

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

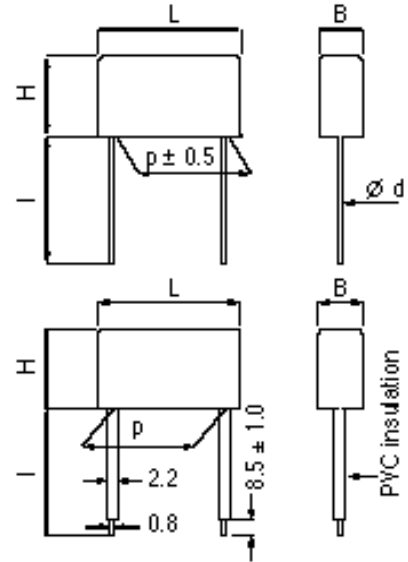
The capacitors are intended for use as interference suppressors in X1, X2 (across-the-line) and Y2 (line-to-earth) applications.

CONSTRUCTION

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

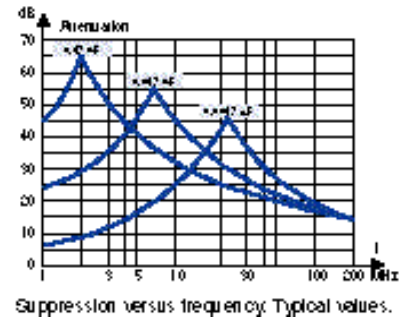
TECHNICAL DATA

	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 $^{\circ}\text{C}$	-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	$\pm 10\%$ for $C > 0.1 \mu\text{F}$, code K. $\pm 20\%$ for $C \leq 0.1 \mu\text{F}$, code M			
Approvals	S, N, D, FI, VDE, SEV, IMQ, UL, CSA			
Dissipation factor	1.3 % at 1 kHz			
Insulation resistance	C $0.33 \mu\text{F}$ 12000 M C $> 0.33 \mu\text{F}$ 4000 s Measured at 500 VDC after 60 s, $+23^{\circ}\text{C}$			
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.			



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 ± 0 mm un-insulated (code R30)
option 30 ± 1 –0 mm insulated (code S)
option shortleads, tolerance ± 0 –1 mm
(standard 6 mm, code FD6)
Other lead lengths on request



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/s ²	No visible damage, No open or short circuit
Bump	IEC 68-2-29, Test Eb	4000 bumps at 390 m/s ²	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 $^{\circ}\text{C}$ and 90 – 95% R.H.	56 days

ARTICLE TABLE

Capacitance μF	Max dimensions in mm				Quantity per package				f_o MHz	Max dU/dt V/ μs	Approvals							Article code 1 st block
	B	H	L	p	R30 pcs	R06 pcs	reel taped pcs	Weight g			ϕ	Z	D	FI	VDE SEV	IMQ	UL	
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				Quantity per package reel			Weight g	f _o MHz	Max dU/dt V/µs	Approvals							Article code 1 st block
	B	H	L	p	R30 pcs	R06 pcs	taped pcs				S	Z	D	FI	VDE	SEV	IMQ	
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.

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.

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