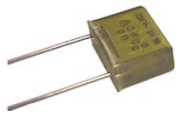


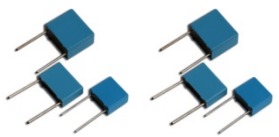


AC Line EMI Suppression Capacitors (Safety Agency Approved "X" and "Y" Capacitors)

PME271Y (Class Y2)	PHE850 & R41 (Class Y2)	R46 & PHE840M (Class X2)	X Capacitors for Industrial Voltages
			
Key Application			
Filtering/EMI Suppression on the AC line of power supplies (including equipment with the power supply on-board). Use from line to ground.	Filtering/EMI Suppression on the AC line of power supplies (including equipment with the power supply on-board). Use from line to ground.	Filtering/EMI Suppression on the AC line of power supplies (including equipment with the power supply on-board). Use across the line.	Filtering/EMI Suppression on the AC line of high-voltage power supplies (including equipment with the power supply on-board). Use across the line.
Applications where excellent protection against short-circuit and fire are needed.	Use in place of ceramic Y caps in economical designs.	For nominal line voltages up to 280VAC	Industrial applications at higher voltages.
Features			
Construction			
Wound metallized paper dielectric vacuum-impregnated with flame retardant epoxy UL 94V-0.	Wound metallized polypropylene film encapsulated with flame retardant epoxy UL 94V-0.	Wound metallized polypropylene film encapsulated with flame retardant epoxy UL 94V-0.	Versions with either metallized vacuum-impregnated paper or metallized polypropylene film.
Capacitance Range			
0.001 - 0.15µF	0.001 - 1.0µF	0.01 - 10µf	Varies according to series (See next page)
Use up to this nominal AC line voltage			
300VAC	300VAC, 480VAC (PHE850 - N. America)	275VAC (Europe), 280 or 310VAC (N. America)	Various, up to 760VAC (See next page)
Range of lead spacing available			
10 - 25.4mm	10 - 37.5mm	7.5 - 37.5mm	10 - 37.5mm
Tolerance			
± 20%	±10%, ±20%	±10%, ±20%	±10%, ±20%
Manufacturing test voltage			
3000VDC	2500VAC (PHE850 also 5000VDC)	2200VDC	Varies according to series
Operating Temperature			
-40 to +115° C	PHE850: -55 to +110° C. R41: -40 to +110° C	R46: -40 to +110° C. PHE840M: -55 to +105° C.	Varies according to series
Special Features			
Offers high breakdown voltages and excellent self-healing.	Economical design - self healing. Replacement for ceramic Y caps.	Self healing.	Models available for all industrial voltages. (See next page)
Does not bend over when subjected to the IEC push test. No external insulation needed.	Does not bend over when subjected to the IEC push test. No external insulation needed.	Rated 280 or 310VAC (UL & CSA). Ideal for use in 277VAC industrial applications.	Eliminates the need to use two lower voltage capacitors in series.
Best flammability performance. Failure mode tends toward open circuit.	Unlike ceramics, failure mode tends toward open circuit.	C-values up to 10µF for high power and industrial power supplies.	All models self healing.
Markets			
Power supplies			
Where reliability and safety are important: <ul style="list-style-type: none"> • Test equipment • Industrial equipment • Commercial-grade uninterruptable power supplies (UPS) • Aircraft ground power units 	Cost-sensitive applications: <ul style="list-style-type: none"> • Consumer-grade uninterruptable power supplies (UPS) • Lighting ballasts • Power supplies for consumer electronics 	<ul style="list-style-type: none"> • Power supplies rated 280VAC nominal or less, including those using 305VAC rated caps for 277VAC applications. • Lighting ballasts • Aircraft ground power units 	<ul style="list-style-type: none"> • High voltage power supplies (300VAC nominal and up).

Selector Chart – AC Line EMI Suppression Capacitors

The series shown in blue type are most commonly used. They are offered in the most widely required voltages and with the most competitive prices.

Common X Capacitors

Operating Voltage	Series	Class	Max. Temp °C	C-value range Min. µF Max. µF	Dielectric	Self healing?	Comments
275 VAC	PME271M	X2	110	0.001µF 0.6µF	Impreg. paper	Yes	Best performance & safety.
275 VAC & 277 VAC	R46 PHE840M	X2	110&125 105	0.01µF 10µF	Polypropylene	Yes	Small size, cost effective, full agency approvals.
300 VAC	PME271E	X1	110	0.01µF 0.22µF	Impreg. paper	Yes	Best performance & safety.
300 VAC	R46 (300VAC) PHE840E	X2	110 105	0.01µF 10µF	Polypropylene	Yes	Small size, cost effective, full agency approvals.
330 VAC	PHE841 R49	X1	100 110	0.01µF 2.2µF 0.047µF 6.8µF	Polypropylene	Yes	Small size, cost effective, full agency approvals.
440 VAC	PME278	X1	110	0.001µF 0.15µF	Impreg. paper	Yes	Best performance & safety.
440/480 VAC	PHE844 R47	X1	105 110	0.1µF 2.2µF 0.0047µF	Polypropylene	Yes	Small size, cost effective, full agency approvals.
660 VAC	PME264	X2	85	0.001µF 0.1µF	Impreg. paper	Yes	Best performance & safety.
760 VAC	PHE845	X1	105	0.01µF 1.0µF	Polypropylene	Yes	Unique offering. Small size, cost effective, meets agency requirements.

Common Y Capacitors

Operating Voltage	Series	Class	Max. Temp °C	C-value range Min. uF Max. uF	Dielectric	Self healing?	Comments
250 VAC	PME271Y	Y2	100	0.001µF 0.1µF	Impreg. paper	Yes	Best flame resistance and high self healing voltage.
250 VAC	SMP253	Y2	100	0.001µF 4700pF	Impreg. paper	Yes	SMD. Excellent flame resistance and high self healing voltage.
250 VAC	ERO610	Y2	125	0.001µF 0.012µF	Ceramic disk	No	Cost effective, meets agency flammability requirements. Will bend during IEC push test.
300 VAC	PME271YA-E	Y2	115	0.001µF 0.15µF	Impreg. paper	Yes	Best flame resistance and high self healing voltage.
300/480 VAC	PHE850 R41	Y2	110	0.001µF 1.0µF	Polypropylene	Yes	Excellent combination of cost and performance. PHE850 rated 480VAC in N. America.
300 VAC	ERK610	Y2	125	33pF 4700pF	Ceramic disk	No	Cost effective, meets agency flammability requirements. Will bend during IEC push test.
440/480 VAC	PME295	Y1	115	470pF 4700pF	Impreg. paper	Yes	Best flame resistance and high self healing voltage.
500 VAC	ERP610	Y1	125	33pF 4700pF	Ceramic disk	No	Cost effective, meets agency flammability requirements. Will bend during IEC push test.