# R75
MKP Series

Loose

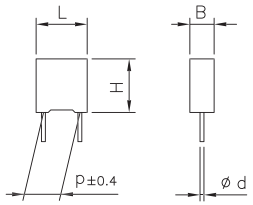
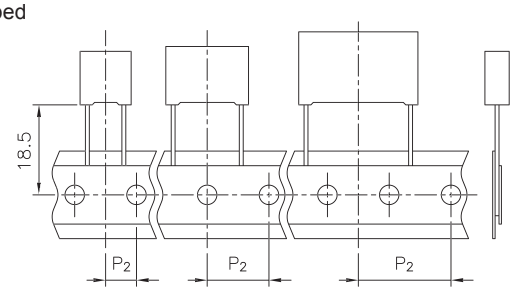



Fig. 1 Fig. 2 Fig. 3

Taped




| Ød±0.05 | p≤15* | 22.5≤p≤27.5 | p = 37.5 |
|---|---|---|---|
| | 0.6 | 0.8 | 1.0 |

*Except for box ≥10x16x18 having Ød = 0.8±0.05mm

All dimensions are in mm.

## REDUCED SIZES

## METALLIZED POLYPROPYLENE FILM CAPACITOR D.C. AND PULSE APPLICATIONS

**Typical applications**: deflection circuits in TV-sets and monitors (S-correction), resonant capacitor in electronic ballast and compact lamp, coupling capacitor in SMPS, timing and oscillator circuits.

PRODUCT CODE: **R75 (Digit 12: A to Z)**

| Pitch | Box thickness (B) | Maximum dimensions (mm) | | |
|---|---|---|---|---|
| (mm) | (mm) | B max | H max | L max |
| 7.5 | All | B +0.1 | H +0.1 | L +0.2 |
| 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 |

## PRODUCT CODE SYSTEM

The part number, comprising 14 digits, is formed as follows:

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

Digit 1 to 3 Series code.

Digit 4 d.c. rated voltage:
G = 160V I = 250V
M = 400V P = 630V
Q = 1000V

Digit 5 Pitch:
D = 7.5 mm; F = 10 mm; I = 15 mm;
N = 22.5 mm; R = 27.5mm; W = 37.5mm

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 (A to Z).

Digit 13 Internal use.

Digit 14 Capacitance tolerance:
J=5%; K=10%; M=20%

## 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 (R75), dielectric code (MKP), capacitance, tolerance, D.C. rated voltage, manufacturing date code.

**Climatic category:** 55/105/56 IEC 60068-1

**Operating temperature range:** -55 to +105°C

**Related documents:** IEC 60384-16

Table 1 (for more detailed information, please refer to pages 14).

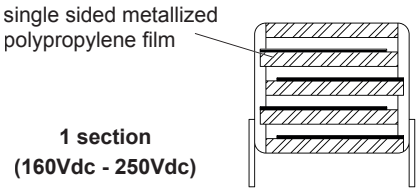
| Standard packaging style | Lead length | Taping style | | | Ordering code |
|---|---|---|---|---|---|
| | (mm) | $P_2$ (mm) | Fig. (No.) | Pitch (mm) | (Digit 10 to 11) |
| AMMO-PACK | | 6.35 | 1 | 7.5 | DQ |
| AMMO-PACK | | 12.70 | 2 | 10.0/15.0 | DQ |
| AMMO-PACK | | 19.05 | 3 | 22.5 | DQ |
| REEL Ø 355mm | | 6.35 | 1 | 7.5 | CK |
| REEL Ø 355mm | | 12.70 | 2 | 10.0/15.0 | GY |
| REEL Ø 500mm | | 12.70 | 2 | 10.0/15.0 | CK |
| REEL Ø 500mm | | 19.05 | 3 | 22.5/27.5 | CK |
| Loose, short leads | $4^{+2}$ | | | | AA |
| Loose, long leads (p≤10mm) | $17^{+1/-2}$ | | | | Z3 |
| Loose, long leads (p≥15mm) | $30^{+5}$<br>$25^{+2/-1}$ | | | | 40<br>50 |

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

# R75
MKP Series

## REDUCED SIZES
## METALLIZED POLYPROPYLENE FILM CAPACITOR D.C. AND PULSE APPLICATIONS

PRODUCT CODE: **R75 (Digit 12: A to Z)**




| Rated Cap. | 160Vdc / 70Vac Std dimensions | | | | Max dv/dt | Max $K_0$ | Part Number |
|---|---|---|---|---|---|---|---|
| | B | H | L | p | (V/µs) | ($V^2$/µs) | |
| 0.10 µF | 4.0 | 9.0 | 10.5 | 7.5 | 100 | 32 E3 | R75GD 3100--A-- |
| 0.12 µF | 5.0 | 11.0 | 10.5 | 7.5 | 100 | 32 E3 | R75GD 3120--A-- |
| 0.15 µF | 5.0 | 11.0 | 10.5 | 7.5 | 100 | 32 E3 | R75GD 3150--A-- |
| 0.18 µF | 6.0 | 12.0 | 10.5 | 7.5 | 100 | 32 E3 | R75GD 3180--A-- |
| 0.22 µF | 6.0 | 12.0 | 10.5 | 7.5 | 100 | 32 E3 | R75GD 3220--A-- |
| 0.12 µF | 4.0 | 9.0 | 13.0 | 10.0 | 90 | 28 E3 | R75GF 3120--A-- |
| 0.15 µF | 4.0 | 9.0 | 13.0 | 10.0 | 90 | 28 E3 | R75GF 3150--A-- |
| 0.18 µF | 5.0 | 11.0 | 13.0 | 10.0 | 90 | 28 E3 | R75GF 3180--A-- |
| 0.22 µF | 5.0 | 11.0 | 13.0 | 10.0 | 90 | 28 E3 | R75GF 3220--A-- |
| 0.27 µF | 6.0 | 12.0 | 13.0 | 10.0 | 90 | 28 E3 | R75GF 3270--A-- |
| 0.33 µF | 6.0 | 12.0 | 13.0 | 10.0 | 90 | 28 E3 | R75GF 3330--A-- |

Mechanical version and packaging (Table1)
Internal use
Tolerance: J (±5%); K (±10%); M (±20%)

| Rated Cap. | 250Vdc / 140Vac Std dimensions | | | | Max dv/dt | Max $K_0$ | Part Number |
|---|---|---|---|---|---|---|---|
| | B | H | L | p | (V/µs) | ($V^2$/µs) | |
| 0.068 µF | 4.0 | 9.0 | 10.5 | 7.5 | 180 | 90 E3 | R75ID 2680--A-- |
| 0.082 µF | 4.0 | 9.0 | 10.5 | 7.5 | 180 | 90 E3 | R75ID 2820--A-- |
| 0.10 µF | 5.0 | 11.0 | 10.5 | 7.5 | 180 | 90 E3 | R75ID 3100--A-- |
| 0.12 µF | 5.0 | 11.0 | 10.5 | 7.5 | 180 | 90 E3 | R75ID 3120--A-- |
| 0.15 µF | 6.0 | 12.0 | 10.5 | 7.5 | 180 | 90 E3 | R75ID 3150--A-- |
| 0.18 µF | 6.0 | 12.0 | 10.5 | 7.5 | 180 | 90 E3 | R75ID 3180--A-- |
| 0.082 µF | 4.0 | 9.0 | 13.0 | 10.0 | 150 | 75 E3 | R75IF 2820--A-- |
| 0.10 µF | 4.0 | 9.0 | 13.0 | 10.0 | 150 | 75 E3 | R75IF 3100--A-- |
| 0.12 µF | 5.0 | 11.0 | 13.0 | 10.0 | 150 | 75 E3 | R75IF 3120--A-- |
| 0.15 µF | 5.0 | 11.0 | 13.0 | 10.0 | 150 | 75 E3 | R75IF 3150--A-- |
| 0.18 µF | 6.0 | 12.0 | 13.0 | 10.0 | 150 | 75 E3 | R75IF 3180--A-- |
| 0.22 µF | 6.0 | 12.0 | 13.0 | 10.0 | 150 | 75 E3 | R75IF 3220--A-- |

Mechanical version and packaging (Table1)
Internal use
Tolerance: J (±5%); K (±10%); M (±20%)

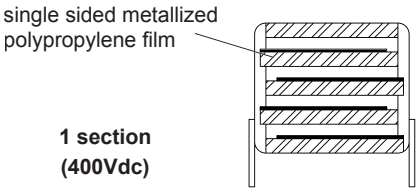
All dimensions are mm.

Note: If the working voltage (V) is lower than the rated voltage ($V_R$), the capacitor may work at higher dv/dt. In this case the maximum value allowed is obtained multiplying the above value (see table dv/dt) with the ratio $V_R$/V.
The pulse characteristic $K_0$ depends on the voltage wave-form and in any case it cannot overcome the value given in the above table. The dv/dt test is carried out at 2 times the above values.

# R75
MKP Series

## REDUCED SIZES
## METALLIZED POLYPROPYLENE FILM CAPACITOR D.C. AND PULSE APPLICATIONS

PRODUCT CODE: **R75 (Digit 12: A to Z)**




| Rated Cap. | 400Vdc / 200Vac Std dimensions B | H | L | p | Max dv/dt (V/µs) | Max $K_0$ ($V^2$/µs) | Part Number |
|---|---|---|---|---|---|---|---|
| 0.027 µF | 4.0 | 9.0 | 10.5 | 7.5 | 390 | 312 E3 | R75MD2270--A-- |
| 0.033 µF | 5.0 | 11.0 | 10.5 | 7.5 | 390 | 312 E3 | R75MD2330--A-- |
| 0.039 µF | 5.0 | 11.0 | 10.5 | 7.5 | 390 | 312 E3 | R75MD2390--A-- |
| 0.047 µF | 5.0 | 11.0 | 10.5 | 7.5 | 390 | 312 E3 | R75MD2470--A-- |
| 0.056 µF | 6.0 | 12.0 | 10.5 | 7.5 | 390 | 312 E3 | R75MD2560--A-- |
| 0.068 µF | 6.0 | 12.0 | 10.5 | 7.5 | 390 | 312 E3 | R75MD2680--A-- |
| 0.022 µF | 4.0 | 9.0 | 13.0 | 10.0 | 350 | 280 E3 | R75MF 2220--M-- |
| 0.027 µF | 4.0 | 9.0 | 13.0 | 10.0 | 350 | 280 E3 | R75MF2270--M-- |
| 0.033 µF | 4.0 | 9.0 | 13.0 | 10.0 | 350 | 280 E3 | R75MF 2330--M-- |
| 0.039 µF | 4.0 | 9.0 | 13.0 | 10.0 | 350 | 280 E3 | R75MF 2390--M-- |
| 0.047 µF | 5.0 | 11.0 | 13.0 | 10.0 | 350 | 280 E3 | R75MF 2470--M-- |
| 0.056 µF | 5.0 | 11.0 | 13.0 | 10.0 | 350 | 280 E3 | R75MF 2560--M-- |
| 0.068 µF | 5.0 | 11.0 | 13.0 | 10.0 | 350 | 280 E3 | R75MF 2680--M-- |
| 0.082 µF | 6.0 | 12.0 | 13.0 | 10.0 | 350 | 280 E3 | R75MF 2820--M-- |
| 0.10 µF | 6.0 | 12.0 | 13.0 | 10.0 | 350 | 280 E3 | R75MF 3100--M-- |
| 0.10 µF | 5.0 | 11.0 | 18.0 | 15.0 | 300 | 240 E3 | R75MI 3100--M-- |
| 0.12 µF | 5.0 | 11.0 | 18.0 | 15.0 | 300 | 240 E3 | R75MI 3120--M-- |
| 0.15 µF | 5.0 | 11.0 | 18.0 | 15.0 | 300 | 240 E3 | R75MI 3150--M-- |
| 0.18 µF | 6.0 | 12.0 | 18.0 | 15.0 | 300 | 240 E3 | R75MI 3180--M-- |
| 0.22 µF | 6.0 | 12.0 | 18.0 | 15.0 | 300 | 240 E3 | R75MI 3220--M-- |
| 0.27 µF | 7.5 | 13.5 | 18.0 | 15.0 | 300 | 240 E3 | R75MI 3270--M-- |
| 0.33 µF | 7.5 | 13.5 | 18.0 | 15.0 | 300 | 240 E3 | R75MI 3330--M-- |
| 0.33 µF | 9.0 | 12.5 | 18.0 | 15.0 | 300 | 240 E3 | R75MI 3330--N-- |
| 0.39 µF | 8.5 | 14.5 | 18.0 | 15.0 | 300 | 240 E3 | R75MI 3390--M-- |
| 0.47 µF | 8.5 | 14.5 | 18.0 | 15.0 | 300 | 240 E3 | R75MI 3470--M-- |
| 0.47 µF | 13.0 | 12.0 | 18.0 | 15.0 | 300 | 240 E3 | R75MI 3470--N-- |
| 0.56 µF | 10.0 | 16.0 | 18.0 | 15.0 | 300 | 240 E3 | R75MI 3560--M-- |
| 0.68 µF | 10.0 | 16.0 | 18.0 | 15.0 | 300 | 240 E3 | R75MI 3680--M-- |

Mechanical version and packaging (Table1)
Internal use
Tolerance: J (±5%); K (±10%); M (±20%)

| Rated Cap. | 400Vdc / 200Vac Std dimensions B | H | L | p | Max dv/dt (V/µs) | Max $K_0$ ($V^2$/µs) | Part Number |
|---|---|---|---|---|---|---|---|
| 0.27 µF | 6.0 | 15.0 | 26.5 | 22.5 | 200 | 160 E3 | R75MN 3270--M-- |
| 0.33 µF | 6.0 | 15.0 | 26.5 | 22.5 | 200 | 160 E3 | R75MN 3330--M-- |
| 0.39 µF | 6.0 | 15.0 | 26.5 | 22.5 | 200 | 160 E3 | R75MN 3390--M-- |
| 0.47 µF | 6.0 | 15.0 | 26.5 | 22.5 | 200 | 160 E3 | R75MN 3470--M-- |
| 0.56 µF | 7.0 | 16.0 | 26.5 | 22.5 | 200 | 160 E3 | R75MN 3560--M-- |
| 0.68 µF | 7.0 | 16.0 | 26.5 | 22.5 | 200 | 160 E3 | R75MN 3680--M-- |
| 0.82 µF | 8.5 | 17.0 | 26.5 | 22.5 | 200 | 160 E3 | R75MN 3820--M-- |
| 1.0 µF | 10.0 | 18.5 | 26.5 | 22.5 | 200 | 160 E3 | R75MN 4100--M-- |
| 1.2 µF | 10.0 | 18.5 | 26.5 | 22.5 | 200 | 160 E3 | R75MN 4120--M-- |
| 1.5 µF | 11.0 | 20.0 | 26.5 | 22.5 | 200 | 160 E3 | R75MN 4150--M-- |
| 1.8 µF | 13.0 | 22.0 | 26.5 | 22.5 | 200 | 160 E3 | R75MN 4180--M-- |
| 0.68 µF | 9.0 | 17.0 | 32.0 | 27.5 | 100 | 80 E3 | R75MR 3680--M-- |
| 0.82 µF | 9.0 | 17.0 | 32.0 | 27.5 | 100 | 80 E3 | R75MR 3820--M-- |
| 1.0 µF | 9.0 | 17.0 | 32.0 | 27.5 | 100 | 80 E3 | R75MR 4100--M-- |
| 1.2 µF | 9.0 | 17.0 | 32.0 | 27.5 | 100 | 80 E3 | R75MR 4120--M-- |
| 1.5 µF | 11.0 | 20.0 | 32.0 | 27.5 | 100 | 80 E3 | R75MR 4150--M-- |
| 1.8 µF | 11.0 | 20.0 | 32.0 | 27.5 | 100 | 80 E3 | R75MR 4180--M-- |
| 2.2 µF | 13.0 | 22.0 | 32.0 | 27.5 | 100 | 80 E3 | R75MR 4220--M-- |
| 2.7 µF | 13.0 | 22.0 | 32.0 | 27.5 | 100 | 80 E3 | R75MR 4270--M-- |
| 3.3 µF | 14.0 | 28.0 | 32.0 | 27.5 | 80 | 60 E3 | R75MR 4330--M-- |
| 3.9 µF | 14.0 | 28.0 | 32.0 | 27.5 | 80 | 60 E3 | R75MR 4390--M-- |
| 4.7 µF | 18.0 | 33.0 | 32.0 | 27.5 | 80 | 60 E3 | R75MR 4470--M-- |
| 2.2 µF | 11.0 | 22.0 | 41.5 | 37.5 | 80 | 60 E3 | R75MW4220--M-- |
| 2.7 µF | 11.0 | 22.0 | 41.5 | 37.5 | 80 | 60 E3 | R75MW4270--M-- |
| 3.3 µF | 11.0 | 22.0 | 41.5 | 37.5 | 80 | 60 E3 | R75MW4330--M-- |
| 3.9 µF | 13.0 | 24.0 | 41.5 | 37.5 | 80 | 60 E3 | R75MW4390--M-- |
| 4.7 µF | 16.0 | 28.5 | 41.5 | 37.5 | 80 | 60 E3 | R75MW4470--M-- |
| 5.6 µF | 16.0 | 28.5 | 41.5 | 37.5 | 40 | 30 E3 | R75MW4560--M-- |
| 6.8 µF | 16.0 | 28.5 | 41.5 | 37.5 | 40 | 30 E3 | R75MW4680--M-- |
| 8.2 µF | 19.0 | 32.0 | 41.5 | 37.5 | 40 | 30 E3 | R75MW4820--M-- |
| 10.0 µF | 20.0 | 40.0 | 41.5 | 37.5 | 40 | 30 E3 | R75MW5100--M-- |
| 12.0 µF | 20.0 | 40.0 | 41.5 | 37.5 | 40 | 30 E3 | R75MW5120--M-- |
| 15.0 µF | 24.0 | 44.5 | 41.5 | 37.5 | 20 | 15 E3 | R75MW5150--M-- |
| 18.0 µF | 24.0 | 44.5 | 41.5 | 37.5 | 20 | 15 E3 | R75MW5180--M-- |
| 22.0 µF | 30.0 | 45.0 | 41.5 | 37.5 | 20 | 15 E3 | R75MW5220--M-- |

Mechanical version and packaging (Table1)
Internal use
Tolerance: J (±5%); K (±10%); M (±20%)

All dimensions are mm.

Note: If the working voltage (V) is lower than the rated voltage ($V_R$), the capacitor may work at higher dv/dt. In this case the maximum value allowed is obtained multiplying the above value (see table dv/dt) with the ratio $V_R/V$.
The pulse characteristic $K_0$ depends on the voltage wave-form and in any case it cannot overcome the value given in the above table. The dv/dt test is carried out at 2 times the above values.

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MKP Series

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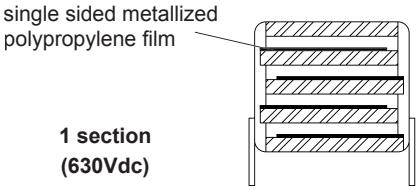



| Rated Cap. | 630Vdc / 220Vac* Std dimensions | | | | Max dv/dt | Max $K_0$ | Part Number |
|---|---|---|---|---|---|---|---|
| | B | H | L | p | (V/µs) | ($V^2$/µs) | |
| 0.010 µF | 4.0 | 9.0 | 10.5 | 7.5 | 600 | 760 E3 | R75PD2100--A-- |
| 0.012 µF | 4.0 | 9.0 | 10.5 | 7.5 | 600 | 760 E3 | R75PD2120--A-- |
| 0.015 µF | 5.0 | 11.0 | 10.5 | 7.5 | 600 | 760 E3 | R75PD2150--A-- |
| 0.018 µF | 5.0 | 11.0 | 10.5 | 7.5 | 600 | 760 E3 | R75PD2180--A-- |
| 0.022 µF | 6.0 | 12.0 | 10.5 | 7.5 | 600 | 760 E3 | R75PD2220--A-- |
| 0.027 µF | 6.0 | 12.0 | 10.5 | 7.5 | 600 | 760 E3 | R75PD2270--A-- |
| 0.010 µF | 4.0 | 9.0 | 13.0 | 10.0 | 550 | 690 E3 | R75PF2100--M-- |
| 0.012 µF | 4.0 | 9.0 | 13.0 | 10.0 | 550 | 690 E3 | R75PF2120--M-- |
| 0.015 µF | 4.0 | 9.0 | 13.0 | 10.0 | 550 | 690 E3 | R75PF2150--M-- |
| 0.018 µF | 4.0 | 9.0 | 13.0 | 10.0 | 550 | 690 E3 | R75PF2180--M-- |
| 0.022 µF | 5.0 | 11.0 | 13.0 | 10.0 | 550 | 690 E3 | R75PF2220--M-- |
| 0.027 µF | 5.0 | 11.0 | 13.0 | 10.0 | 550 | 690 E3 | R75PF2270--M-- |
| 0.033 µF | 5.0 | 11.0 | 13.0 | 10.0 | 550 | 690 E3 | R75PF2330--M-- |
| 0.039 µF | 6.0 | 12.0 | 13.0 | 10.0 | 550 | 690 E3 | R75PF2390--M-- |
| 0.047 µF | 6.0 | 12.0 | 13.0 | 10.0 | 550 | 690 E3 | R75PF2470--M-- |
| 0.056 µF | 6.0 | 12.0 | 13.0 | 10.0 | 550 | 690 E3 | R75PF2560--M-- |
| 0.068 µF | 6.0 | 12.0 | 13.0 | 10.0 | 550 | 690 E3 | R75PF2680--M-- |
| 0.010 µF | 5.0 | 11.0 | 18.0 | 15.0 | 400 | 504 E3 | R75PI 2100--M-- |
| 0.012 µF | 5.0 | 11.0 | 18.0 | 15.0 | 400 | 504 E3 | R75PI 2120--M-- |
| 0.015 µF | 5.0 | 11.0 | 18.0 | 15.0 | 400 | 504 E3 | R75PI 2150--M-- |
| 0.018 µF | 5.0 | 11.0 | 18.0 | 15.0 | 400 | 504 E3 | R75PI 2180--M-- |
| 0.022 µF | 5.0 | 11.0 | 18.0 | 15.0 | 400 | 504 E3 | R75PI 2220--M-- |
| 0.027 µF | 5.0 | 11.0 | 18.0 | 15.0 | 400 | 504 E3 | R75PI 2270--M-- |
| 0.033 µF | 5.0 | 11.0 | 18.0 | 15.0 | 400 | 504 E3 | R75PI 2330--M-- |
| 0.039 µF | 5.0 | 11.0 | 18.0 | 15.0 | 400 | 504 E3 | R75PI 2390--M-- |
| 0.047 µF | 5.0 | 11.0 | 18.0 | 15.0 | 400 | 504 E3 | R75PI 2470--M-- |
| 0.056 µF | 5.0 | 11.0 | 18.0 | 15.0 | 400 | 504 E3 | R75PI 2560--M-- |
| 0.068 µF | 5.0 | 11.0 | 18.0 | 15.0 | 400 | 504 E3 | R75PI 2680--M-- |
| 0.082 µF | 6.0 | 12.0 | 18.0 | 15.0 | 400 | 504 E3 | R75PI 2820--M-- |
| 0.10 µF | 6.0 | 12.0 | 18.0 | 15.0 | 400 | 504 E3 | R75PI 3100--M-- |
| 0.12 µF | 7.5 | 13.5 | 18.0 | 15.0 | 400 | 504 E3 | R75PI 3120--M-- |
| 0.15 µF | 7.5 | 13.5 | 18.0 | 15.0 | 400 | 504 E3 | R75PI 3150--M-- |
| 0.18 µF | 8.5 | 14.5 | 18.0 | 15.0 | 400 | 504 E3 | R75PI 3180--M-- |
| 0.22 µF | 8.5 | 14.5 | 18.0 | 15.0 | 400 | 504 E3 | R75PI 3220--M-- |
| 0.22 µF | 9.0 | 12.5 | 18.0 | 15.0 | 400 | 504 E3 | R75PI 3220--N-- |
| 0.27 µF | 10.0 | 16.0 | 18.0 | 15.0 | 400 | 504 E3 | R75PI 3270--M-- |
| 0.33 µF | 10.0 | 16.0 | 18.0 | 15.0 | 400 | 504 E3 | R75PI 3330--M-- |
| 0.33 µF | 13.0 | 12.0 | 18.0 | 15.0 | 400 | 504 E3 | R75PI 3330--N-- |
| 0.39 µF | 11.0 | 19.0 | 18.0 | 15.0 | 400 | 504 E3 | R75PI 3390--M-- |
| 0.47 µF | 11.0 | 19.0 | 18.0 | 15.0 | 400 | 504 E3 | R75PI 3470--M-- |

Mechanical version and packaging (Table1)
Internal use
Tolerance: J (±5%); K (±10%); M (±20%)

| Rated Cap. | 630Vdc / 220Vac* Std dimensions | | | | Max dv/dt | Max $K_0$ | Part Number |
|---|---|---|---|---|---|---|---|
| | B | H | L | p | (V/µs) | ($V^2$/µs) | |
| 0.15 µF | 6.0 | 15.0 | 26.5 | 22.5 | 250 | 315 E3 | R75PN3150--M-- |
| 0.18 µF | 6.0 | 15.0 | 26.5 | 22.5 | 250 | 315 E3 | R75PN3180--M-- |
| 0.22 µF | 6.0 | 15.0 | 26.5 | 22.5 | 250 | 315 E3 | R75PN3220--M-- |
| 0.27 µF | 7.0 | 16.0 | 26.5 | 22.5 | 250 | 315 E3 | R75PN3270--M-- |
| 0.33 µF | 7.0 | 16.0 | 26.5 | 22.5 | 250 | 315 E3 | R75PN3330--M-- |
| 0.39 µF | 10.0 | 18.5 | 26.5 | 22.5 | 250 | 315 E3 | R75PN3390--M-- |
| 0.47 µF | 10.0 | 18.5 | 26.5 | 22.5 | 250 | 315 E3 | R75PN3470--M-- |
| 0.56 µF | 10.0 | 18.5 | 26.5 | 22.5 | 250 | 315 E3 | R75PN3560--M-- |
| 0.68 µF | 11.0 | 20.0 | 26.5 | 22.5 | 250 | 315 E3 | R75PN3680--M-- |
| 0.82 µF | 13.0 | 22.0 | 26.5 | 22.5 | 250 | 315 E3 | R75PN3820--M-- |
| 1.0 µF | 13.0 | 22.0 | 26.5 | 22.5 | 250 | 315 E3 | R75PN4100--M-- |
| 0.47 µF | 9.0 | 17.0 | 32.0 | 27.5 | 150 | 180 E3 | R75PR3470--M-- |
| 0.56 µF | 9.0 | 17.0 | 32.0 | 27.5 | 150 | 180 E3 | R75PR3560--M-- |
| 0.68 µF | 9.0 | 17.0 | 32.0 | 27.5 | 150 | 180 E3 | R75PR3680--M-- |
| 0.82 µF | 11.0 | 20.0 | 32.0 | 27.5 | 150 | 180 E3 | R75PR3820--M-- |
| 1.0 µF | 11.0 | 20.0 | 32.0 | 27.5 | 150 | 180 E3 | R75PR4100--M-- |
| 1.2 µF | 13.0 | 22.0 | 32.0 | 27.5 | 150 | 180 E3 | R75PR4120--M-- |
| 1.5 µF | 13.0 | 22.0 | 32.0 | 27.5 | 150 | 180 E3 | R75PR4150--M-- |
| 1.8 µF | 14.0 | 28.0 | 32.0 | 27.5 | 100 | 120 E3 | R75PR4180--M-- |
| 2.2 µF | 14.0 | 28.0 | 32.0 | 27.5 | 100 | 120 E3 | R75PR4220--M-- |
| 2.7 µF | 18.0 | 33.0 | 32.0 | 27.5 | 100 | 120 E3 | R75PR4270--M-- |
| 3.3 µF | 18.0 | 33.0 | 32.0 | 27.5 | 100 | 120 E3 | R75PR4330--M-- |
| 3.9 µF | 22.0 | 37.0 | 32.0 | 27.5 | 60 | 70 E3 | R75PR4390--M-- |
| 4.7 µF | 22.0 | 37.0 | 32.0 | 27.5 | 60 | 70 E3 | R75PR4470--M-- |
| 1.5 µF | 11.0 | 22.0 | 41.5 | 37.5 | 100 | 120 E3 | R75PW4150--M-- |
| 1.8 µF | 11.0 | 22.0 | 41.5 | 37.5 | 100 | 120 E3 | R75PW4180--M-- |
| 2.2 µF | 13.0 | 24.0 | 41.5 | 37.5 | 100 | 120 E3 | R75PW4220--M-- |
| 2.7 µF | 13.0 | 24.0 | 41.5 | 37.5 | 100 | 120 E3 | R75PW4270--M-- |
| 3.3 µF | 16.0 | 28.5 | 41.5 | 37.5 | 60 | 70 E3 | R75PW4330--M-- |
| 3.9 µF | 16.0 | 28.5 | 41.5 | 37.5 | 60 | 70 E3 | R75PW4390--M-- |
| 4.7 µF | 19.0 | 32.0 | 41.5 | 37.5 | 60 | 70 E3 | R75PW4470--M-- |
| 5.6 µF | 19.0 | 32.0 | 41.5 | 37.5 | 60 | 70 E3 | R75PW4560--M-- |
| 6.8 µF | 20.0 | 40.0 | 41.5 | 37.5 | 30 | 36 E3 | R75PW4680--M-- |
| 8.2 µF | 20.0 | 40.0 | 41.5 | 37.5 | 30 | 36 E3 | R75PW4820--M-- |
| 10.0 µF | 24.0 | 44.0 | 41.5 | 37.5 | 30 | 36 E3 | R75PW5100--M-- |
| 12.0 µF | 24.0 | 44.0 | 41.5 | 37.5 | 30 | 36 E3 | R75PW5120--M-- |
| 15.0 µF | 30.0 | 45.0 | 41.5 | 37.5 | 20 | 24 E3 | R75PW5150--M-- |

Mechanical version and packaging (Table1)
Internal use
Tolerance: J (±5%); K (±10%); M (±20%)

All dimensions are mm.

Note: If the working voltage (V) is lower than the rated voltage ($V_R$), the capacitor may work at higher dv/dt. In this case the maximum value allowed is obtained multiplying the above value (see table dv/dt) with the ratio $V_R$/V.
The pulse characteristic $K_0$ depends on the voltage wave-form and in any case it cannot overcome the value given in the above table. The dv/dt test is carried out at 2 times the above values.

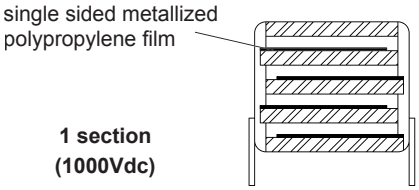
* Not suitable for across-the-line applications. Please refer to Interference Suppression Capacitors (page 167)

# R75
MKP Series

PRELIMINARY

## REDUCED SIZES
## METALLIZED POLYPROPYLENE FILM CAPACITOR D.C. AND PULSE APPLICATIONS

PRODUCT CODE: **R75 (Digit 12: A to Z)**




| Rated Cap. | 1000Vdc / 250Vac* Std dimensions | | | | Max dv/dt | Max $K_0$ | Part Number |
|---|---|---|---|---|---|---|---|
| | B | H | L | p | (V/µs) | ($V^2$/µs) | |
| 0.22 µF | 9.0 | 17.0 | 32.0 | 27.5 | 180 | 320 E3 | R75QR3220--M-- |
| 0.27 µF | 9.0 | 17.0 | 32.0 | 27.5 | 180 | 320 E3 | R75QR3270--M-- |
| 0.33 µF | 11.0 | 20.0 | 32.0 | 27.5 | 180 | 320 E3 | R75QR3330--M-- |
| 0.39 µF | 11.0 | 20.0 | 32.0 | 27.5 | 180 | 320 E3 | R75QR3390--M-- |
| 0.47 µF | 13.0 | 22.0 | 32.0 | 27.5 | 180 | 320 E3 | R75QR3470--M-- |
| 0.56 µF | 13.0 | 22.0 | 32.0 | 27.5 | 180 | 320 E3 | R75QR3560--M-- |
| 0.68 µF | 14.0 | 28.0 | 32.0 | 27.5 | 180 | 320 E3 | R75QR3680--M-- |
| 0.82 µF | 14.0 | 28.0 | 32.0 | 27.5 | 180 | 320 E3 | R75QR3820--M-- |
| 1.0 µF | 18.0 | 33.0 | 32.0 | 27.5 | 180 | 320 E3 | R75QR4100--M-- |
| 1.2 µF | 18.0 | 33.0 | 32.0 | 27.5 | 180 | 320 E3 | R75QR4120--M-- |
| 1.5 µF | 18.0 | 33.0 | 32.0 | 27.5 | 180 | 320 E3 | R75QR4150--M-- |
| 1.8 µF | 22.0 | 37.0 | 32.0 | 27.5 | 180 | 320 E3 | R75QR4180--M-- |
| 2.2 µF | 22.0 | 37.0 | 32.0 | 27.5 | 180 | 320 E3 | R75QR4220--M-- |

Mechanical version and packaging (Table1)
Internal use
Tolerance: J (±5%); K (±10%); M (±20%)

| Rated Cap. | 1000Vdc / 250Vac* Std dimensions | | | | Max dv/dt | Max $K_0$ | Part Number |
|---|---|---|---|---|---|---|---|
| | B | H | L | p | (V/µs) | ($V^2$/µs) | |
| 0.68 µF | 11.0 | 22.0 | 41.5 | 37.5 | 150 | 260 E3 | R75QW3680--M-- |
| 0.82 µF | 13.0 | 24.0 | 41.5 | 37.5 | 150 | 260 E3 | R75QW3820--M-- |
| 1.0 µF | 13.0 | 24.0 | 41.5 | 37.5 | 150 | 260 E3 | R75QW4100--M-- |
| 1.2 µF | 16.0 | 28.5 | 41.5 | 37.5 | 150 | 260 E3 | R75QW4120--M-- |
| 1.5 µF | 16.0 | 28.5 | 41.5 | 37.5 | 150 | 260 E3 | R75QW4150--M-- |
| 1.8 µF | 19.0 | 32.0 | 41.5 | 37.5 | 150 | 260 E3 | R75QW4180--M-- |
| 2.2 µF | 19.0 | 32.0 | 41.5 | 37.5 | 150 | 260 E3 | R75QW4220--M-- |
| 2.7 µF | 20.0 | 40.0 | 41.5 | 37.5 | 100 | 180 E3 | R75QW4270--M-- |
| 3.3 µF | 24.0 | 44.0 | 41.5 | 37.5 | 100 | 180 E3 | R75QW4330--M-- |
| 3.9 µF | 24.0 | 44.0 | 41.5 | 37.5 | 100 | 180 E3 | R75QW4390--M-- |
| 4.7 µF | 24.0 | 44.0 | 41.5 | 37.5 | 60 | 100 E3 | R75QW4470--M-- |
| 5.6 µF | 30.0 | 45.0 | 41.5 | 37.5 | 60 | 100 E3 | R75QW4560--M-- |

Mechanical version and packaging (Table1)
Internal use
Tolerance: J (±5%); K (±10%); M (±20%)

All dimensions are mm.

Note: If the working voltage (V) is lower than the rated voltage ($V_R$), the capacitor may work at higher dv/dt. In this case the maximum value allowed is obtained multiplying the above value (see table dv/dt) with the ratio $V_R$/V.
The pulse characteristic $K_0$ depends on the voltage wave-form and in any case it cannot overcome the value given in the above table. The dv/dt test is carried out at 2 times the above values.

* Not suitable for across-the-line applications. Please refer to Interference Suppression Capacitors (page 167)

# R75
MKP Series

## REDUCED SIZES
## METALLIZED POLYPROPYLENE FILM CAPACITOR D.C. AND PULSE APPLICATIONS

PRODUCT CODE: **R75 (Digit 12: A to Z)**

### ELECTRICAL CHARACTERISTICS

**Rated voltage ($V_R$):**
160Vdc - 250Vdc - 400Vdc - 630Vdc - 1000 Vdc.

**Rated temperature ($T_R$):** +85°C

**Temperature derated voltage:**
The following decreasing factor has to be applied on the rated voltage:
+85°C to +105°C: 2.00% per °C for $V_R$ (d.c.)
+85°C to +105°C: 1.25% per °C for $V_R$ (a.c.)

**Capacitance range:**
0.01µF to 22µF

**Capacitance values:**
E12 series (IEC 60063 Norm).

**Capacitance tolerances** (measured at 1 kHz)**:**
±5% (J); ±10% (K); ±20% (M).

**Total self-inductance** (L)**:** (Lead length ~2 mm)

| Pitch (mm) | 7.5 | 10 | 15 | 22.5 | 27.5 | 37.5 |
|---|---|---|---|---|---|---|
| L (nH) ≈ | 8 | 9 | 10 | 18 | 18 | 20 |

**Dissipation factor (DF):**
tgδx$10^{-4}$ at +25°C ±5°C

| kHz | C≤0.1µF | 0.1<C≤1.0µF | 1<C≤4.7µF |
|---|---|---|---|
| 1 | ≤ 4 | ≤ 5 | ≤6 |
| 10 | ≤ 6 | ≤12 | |
| 100 | ≤30 | | |

**Insulation resistance:**

**Test conditions**

| | |
|---|---|
| Temperature: | +25°C±5°C |
| Voltage charge time: | 1 min |
| Voltage charge: | 100Vdc |

**Performance**

| | | |
|---|---|---|
| ≥1x$10^5$ MΩ | for C≥0.33 µF | (5x$10^5$ MΩ)* |
| ≥30000 s | for C>0.33 µF | (150000 s)* |

* Typical value.

**Test voltage between terminations:**
1.6x$V_R$ applied for 2 s at +25°C±5°C

### TEST METHOD AND PERFORMANCE

**Damp heat, steady state:**

**Test conditions**

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

**Performance**

| | |
|---|---|
| Capacitance change \|ΔC/C\|: | ≤2% |
| DF change (Δtgδ): | ≤10x$10^{-4}$ at 1kHz |
| Insulation resistance: | ≥50% of initial limit. |

**Endurance:**

**Test conditions**

| | |
|---|---|
| Temperature: | +85°C±2°C |
| Test duration: | 2000 h |
| Voltage applied: | 1.25x$V_R$ |

**Performance**

| | |
|---|---|
| Capacitance change \|ΔC/C\|: | ≤3% |
| DF change (Δtgd): | ≤10x$10^{-4}$ at 10kHz for C≤1µF<br>≤10x$10^{-4}$ at 1kHz for C≥1µF |
| 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\|: | ≤1% |
| DF change (Δtgδ): | ≤10x$10^{-4}$ at 10kHz for C≤1µF<br>≤10x$10^{-4}$ at 1kHz for Cu1µF |
| Insulation resistance: | ≥initial limit. |

**Long term stability** (after two years)**:**

**Storage:** standard environmental conditions (see page 12)

**Performance**

| | |
|---|---|
| Capacitance change \|ΔC/C\|: | ≤0.5% |