PME271

• EMI suppressor, classes X1, X2 and Y2, metallized paper

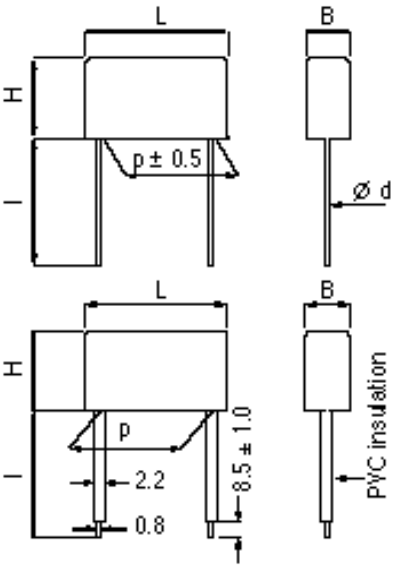
- The highest possible safety regarding active and passive flammability.
- Self-extinguishing UL 94V-0 encapsulation material.
- Excellent self-healing properties. Ensures long life even when subjected to frequent overvoltages.
- Good resistance to ionisation due to impregnated dielectric.
- High dU/dt 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, X2 (across-the-line) and Y2 (line-to-earth) applications.

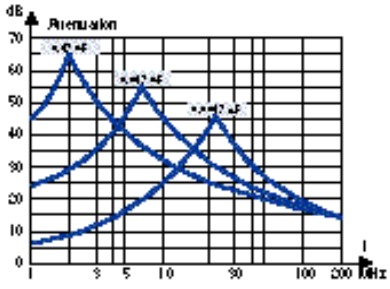
CONSTRUCTION

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



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 +5/-0 mm uninsulated (code R30)
option 30 +1/-0 mm insulated (code S)
option short leads, tolerance +0/-1 mm
(standard 6 mm, code R06)
Other lead lengths on request



Suppression versus frequency. Typical values.

TECHNICAL DATA

	X2 PME271M	X1 PME271E	Y2 PME271Y	Y2 PME271YA-E
Rated voltage VAC, 50/60Hz	275	300	250	300
Capacitance range µF	0.001–0.6	0.01–0.22	0.001–0.1	0.001–0.15
Temperature range °C	–40/+110	–40/+110	–40/+100	–40/+115
Climatic category IEC	40/110/56/B	40/110/56/B	40/100/56/B	40/115/56/B

Capacitance tolerance ± 10% for C > 0.1 µF, code K. ± 20% for C ≤ 0.1 µF, code M

Approvals S, N, D, FI, VDE, SEV, IMQ, UL, CSA

Dissipation factor ≤ 1.3 % at 1 kHz

Insulation resistance C ≤ 0.33 µF ≥ 12000 MΩ
C > 0.33 µF ≥ 4000 s
Measured at 500 VDC after 60 s, +23°C

In DC applications Recommended voltage:
PME271 M, E ≤ 630 VDC
PME271 Y ≤ 1000 VDC

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

Test voltage between terminals The 100% screening factory test is carried out at:
2150 VDC: PME271M and PME271E.
2700 VDC: PME271Y. The voltage level is selected to meet the requirements in applicable equipment standards. All electrical characteristics are checked after the test.

ENVIRONMENTAL TEST DATA

Vibration	IEC 68-2-6, Test Fc	3 directions at 2 hour each, 10 – 500 Hz at 0.75 mm or 98 m/s²	No visible damage, No open or short circuit	
Bump	IEC 68-2-29, Test Eb	4000 bumps at 390 m/s²	No visible damage, No open or short circuit	
Solderability	IEC 68-2-20, Test Ta	Solder globule method	Wetting time	for d ≤ 0.8 < 1 s for d > 0.8 < 1.5 s
Active flammability	EN 132400			
Passive flammability	IEC 384-14 (1993), EN 132400			
Humidity	IEC 68-2-3, Test Ca	+40°C and 90 – 95% R.H.	56 days	

ARTICLE TABLE

Capacitance µF	Max dimensions in mm B	H	L	p	Quantity per package R30 pcs	R06 pcs	reel taped pcs	Weight g	f_o MHz	Max dU/dt V/µs	Approvals S	N	D	FI	VDE	SEV	IMQ	UL	CSA		Article code 1 st block
CLASS X2 275 VAC +110 °C PME271 M																					
0.0010	3.9	7.5	13.5	10.2	1000	2000	700	0.7	53.0	1200	√	√	√	√	√	√	√				PME271M410M
0.0015	3.9	7.5	13.5	10.2	1000	2000	700	0.7	44.0	1200	√	√	√	√	√	√	√				PME271M415M
0.0022	3.9	7.5	13.5	10.2	1000	2000	700	0.7	37.0	1200	√	√	√	√	√	√	√				PME271M422M
0.0033	4.1	8.2	13.5	10.2	1000	2000	600	0.9	30.0	1200	√	√	√	√	√	√	√				PME271M433M
0.0047	5.1	10.5	13.5	10.2	800	1600	600	1.2	24.0	1200	√	√	√	√	√	√	√				PME271M447M
0.0068	5.2	10.5	18.5	15.2	500	1000	600	1.7	18.5	1200	√	√	√	√	√	√	√			*)	PME271M468M
0.010	5.2	10.5	18.5	15.2	500	1000	600	1.7	15.5	1200	√	√	√	√	√	√	√	√		*)	PME271M510M
0.015	5.2	10.5	18.5	15.2	500	1000	600	1.7	13.0	1200	√	√	√	√	√	√	√	√		*)	PME271M515M
0.022	6.0	12.5	18.5	15.2	400	800	400	3.0	10.0	1200	√	√	√	√	√	√	√	√		*)	PME271M522M
0.033	6.0	12.5	18.5	15.2	400	800	400	3.0	8.4	1200	√	√	√	√	√	√	√	√		*)	PME271M533M
0.047	6.0	12.5	18.5	15.2	400	800	400	3.0	7.0	1200	√	√	√	√	√	√	√	√		*)	PME271M547M
0.068	7.8	13.5	18.5	15.2	400	800	400	3.3	5.6	1200	√	√	√	√	√	√	√	√		*)	PME271M568M
0.10	8.5	14.1	18.5	15.2	300	600	360	3.8	4.3	1200	√	√	√	√	√	√	√	√		*)	PME271MB6100M
0.10	7.6	14.0	24.0	20.3	250	1500	250	4.0	4.1	600	√	√	√	√	√	√	√	√		*)	PME271M610M
0.15	9.0	15.0	24.0	20.3	200	1200	250	5.0	3.4	600	√	√	√	√	√	√	√	√		*)	PME271M615K
0.22	11.3	16.5	24.0	20.3	150	1000	180	7.0	2.7	600	√	√	√	√	√	√	√	√		*)	PME271M622K
0.10	8.0	17.0	27.0	22.5	200	1200	250	5.5	3.9	600	√	√	√	√	√	√	√	√			PME271MD6100M
0.15	8.0	17.0	27.0	22.5	200	1200	250	5.5	3.3	600	√	√	√	√	√	√	√	√			PME271MD6150K
0.22	10.0	19.0	27.0	22.5	150	1000	250	7.5	2.6	600	√	√	√	√	√	√	√	√			PME271MD6220K
0.27	12.0	22.0	27.0	22.5	100	800		10.0	2.3	400	√	√	√	√	√	√	√	√			PME271MD6270K
0.33	12.0	22.0	27.0	22.5	100	800		10.0	2.1	400	√	√	√	√	√	√	√	√			PME271MD6330K
0.27	10.5	17.3	30.5	25.4	100	1000		8.5	2.4	400	√	√	√	√	√	√	√	√			PME271M627K
0.33	12.1	19.0	30.5	25.4	100	800		10.0	2.1	400	√	√	√	√	√	√	√	√			PME271M633K
0.47	15.3	22.0	30.5	25.4	75	600		15.0	1.8	400	√	√	√	√	√	√	√	√			PME271M647K
0.60	15.3	22.0	30.5	25.4	75	600		15.0	1.6	400	√	√	√	√	√	√	√	√			PME271M660K
CLASS X1 300 VAC +110 °C PME271 E																					
0.010	5.2	10.5	18.5	15.2	500	1000	600	1.7	15.5	1200	√	√	√	√	√	√	√			*)	PME271E510M
0.015	5.2	10.5	18.5	15.2	500	1000	600	1.7	13.0	1200	√	√	√	√	√	√	√			*)	PME271E515M
0.022	7.3	13.0	19.0	15.2	400	800	400	3.0	9.8	1200	√	√	√	√	√	√	√			*)	PME271E522M
0.033	7.3	13.0	19.0	15.2	400	800	400	3.0	7.0	1200	√	√	√	√	√	√	√			*)	PME271E533M
0.047	8.5	14.3	18.5	15.2	300	600	400	3.8	6.4	1200	√	√	√	√	√	√	√			*)	PME271E547M
0.068	7.6	14.0	24.0	20.3	250	1500	250	4.5	5.2	600	√	√	√	√	√	√	√			*)	PME271E568M
0.10	11.3	16.5	24.0	20.3	150	1000	180	7.0	4.1	600	√	√	√	√	√	√	√			*)	PME271E610M
0.068	8.0	17.0	27.0	22.5	200	1200	250	5.5	4.7	600	√	√	√	√	√	√	√				PME271ED5680M
0.10	8.0	17.0	27.0	22.5	200	1200	250	5.5	4.1	600	√	√	√	√	√	√	√				PME271ED6100M
0.15	10.0	19.0	27.0	22.5	150	1000	250	5.5	3.2	600	√	√	√	√	√	√	√				PME271ED6150K
0.22	12.0	22.0	27.0	22.5	100	800		5.5	2.5	600	√	√	√	√	√	√	√				PME271ED6220K
0.15	10.6	16.1	30.5	25.4	150	1000		8.6	3.3	400	√	√	√	√	√	√	√				PME271E615K
0.22	12.1	19.0	30.5	25.4	100	800		10.0	2.6	400	√	√	√	√	√	√	√				PME271E622K

ARTICLE TABLE

Capacitance µF	Max dimensions in mm B	H	L	p	Quantity per package R30 pcs	R06 pcs	reel taped pcs	Weight g	f_o MHz	Max dU/dt V/µs	Approvals S	N	D	FI	VDE	SEV	IMQ	UL	CSA		Article code 1 st block
CLASS Y2 250 VAC +100 °C PME271 Y																					
0.0010	3.9	7.5	13.5	10.2	1000	2000	700	0.7	53.0	2000	√	√	√	√	√	√	√	√			PME271Y410M
0.0015	3.9	7.5	13.5	10.2	1000	2000	700	0.7	44.0	2000	√	√	√	√	√	√	√	√			PME271Y415M
0.0022	3.9	7.5	13.5	10.2	1000	2000	700	0.7	37.0	2000	√	√	√	√	√	√	√	√			PME271Y422M
0.0033	4.1	8.2	13.5	10.2	1000	2000	600	0.9	30.0	2000	√	√	√	√	√	√	√	√			PME271Y433M
0.0047	5.1	10.5	13.5	10.2	800	1600	600	1.2	24.0	2000	√	√	√	√	√	√	√	√			PME271Y447M
0.0068	5.2	10.5	18.5	15.2	500	1000	600	1.7	18.5	1400	√	√	√	√	√	√	√	√		*)	PME271Y468M
0.010	5.2	10.5	18.5	15.2	500	1000	600	1.7	15.5	1400	√	√	√	√	√	√	√	√		*)	PME271Y510M
0.015	5.5	11.1	18.5	15.2	500	1000	500	2.0	13.0	1400	√	√	√	√	√	√	√	√		*)	PME271Y515M
0.022	7.3	13.0	19.0	15.2	400	800	400	3.0	9.8	1400	√	√	√	√	√	√	√	√		*)	PME271Y522M
0.033	7.6	14.0	24.0	20.3	250	1500	250	4.0	7.0	1000	√	√	√	√	√	√	√	√		*)	PME271Y533M
0.047	9.0	15.0	24.0	20.3	200	1200	250	5.0	6.0	1000	√	√	√	√	√	√	√	√		*)	PME271Y547M
0.068	11.3	16.5	24.0	20.3	150	1000	180	7.0	4.6	600	√	√	√	√	√	√	√	√		*)	PME271Y568M
0.10	12.1	19.0	30.5	25.4	100	800		10.0	3.9	400	√	√	√	√	√	√	√	√			PME271Y610M
CLASS Y2 300 VAC + 115 °C PME271 Y																					
0.0010	3.9	7.5	13.5	10.2	1000	2000	700	0.7	53.0	2000	√			P			P	P			PME271YA4100M
0.0015	3.9	7.5	13.5	10.2	1000	2000	700	0.7	44.0	2000	√			P			P	P			PME271YA4150M
0.0022	3.9	7.5	13.5	10.2	1000	2000	700	0.7	37.0	2000	√			P			P	P			PME271YA4220M
0.0025	4.1	8.2	13.5	10.2	1000	2000	600	0.9	35.0	2000	√			P			P	P			PME271YA4250M
0.0033	4.1	8.2	13.5	10.2	1000	2000	600	0.9	30.0	2000	√			P			P	P			PME271YA4330M
0.0047	5.1	10.5	13.5	10.2	800	1600	600	1.2	24.0	2000	√			P			P	P			PME271YA4470M
0.0068	5.2	10.5	18.5	15.2	500	1000	600	1.7	18.5	1400	√			P			P	P		*)	PME271YB4680M
0.010	5.2	10.5	18.5	15.2	500	1000	600	1.7	15.5	1400	√			P			P	P		*)	PME271YB5100M
0.015	5.5	11.0	18.5	15.2	500	1000	500	2.0	13.0	1400	√			P			P	P		*)	PME271YB5150M
0.022	7.3	13.0	18.5	15.2	400	800	400	3.0	9.8	1400	√			P			P	P		*)	PME271YB5220M
0.033	7.6	14.0	24.0	20.3	250	1500	250	4.0	7.0	1000	√			P			P	P		*)	PME271YC5330M
0.047	9.0	15.0	24.0	20.3	200	1200	250	5.0	6.0	1000	√			P			P	P		*)	PME271YC5470M
0.068	11.3	16.5	24.0	20.3	150	1000	180	7.0	4.6	1000	√			P			P	P		*)	PME271YC5680M
0.033	8.0	17.0	27.0	22.5	200	1200	250	5.5	6.8	600	√			P			P	P			PME271YD5330M
0.047	8.0	17.0	27.0	22.5	200	1200	250	5.5	5.8	600	√			P			P	P			PME271YD5470M
0.068	10.0	19.0	27.0	22.5	150	1000	250	7.5	4.8	600	√			P			P	P			PME271YD5680M
0.10	12.0	22.0	27.0	22.5	100	800		10.0	3.8	600	√			P			P	P			PME271YD6100M
0.10	12.1	19.0	30.5	25.4	100	800		10.0	3.9	400	√			P			P	P			PME271YE6100M
0.15	15.3	22.0	30.5	25.4	75	600		15.0	3.1	400	√			P			P	P			PME271YE6150K

*) Also available with insulated leads (code S in ordering info.)
P = Approvals pending

APPROVALS/REFERENCE DOCUMENTS

Country	Specification	Approval reference
S = Sweden	EN 132400	9834227-01 (X2), 9821105-01 (X1), 9509092 (Y2, 250 VAC), 9834228-01 (Y2, 300 VAC)
N* = Norway	EN 132400	P95102355 (X2), P95101254 (X1) P95101244 (Y2, 250 VAC)
D = Denmark	EN 132400	308048 (X2), 307886 (X1), 303656 (Y2, 250 VAC), Approval for Y2, 300 VAC pending
FI* = Finland	EN 132400	183356-01 (X2), 181587-01 (X1), 181622-01 (Y2, 250 VAC)
VDE*= Germany	EN 132400	89756 (X2), 89757 (X1), 89750 (Y2, 250 VAC)
SEV*= Switzerland	EN 132400	95.7 70724.01 (X2), 95.7 70723.01(X1) 95.7 70720.01 (Y2, 250 VAC)
IMQ*= Italy	EN 132400	V 0060 (X2), V 1952 (X1), V 0061 (Y2, 250 VAC)
UL* = USA	UL 1283 (U_R=250 VAC) UL 1414 (U_R=250 VAC)	E 100117 (X1 and Y2, 250 VAC) E 73869 (X2)
CSA*= Canada	C 22.2 No. 8-M 1986 C 22.2 No. 1-M 1990 (U_R=250 VAC)	53108 (Y2, 250 VAC) 53108 (X2)

* Approval references apply to +100 °C for X1, X2 and 250 VAC +100 °C for Y2. Approvals for +110 °C for X1, X2 and 300 VAC +115 °C for Y2 are pending.

ORDERING INFORMATION

See article table and page 21.
Options: Short leads: e.g. 6 mm, add R06. Insulated leads: add S.
Reel taped: add T0 or T1. (= lead length 19 mm).
Examples:
PME271Y468MR06
PME271MD6100MR06

MARKING

- RIFA
- RIFA article code
- Rated capacitance
- Rated voltage
- X2, X1 or Y2
- SH, for self-healing
- Climatic category according to IEC 68-1, 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.