

PHE840

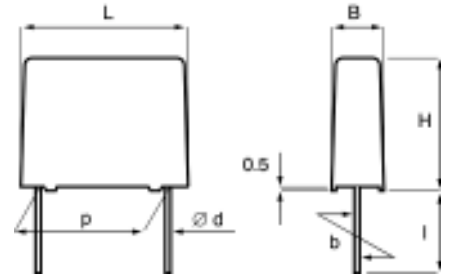
- EMI suppressor, class X2, metallized polypropylene
- 0.01 – 4.7 μF , 275/280 VAC and 300 VAC, +100°C
- For smaller dimensions and larger capacitance values see PHE843

TYPICAL APPLICATIONS

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

CONSTRUCTION

Metallized polypropylene winding, encapsulated in self-extinguishing material meeting the requirements of UL 94 V-0.



TECHNICAL DATA

| | PHE840M | PHE840E | | |
|---------------------------------|---|--------------------------|---|------------------------|
| Rated voltage | 275 VAC 50/60 Hz (280 VAC North America) | 300 VAC 50/60 Hz | | |
| Capacitance range | 0.01 – 4.7 μF | 0.01 – 4.7 μF | | |
| Capacitance tolerance | $\pm 20\%$ standard, $\pm 10\%$ option | | | |
| Temperature range | -40 to +100°C | | | |
| Climatic category | 40/100/56/C | | | |
| Approvals | S, VDE, UL, CSA | | | |
| Dissipation factor $\tan\delta$ | Maximum values at +23°C | | | |
| | | $C \leq 0.1 \mu\text{F}$ | $0.1 \mu\text{F} < C \leq 0.47 \mu\text{F}$ | $C > 0.47 \mu\text{F}$ |
| | 1 kHz | 0.1% | 0.1% | 0.1% |
| | 10 kHz | 0.1% | 0.2% | 0.5% |
| 100 kHz | 0.6% | 0.9% | - | |

| p | d | std l | max l | b |
|----------------|-----|-------|-------|-----------|
| 10.0 \pm 0.4 | 0.6 | 17 | 30 | \pm 0.4 |
| 15.0 \pm 0.4 | 0.8 | 17 | 30 | \pm 0.4 |
| 22.5 \pm 0.4 | 0.8 | 6 | 30 | \pm 0.4 |
| 27.5 \pm 0.4 | 0.8 | 6 | 30 | \pm 0.4 |
| 37.5 \pm 0.5 | 1.0 | 6 | 30 | \pm 0.7 |

Tolerance in lead length
 $< 30 \text{ mm}$ $\begin{matrix} +0 \\ -1 \end{matrix} \text{ mm}$
 $\geq 30 \text{ mm}$ $\begin{matrix} +5 \\ -0 \end{matrix} \text{ mm}$

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.

Resonance frequency Tabulated self-resonance frequencies f_0 refer to 5 mm lead length.

Insulation resistance $C \leq 0.33 \mu\text{F}$: $\geq 30\,000 \text{ M}\Omega$
 $C > 0.33 \mu\text{F}$: $\geq 10\,000 \text{ s}$

In DC applications Recommended voltage: PHE840M $\leq 630 \text{ VDC}$
PHE840E $\leq 760 \text{ VDC}$

ENVIRONMENTAL TEST DATA

| | | | |
|------------------------------|--|--|---|
| Endurance | IEC 60384-14 | 1.25 x U_R VAC 50 Hz, once every hour increased to 1000 VAC for 0.1 s, 1000 h at upper rated temperature | |
| Vibration | IEC 60068-2-6 Test Fc | 3 directions at 2 hours each, 10-55 Hz at 0.75 mm or 98 m/s ² | No visible damage No open or short circuit |
| Bump | IEC 60068-2-29 Test Eb | 1000 bumps at 390 m/s ² | No visible damage No open or short circuit |
| Change of temperature | IEC 60068-2-14 Test Na | Upper and lower rated temperature 5 cycles | No visible damage |
| Active flammability | EN 132400 | | |
| Passive flammability | IEC 60384-14 (1993) EN 132400 UL1414 | Enclosure material of UL94V-0 flammability class | |
| Humidity | IEC 60068-2-3 Test Ca | +40°C and 90 – 95% R.H. | 56 days |

ARTICLE TABLE

| Capacitance μF | Max dimensions in mm | | | p | Quantity per package | | | Weight g | f_0 MHz | Max dU/dt V/ μs | Approvals | | | | Article code 1 st block |
|------------------------------|-------------------------|------|------|------|----------------------|-------------|----------------------|-------------|--------------|----------------------------------|-----------|-----|----|-----|----------------------------|
| | B | H | L | | Bulk pcs | Tray pcs | reel taped pcs | | | | S | VDE | UL | CSA | |
| 275/280 VAC, PHE840 M | | | | | | | | | | | | | | | |
| LEAD SPACING 10 MM | | | | | | | | | | | | | | | |
| 0.010 | 4.0 | 9.0 | 13.0 | 10.0 | 1000 | | 900 | 0.7 | 11 | 100 | √ | √ | √ | √ | PHE840MA5100M |
| 0.012 | 4.0 | 9.0 | 13.0 | 10.0 | 1000 | | 900 | 0.7 | 10 | 100 | √ | √ | √ | √ | PHE840MA5120M |
| 0.015 | 4.0 | 9.0 | 13.0 | 10.0 | 1000 | | 900 | 0.7 | 9.4 | 100 | √ | √ | √ | √ | PHE840MA5150M |
| 0.018 | 4.5 | 10.5 | 13.0 | 10.0 | 1000 | | 800 | 0.9 | 8.7 | 100 | √ | √ | √ | √ | PHE840MA5180M |
| 0.022 | 4.5 | 10.5 | 13.0 | 10.0 | 1000 | | 800 | 0.9 | 8.1 | 100 | √ | √ | √ | √ | PHE840MA5220M |
| 0.027 | 5.0 | 11.0 | 13.0 | 10.0 | 800 | | 700 | 1.0 | 7.5 | 100 | √ | √ | √ | √ | PHE840MA5270M |
| 0.033 | 5.0 | 11.0 | 13.0 | 10.0 | 800 | | 700 | 1.0 | 6.9 | 100 | √ | √ | √ | √ | PHE840MA5330M |
| 0.039 | 6.0 | 12.0 | 13.0 | 10.0 | 600 | | 500 | 1.2 | 6.5 | 100 | √ | √ | √ | √ | PHE840MA5390M |
| 0.047 | 6.0 | 12.0 | 13.0 | 10.0 | 600 | | 500 | 1.2 | 6.0 | 100 | √ | √ | √ | √ | PHE840MA5470M |
| LEAD SPACING 15 MM | | | | | | | | | | | | | | | |
| 0.010 | 5.5 | 10.5 | 18.0 | 15.0 | 800 | | 600 | 1.4 | 10 | 100 | √ | √ | √ | √ | PHE840MB5100M |
| 0.012 | 5.5 | 10.5 | 18.0 | 15.0 | 800 | | 600 | 1.4 | 9.7 | 100 | √ | √ | √ | √ | PHE840MB5120M |
| 0.015 | 5.5 | 10.5 | 18.0 | 15.0 | 800 | | 600 | 1.4 | 8.7 | 100 | √ | √ | √ | √ | PHE840MB5150M |
| 0.018 | 5.5 | 10.5 | 18.0 | 15.0 | 800 | | 600 | 1.4 | 7.9 | 100 | √ | √ | √ | √ | PHE840MB5180M |
| 0.022 | 5.5 | 10.5 | 18.0 | 15.0 | 800 | | 600 | 1.4 | 7.2 | 100 | √ | √ | √ | √ | PHE840MB5220M |
| 0.027 | 5.5 | 10.5 | 18.0 | 15.0 | 800 | | 600 | 1.4 | 6.5 | 100 | √ | √ | √ | √ | PHE840MB5270M |
| 0.033 | 5.5 | 10.5 | 18.0 | 15.0 | 800 | | 600 | 1.4 | 5.9 | 100 | √ | √ | √ | √ | PHE840MB5330M |
| 0.039 | 5.5 | 10.5 | 18.0 | 15.0 | 800 | | 600 | 1.4 | 5.4 | 100 | √ | √ | √ | √ | PHE840MB5390M |
| 0.047 | 5.5 | 10.5 | 18.0 | 15.0 | 800 | | 600 | 1.4 | 5.0 | 100 | √ | √ | √ | √ | PHE840MB5470M |
| 0.056 | 5.5 | 12.5 | 18.0 | 15.0 | 800 | | 600 | 1.6 | 4.6 | 100 | √ | √ | √ | √ | PHE840MB5560M |
| 0.068 | 5.5 | 12.5 | 18.0 | 15.0 | 800 | | 600 | 1.6 | 4.2 | 100 | √ | √ | √ | √ | PHE840MB5680M |
| 0.082 | 6.5 | 12.5 | 18.0 | 15.0 | 600 | | 500 | 1.9 | 3.8 | 100 | √ | √ | √ | √ | PHE840MB5820M |
| 0.10 | 5.5 | 12.5 | 18.0 | 15.0 | 800 | | 600 | 1.6 | 3.7 | 100 | √ | √ | √ | √ | PHE840MX6100M * |
| 0.10 | 6.0 | 12.0 | 18.0 | 15.0 | 800 | | 500 | 1.7 | 3.5 | 100 | √ | √ | √ | √ | PHE840MB6100M |
| 0.12 | 7.5 | 14.5 | 18.0 | 15.0 | 400 | | 400 | 2.2 | 3.2 | 100 | √ | √ | √ | √ | PHE840MB6120M |
| 0.15 | 8.0 | 15.0 | 18.0 | 15.0 | 400 | | 400 | 2.5 | 2.8 | 100 | √ | √ | √ | √ | PHE840MB6150M |
| 0.18 | 8.5 | 16.0 | 18.0 | 15.0 | 400 | | 400 | 2.9 | 2.6 | 100 | √ | √ | √ | √ | PHE840MB6180M |
| 0.22 | 8.5 | 16.0 | 18.0 | 15.0 | 400 | | 400 | 2.9 | 2.5 | 100 | √ | √ | √ | √ | PHE840MX6220M * |
| 0.22 | 9.5 | 17.5 | 18.0 | 15.0 | 300 | | 350 | 3.5 | 2.4 | 100 | √ | √ | √ | √ | PHE840MB6220M |
| 0.27 | 9.5 | 17.5 | 18.0 | 15.0 | 300 | | 350 | 3.5 | 2.1 | 100 | √ | √ | √ | √ | PHE840MB6270M |
| 0.33 | 9.5 | 17.5 | 18.0 | 15.0 | 300 | | 350 | 3.5 | 2.0 | 100 | √ | √ | √ | √ | PHE840MX6330M * |
| LEAD SPACING 22.5 MM | | | | | | | | | | | | | | | |
| 0.10 | 6.5 | 14.5 | 26.0 | 22.5 | | 234 | | 2.7 | 2.7 | 100 | √ | √ | √ | √ | PHE840MD6100M |
| 0.12 | 6.5 | 14.5 | 26.0 | 22.5 | | 234 | | 2.7 | 2.6 | 100 | √ | √ | √ | √ | PHE840MD6120M |
| 0.15 | 6.5 | 14.5 | 26.0 | 22.5 | | 234 | | 2.7 | 2.5 | 100 | √ | √ | √ | √ | PHE840MD6150M |
| 0.18 | 6.5 | 14.5 | 26.0 | 22.5 | | 234 | | 2.7 | 2.3 | 100 | √ | √ | √ | √ | PHE840MD6180M |
| 0.22 | 7.0 | 16.5 | 26.0 | 22.5 | | 216 | | 3.2 | 2.2 | 100 | √ | √ | √ | √ | PHE840MD6220M |
| 0.27 | 8.0 | 16.0 | 26.0 | 22.5 | | 186 | | 3.8 | 2.0 | 100 | √ | √ | √ | √ | PHE840MD6270M |
| 0.33 | 8.0 | 16.0 | 26.0 | 22.5 | | 186 | | 3.8 | 1.9 | 100 | √ | √ | √ | √ | PHE840MY6330M * |
| 0.33 | 9.0 | 18.5 | 26.0 | 22.5 | | 168 | | 5.0 | 1.7 | 100 | √ | √ | √ | √ | PHE840MD6330M |
| 0.39 | 9.0 | 18.5 | 26.0 | 22.5 | | 168 | | 5.0 | 1.6 | 100 | √ | √ | √ | √ | PHE840MD6390M |
| 0.47 | 9.0 | 18.5 | 26.0 | 22.5 | | 168 | | 5.0 | 1.5 | 100 | √ | √ | √ | √ | PHE840MY6470M * |
| 0.47 | 10.5 | 19.0 | 26.0 | 22.5 | | 264 | | 5.8 | 1.4 | 100 | √ | √ | √ | √ | PHE840MD6470M |
| 0.56 | 11.0 | 21.5 | 26.0 | 22.5 | | 253 | | 6.6 | 1.3 | 100 | √ | √ | √ | √ | PHE840MD6560M |
| 0.68 | 11.0 | 21.5 | 26.0 | 22.5 | | 253 | | 6.6 | 1.2 | 100 | √ | √ | √ | √ | PHE840MY6680M * |
| 0.82 | 15.5 | 24.5 | 26.0 | 22.5 | | 176 | | 10.6 | 1.1 | 100 | √ | √ | √ | √ | PHE840MD6820M |
| 1.0 | 15.5 | 24.5 | 26.0 | 22.5 | | 176 | | 10.0 | 1.0 | 100 | √ | √ | √ | √ | PHE840MD7100M |
| LEAD SPACING 27.5 MM | | | | | | | | | | | | | | | |
| 0.47 | 10.5 | 20.5 | 31.5 | 27.5 | | 216 | | 8.0 | 1.3 | 100 | √ | √ | √ | √ | PHE840MF6470M |
| 0.56 | 10.5 | 20.5 | 31.5 | 27.5 | | 216 | | 8.0 | 1.2 | 100 | √ | √ | √ | √ | PHE840MF6560M |
| 0.68 | 10.5 | 20.5 | 31.5 | 27.5 | | 216 | | 8.0 | 1.1 | 100 | √ | √ | √ | √ | PHE840MF6680M |
| 0.82 | 11.5 | 22.5 | 31.5 | 27.5 | | 198 | | 9.1 | 1.0 | 100 | √ | √ | √ | √ | PHE840MF6820M |
| 1.0 | 11.5 | 22.5 | 31.5 | 27.5 | | 198 | | 9.1 | 1.0 | 100 | √ | √ | √ | √ | PHE840MZ7100M * |
| 1.0 | 13.5 | 23.0 | 31.5 | 27.5 | | 171 | | 10.8 | 0.94 | 100 | √ | √ | √ | √ | PHE840MF7100M |
| 1.2 | 14.5 | 24.5 | 31.5 | 27.5 | | 153 | | 14.5 | 0.87 | 100 | √ | √ | √ | √ | PHE840MF7120M |

ARTICLE TABLE

| Capacitance μF | Max dimensions in mm | | | p | Quantity per package | | | Weight g | f_0 MHz | Max dU/dt V/ μs | Approvals | | | | Article code 1 st block |
|------------------------------|-------------------------|------|------|------|----------------------|-------------|----------------------|-------------|--------------|----------------------------------|-----------|-----|----|-----------------|----------------------------|
| | B | H | L | | Bulk pcs | Tray pcs | reel taped pcs | | | | S | VDE | UL | CSA | |
| 275/280 VAC, PHE840 M | | | | | | | | | | | | | | | |
| LEAD SPACING 27.5 MM | | | | | | | | | | | | | | | |
| 1.5 | 17.5 | 28.0 | 31.5 | 27.5 | | 126 | 17.0 | 0.78 | 100 | √ | √ | √ | √ | PHE840MF7150M | |
| 1.8 | 19.0 | 29.0 | 31.5 | 27.5 | | 117 | 19.5 | 0.72 | 100 | √ | √ | √ | √ | PHE840MF7180M | |
| 2.2 | 19.0 | 29.0 | 31.5 | 27.5 | | 117 | 19.5 | 0.70 | 100 | √ | √ | √ | √ | PHE840MZ7220M * | |
| 2.2 | 21.0 | 30.0 | 31.5 | 27.5 | | 108 | 22.6 | 0.66 | 100 | √ | √ | √ | √ | PHE840MF7220M | |
| LEAD SPACING 37.5 MM | | | | | | | | | | | | | | | |
| 1.0 | 13.0 | 24.0 | 41.0 | 37.5 | | 140 | 14.0 | 0.93 | 100 | √ | √ | √ | √ | PHE840MR7100M | |
| 1.2 | 13.0 | 24.0 | 41.0 | 37.5 | | 140 | 14.0 | 0.84 | 100 | √ | √ | √ | √ | PHE840MR7120M | |
| 1.5 | 13.0 | 24.0 | 41.0 | 37.5 | | 140 | 14.0 | 0.74 | 100 | √ | √ | √ | √ | PHE840MR7150M | |
| 1.8 | 15.0 | 26.0 | 41.0 | 37.5 | | 119 | 17.0 | 0.67 | 100 | √ | √ | √ | √ | PHE840MR7180M | |
| 2.2 | 15.0 | 26.0 | 41.0 | 37.5 | | 119 | 17.0 | 0.60 | 100 | √ | √ | √ | √ | PHE840MR7220M | |
| 2.7 | 16.5 | 32.0 | 41.0 | 37.5 | | 105 | 23.0 | 0.54 | 100 | √ | √ | √ | √ | PHE840MR7270M | |
| 3.3 | 19.0 | 36.0 | 41.0 | 37.5 | | 91 | 28.5 | 0.48 | 100 | √ | √ | √ | √ | PHE840MR7330M | |
| 3.9 | 19.0 | 36.0 | 41.0 | 37.5 | | 91 | 28.5 | 0.44 | 100 | √ | √ | √ | √ | PHE840MR7390M | |
| 4.7 | 21.0 | 38.0 | 41.0 | 37.5 | | 84 | 34.4 | 0.39 | 100 | √ | √ | √ | √ | PHE840MR7470M | |
| 300 VAC, PHE840 E | | | | | | | | | | | | | | | |
| LEAD SPACING 10 MM | | | | | | | | | | | | | | | |
| 0.010 | 4.0 | 9.0 | 13.0 | 10.0 | 1000 | 900 | 0.7 | 11 | 100 | √ | √ | √ | √ | PHE840EA5100M | |
| 0.012 | 4.0 | 9.0 | 13.0 | 10.0 | 1000 | 900 | 0.7 | 10 | 100 | √ | √ | √ | √ | PHE840EA5120M | |
| 0.015 | 4.0 | 9.0 | 13.0 | 10.0 | 1000 | 900 | 0.7 | 9.4 | 100 | √ | √ | √ | √ | PHE840EA5150M | |
| 0.018 | 4.5 | 10.5 | 13.0 | 10.0 | 1000 | 800 | 0.9 | 8.7 | 100 | √ | √ | √ | √ | PHE840EA5180M | |
| 0.022 | 4.5 | 10.5 | 13.0 | 10.0 | 1000 | 800 | 0.9 | 8.1 | 100 | √ | √ | √ | √ | PHE840EA5220M | |
| 0.027 | 5.0 | 11.0 | 13.0 | 10.0 | 800 | 700 | 1.0 | 7.5 | 100 | √ | √ | √ | √ | PHE840EA5270M | |
| 0.033 | 5.0 | 11.0 | 13.0 | 10.0 | 800 | 700 | 1.0 | 6.9 | 100 | √ | √ | √ | √ | PHE840EA5330M | |
| 0.039 | 6.0 | 12.0 | 13.0 | 10.0 | 600 | 500 | 1.2 | 6.5 | 100 | √ | √ | √ | √ | PHE840EA5390M | |
| 0.047 | 6.0 | 12.0 | 13.0 | 10.0 | 600 | 500 | 1.2 | 6.0 | 100 | √ | √ | √ | √ | PHE840EA5470M | |
| LEAD SPACING 15 MM | | | | | | | | | | | | | | | |
| 0.010 | 5.5 | 10.5 | 18.0 | 15.0 | 800 | 600 | 1.4 | 10 | 100 | √ | √ | √ | √ | PHE840EB5100M | |
| 0.012 | 5.5 | 10.5 | 18.0 | 15.0 | 800 | 600 | 1.4 | 9.7 | 100 | √ | √ | √ | √ | PHE840EB5120M | |
| 0.015 | 5.5 | 10.5 | 18.0 | 15.0 | 800 | 600 | 1.4 | 8.7 | 100 | √ | √ | √ | √ | PHE840EB5150M | |
| 0.018 | 5.5 | 10.5 | 18.0 | 15.0 | 800 | 600 | 1.4 | 7.9 | 100 | √ | √ | √ | √ | PHE840EB5180M | |
| 0.022 | 5.5 | 10.5 | 18.0 | 15.0 | 800 | 600 | 1.4 | 7.2 | 100 | √ | √ | √ | √ | PHE840EB5220M | |
| 0.027 | 5.5 | 10.5 | 18.0 | 15.0 | 800 | 600 | 1.4 | 6.5 | 100 | √ | √ | √ | √ | PHE840EB5270M | |
| 0.033 | 5.5 | 10.5 | 18.0 | 15.0 | 800 | 600 | 1.4 | 5.9 | 100 | √ | √ | √ | √ | PHE840EB5330M | |
| 0.039 | 5.5 | 10.5 | 18.0 | 15.0 | 800 | 600 | 1.4 | 5.4 | 100 | √ | √ | √ | √ | PHE840EB5390M | |
| 0.047 | 5.5 | 10.5 | 18.0 | 15.0 | 800 | 600 | 1.4 | 5.0 | 100 | √ | √ | √ | √ | PHE840EB5470M | |
| 0.056 | 5.5 | 12.5 | 18.0 | 15.0 | 800 | 600 | 1.6 | 4.6 | 100 | √ | √ | √ | √ | PHE840EB5560M | |
| 0.068 | 5.5 | 12.5 | 18.0 | 15.0 | 800 | 600 | 1.6 | 4.2 | 100 | √ | √ | √ | √ | PHE840EB5680M | |
| 0.082 | 6.5 | 12.5 | 18.0 | 15.0 | 600 | 500 | 1.9 | 3.8 | 100 | √ | √ | √ | √ | PHE840EB5820M | |
| 0.10 | 6.5 | 12.5 | 18.0 | 15.0 | 600 | 500 | 1.9 | 3.7 | 100 | √ | √ | √ | √ | PHE840EX6100M * | |
| 0.10 | 7.5 | 14.5 | 18.0 | 15.0 | 400 | 400 | 2.2 | 3.5 | 100 | √ | √ | √ | √ | PHE840EB6100M | |
| 0.12 | 7.5 | 14.5 | 18.0 | 15.0 | 400 | 400 | 2.2 | 3.2 | 100 | √ | √ | √ | √ | PHE840EB6120M | |
| 0.15 | 8.0 | 15.0 | 18.0 | 15.0 | 400 | 400 | 2.5 | 2.8 | 100 | √ | √ | √ | √ | PHE840EB6150M | |
| 0.18 | 8.5 | 16.0 | 18.0 | 15.0 | 400 | 400 | 2.9 | 2.6 | 100 | √ | √ | √ | √ | PHE840EB6180M | |
| 0.22 | 8.5 | 16.0 | 18.0 | 15.0 | 400 | 400 | 2.9 | 2.5 | 100 | √ | √ | √ | √ | PHE840EX6220M * | |
| 0.22 | 9.5 | 17.5 | 18.0 | 15.0 | 300 | 350 | 3.5 | 2.4 | 100 | √ | √ | √ | √ | PHE840EB6220M | |
| LEAD SPACING 22.5 MM | | | | | | | | | | | | | | | |
| 0.10 | 6.5 | 14.5 | 26.0 | 22.5 | | 234 | 2.7 | 2.7 | 100 | √ | √ | √ | √ | PHE840ED6100M | |
| 0.12 | 6.5 | 14.5 | 26.0 | 22.5 | | 234 | 2.7 | 2.6 | 100 | √ | √ | √ | √ | PHE840ED6120M | |
| 0.15 | 6.5 | 14.5 | 26.0 | 22.5 | | 234 | 2.7 | 2.5 | 100 | √ | √ | √ | √ | PHE840ED6150M | |
| 0.18 | 6.5 | 14.5 | 26.0 | 22.5 | | 234 | 2.7 | 2.3 | 100 | √ | √ | √ | √ | PHE840ED6180M | |
| 0.22 | 7.0 | 16.5 | 26.0 | 22.5 | | 216 | 3.2 | 2.2 | 100 | √ | √ | √ | √ | PHE840ED6220M | |
| 0.27 | 8.0 | 16.0 | 26.0 | 22.5 | | 186 | 3.8 | 2.0 | 100 | √ | √ | √ | √ | PHE840ED6270M | |

ARTICLE TABLE

| Capacitance μF | Max dimensions in mm | | | p | Quantity per package | | Weight g | f_0 MHz | Max dU/dt V/ μs | Approvals | | | | Article code 1 st block |
|------------------------------|-------------------------|------|------|------|----------------------|-------------|-------------|--------------|----------------------------------|----------------------|---|-----|----|----------------------------|
| | B | H | L | | Bulk pcs | Tray pcs | | | | reel taped pcs | S | VDE | UL | |
| 300 VAC, PHE840 E | | | | | | | | | | | | | | |
| LEAD SPACING 22.5 MM | | | | | | | | | | | | | | |
| 0.33 | 8.0 | 16.0 | 26.0 | 22.5 | | 186 | 3.8 | 1.9 | 100 | √ | √ | √ | √ | PHE840EY6330M * |
| 0.33 | 9.0 | 18.5 | 26.0 | 22.5 | | 168 | 5.0 | 1.7 | 100 | √ | √ | √ | √ | PHE840ED6330M |
| 0.39 | 9.0 | 18.5 | 26.0 | 22.5 | | 168 | 5.0 | 1.6 | 100 | √ | √ | √ | √ | PHE840ED6390M |
| 0.47 | 9.0 | 18.5 | 26.0 | 22.5 | | 168 | 5.0 | 1.5 | 100 | √ | √ | √ | √ | PHE840EY6470M * |
| 0.47 | 10.5 | 19.0 | 26.0 | 22.5 | | 264 | 5.8 | 1.4 | 100 | √ | √ | √ | √ | PHE840ED6470M |
| 0.56 | 11.0 | 21.5 | 26.0 | 22.5 | | 253 | 6.6 | 1.3 | 100 | √ | √ | √ | √ | PHE840ED6560M |
| 0.68 | 11.0 | 21.5 | 26.0 | 22.5 | | 253 | 6.6 | 1.2 | 100 | √ | √ | √ | √ | PHE840EY6680M * |
| 0.82 | 15.5 | 24.5 | 26.0 | 22.5 | | 176 | 10.6 | 1.1 | 100 | √ | √ | √ | √ | PHE840ED6820M |
| 1.0 | 15.5 | 24.5 | 26.0 | 22.5 | | 176 | 10.0 | 1.0 | 100 | √ | √ | √ | √ | PHE840ED7100M |
| LEAD SPACING 27.5 MM | | | | | | | | | | | | | | |
| 0.47 | 10.5 | 20.5 | 31.5 | 27.5 | | 216 | 8.0 | 1.3 | 100 | √ | √ | √ | √ | PHE840EF6470M |
| 0.56 | 10.5 | 20.5 | 31.5 | 27.5 | | 216 | 8.0 | 1.2 | 100 | √ | √ | √ | √ | PHE840EF6560M |
| 0.68 | 10.5 | 20.5 | 31.5 | 27.5 | | 216 | 8.0 | 1.1 | 100 | √ | √ | √ | √ | PHE840EF6680M |
| 0.82 | 11.5 | 22.5 | 31.5 | 27.5 | | 198 | 9.1 | 1.0 | 100 | √ | √ | √ | √ | PHE840EF6820M |
| 1.0 | 11.5 | 22.5 | 31.5 | 27.5 | | 198 | 9.1 | 1.0 | 100 | √ | √ | √ | √ | PHE840EZ7100M * |
| 1.0 | 13.5 | 23.0 | 31.5 | 27.5 | | 171 | 10.8 | 0.94 | 100 | √ | √ | √ | √ | PHE840EF7100M |
| 1.2 | 14.5 | 24.5 | 31.5 | 27.5 | | 153 | 14.5 | 0.87 | 100 | √ | √ | √ | √ | PHE840EF7120M |
| 1.5 | 17.5 | 28.0 | 31.5 | 27.5 | | 126 | 17.0 | 0.78 | 100 | √ | √ | √ | √ | PHE840EF7150M |
| 1.8 | 19.0 | 29.0 | 31.5 | 27.5 | | 117 | 19.5 | 0.72 | 100 | √ | √ | √ | √ | PHE840EF7180M |
| 2.2 | 19.0 | 29.0 | 31.5 | 27.5 | | 117 | 19.5 | 0.70 | 100 | √ | √ | √ | √ | PHE840EZ7220M * |
| 2.2 | 21.0 | 30.0 | 31.5 | 27.5 | | 108 | 22.6 | 0.66 | 100 | √ | √ | √ | √ | PHE840EF7220M |
| LEAD SPACING 37.5 MM | | | | | | | | | | | | | | |
| 1.0 | 13.0 | 24.0 | 41.0 | 37.5 | | 140 | 14.0 | 0.93 | 100 | √ | √ | √ | √ | PHE840ER7100M |
| 1.2 | 13.0 | 24.0 | 41.0 | 37.5 | | 140 | 14.0 | 0.84 | 100 | √ | √ | √ | √ | PHE840ER7120M |
| 1.5 | 13.0 | 24.0 | 41.0 | 37.5 | | 140 | 14.0 | 0.74 | 100 | √ | √ | √ | √ | PHE840ER7150M |
| 1.8 | 15.0 | 26.0 | 41.0 | 37.5 | | 119 | 17.0 | 0.67 | 100 | √ | √ | √ | √ | PHE840ER7180M |
| 2.2 | 15.0 | 26.0 | 41.0 | 37.5 | | 119 | 17.0 | 0.60 | 100 | √ | √ | √ | √ | PHE840ER7220M |
| 2.7 | 16.5 | 32.0 | 41.0 | 37.5 | | 105 | 23.0 | 0.54 | 100 | √ | √ | √ | √ | PHE840ER7270M |
| 3.3 | 19.0 | 36.0 | 41.0 | 37.5 | | 91 | 28.5 | 0.48 | 100 | √ | √ | √ | √ | PHE840ER7330M |
| 3.9 | 19.0 | 36.0 | 41.0 | 37.5 | | 91 | 28.5 | 0.44 | 100 | √ | √ | √ | √ | PHE840ER7390M |
| 4.7 | 21.0 | 38.0 | 41.0 | 37.5 | | 84 | 34.4 | 0.39 | 100 | √ | √ | √ | √ | PHE840ER7470M |

* Only $\pm 20\%$

| APPROVALS/REFERENCE DOCUMENTS | | | | MARKING | |
|-------------------------------|---------------|----------------------------|----------------------------|---|--|
| Country | Specification | Approval reference | | | |
| | | PHE840M | PHE840E | | |
| S = Sweden | EN 132400 | 9837223-01 | 9934306/01 | <ul style="list-style-type: none"> • RIFA • RIFA article code • Rated capacitance • Capacitance tolerance code • Rated voltage • X2 • Approval marks • Manufacturing date code • IEC climatic category • Passive flammability class | |
| VDE = Germany | EN 132400 | 122222 | 124109 | | |
| | | 115119 | 123570 | | |
| UL = USA | UL 1283 | E100117 | E100117 | | |
| | UL 1414 | (U _R = 280 VAC) | (U _R = 300 VAC) | | |
| | | E73869 | E73869 | | |
| | | (U _R = 250 VAC) | | | |
| CSA = Canada | C 22.2 No. 8 | E100117 | E100117 | | |
| (cUL recognition) | C 22.2 No. 1 | (U _R = 280 VAC) | (U _R = 300 VAC) | | |
| | | E73869 | E73869 | | |
| | | (U _R = 250 VAC) | | | |

| ORDERING INFORMATION | | PACKING |
|--|--|---|
| Article code | | The box dimensions for bulk packaging are 245 x 145 x 80 mm. Quantity/package as per article table. |
| 1st block See article table Pos. 13 Capacitance tolerance code: M = ± 20% standard K = ± 10% option | 2nd block If not standard lead length, add R06 – R30 in pos. 14–16. For reel taped, add 17T0 or 17T1 in pos. 14–15. For packing on trays (6 mm lead length), add L2 in pos. 17–18. | |
| P H E 8 4 0 E B 5 3 3 0 M | | 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. |
| R 0 6 | | |
| 1 2 3 4 5 6 7 8 9 10 11 12 13 | 14 15 16 17 18 19 20 | |