

PME278

- EMI suppressor, class X1, metallized paper
- 0.001 – 0.15 μF , 440 VAC, +110 °C

- High dU/dt capability.
- Excellent self-healing properties. Ensures long life even when subjected to frequent overvoltages.
- Good resistance to ionisation due to impregnated dielectric.
- 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

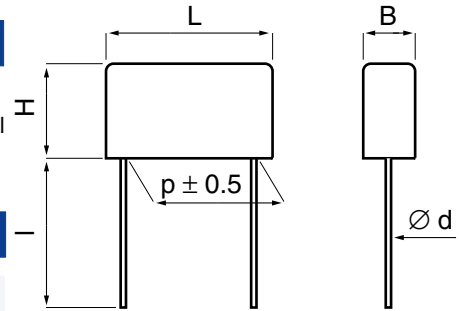
The capacitors are intended for use as interference suppressors in X1, across-the-line, 440 VAC applications.

CONSTRUCTION

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

TECHNICAL DATA

| | |
|---|--|
| Rated voltage | 440 VAC 50/60 Hz |
| Capacitance range | 0.001 – 0.15 μF |
| Capacitance tolerance | $\pm 20\%$ |
| Temperature range | -40 to +110°C |
| Climatic category IEC | 40/110/56/B |
| Approvals | S, N, D, FI, VDE, SEV, IMQ |
| Dissipation factor $\tan\delta$ | $\leq 1.3\%$ at 1 kHz |
| Insulation resistance | $\geq 12000\text{ M}\Omega$ Measured at 500 VDC after 60 s, +23°C |
| Resonance frequency | Tabulated self-resonance frequencies f_0 refer to 5 mm lead length. |
| In DC applications | Recommended voltage: $\leq 1000\text{ VDC}$ |
| Test voltage between terminals | The 100% screening factory test is carried out at 2700 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 and 20.3
1.0 for p = 25.4

l = standard : 30 +5/-0 mm
option : short leads, tolerance +0/-1 mm
(standard 6 mm, code R06)
Other lead lengths on request

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 ² | No visible damage No open or short circuit |
| Bump | IEC 60068-2-29 Test Eb | 4000 bumps at 390 m/s ² | No visible damage No open or short circuit |
| Solderability | IEC 60068-2-20 Test Ta | Solder globule method | Wetting time for d $\leq 0.8 < 1\text{ s}$ for d $> 0.8 < 1.5\text{ s}$ |
| Active flammability | EN 132400 | | |
| Passive flammability | IEC 60384-14 (1993) EN 132400 | | |
| Humidity | IEC 60068-2-3 Test Ca | +40°C and 90 – 95% R.H. | 56 days |

ARTICLE TABLE

| Capacitance μF | Max dimensions in mm | | | | Quantity per package | | | Weight g | f_o MHz | Max dU/dt V/ μs | Approvals | | | | | | Article code |
|------------------------------|-------------------------|------|------|------|----------------------|------------|----------------------|-------------|--------------|----------------------------------|-----------|---|---|---|------------|-----|------------------|
| | B | H | L | p | R30 pcs | R06 pcs | reel taped pcs | | | | S | Z | D | E | VDE SEV | IMQ | |
| 0.0010 | 3.9 | 7.5 | 13.5 | 10.2 | 1000 | 2000 | 700 | 0.7 | 53.0 | 2000 | √ | √ | √ | √ | √ | √ | PME278RA4100MR30 |
| 0.0015 | 3.9 | 7.5 | 13.5 | 10.2 | 1000 | 2000 | 700 | 0.7 | 44.0 | 2000 | √ | √ | √ | √ | √ | √ | PME278RA4150MR30 |
| 0.0022 | 3.9 | 7.5 | 13.5 | 10.2 | 1000 | 2000 | 700 | 0.7 | 37.0 | 2000 | √ | √ | √ | √ | √ | √ | PME278RA4220MR30 |
| 0.0033 | 4.1 | 8.2 | 13.5 | 10.2 | 1000 | 2000 | 600 | 0.9 | 30.0 | 2000 | √ | √ | √ | √ | √ | √ | PME278RA4330MR30 |
| 0.0047 | 5.1 | 10.5 | 13.5 | 10.2 | 800 | 1600 | 600 | 1.2 | 24.0 | 2000 | √ | √ | √ | √ | √ | √ | PME278RA4470MR30 |
| 0.0068 | 5.2 | 10.5 | 18.5 | 15.2 | 500 | 1000 | 600 | 1.7 | 18.5 | 1400 | √ | √ | √ | √ | √ | √ | PME278RB4680MR30 |
| 0.010 | 5.2 | 10.5 | 18.5 | 15.2 | 500 | 1000 | 600 | 1.7 | 15.5 | 1400 | √ | √ | √ | √ | √ | √ | PME278RB5100MR30 |
| 0.015 | 5.5 | 11.1 | 18.5 | 15.2 | 500 | 1000 | 500 | 2.0 | 13.0 | 1400 | √ | √ | √ | √ | √ | √ | PME278RB5150MR30 |
| 0.022 | 8.5 | 14.3 | 18.5 | 15.2 | 300 | 500 | 350 | 3.8 | 9.6 | 1400 | √ | √ | √ | √ | √ | √ | PME278RB5220MR30 |
| 0.033 | 7.6 | 14.0 | 24.0 | 20.3 | 250 | 1500 | 250 | 4.0 | 9.6 | 1000 | √ | √ | √ | √ | √ | √ | PME278RC5330MR30 |
| 0.047 | 9.0 | 15.0 | 24.0 | 20.3 | 200 | 1200 | 250 | 5.0 | 7.5 | 1000 | √ | √ | √ | √ | √ | √ | PME278RC5470MR30 |
| 0.068 | 11.3 | 16.5 | 24.0 | 20.3 | 150 | 1000 | 180 | 7.0 | 6.2 | 1000 | √ | √ | √ | √ | √ | √ | PME278RC5680MR30 |
| 0.033 | 8.0 | 17.0 | 27.0 | 22.5 | 200 | 1200 | 250 | 5.5 | 7.2 | 1000 | √ | √ | √ | √ | √ | √ | PME278RD5330MR30 |
| 0.047 | 8.0 | 17.0 | 27.0 | 22.5 | 200 | 1200 | 250 | 5.5 | 6.0 | 1000 | √ | √ | √ | √ | √ | √ | PME278RD5470MR30 |
| 0.068 | 10.0 | 19.0 | 27.0 | 22.5 | 150 | 1000 | 200 | 7.5 | 4.8 | 1000 | √ | √ | √ | √ | √ | √ | PME278RD5680MR30 |
| 0.10 | 12.0 | 22.0 | 27.0 | 22.5 | 100 | 800 | 180 | 10.0 | 3.6 | 600 | √ | √ | √ | √ | √ | √ | PME278RD6100MR30 |
| 0.10 | 12.1 | 19.0 | 30.5 | 25.4 | 100 | 800 | | 10.0 | 3.9 | 600 | √ | √ | √ | √ | √ | √ | PME278RE6100MR30 |
| 0.15 | 15.3 | 22.0 | 30.5 | 25.4 | 75 | 600 | | 15.0 | 3.2 | 600 | √ | √ | √ | √ | √ | √ | PME278RE6150MR30 |

APPROVALS/REFERENCE DOCUMENTS

| Certification Body | Specification | Approval reference |
|--------------------|---------------|--------------------|
| S | EN 132400 | 9516076 |
| N | EN 132400 | P95101829 |
| D | EN 132400 | 303938 |
| FI | EN 132400 | 182572-01 |
| VDE | EN 132400 | 89760 |
| SEV | EN 132400 | 95.7 70725 |
| IMQ | EN 132400 | V4070 |

MARKING

- RIFA
- RIFA article code
- Rated capacitance
- Rated voltage
- X1
- 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 21.

PACKING

Capacitors in standard design (lead length 30 mm) and with $L < 24$ mm and lead length 5 or 6 mm are packed bulk in a box with dimensions 245 x 145 x 80 mm. Quantity/package as per article table.

Capacitors with $L \geq 24$ mm and lead length 5 or 6 mm are packed on trays piled in a box with dimensions 300 x 260 x 195 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. 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.