



Press-Fit Aluminum Electrolytic Capacitors

ALF20 & ALF40

Electronic Components
KEMET
CHARGED®

Why Choose KEMET

KEMET Electronics Corporation is a leading global supplier of electronic components. We offer our customers the broadest selection of capacitor technologies in the industry, along with an expanding range of electromechanical devices, electromagnetic compatibility solutions and supercapacitors. Our vision is to be the preferred supplier of electronic component solutions for customers demanding the highest standards of quality, delivery and service.

Features & Benefits

- Eliminates soldering process problems
- Meets BS EN 60352-5:2012
- Compact size
- Reliable electrical contacts
- High ripple current
- Excellent surge voltage capability
- Quick exchange of components

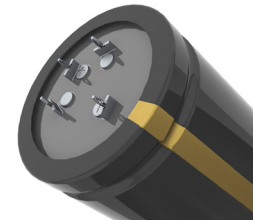
Product Checklist

- Is this a PCB redesign or a new design?
PCB through-holes are smaller and have a tighter tolerance than those used for snap-in terminals.
- What is the pin configuration required?
- What are the operational conditions of your application? Do you have a specification available?
 - What is the applied voltage VDC?
 - What is the operational temperature?
 - What is the applied ripple current spectrum?
 - What life expectancy is required?
 - What are the end-of-life criteria?
- What are the application size constraints?
- Does the application require UL recognized sleeving?

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

Applications

- Uninterruptible power supply (UPS)
- Switch mode power supplies (SMPS)
- Smoothing
- Energy storage
- Demanding power supplies
- Frequency inverters



Electrical/Physical Characteristics

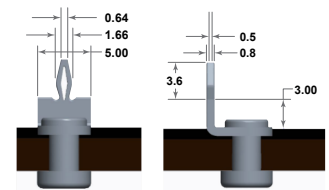
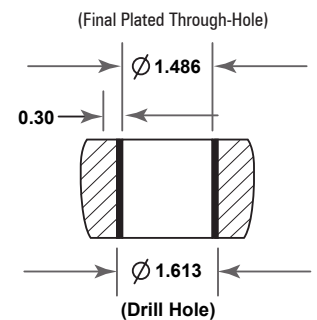
Series	Case Sizes	Tolerances	Dielectric	Temperature Range	Voltage Options	Capacitance Values
ALF20	35, 40, 45, and 50 mm diameter,	±20%	Aluminum Electrolytic	-40°C to +85°C	35 - 600 VDC	150 - 100,000 µF
ALF40	30 to 105 mm length			-40°C to +105°C	25 - 500 VDC	120 - 120,000 µF

Printed Circuit Board (PCB) Requirements

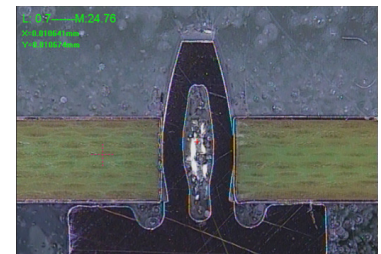
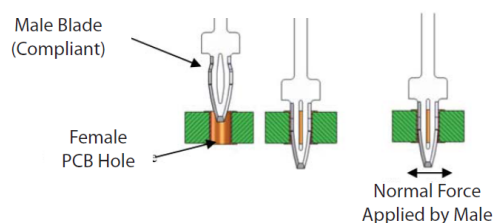
PCB Thickness	1.57 mm minimum
Drill	Ø 1.613 ±0.025 mm
Copper Thickness	0.025 mm minimum
Final Plated Through-Hole Diameter	Ø 1.486 ±0.076 mm
Pin Insertion Force	125 N (28 lbf) maximum
Pin Retention Force	62 N (14 lbf) minimum

Insertion force used in all testing is 100 N per pin: 400 N and 500 N for 4-pin and 5-pin decks respectively.

Material Specification (mm)	
Pin Length	6.6 (5.5 mm protrudes above top rim of can)
Pin Width	1.66
Base Material	Copper alloy C19010
Plating Material	Ni and Sn



Press-Fit Male/Female Interconnects





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FAQs

Are Press-Fit capacitors a drop-in replacement for snap-ins?

No, because the PCB hole size and tolerance are different. Press-Fit capacitors are best used for redesigns or new designs. Avoid problems seen today in the next round of designs.

Are custom versions available?

Custom versions are available to meet a specific CV/size requirement. Please contact KEMET representative.

What is the hole size required in the PCB?

The final plated through-hole diameter is 1.486 ± 0.076 mm, which includes copper-plating of a minimum 0.025 mm thickness. Hole configurations for both 4 and 5 pins can be found in the datasheet.

How is the product assembled to the PCB?

Assembly is accomplished by a simple push fit. No additional process is required.

How is the insertion distance controlled during assembly to the PCB?

Each Press-Fit pin has a shoulder to control the depth of insertion. Pins are correctly inserted when the shoulder contacts the surface of the PCB.

What is the vibration capability when mounted on the board?

KEMET Press-Fit devices are rated to 10 g with the capacitor clamped by the body. The vibration performance of the Press-Fit pins are equal to the performance of soldered snap-in terminals.

Endurance Test DC & Ripple Current: Electrical Qualification Results

2,000 hours ($\varnothing 40 \times 105 \times 4$ pin)

