



EMI Suppression Capacitors



Why Choose KEMET

KEMET applies world-class service and quality to deliver industry-leading, high performance capacitance solutions worldwide. With 95% of possible dielectric solutions, KEMET offers the world's most complete line of surface mount and through-hole capacitor technologies across tantalum, ceramic, film, aluminum and paper dielectrics. One world. One KEMET.

Features & Benefits

- All models self-healing
- Class Y2 Capacitors
 - No bend-over when subject to IEC push test
 - No external insulation required
 - Failure mode tends toward open circuit
- Class X2 Capacitors
 - Rated 310 VAC
 - Capacitance values up to 45 μ F
- X Capacitors for Industrial Voltages
 - Models available for all industrial voltages
 - Eliminates need for two lower voltage capacitors in series

Product Checklist

- Does your product use AC line power?
 - If so, does your company build their own power supplies?
- Do you use/buy X or Y capacitors?
- What is the nominal AC line voltage?
- What is the capacitance value?
- What is the lead spacing required?



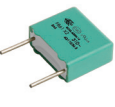

For more information, samples and engineering kits, please visit us at www.kemet.com or call 1.877.myKEMET.

Programs Supported

- F881 (Class Y2)
 - Cost-sensitive applications
 - Consumer-grade UPS
 - Lighting ballasts
 - Power supplies for consumer electronics
- F861 (Class X2)
 - 277 VAC industrial applications
 - Power supplies rated 310 VAC or less
 - Lighting ballasts
 - Aircraft ground power units
- X Capacitors for Industrial Voltages
 - Applications requiring 330 VAC and higher
- Filtering/EMI suppression on the AC line of industrial power supplies
- Equipment with on-board power supply
- PME271Y (Class Y2)
 - Applications where reliability and safety are important
 - Test and industrial equipment
 - Commercial-grade uninterruptable power supplies (UPS)
 - Aircraft ground power units

KEMET Products

(Safety Agency Approved "X" & "Y" Capacitors)

	PME271Y (Class Y2)	F881 (Class Y2)	F861 (Class X2)	X Capacitors for Industrial Voltages
				
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 – 0.15 μ F	0.001 – 1.0 μ F	0.001 – 45 μ f	Varies according to series (See next page)
Rated Voltage	300 VAC	300 VAC	310 VAC	Various, up to 760 VAC (See next page)
Lead Spacing	10 – 25.4 mm	10 – 37.5 mm	7.5 – 37.5 mm	10 – 37.5 mm
Tolerance	\pm 20%	\pm 10%, \pm 20%	\pm 10%, \pm 20%	\pm 10%, \pm 20%
Manufacturing Test Voltage	3000 VDC	4000 VDC and 2500 VAC	1900 VDC	Varies according to series
Operating Temperature	-40° to +115°C	-40° to +110°C	-40° to +110°C	Varies according to series
Characteristics	<ul style="list-style-type: none"> • Best flammability performance • Use from line to ground 	<ul style="list-style-type: none"> • Replacement for ceramic Y capacitors in economical designs • Use from line to ground 	<ul style="list-style-type: none"> • Nominal line voltages up to 310 VAC • Use across the line 	<ul style="list-style-type: none"> • Industrial applications at higher voltages • Use across the line

AC Line EMI Suppression Capacitors Selection Chart

Common X Capacitors

Operating Voltage	Series	Class	Max. Temp °C	Cap. Value Range		Dielectric	Self-Healing	Benefits
				Min. μ F	Max. μ F			
275 VAC	PME271M	X2	110°	0.001 μ F	0.6 μ F	Impregnated paper	Yes	Best performance & safety. Top performer in AC series power supply.
275 VAC (310 UL)	R46-125C	X2	125°	0.01 μ F	1.0 μ F	Polypropylene	Yes	Rated 125°C. (Use new series F861 for lower temperatures.)
275 VAC & 300 VAC (310 UL)	R46+R	X2	110°	0.22 μ F	10 μ F	Polypropylene	Yes	With internal discharge resistor. (Use new series F861 if resistor not required.)
275 VAC	PHE820M	X2	100°	0.01 μ F	2.2 μ F	Polyester	Yes	Excellent for AC series power supply. For normal X2 use, consider new series F861.
300 VAC	PME271E	X1	110°	0.01 μ F	0.22 μ F	Impregnated paper	Yes	Best performance & safety. Top performer in AC series power supply.
300 VAC	PHE820E	X2	100°	0.01 μ F	2.2 μ F	Polyester	Yes	Excellent for AC series power supply. For normal X2 use, consider new series F861.
310 VAC* New!	F861	X2	110°	0.001 μ F	45 μ F	Polypropylene	Yes	New – Smaller sizes, higher cap values. Full agency approvals.
330 VAC New!	F871	X1	110°	0.001 μ F	12 μ F	Polypropylene	Yes	New – Smaller sizes, higher cap values. Full agency approvals.
330 VAC	R49+R	X1	110°	0.33 μ F	6.8 μ F	Polypropylene	Yes	With internal discharge resistor. (Use new series F871 if resistor not required.)
440 VAC	PME278	X1	110°	0.001 μ F	0.15 μ F	Impregnated paper	Yes	Best performance & safety.
480 VAC New!	F872	X1	110°	0.001 μ F	5.6 μ F	Polypropylene	Yes	New – Smaller sizes, higher cap values. Full agency approvals.
520 VAC	R47 (520 VAC)	X2	85°	0.0047 μ F	2.2 μ F	Polypropylene	Yes	Small size, cost-effective, full agency approvals.
660 VAC	PME264	X2	85°	0.001 μ F	0.1 μ F	Impregnated paper	Yes	Best performance & safety.
760 VAC New!	F873	X1	110°	0.01 μ F	1.8 μ F	Polypropylene	Yes	New – Unique offering. Full agency approvals.

Common Y Capacitors

250 VAC	PME271Y	Y2	100°	0.001 μ F	0.1 μ F	Impregnated paper	Yes	Best flame resistance and high self-healing voltage.
250 VAC	SMP253	Y2	100°	0.001 μ F	4700 pF	Impregnated paper	Yes	Surface mount, excellent flame resistance and high self-healing voltage.
250 VAC	ER0610	Y2	125°	0.001 μ F	0.012 μ F	Ceramic disk	No	Cost-effective, meets agency flammability requirements. Will bend during IEC push test.
300 VAC	PME271YA-E	Y2	115°	0.001 μ F	0.15 μ F	Impregnated paper	Yes	Best flame resistance and high self-healing voltage.
300 VAC* New!	F881	Y2	110°	0.001 μ F	1.0 μ F	Polypropylene	Yes	New – Excellent combination of cost and performance.
300 VAC	ERK610	Y2	125°	33 pF	4700 pF	Ceramic disk	No	Cost-effective, meets agency flammability requirements. Will bend during IEC push test.
440/480 VAC	PME295	Y1	115°	470 pF	4700 pF	Impregnated paper	Yes	Best flame resistance and high self-healing voltage.
500 VAC	ERP610	Y1	125°	33 pF	4700 pF	Ceramic disk	No	Cost-effective, meets agency flammability requirements. Will bend during IEC push test.

* Most commonly used, offered in the most widely required voltages and with the most competitive prices.