRODUCT CODE: **R41**

Table 1

Rated Cap.	300 Vac				Ø d	Max dv/dt at 420Vdc (V/µs)	Part Number	Standard packaging style	Lead length (mm)	Taping style			Ordering code (Digit 10 to 11)
	B	H	L	p						P ₂ (mm)	Fig. (No.)	Pitch (mm)	
1000 pF	4.0	9.0	13.0	10.0	0.6	800	R413F 1100 - - 00 -	AMMO-PACK		12.70	1	10.0/15.0	DQ
1500 pF	4.0	9.0	13.0	10.0	0.6	800	R413F 1150 - - 00 -	AMMO-PACK		19.05	2	22.5	DQ
2200 pF	4.0	9.0	13.0	10.0	0.6	800	R413F 1220 - - 00 -						
3300 pF	5.0	11.0	13.0	10.0	0.6	800	R413F 1330 - - 00 -	REEL Ø 355mm		12.70	1	10.0/15.0	CK
4700 pF	5.0	11.0	13.0	10.0	0.6	800	R413F 1470 - - M1M	REEL Ø 500mm		19.05	2	22.5/27.5	CK
4700 pF	6.0	12.0	13.0	10.0	0.6	800	R413F 1470 - - 00 -	Loose, short leads	4 ±2				00
6800 pF	6.0	12.0	13.0	10.0	0.6	800	R413F 1680 - - 00 -	Loose, long leads (p=10mm)	25 ±1				JY
0.010 µF	5.0	11.0	18.0	15.0	0.6	600	R413I 2100 - - 00 -	Loose, long leads (p ≥ 15mm)	25 ±2/-1 30 ±5				50 40
0.015 µF	6.0	12.0	18.0	15.0	0.6	600	R413I 2150 - - 00 -						
0.022 µF	7.5	13.5	18.0	15.0	0.6	600	R413I 2220 - - 00 -						
0.033 µF	8.5	14.5	18.0	15.0	0.6	600	R413I 2330 - - 00 -						
0.047 µF	10.0	16.0	18.0	15.0	0.8	600	R413I 2470 - - 00 -						
0.047 µF	6.0	15.0	26.5	22.5	0.8	500	R413N 2470 - - 00 -						
0.068 µF	7.0	16.0	26.5	22.5	0.8	500	R413N 2680 - - 00 -						
0.10 µF	10.0	18.5	26.5	22.5	0.8	500	R413N 3100 - - 00 -						
0.15 µF	11.0	20.0	26.5	22.5	0.8	500	R413N 3150 - - 00 -						
0.22 µF	13.0	22.0	26.5	22.5	0.8	500	R413N 3220 - - 00M						
0.22 µF	13.0	22.0	32.0	27.5	0.8	400	R413R 3220 - - 00 -						
0.33 µF	14.0	28.0	32.0	27.5	0.8	400	R413R 3330 - - 00 -						
0.47 µF	18.0	33.0	32.0	27.5	0.8	400	R413R 3470 - - 00 -						
0.68 µF	18.0	33.0	32.0	27.5	0.8	400	R413R 3680 - - 00 -						
0.47 µF	13.0	24.0	41.5	37.5	0.8	300	R413W3470 - - 00 -						
0.68 µF	16.0	28.5	41.5	37.5	0.8	300	R413W3680 - - 00 -						
1.0 µF	20.0	40.0	41.5	37.5	0.8	300	R413W4100 - - 00 -						

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

Mechanical version and packaging (Table 1) _____

Tolerance: K (± 10%); M (± 20%) _____

E12 Series available upon request

All dimensions are in mm.