



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.

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):** 310Vac / 800Vdc; (50/60Hz)
330Vac / 800Vdc; (50/60Hz)
- Capacitance range:** 0.01µF to 6.8µF
- 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**
- ≥1 × 10⁵ MΩ (5 × 10⁵ 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

X1 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.

Class X1 shall be applied for PERMANENTLY CONNECTED APPARATUS.

Note: PERMANENTLY CONNECTED APPARATUS:
apparatus which is intended for connection to the mains by a connection which cannot be loosened **BY HAND**.
BY HAND:
operation that does not require the use of any object such as a tool, coin, etc.

PRODUCT CODE: **R49**

Note: R.49 series has replaced the 1.58 series (available upon request). For new design we suggest the use of the R.49 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**
- 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%

Winding scheme

