PHE840M

- EMI suppressor, class X2, metallized polypropylene
- 0.01 – 10.0 µF, 275/280 VAC, +105°C
- New, small dimensions
- Replaces PHE843

**TYPICAL APPLICATIONS**
For worldwide use as electromagnetic interference suppressor in all X2 and across-the-line applications.

**CONSTRUCTION**
Metallized polypropylene film encapsulated with selfextinguishing epoxy resin in a box of material recognized to UL 94 V-0.

**TECHNICAL DATA**

<table>
<thead>
<tr>
<th>Rated voltage</th>
<th>275 VAC 50/60 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>280 VAC 50/60 Hz USA, Canada</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capacitance range</th>
<th>0.01 – 10.0 µF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacitance tolerance</td>
<td>± 20% standard, ± 10% option, ± 5% on request</td>
</tr>
<tr>
<td>Temperature range</td>
<td>–55 to +105°C</td>
</tr>
<tr>
<td>Climatic category</td>
<td>55/105/56/B</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Approvals</th>
<th>ENEC, UL, CSA</th>
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<table>
<thead>
<tr>
<th>Dissipation factor</th>
<th>Maximum values at +23°C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C ≤ 0.1 µF</td>
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<tr>
<td>1 kHz</td>
<td>0.1%</td>
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<tr>
<td>10 kHz</td>
<td>0.2%</td>
</tr>
<tr>
<td>100 kHz</td>
<td>0.8%</td>
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| Test voltage between terminals | The 100% screening factory test is carried out at 2200 VDC. The voltage level is selected to meet the requirements in applicable equipment standards. All electrical characteristics are checked after the test. |

<table>
<thead>
<tr>
<th>Insulation resistance</th>
<th>C ≤ 0.33 µF: ≥ 30 000 MΩ</th>
<th>C &gt; 0.33 µF: ≥ 10 000 s</th>
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</table>

**ENVIRONMENTAL TEST DATA**

<table>
<thead>
<tr>
<th>Endurance</th>
<th>IEC 60384–14</th>
<th>1.25 x Ue VAC 50 Hz, once every hour increased to 1000 VAC for 0.1 s, 1000 h at upper rated temperature</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Vibration</th>
<th>IEC 60068–2–6</th>
<th>3 directions at 2 hours each, 10–55 Hz at 0.75 mm or 98 m/s²</th>
<th>No visible damage</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Bump</th>
<th>IEC 60068–2–29</th>
<th>1000 bumps at 390 m/s²</th>
<th>No visible damage</th>
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<table>
<thead>
<tr>
<th>Change of temperature</th>
<th>IEC 60068–2–14</th>
<th>Upper and lower rated temperature 5 cycles</th>
<th>No visible damage</th>
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</table>

<table>
<thead>
<tr>
<th>Active flammability</th>
<th>EN 132400</th>
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<table>
<thead>
<tr>
<th>Passive flammability</th>
<th>IEC 60384–14 (1993)</th>
<th>Enclosure material of UL94V-0 flammability class</th>
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<table>
<thead>
<tr>
<th>Humidity</th>
<th>IEC 60068–2–3</th>
<th>+40°C and 90 – 95% R.H.</th>
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</table>

**MARKING**

- Capacitor class and sub-class
- Capacitance code acc. to IEC 62 3.3
- Article code, type
- Climate category acc. to IEC 68 incl. passive flammability
- Date code acc. to IEC 62 5.1
- Approval marks
<table>
<thead>
<tr>
<th>Capacitance (µF)</th>
<th>Lead spacing (mm)</th>
<th>Max dimensions</th>
<th>Bulk Taped pcs</th>
<th>Tray Taped pcs</th>
<th>Weight (g)</th>
<th>Frequency (MHz)</th>
<th>Approvals</th>
<th>Article code</th>
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**LEAD SPACING 10 MM**

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<th>Frequency (MHz)</th>
<th>Approvals</th>
<th>Article code</th>
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**LEAD SPACING 15 MM**

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**LEAD SPACING 22.5 MM**

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<th>Tray Taped pcs</th>
<th>Weight (g)</th>
<th>Frequency (MHz)</th>
<th>Approvals</th>
<th>Article code</th>
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* Only ± 20% tolerance
### ARTICLE TABLE

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<thead>
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<th>Capacitance in µF</th>
<th>Max dimensions in mm</th>
<th>Reel Weight</th>
<th>Max dU/dt V/µs</th>
<th>Approvals</th>
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<td>28.0 43.0 41.0 37.5</td>
<td>63 0.30</td>
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<td>63 0.26</td>
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</table>

* Only ± 20% tolerance

### APPROVALS/REFERENCE DOCUMENTS

<table>
<thead>
<tr>
<th>Country</th>
<th>Specification</th>
<th>Approval reference</th>
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<td>ENEC</td>
<td>EN 132400</td>
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<td>UL = USA</td>
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<td>(U_{r0} = 280 VAC)</td>
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<tr>
<td>CSA = Canada</td>
<td>C 22.2 No. 8</td>
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### MARKING

- RIFA
- RIFA article code
- Rated capacitance
- Capacitance tolerance code
- Rated voltage
- X2
- Approval marks
- Manufacturing date code
- IEC climatic category
- Passive flammability class

### ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Article code</th>
<th>1st block</th>
<th>2nd block</th>
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<tbody>
<tr>
<td></td>
<td>See article table</td>
<td>If not standard lead length, add R06 – R30 in pos. 17–19. For reel taped, add 17T0 or 17T1 in pos. 17–20. For packing on trays (6 mm lead length), add L2 in pos. 20–21.</td>
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<td>Pos. 13 Capacitance tolerance code: M = ± 20% standard</td>
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<td>K = ± 10% option</td>
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<td>J = ± 5% on request</td>
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<tr>
<td></td>
<td>Pos. 14–16, box size code</td>
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</tbody>
</table>

### PACKING

The box dimensions for bulk packaging are 245 x 145 x 80 mm. Quantity/package as per article table.

Reels with taped capacitors are packed 10 in a box with dimension 370 x 370 x 560 mm. Quantity/reel according to article table. The standard quantity/reel is for 360 mm reel. If 500 mm reel is required, it must be specified when ordering and the quantity is 2 x the given quantity.