

# PME271M

**RoHS**  
Compliant

- EMI suppressor, class X2, metallized paper
- 0.001 – 0.6  $\mu\text{F}$ , 275 VAC, +110 °C

- The highest possible safety regarding active and passive flammability.
- Self-extinguishing UL 94V-0 encapsulation material.
- Excellent self-healing properties. Ensures long life even when subjected to frequent overvoltages.

- Good resistance to ionisation due to impregnated dielectric.
- High dU/dt capability.
- Small dimensions.
- Safety approvals for worldwide use.
- The capacitors meet the most stringent IEC humidity class, 56 days.

- The impregnated paper ensures excellent stability giving outstanding reliability properties, especially in applications having continuous operation.

## TYPICAL APPLICATIONS

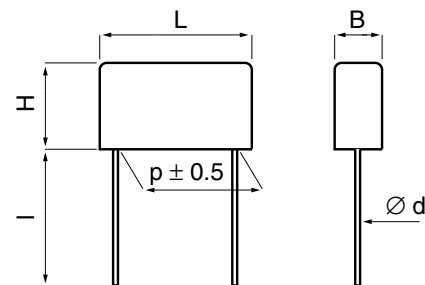
The capacitors are intended for use as interference suppressors in X2 (across-the-line) applications.

## CONSTRUCTION

Multi-layer metallized paper. Encapsulated and impregnated in self-extinguishing material meeting the requirements of UL 94V-0.

## TECHNICAL DATA

|                                 |                                                                                                                                                                                                                  |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rated voltage VAC, 50/60Hz      | 275                                                                                                                                                                                                              |
| Capacitance range $\mu\text{F}$ | 0.001–0.6                                                                                                                                                                                                        |
| Temperature range °C            | –40/+110                                                                                                                                                                                                         |
| Climatic category IEC           | 40/110/56/B                                                                                                                                                                                                      |
| Capacitance tolerance           | $\pm 10\%$ for $C > 0.1 \mu\text{F}$ , code K<br>$\pm 20\%$ for $C \leq 0.1 \mu\text{F}$ , code M                                                                                                                |
| Approvals                       | ENEC, UL, CSA                                                                                                                                                                                                    |
| Dissipation factor $\tan\delta$ | $\leq 1.3\%$ at 1 kHz                                                                                                                                                                                            |
| Insulation resistance           | $C \leq 0.33 \mu\text{F} \geq 12000 \text{ M}\Omega$<br>$C > 0.33 \mu\text{F} \geq 4000 \text{ s}$<br>Measured at 500 VDC after 60 s, +23°C                                                                      |
| In DC applications              | Recommended voltage: $\leq 630 \text{ VDC}$                                                                                                                                                                      |
| Resonance frequency             | Tabulated self-resonance frequencies $f_0$ refer to 5 mm lead lengths.                                                                                                                                           |
| Test voltage between            | The 100% screening factory test is carried out at 2150 VDC. The voltage level is selected to meet the requirements in applicable equipment standards. All electrical characteristics are checked after the test. |

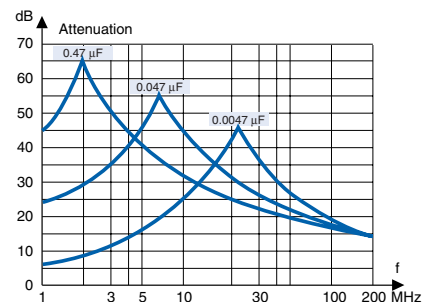


$d = 0.6$  for  $p = 10.2$   
 $0.8$  for  $p = 15.2, 20.3, 22.5$   
 $1.0$  for  $p = 25.4$

$l =$  standard:  $30 \pm 5/-0 \text{ mm}$  (code R30)

option 1: short leads, tolerance  $\pm 0/-1 \text{ mm}$  (standard 6 mm, code R06)  
Other lead lengths on request

option 2: 30 mm insulated solid leads, ordering code: replace R30 with R300PS in std P/N



Suppression versus frequency. Typical values.

## ENVIRONMENTAL TEST DATA

|                      |                         |                                                                            |                                                                              |
|----------------------|-------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Vibration            | IEC 60068-2-6, Test Fc  | 3 directions at 2 hour each, 10 – 500 Hz at 0.75 mm or 98 m/s <sup>2</sup> | No visible damage, No open or short circuit                                  |
| Bump                 | IEC 60068-2-29, Test Eb | 4000 bumps at 390 m/s <sup>2</sup>                                         | No visible damage, No open or short circuit                                  |
| Solderability        | IEC 60068-2-20, Test Ta | Solder globule method                                                      | Wetting time for $d \leq 0.8 < 1 \text{ s}$<br>for $d > 0.8 < 1.5 \text{ s}$ |
| Active flammability  | EN/IEC 60384-14:2005    |                                                                            |                                                                              |
| Passive flammability | EN/IEC 60384-14:2005    |                                                                            |                                                                              |
| Humidity             | IEC 60068-2-3, Test Ca  | +40°C and 90 – 95% R.H.                                                    | 56 days                                                                      |

## ARTICLE TABLE

| Capacitance<br>$\mu\text{F}$ | Max dimensions<br>in mm |      |      |      | Quantity per package |            |                      | Weight<br>g | $f_o$<br>MHz | Max<br>$dU/dt$<br>V/ $\mu\text{s}$ | Article code     |
|------------------------------|-------------------------|------|------|------|----------------------|------------|----------------------|-------------|--------------|------------------------------------|------------------|
|                              | B                       | H    | L    | p    | R30<br>pcs           | R06<br>pcs | reel<br>taped<br>pcs |             |              |                                    |                  |
| 0.0010                       | 3.9                     | 7.5  | 13.5 | 10.2 | 1000                 | 2000       | 700                  | 0.7         | 53           | 1200                               | PME271M410MR30   |
| 0.0015                       | 3.9                     | 7.5  | 13.5 | 10.2 | 1000                 | 2000       | 700                  | 0.7         | 44           | 1200                               | PME271M415MR30   |
| 0.0022                       | 3.9                     | 7.5  | 13.5 | 10.2 | 1000                 | 2000       | 700                  | 0.7         | 37           | 1200                               | PME271M422MR30   |
| 0.0033                       | 4.1                     | 8.2  | 13.5 | 10.2 | 1000                 | 2000       | 600                  | 0.9         | 30           | 1200                               | PME271M433MR30   |
| 0.0047                       | 5.1                     | 10.5 | 13.5 | 10.2 | 800                  | 1600       | 600                  | 1.2         | 24           | 1200                               | PME271M447MR30   |
| 0.0068                       | 5.1                     | 10.5 | 13.5 | 10.2 | 800                  | 1600       | 600                  | 1.2         | 21           | 1200                               | PME271MA4680MR30 |
| 0.0068                       | 5.2                     | 10.5 | 18.5 | 15.2 | 500                  | 1000       | 600                  | 1.7         | 19           | 1200                               | PME271M468MR30   |
| 0.010                        | 5.2                     | 10.5 | 18.5 | 15.2 | 500                  | 1000       | 600                  | 1.7         | 16           | 1200                               | PME271M510MR30   |
| 0.015                        | 5.2                     | 10.5 | 18.5 | 15.2 | 500                  | 1000       | 600                  | 1.7         | 13           | 1200                               | PME271M515MR30   |
| 0.022                        | 6.0                     | 12.5 | 18.5 | 15.2 | 400                  | 800        | 400                  | 3.0         | 10           | 1200                               | PME271M522MR30   |
| 0.033                        | 6.0                     | 12.5 | 18.5 | 15.2 | 400                  | 800        | 400                  | 3.0         | 8.4          | 1200                               | PME271M533MR30   |
| 0.047                        | 6.0                     | 12.5 | 18.5 | 15.2 | 400                  | 800        | 400                  | 3.0         | 7.0          | 1200                               | PME271M547MR30   |
| 0.068                        | 7.8                     | 13.5 | 18.5 | 15.2 | 400                  | 800        | 400                  | 3.3         | 5.6          | 1200                               | PME271M568MR30   |
| 0.10                         | 8.5                     | 14.3 | 18.5 | 15.2 | 300                  | 500        | 350                  | 3.8         | 4.3          | 1200                               | PME271MB6100MR30 |
| 0.10                         | 7.6                     | 14.0 | 24.0 | 20.3 | 250                  | 1500       | 250                  | 4.0         | 4.1          | 600                                | PME271M610MR30   |
| 0.15                         | 9.0                     | 15.0 | 24.0 | 20.3 | 200                  | 1200       | 250                  | 5.0         | 3.4          | 600                                | PME271M615KR30   |
| 0.22                         | 11.3                    | 16.5 | 24.0 | 20.3 | 150                  | 1000       | 180                  | 7.0         | 2.7          | 600                                | PME271M622KR30   |
| 0.10                         | 8.0                     | 17.0 | 27.0 | 22.5 | 200                  | 1200       | 250                  | 5.5         | 3.9          | 600                                | PME271MD6100MR30 |
| 0.15                         | 8.0                     | 17.0 | 27.0 | 22.5 | 200                  | 1200       | 250                  | 5.5         | 3.3          | 600                                | PME271MD6150KR30 |
| 0.22                         | 10.0                    | 19.0 | 27.0 | 22.5 | 150                  | 1000       | 200                  | 7.5         | 2.6          | 600                                | PME271MD6220KR30 |
| 0.27                         | 12.0                    | 22.0 | 27.0 | 22.5 | 100                  | 800        |                      | 10.0        | 2.3          | 400                                | PME271MD6270KR30 |
| 0.33                         | 12.0                    | 22.0 | 27.0 | 22.5 | 100                  | 800        |                      | 10.0        | 2.1          | 400                                | PME271MD6330KR30 |
| 0.27                         | 10.5                    | 17.3 | 30.5 | 25.4 | 100                  | 1000       |                      | 8.5         | 2.4          | 400                                | PME271M627KR30   |
| 0.33                         | 12.1                    | 19.0 | 30.5 | 25.4 | 100                  | 800        |                      | 10.0        | 2.1          | 400                                | PME271M633KR30   |
| 0.47                         | 15.3                    | 22.0 | 30.5 | 25.4 | 75                   | 600        |                      | 15.0        | 1.8          | 400                                | PME271M647KR30   |
| 0.60                         | 15.3                    | 22.0 | 30.5 | 25.4 | 75                   | 600        |                      | 15.0        | 1.6          | 400                                | PME271M660KR30   |

## APPROVALS

| Certification Body | Specification        |                                                            |
|--------------------|----------------------|------------------------------------------------------------|
| ENEC               | EN/IEC 60384-14:2005 |                                                            |
| UL                 | UL 1283<br>UL 1414   | ( $U_R = 250 \text{ VAC}$ )<br>( $U_R = 250 \text{ VAC}$ ) |
| CSA                | C 22.2 No. 1         | ( $U_R = 250 \text{ VAC}$ )                                |

## MARKING

- RIFA
- RIFA article code
- Rated capacitance
- Rated voltage
- X2
- SH, for self-healing
- Climatic category according to IEC 60068-1, appendix A
- Passive flammability class
- Approval marks
- Manufacturing code (year, month)

## ORDERING INFORMATION

The article code for the standard part is given in the article table.  
For other options, see page 11.