

# Type MPF, AC Motor Run Capacitors

## Oval and Round, Oil Filled, 70 °C, Metallized Polypropylene Capacitors



[Click here to view hardware](#)

Type MPF AC metallized polypropylene film dielectric capacitors offer a reliable option for alternating current applications. All devices are oil filled in metal cases with 4-prong quick disconnect terminals for easy assembly. These capacitors pack high capacitance and voltage capabilities into a small, light-weight package. The MPF is internally protected for fail-safe operation. These capacitors have extremely low DF that is ideal for AC motor-run applications.

### Highlights

- Low DF
- Protected with a pressure sensitive interrupter
- Small size and light weight
- UL E71645
- CSA 219950
- Air conditioning and refrigeration applications
- Power factor correction
- Motors

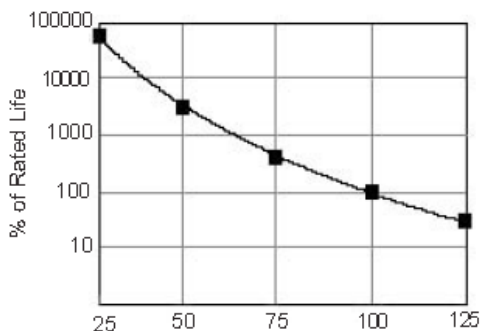
### Specifications

Capacitance Range	1 $\mu$ F to 80 $\mu$ F
Capacitance Tolerance	$\pm$ 10%
Rated Voltage	330 Vac, 370 Vac and 440 Vac
Operating Temperature Range with Ripple	-40 °C to +70 °C
Rated Frequency	50 Hz and 60 Hz
Dissipation Factor	0.1% max @ 60 Hz
RoHS Compliant	

### Service Life Objective

The service life objective for this series is 60,000 hours of operating life with a 94% survival rate when operated at full voltage, 60 Hz, and rated ambient temperature. AC capacitors are frequently used at voltages and ambient temperatures other than rated conditions. Service life may be estimated under specific conditions of temperature and voltage by using the curves as shown below and to the right.

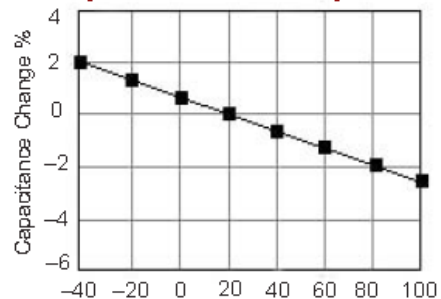
### Life vs. Temperature



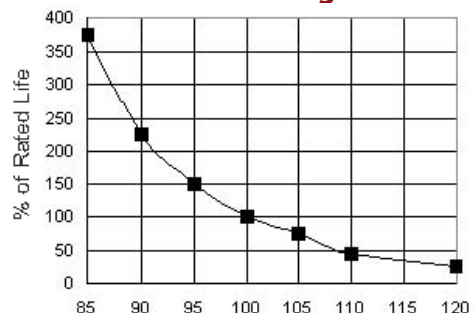
### Capacitance vs. Temperature

The Capacitance vs. Temperature curve may be used to determine the capacitance change as a function of temperature. Capacitance varies by no more than  $\pm$ 3% over the operating temperature range.

### Capacitance vs. Temperature



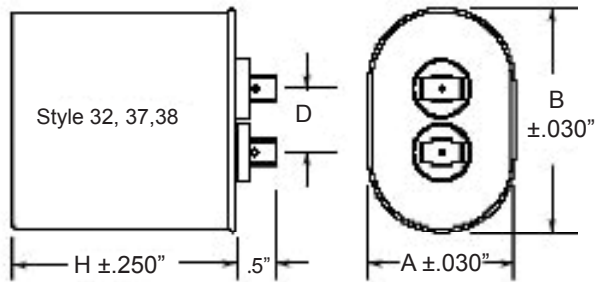
### Life vs. Voltage



# Type MPF, AC Motor Run Capacitors

## Oval and Round, Oil Filled, 70 °C, Metallized Polypropylene Capacitors

### Oval Case Style



See Ratings Table for "H" dimension

Oval				
Style	A	B	D	Industry Type
32	1 5/16"	2 5/32"	13/16"	1¼" Flat Oval
37	1 29/32"	2 29/32"	13/16"	1¼" Flat Oval
38	1 31/32"	3 21/32"	13/16"	2.0" Flat Oval

### Construction Details

Case Material	Aluminum
Encapsulation	Environmentally Safe Dielectric Fluid
Terminal Material	Tin Plated Steel

### Oval Ratings

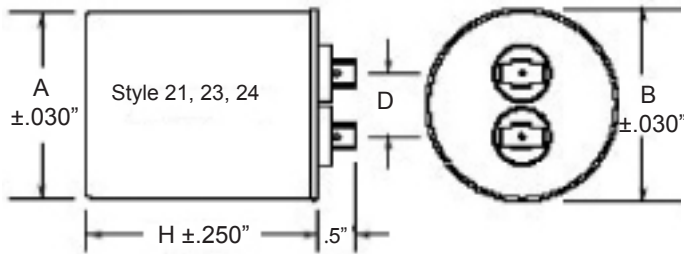
Cap. (µF)	Case Code	Aluminum Catalog Part Number	H (inches)
<b>370V</b>			
1.0	32	32FD3701A-F	2.19
2.0	32	32FD3702A-F	2.19
3.0	32	32FD3703A-F	2.19
4.0	32	32FD3704A-F	2.19
5.0	32	32FD3705A-F	2.19
6.0	32	32FD3706A-F	2.19
7.5	32	32FD37075A-F	2.19
10.0	32	32FD3710A-F	2.88
12.5	32	32FD37125A-F	2.88
12.5	37	37FD37125A-F	2.38
15.0	37	37FD3715A-F	2.38
17.5	37	37FD37175A-F	2.38
20.0	37	37FD3720A-F	2.38
22.5	37	37FD37225A-F	2.38
25.0	37	37FD3725A-F	2.91
27.5	38	38FD37275A-F	2.91
30.0	37	37FD3730A-F	2.91
30.0	38	38FD3730A-F	2.91
35.0	37	37FD3735A-F	3.91
35.0	38	38FD3735A-F	2.91
40.0	37	37FD3740A-F	3.91
40.0	38	38FD3740A-F	2.91
45.0	37	37FD3745A-F	3.91
45.0	38	38FD3745A-F	2.91
50.0	38	38FD3750A-F	2.91
70.0	38	38FD3770A-F	3.91

Cap. (µF)	Case Code	Aluminum Catalog Part Number	H (inches)
<b>440V</b>			
1.0	32	32FB4401A-F	2.19
2.0	32	32FB4402A-F	2.19
3.0	32	32FB4403A-F	2.19
4.0	32	32FB4404A-F	2.19
5.0	32	32FB4405A-F	2.19
6.0	32	32FB4406A-F	2.19
7.5	32	32FB44075A-F	2.88
7.5	37	37FB44075A-F	2.38
10.0	32	32FB4410A-F	2.88
10.0	37	37FB4410A-F	2.38
12.5	37	37FB44125A-F	2.38
15.0	37	37FB4415A-F	2.38
17.5	37	37FB44175A-F	2.91
20.0	37	37FB4420A-F	2.91
20.0	38	38FB4420A-F	2.91
25.0	37	37FB4425A-F	3.91
25.0	38	38FB4425A-F	3.91
30.0	38	38FB4430A-F	3.91
35.0	37	37FB4435A-F	4.75
35.0	38	38FB4435A-F	3.91
40.0	37	37FB4440A-F	4.75
40.0	38	38FB4440A-F	3.91
45.0	38	38FB4445A-F	3.91
50.0	38	38FB4450A-F	3.91
55.0	38	38FB4455A-F	4.75
60.0	38	38FB4460A-F	4.75

# Type MPF, AC Motor Run Capacitors

## Oval and Round, Oil Filled, 70 °C, Metallized Polypropylene Capacitors

### Round Case Style



See Ratings Table for "H" dimension

Round				
Style	A	B	D	Industry Type
21	1¾"	1⅞"	13/16"	1¾" Round
23	2.0"	2⅛"	13/16"	2.0" Round
24	2½"	2⅝"	13/16"	2½" Round

### Construction Details

Case Material	Aluminum
Encapsulation	Environmentally Safe Dielectric Fluid
Terminal Material	Tin Plated Steel

### Round Ratings

Cap. (µF)	Case Code	Aluminum Catalog Part Number	H (inches)
<b>330 V</b>			
3.0	23	23FD3303A-F	2.38
4.0	23	23FD3304A-F	2.38
5.0	23	23FD3305A-F	2.38
6.0	23	23FD3306A-F	2.38
7.0	23	23FD3307A-F	2.38
8.0	23	23FD3308A-F	2.38
10.0	23	23FD3310A-F	2.38
<b>370V</b>			
3.0	21	21FD3703A-F	2.38
4.0	21	21FD3704A-F	2.38
5.0	21	21FD3705A-F	2.38
6.0	21	21FD3706A-F	2.38
7.0	21	21FD3707A-F	2.38
8.0	21	21FD3708A-F	2.38
10.0	21	21FD3710A-F	2.38
12.5	21	21FD37125A-F	2.38
15.0	21	21FD3715A-F	2.38
17.5	21	21FD37175A-F	2.38
20.0	21	21FD3720A-F	2.38
25.0	21	21FD3725A-F	2.84
25.0	23	23FD3725A-F	2.91
30.0	21	21FD3730A-F	2.84
30.0	23	23FD3730A-F	2.91
35.0	21	21FD3735A-F	3.84
35.0	23	23FD3735A-F	2.91
40.0	21	21FD3740A-F	3.84
40.0	23	23FD3740A-F	2.91
45.0	23	23FD3745A-F	3.84
45.0	24	24FD3745A-F	2.91

Cap. (µF)	Case Code	Aluminum Catalog Part Number	H (inches)
<b>370V</b>			
50.0	23	23FD3750A-F	3.84
50.0	24	24FD3750A-F	2.91
55.0	23	23FD3755A-F	3.84
55.0	24	24FD3755A-F	2.91
60.0	23	23FD3760A-F	3.84
60.0	24	24FD3760A-F	2.91
65.0	24	24FD3765A-F	3.91
70.0	24	24FD3770A-F	3.91
80.0	24	24FD3780A-F	4.75
<b>440V</b>			
15.0	21	21FB4415A-F	2.38
20.0	21	21FB4420A-F	2.84
20.0	23	23FB4420A-F	2.91
22.5	21	21FB44225A-F	2.84
22.5	23	23FB44225A-F	2.91
25.0	21	21FB4425A-F	3.84
25.0	23	23FB4425A-F	2.91
30.0	23	23FB4430A-F	3.84
30.0	24	24FB4430A-F	2.91
35.0	23	23FB4435A-F	3.84
35.0	24	24FB4435A-F	2.91
40.0	23	23FB4440A-F	3.84
40.0	24	24FB4440A-F	3.91
45.0	24	24FB4445A-F	3.91
50.0	24	24FB4450A-F	3.91
55.0	24	24FB4455A-F	3.91
60.0	24	24FB4460A-F	4.75
70.0	24	24FB4470A-F	4.75

## Type MPF, AC Motor Run Capacitors

### Oval and Round, Oil Filled, 70 °C, Metallized Polypropylene Capacitors

**Notice and Disclaimer:** All product drawings, descriptions, specifications, statements, information and data (collectively, the "Information") in this datasheet or other publication are subject to change. The customer is responsible for checking, confirming and verifying the extent to which the Information contained in this datasheet or other publication is applicable to an order at the time the order is placed. All Information given herein is believed to be accurate and reliable, but it is presented without any guarantee, warranty, representation or responsibility of any kind, expressed or implied. Statements of suitability for certain applications are based on the knowledge that the Cornell Dubilier company providing such statements ("Cornell Dubilier") has of operating conditions that such Cornell Dubilier company regards as typical for such applications, but are not intended to constitute any guarantee, warranty or representation regarding any such matter – and Cornell Dubilier specifically and expressly disclaims any guarantee, warranty or representation concerning the suitability for a specific customer application, use, storage, transportation, or operating environment. The Information is intended for use only by customers who have the requisite experience and capability to determine the correct products for their application. Any technical advice inferred from this Information or otherwise provided by Cornell Dubilier with reference to the use of any Cornell Dubilier products is given gratis (unless otherwise specified by Cornell Dubilier), and Cornell Dubilier assumes no obligation or liability for the advice given or results obtained. Although Cornell Dubilier strives to apply the most stringent quality and safety standards regarding the design and manufacturing of its products, in light of the current state of the art, isolated component failures may still occur. Accordingly, customer applications which require a high degree of reliability or safety should employ suitable designs or other safeguards (such as installation of protective circuitry or redundancies or other appropriate protective measures) in order to ensure that the failure of an electrical component does not result in a risk of personal injury or property damage. Although all product-related warnings, cautions and notes must be observed, the customer should not assume that all safety measures are indicated in such warnings, cautions and notes, or that other safety measures may not be required.