

AC Line EMI Capacitors (X and Y Capacitors)

Benefits & Advantages

- X2 capacitors to 10 μ F, Y2 to 1 μ F
- Safe failure mode
- Models up to 125°C
- Models for every industrial voltage
- Easy-To-Buy-From Order Entry & Philosophy
- Stable temperature characteristics
- Pb free/RoHS compliant
- Halogen free on request
- Polypropylene caps for 400/440Hz

KEMET Products

COMMON X CAPACITORS								
VAC	Series	Class	Max. Temp °C	C-Value Range		Dielectric	Self Healing?	Comments
				Min. μ F	Max. μ F			
275	PME271M	X2	110	0.001	0.6	Impreg. Paper	Yes	Best performance & safety.
275 & 277	R46 PHE840M	X2	110 & 125 105	0.01	10	Polypropylene	Yes	Small size, cost effective, full agencies approval
300	PME217E	X1	110	0.01	0.22	Impreg. Paper	Yes	Best performance & safety.
300	R46(300V) PHE840E	X2	110 105	0.01	10	Polypropylene	Yes	Small size, cost effective, full agencies approval
330	PHE841 R49	X1	100 110	0.01 0.047	2.2 6.8	Polypropylene	Yes	Small size, cost effective, full agencies approval
440	PME278	X1	110	0.001	0.15	Impreg. Paper	Yes	Best performance & safety.
440/480	PHE844 R47	X1	105 110	0.1 0.0047	2.2	Polypropylene	Yes	Small size, cost effective, full agencies approval
660	PME246	X2	85	0.001	0.1	Impreg. Paper	Yes	Best performance & safety.
760	PHE845	X1	105	0.01	1.0	Polypropylene	Yes	Unique Offering: Small size, cost effective, full agencies approval

COMMON Y CAPACITORS								
VAC	Series	Class	Max. Temp °C	C-Value Range		Dielectric	Self Healing?	Comments
				Min.	Max.			
250	PME271M	Y2	100	0.001 μ F	0.1 μ F	Impreg. Paper	Yes	Excellent flame resistance & high self healing voltage.
250	SMP253	Y2	100	0.001 μ F	4700pF	Impreg. Paper	Yes	SMD. Excellent flame resistance & high self healing voltage.
250	ERO610	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	PME271YA-E	Y2	115	0.001 μ F	0.15 μ F	Impreg. Paper	Yes	Excellent flame resistance & high self healing voltage.
300/480	PHE850 R41	Y2	110	0.001 μ F	1.0 μ F	Polypropylene	Yes	Cost effective, meets agency flammability req. PHE850 rated 480V in N. America.
300	ERK610	Y2	125	33pF	4700pF	Ceramic Disk	No	Cost effective, meets agency flammability requirements. Will bend during IEC push test.
440/480	PME295	Y1	115	470pF	4700pF	Impreg. Paper	Yes	Excellent flame resistance & high self healing voltage.
500	ERP610	Y1	125	33pF	4700pF	Ceramic Disk	No	Cost effective, meets agency flammability requirements. Will bend during IEC push test.

Listings in blue are most commonly used - offered in the most widely required voltages & with the most competitive prices.

Other Information:

White papers at www.kemet.com
 PPT available from KEMET Sales team

Samples available

www.kemet.com





Snubber Capacitors for IGBT Modules

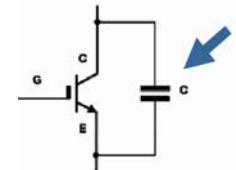
Benefits & Features

- Wide capacitance & voltage range
- Direct mount version with six tab styles to fit most IGBTs
- 4-pin PCB mount version available
- Easy-To-Buy-From Order Entry & Philosophy
- Global footprint – manufacturing & sales
- Stable temperature characteristics
- Pb free/RoHS compliant
- Made with low-loss polypropylene film
- Safe failure mode

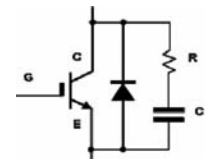
Screw connections

Pin connections

Snubber by itself	 <p>Series C4BS, C4BT direct mount</p> <p>Cap value = 1uF per 100A IGBT rating</p>	 <p>Series C4AS, C4AT PC board mount</p> <p>Cap value = 1uF per 100A IGBT rating</p>
	 <p>Series C4AS, C4AT PC board mount</p> <p>Cap value = 0.25uF per 100A IGBT rating</p>	 <p>Series C4AS, C4AT PC board mount</p> <p>Cap value = 0.25uF per 100A IGBT rating</p>



**Snubber capacitor
by itself**



**Snubber capacitor
in a network**

This is a starting point. The engineer will pick the capacitor voltage and final cap value.

KEMET Snubber Capacitor Quick Selector Guide

Series	Capacitor type	Rated Voltage	Cap Range	Characteristics
C4AS	Radial Leads	850VDC/500VAC	0.15 - 5.0µF	<ul style="list-style-type: none"> • Snubber applications • Climatic category (IEC 60068-1) 40/85/56 • Pulse rise time (dv/dt) 469 to 3360V/µs • Pitch (p) p = 27.5, 37.5, 52.5mm • Terminals Tinned copper 2 or 4 wires
		1000VDC/600VAC	0.15 - 4.7µF	
		1200VDC/630VAC	0.1 - 3.5µF	
		2000VDC/700VAC	0.033 - 1.5µF	
		3000VDC/750VAC	0.022 - 0.82µF	
C4AT	Radial Leads	250VDC/160VAC	1.0 - 60µF	<ul style="list-style-type: none"> • Switching applications • Climatic category (IEC 60068-1) 40/85/56 • Pulse rise time (dv/dt) 15 to 148V/µs • Pitch (p) p = 27.5, 37.5, 52.5mm • Terminals Tinned copper 2 or 4 wires
		400VDC/250VAC	1.0 - 40µF	
		450VDC/275VAC	1.0 - 33µF	
		600VDC/350VAC	0.68 - 20µF	
		700VDC/400VAC	0.47 - 15µF	
C4BS	Direct Mount	850VDC/550VAC	0.47 - 5.0µF	<ul style="list-style-type: none"> • Snubber-IGBT applications • Climatic category (IEC 60068-1) 40/85/56 • Pulse rise time (dv/dt) 469 to 3361V/µs • Box Length (L) L = 32 to 57.5mm • Terminals Tinned brass lugs
		1000VDC/600VAC	0.47 - 4.0µF	
		1200VDC/630VAC	0.33 - 3.3µF	
		2000VDC/700VAC	0.10 - 1.5µF	
		3000VDC/750VAC	0.047 - 0.82µF	
C4BT	Direct Mount	250VDC/160VAC	4.7 - 60µF	<ul style="list-style-type: none"> • Switching-IGBT applications • Climatic category (IEC 60068-1) 40/85/56 • Pulse rise time (dv/dt) 27 to 148V/µs • Box Length (L) L = 32 to 57.5mm • Terminals Tinned brass lugs
		400VDC/250VAC	3.3 - 40µF	
		600VDC/330VAC	2.5 - 20µF	
		700VDC/400VAC	1.5 - 15µF	
		850VDC/450VAC	1.0 - 10µF	

QUESTIONS for Customers:

- Is the IGBT module with screw or pin connections?
- What is the current rating of the IGBT? (100A, 200A, etc.)
- Will the snubber capacitor be used by itself or with a diode in a network?
- What rated voltage is required?

Other Information:

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KEMET, *The Capacitance Company.*

