

# PME271M/E

- EMI suppressor, classes X1 and X2, metallized paper
- 0.001 – 0.6  $\mu\text{F}$ , 275/300 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

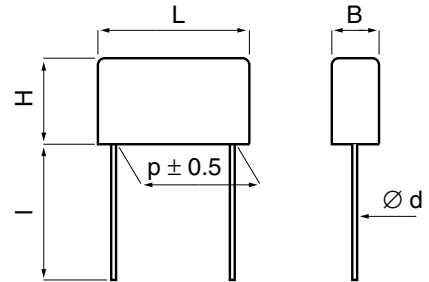
The capacitors are intended for use as interference suppressors in X1 or X2 (across-the-line) applications.

## CONSTRUCTION

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

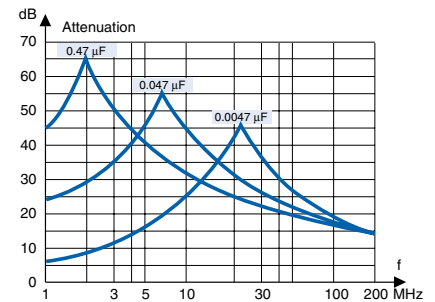
## TECHNICAL DATA

	PME271M	PME271E
<b>Rated voltage VAC, 50/60Hz</b>	275	300
<b>Capacitance range <math>\mu\text{F}</math></b>	0.001–0.6	0.01–0.22
<b>Temperature range °C</b>	–40/+110	–40/+110
<b>Climatic category IEC</b>	40/110/56/B	40/110/56/B
<b>Capacitance tolerance</b>	$\pm 10\%$ for $C > 0.1 \mu\text{F}$ , code K. $\pm 20\%$ for $C \leq 0.1 \mu\text{F}$ , code M	
<b>Approvals</b>	S, N, D, FI, VDE, SEV, IMQ, UL, CSA	
<b>Dissipation factor <math>\tan\delta</math></b>	$\leq 1.3\%$ at 1 kHz	
<b>Insulation resistance</b>	$C \leq 0.33 \mu\text{F} \geq 12000 \text{ M}\Omega$ $C > 0.33 \mu\text{F} \geq 4000 \text{ s}$ Measured at 500 VDC after 60 s, +23°C	
<b>In DC applications</b>	Recommended voltage: $\leq 630 \text{ VDC}$	
<b>Resonance frequency</b>	Tabulated self-resonance frequencies $f_0$ refer to 5 mm lead lengths.	
<b>Test voltage between terminals</b>	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 short leads, tolerance  $+0/-1 \text{ mm}$  (standard 6 mm, code R06)  
 Other lead lengths on request.



Suppression versus frequency. Typical values.

## ENVIRONMENTAL TEST DATA

<b>Vibration</b>	IEC 60068-2-6, Test Fc	3 directions at 2 hour each, 10 – 500 Hz at 0.75 mm or 98 $\text{m/s}^2$	No visible damage, No open or short circuit
<b>Bump</b>	IEC 60068-2-29, Test Eb	4000 bumps at 390 $\text{m/s}^2$	No visible damage, No open or short circuit
<b>Solderability</b>	IEC 60068-2-20, Test Ta	Solder globule method	Wetting time for $d \leq 0.8 < 1 \text{ s}$ for $d > 0.8 < 1.5 \text{ s}$
<b>Active flammability</b>	EN 132400		
<b>Passive flammability</b>	IEC 60384-14 (1993), EN 132400		
<b>Humidity</b>	IEC 60068-2-3, Test Ca	+40°C and 90 – 95% R.H.	56 days

## ARTICLE TABLE

Capacitance $\mu\text{F}$	Max dimensions in mm				Quantity per package				$f_o$ MHz	Max $dU/dt$ V/ $\mu\text{s}$	Approvals								Article code
	B	H	L	p	R30 pcs	R06 pcs	reel taped pcs	Weight g			S	Z	D	FI	VDE	SEV	IMQ	UL	
<b>CLASS X2 275 VAC +110 °C PME271 M</b>																			
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	5.2	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	
<b>CLASS X1 300 VAC +110 °C PME271 E</b>																			
0.010	5.2	10.5	18.5	15.2	500	1000	600	1.7	16	1200	√	√	√	√	√	√	√	PME271E510MR30	
0.015	5.2	10.5	18.5	15.2	500	1000	600	1.7	13	1200	√	√	√	√	√	√	√	PME271E515MR30	
0.022	7.3	13.0	19.0	15.2	400	800	400	3.0	9.8	1200	√	√	√	√	√	√	√	PME271E522MR30	
0.033	7.3	13.0	19.0	15.2	400	800	400	3.0	7.0	1200	√	√	√	√	√	√	√	PME271E533MR30	
0.047	8.5	14.3	18.5	15.2	300	500	350	3.8	6.4	1200	√	√	√	√	√	√	√	PME271E547MR30	
0.068	7.6	14.0	24.0	20.3	250	1500	250	4.5	5.2	600	√	√	√	√	√	√	√	PME271E568MR30	
0.10	11.3	16.5	24.0	20.3	150	1000	180	7.0	4.1	600	√	√	√	√	√	√	√	PME271E610MR30	
0.068	8.0	17.0	27.0	22.5	200	1200	250	5.5	4.7	600	√	√	√	√	√	√	√	PME271ED5680MR30	
0.10	8.0	17.0	27.0	22.5	200	1200	250	5.5	4.1	600	√	√	√	√	√	√	√	PME271ED6100MR30	
0.15	10.0	19.0	27.0	22.5	150	1000	200	5.5	3.2	600	√	√	√	√	√	√	√	PME271ED6150KR30	
0.22	12.0	22.0	27.0	22.5	100	800		5.5	2.5	600	√	√	√	√	√	√	√	PME271ED6220KR30	
0.15	10.6	16.1	30.5	25.4	150	1000		8.6	3.3	400	√	√	√	√	√	√	√	PME271E615KR30	
0.22	12.1	19.0	30.5	25.4	100	800		10.0	2.6	400	√	√	√	√	√	√	√	PME271E622KR30	

**APPROVALS/REFERENCE DOCUMENTS**

Certification Body	Specification	Approval reference
S	EN 132400	9834227-01 (X2), 9821105-01 (X1),
N	EN 132400	P98102279 (X2), P98101874 (X1)
D	EN 132400	308048 (X2), 307886 (X1),
FI	EN 132400	203301 (X2), 202782 (X1),
VDE	EN 132400	118230 (X2), 117365 (X1),
SEV	EN 132400	99.7 70053.01 (X2), 99.7 70083.01(X1)
IMQ	EN 132400	V 4699 (X2), V 4698 (X1),
UL	UL 1283 (U <sub>R</sub> = 250 VAC) UL 1414 (U <sub>R</sub> = 250 VAC)	E 100117 (X2, X1) E 73869 (X2)
CSA	C 22.2 No. 1 (U <sub>R</sub> = 250 VAC)	53108 (X2)

**MARKING**

- RIFA
- RIFA article code
- Rated capacitance
- Rated voltage
- X2 or X1
- SH, for self-healing
- Climatic category according to IEC 60068-1, appendix A
- Passive flammability class
- Approval marks
- Manufacturing code (year, month)

**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 ≥ 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.

**ORDERING INFORMATION**

The article code for the standard part is given in the article table. For other options, see page 21.