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):
\[ \text{tg} \delta 10^{-4} \text{ at } +25°C \pm 5°C: \leq 10 \text{ (6)* at 1kHz} \]
Typical value
Insulation resistance:
Test conditions:
- Temperature: +25°C±5°C
- Voltage charge time: 1 min
- Voltage charge: 100 Vdc
Performance:
\[ \geq1x10^8 \text{ M}Ω \text{ (5x10}^9 \text{ M}Ω)* \text{ for } C<0.33µF} \]
\[ \geq300000 \text{ s (150000 s)* for } C>0.33µF} \]
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
Performance
- Dielectric strength: no dielectric breakdown or flashover at 4.3 x \( V_R \) (d.c.)/1 min
Capacitance change |\( \Delta C/C |\): ≤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 |\( \Delta C/C |\): ≤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 |\( \Delta C/C |\): ≤2%

Winding scheme
- single sided metallized polypropylene film

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.
**METALLIZED POLYPROPYLENE FILM CAPACITOR**

**SELF-HEALING PROPERTIES**

**APPROVALS**

Not for use in series with the mains.

See www.kemet.com for more information.

**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 CCQ3001008199  
CCQ3001008842

Approved according to IEC 60384-14

According to IEC 60065

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

![ENEC logo]

**Table 1**

| 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

151

09/2008
### APPROVALS

<table>
<thead>
<tr>
<th>ENEC</th>
<th>IEC 60384-14</th>
<th>Class X2</th>
<th>File No.4413</th>
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Approved according to IEC 60384-14
According to IEC 60065
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![Diagram of approved marks](https://example.com/diagram)

### Table 1

<table>
<thead>
<tr>
<th>Standard packaging style</th>
<th>Lead length (mm)</th>
<th>Taping style</th>
<th>Ordering code (Digit 10 to 11)</th>
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</thead>
<tbody>
<tr>
<td>AMMOS-PACK</td>
<td>12.70</td>
<td>19.05</td>
<td>2</td>
</tr>
<tr>
<td>AMMOS-PACK</td>
<td>12.70</td>
<td>19.05</td>
<td>2</td>
</tr>
<tr>
<td>REEL Ø500mm</td>
<td>12.70</td>
<td>19.05</td>
<td>2</td>
</tr>
<tr>
<td>REEL Ø500mm</td>
<td>12.70</td>
<td>19.05</td>
<td>2</td>
</tr>
<tr>
<td>Loose, short leads</td>
<td>4 α</td>
<td>25 β</td>
<td>30 γ</td>
</tr>
<tr>
<td>Loose, long leads</td>
<td>30 β</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Loose, insulated rigid leads</td>
<td>30 β</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Loose, insulated flexible leads</td>
<td>150 γ</td>
<td>52</td>
<td></td>
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</tbody>
</table>

Note: Ammopack 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.
**APPROVALS**

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<td>Class X2</td>
<td>FileCQC0301008199 CQC0301008842</td>
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</tr>
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Approved according to IEC 60384-14
According to IEC 60065
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**Rated voltage (3=300Vac)**

<table>
<thead>
<tr>
<th>Rated Cap.</th>
<th>300 Vac / 630 Vdc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø d</td>
<td>Max dv/dt at 380Vac (V/µs)</td>
</tr>
<tr>
<td>B</td>
<td>H</td>
</tr>
</tbody>
</table>

**Self-Healing Properties**

**METALLIZED POLYPROPYLENE FILM CAPACITOR**

**X2 CLASS (IEC 60384-14) - MKP Series**

**All dimensions are in mm**

**E12 Series available upon request**

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**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.**