



**THE DATASHEET OF**  
**21FB4420A-F**



# Type MPF, AC Motor Run Capacitors

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



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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](#)

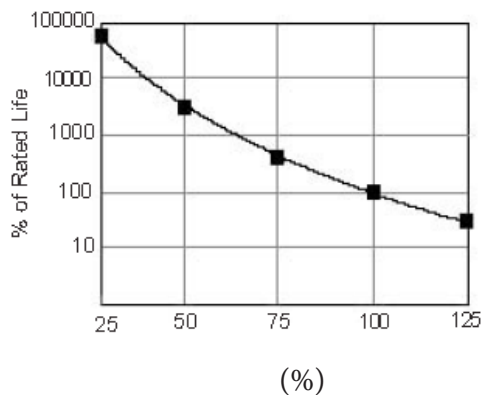
### Service Life Objective

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.

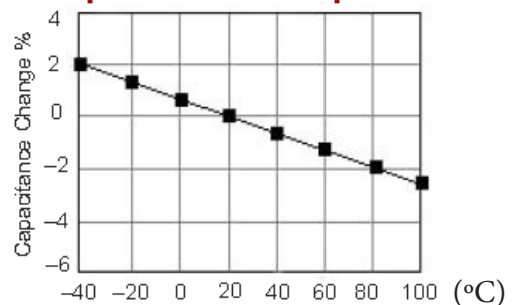
### Capacitance vs. Temperature

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.

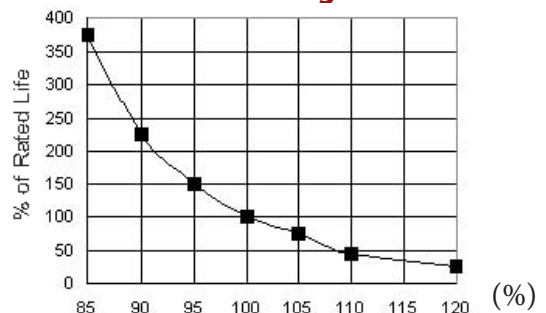
### Life vs. Temperature



### Capacitance vs. Temperature



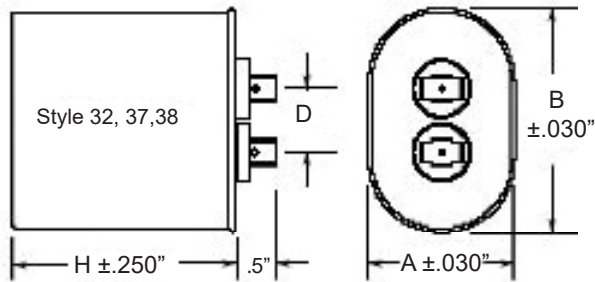
### Life vs. Voltage



# Type MPF, AC Motor Run Capacitors

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### 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

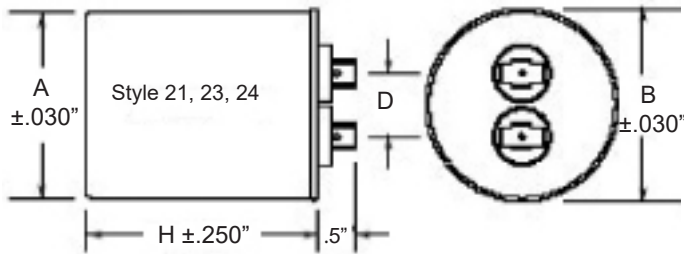
Cap. (µF)	Case Code	Aluminum Catalog Part Number	H (inches)
<b>370V</b>			
1.0	32	32FD3701A-F	2.19
2.0	32	32FD3702A-F	2.19
3.0	32	32FD3703A-F	2.19
4.0	32	32FD3704A-F	2.19
5.0	32	32FD3705A-F	2.19
6.0	32	32FD3706A-F	2.19
7.5	32	32FD37075A-F	2.19
10.0	32	32FD3710A-F	2.88
12.5	32	32FD37125A-F	2.88
12.5	37	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

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### 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



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