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PRODUCT SELECTION

DC-Link, DC Filter, Radial Capacitors

Overview

Metallized Polypropylene, Power Box, Film (MKP)

DC-Link capacitors use thin polypropylene[4] film as their dielectric and are found in power converter circuits for DC filtering, and energy storage. These capacitors are stable over temperature, frequency and time. They have low DF, excellent self-healing capability, and long operational lifetimes.

Device Applications

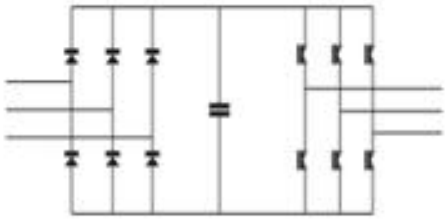
- Inverters
  - Green Energy: Solar and Wind
  - Automotive: Traction (C4E)
- On-Board Battery Charger
- Regenerative drives
- Motor Drives
- Welding Machines
- SMPS

Benefits

- High Capacitance Density
- Extended life at >200,000 hours at VN at rated hot spot temperature
- High Reliability
- High ripple Current

Applications

- DC link
- DC filtering
- Energy Storage



	R75H R76H High Current	C4AQ standard	C4AQ-M miniaturized	C4AQ-P high temp. extended life	C4AU Harsh environment	C4AK highest temp. extended life
Min C (µF)	0.0001	1	1.1	1	1	1.5
Max C (µF)	33	210	210	210	210	60
Max. Voltage (Vdc)	2,000[3]	1,500 [1]	1,200 [2]	1,100[2]	1,200[2]	900[2]
Max. Temperature (°C)	125	125	125	125	85	135
Life (h)	2,000/3,000	200	200	4,000	200	1,000
Construction	Radial Plastic Box 2 leads	Radial Plastic Box 2/4 leads				
Power Level (V*I) (kVAr)	13	4	4	5	4	2
Max. dv/dt (V/µs)	11,000	33	90	37	19	40
Harsh Environment 60°C / 95% RH, 1,000h, Vr		•	•	•	•	•
85 C / 85 % RH, 1000h, Vr	•			•[4]	•	•
Industry						

[1] Rated Voltage at 70 °C [2] Rated Voltage at 85 °C [3] R75H/R76H Rated Voltage at 105 °C [4] C4AK uses a new PP mixed material [5] C4AQ-P Tested at 85%Vr

Rev. 05/18/2021

KC-LINK™
DC LINK CAPACITORS

SMD MLCCs

For Fast Switching Semiconductor Applications

Overview

KC-LINK surface mount capacitors are designed to meet the growing demand for fast switching wide bandgap (WBG) semiconductors that operate at higher voltages, temperatures, and frequencies.

Applications

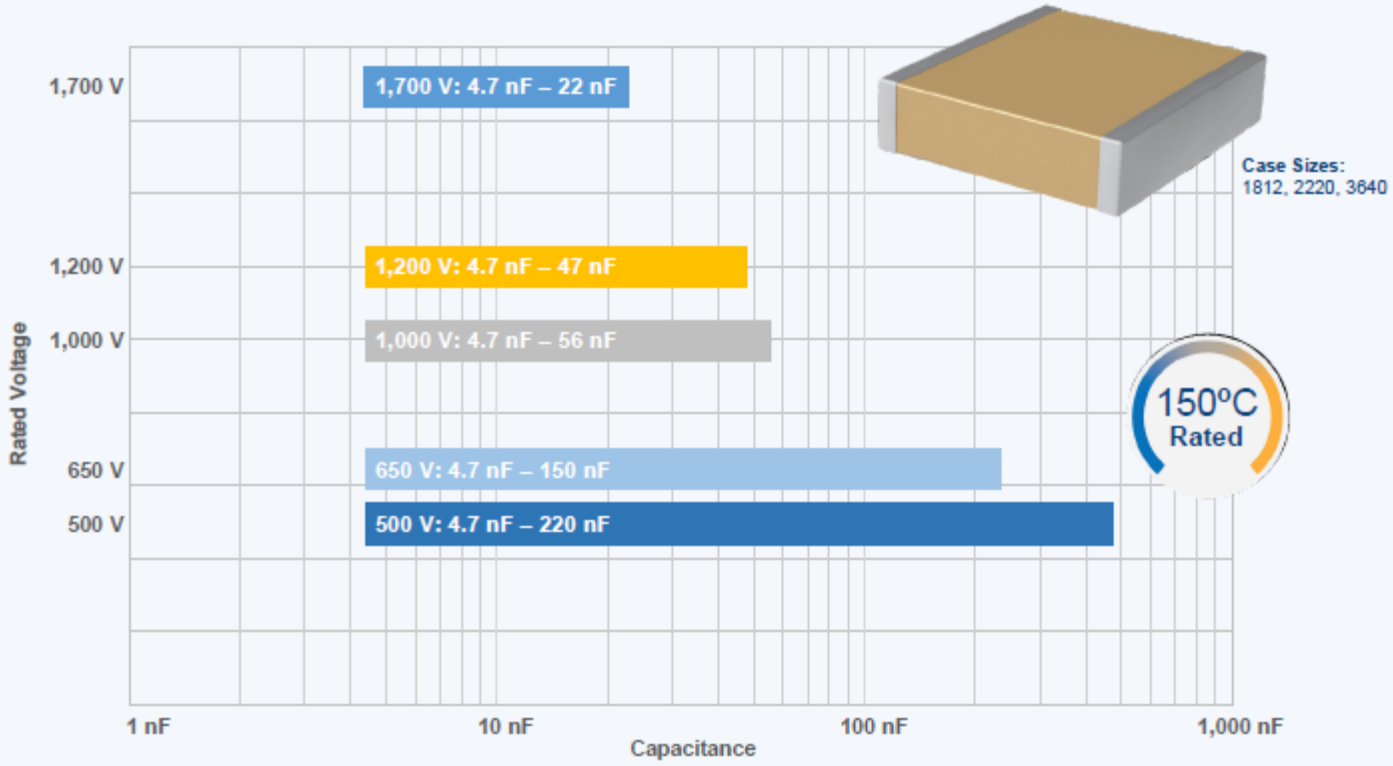
- WBG systems
- EV/HEV
- LLC resonant converters
- DC-LINK
- Snubber
- Resonator

Electrical Characteristics

- Ultra stable across frequency, temperature, and voltage
- Extremely low ESR/ESL (< 1 nH)
- Very high ripple current capability)

Mechanical and Environmental Characteristics

- No lead frame required
- AEC-Q200 qualified
- RoHS and Pb-free



Part Number System

CKC 33 C 224 K C G A C TU

- TU — Packaging
- C — Termination Finish
- A — Subclass Designation
- G — Dielectric
- C — Rated Voltage (V)
- K — Capacitance Tolerance
- 224 — Capacitance Code (pF)
- C — Specification/Series
- 33 — Case Size (L" x W")
- CKC — Series CKC = KC-LINK*

*See catalog part number ordering section

Rated Voltage:
C = 500 V, W = 650 V, D = 1,000 V
E = 1,200 V, J = 1,700 V

Capacitance Tolerance:
F = 1%, G = 2%, J = 5%, K = 10%, M = 20%

Capacitance Code (pF):
Two single digits and number of zeros.

Specification/Series:
C = Standard
X = Flex (for 1812 and 2220 case sizes)

Case Sizes:
18 = 1812, 21 = 2220, 33 = 3640

Available with KEMET KONNEKT™ High Density Packaging

Contact Sales

100 YEARS KEMET ESTABLISHED 1919

Find out more at www.kemet.com/kc-link

630 V Extension

85°C Screw Terminal & Snap-In Capacitors

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Overview

The KEMET ALC70 Snap-In and ALS70/71 Screw Terminal capacitors offer high performance and reliability in a wide range of voltage ratings up to 630 VDC. These series also features high ripple currents and long-life performance. Volumetric efficiency ensures the maximum capacitance and voltage capability in a smaller size.

Features

- Long Life at 85°C (V_R, I_R applied)
  - Up to 18,000 hours (ALC70)
  - Up to 20,000 hours (ALS70/71)
- High ripple current capability
- Excellent surge voltage capability
- High reliability
- Maximum CV in a smaller size
- PET sleeve and Lexan disc are recognized to UL: QMTR2, UL No. E358957
- Optimized designs available upon request

RoHS REACH COMPLIANT HF Halogen Free

Applications

- Inverters
- Motor Drives
- Motor Control
- UPS Systems
- Smoothing
- Energy Storage
- Alternative Energy
- Pulse Operation
- AC Motor Control
- Charging Stations
- Traction
- Power Supplies
- Welding
- HVAC

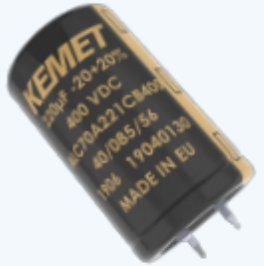
Electrical Characteristics

ALS70/71 Screw Terminal, 85°C

Capacitance: 180 – 1,300,000 µF
Voltage Rating: 25 – **630** VDC
Operating Temperature: -40 to 85°C

ALC70 Snap-In, 85°C

Capacitance: 47 – 150,000 µF
Voltage Rating: 40 – **630** VDC
Operating Temperature: -40 to 85°C



Part Number System

ALS7 0 A 303 DA 025

- ALS7 — Series
- 0 — Stud Option
- A — Termination
- 303 — Capacitance Code
- DA — Size Code
- 025 — Rated Voltage

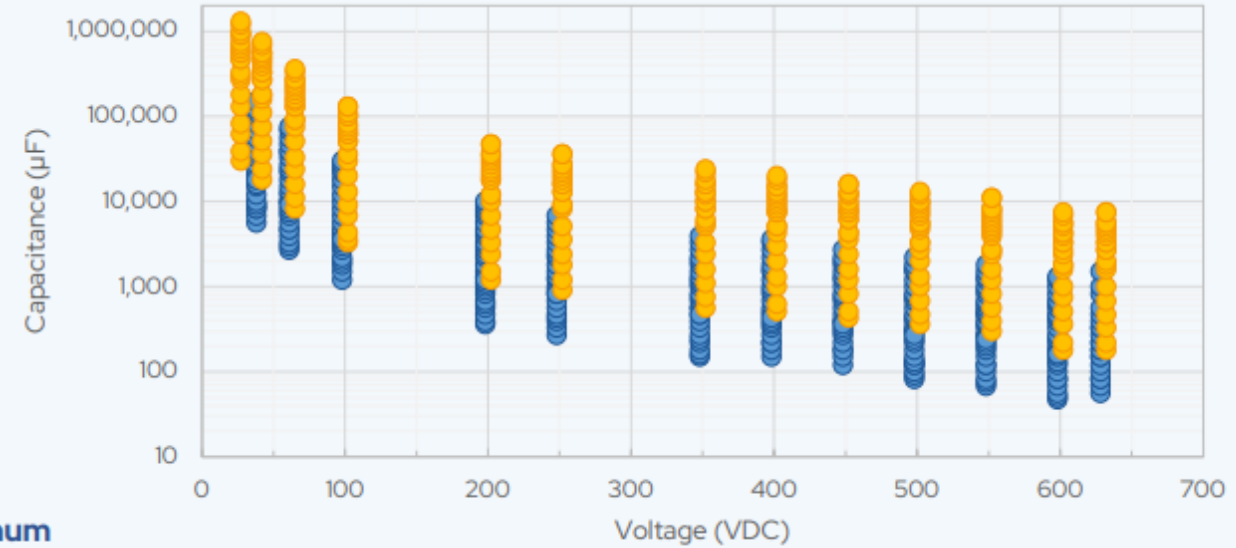
Part Number System

ALC70 A 562 BB 040

- ALC70 — Series
- A — Termination
- 562 — Capacitance Code
- BB — Size Code
- 040 — Rated Voltage

Voltage and Capacitance Offerings

- ALC70
- ALS70/71



Learn more at ec.kemet.com/aluminum

• *Refer to KEMET datasheets for full details*

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PRODUCT SELECTION

AC Filters Film Capacitors

Overview

Metallized Polypropylene Film (MKP)

AC filter capacitors use thin polypropylene film as their dielectric and are found in power converter circuits for filtering harmonic content in the input and output signals, as a voltage modifier in commutation cells, and as PFC capacitors. These capacitors are stable over temperature, frequency and time. They have low dissipation factor, excellent self-healing capability, and long operational lifetimes. The aluminum canister versions are resin impregnated and have overpressure disconnection features for safety.

Device Applications

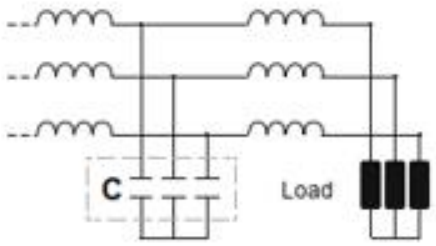
- Inverters
  - Green Energy: Solar and Wind
- Energy Storage, UPS
- Motor Drives
- Welding Machines
- Battery Chargers

Benefits

- Self-healing
- High ripple current
- Low losses
- High reliability
- Optimized AC voltage performance
- Suitable for high frequency applications (SiC and IGBT switching devices)
- Meet AEC-Q200 (C4AF)

Applications

- AC and Harmonic Filtering
- Clamping / Damping Systems
- Power Factor Correction (PFC)



	C4AF	C44H	C44P-R
Min C (µF)	1	100	10
Max C (µF)	210	250	600
Max. Voltage (Vdc)	600	440	1,000
Max. Temperature (°C)	105	75	80
Construction (Plastic or Metal)	Radial Plastic Box 2/4 leads	Metal Canister	Metal Canister
Power Level (kVA)	Low - Medium	Medium - High	High
Overpressure Safety		•	•
Harsh Environment	•		
Industry			

Rev. 02/12/2021

KEMET

CAS SERIES

Ceramic Safety Certified MLCC

Overview

X/Y capacitors are used in mains-connected applications to minimize the amount of conducted EMI common in many electrical devices. Traditionally through hole devices, surface mount X/Y safety-rated capacitors allow for miniaturization of devices without compromising performance

Applications

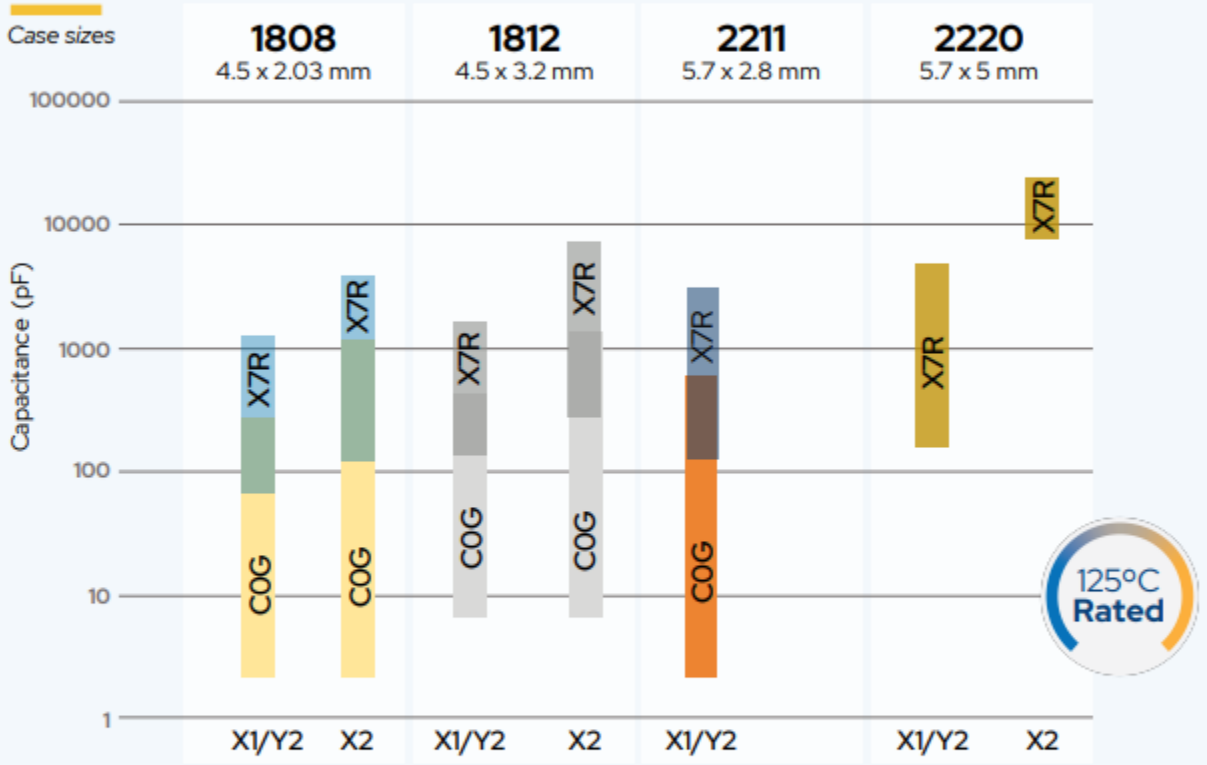
- Line-to-line (Class X) filtering
- Line-to-ground (Class Y) filtering
- Antenna coupling
- Line disturbances suppression

Electrical Characteristics

- 250V AC Operating Voltage
- 5 KV and 2.5 KV Impulse Rated
- 3pF to 22nF (C0G and X7R)
- IEC 60348-14 Certified
- X1/Y2 and X2 Classes

Mechanical and Environmental Characteristics

- Case sizes 1808, 1812, 2211, and 2220
- Reliable operation up to 125°C
- Standard Reflow Soldering profile
- RoHS and Pb-free
- C0G and X7R Dielectrics



Part Number System

CAS 17 C 471 K A G F C

- CAS — Type
- 17 — Case Size (17=1808, 18=1812, 21=2220, 26=2211)
- C — Specification / Series
- 471 — Capacitance Code (pF)
- K — Capacitance Tolerance
- A — AC Rated Voltage
- G — Dielectric
- F — Subclass Designation (F=X1/Y2, G=X2)
- C — Termination Finish

Typical EMI Application