### Oil Filled/Impregnated, AC Rated, Metallized Polypropylene Capacitors



#### Click here to view hardware **Specifications**

Type SF, AC rated metallized polypropylene capacitors provide starting torque and power factor correction for split phase motors typically used in refrigeration and air conditioning motorrun applications. Type SF also may be used to provide noise suppression, voltage regulation and line current reduction in power supply applications.

### **Highlights**

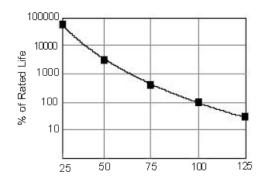
- Self healing
- Fault current protection up to 10,000 amps AFC
- Low energy consumption
- 4 tine, 1/4" quick connect lug terminals are standard
- Meets EIA Standard EIA-456-A
- UL recognized File Number E71645
- CSA File Number 223507

Capacitance Range	5.0 μF to 120.0 μF		
Capacitance Tolerance	±10% standard, ± 6% and ±3% available		
Rated Voltage	240 Vac to 660 Vac		
Operating Temperature Range	–40 °C to 70 °C standard, 90 °C available		
Dissipation Factor	<0.1%		
Service Life Objective	60,000 h with 94% survival rate		
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

400

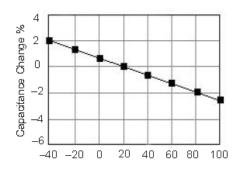
350

300

250

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

## Oil Filled/Impregnated, AC Rated, Metallized Polypropylene Capacitors

### **Part Numbering System**

SF	C	37	T	35	K	291	В	-F
Series	 Case	AC Volt	 Case Material	Cap	 Tol. ±%	 Can Height	VAR	 RoHS
SF	<b>A</b> = 1 1/4" Oval	<b>24</b> = 240 Vac	<b>T</b> = Aluminum	<b>7</b> = 7.0 μF	<b>L</b> = ±3%	<b>238</b> = 2.38"	<b>A</b> = 2 way 70°C	Compliant
	<b>B</b> = 1 1/2 Oval	<b>37</b> = 370 Vac	w/steel cover	<b>35</b> = 35.0 μF	$\mathbf{H} = \pm 6\%$	<b>291</b> = 2.91"	<b>B</b> = 4 way 70 °C	<b>-F</b> = Compliant
	<b>C</b> = 1 3/4" Oval	<b>44</b> = 440 Vac			$K = \pm 10\%$	<b>388</b> = 3.88"	<b>C</b> = 2 way 90 °C	
	<b>D</b> = 2.0" Oval	<b>66</b> = 660 Vac				<b>475</b> = 4.75"	<b>D</b> = 4 way 90 °C	
	<b>P</b> = 1 3/4" Round					<b>488</b> = 4.88"	<b>E</b> = Dual 2,3,4 70 °C	
	<b>S</b> = 2.0" Round						<b>F</b> = Forks 70 °C	
	<b>T</b> = 2 1/2" Round						<b>G</b> = Forks 90 °C	
							<b>H</b> = Forks 100 °C	
							<b>J</b> = Forks, 70 °C Res.	
ptions							<b>K</b> = Forks, 90 °C Res.	
, p o	-						<b>L</b> = Forks 100 °C Res.	

 $\mathbf{Z} = Other$ 

#### Op

Capacitors in aluminum cases with mounting studs, are available upon request.

Tighter capacitance tolerances such as  $\pm 3\%$  or  $\pm 6\%$  are available.

+90 °C ratings are available for HID lighting and power supply applications.

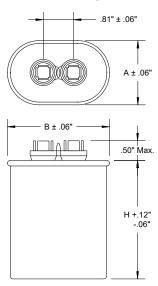
Discharge resistors are available.

Special terminal lugs such as 2 tines plus 1 fork lug are available.

Dual capacitance values are available for 370 Vac and 440 Vac applications.

## Oil Filled/Impregnated, AC Rated, Metallized Polypropylene Capacitors Oval Ratings

#### **Oval Case Style\***



	Dimensions (Inches)			
Case Code	Α	В	Н	
Α	1.31	2.16		
В	1.56	2.69	See Ratings Table	
C	1.91	2.91		
D	1.97	3.66		

Construction Details			
Case Material	Aluminum		
Encapsulation	Enviromentally Safe Dielectric Fluid		
Terminal Material	Tin Plated Steel		

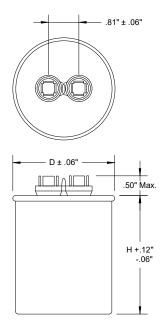
\*Note: The capacitor's safety pressure interrupter is designed to disconnect the capacitor element as the cover expands upward due to gas pressure build up. Catastrophic failure may result if movement of the cover and or terminals are restricted. Rigid bus bars are not recommended as they may restrict movement of the cover or terminals. Customers are advised to provide at least 0.5" clearance above the cover to allow for its expansion.

Cap.	Case	Aluminum Catalog	Н
(μF)	Code	Part Number	(in)
· ·		240V	
4.0	Α	SFA24T4K219B-F	2.19
5.0	Α	SFA24T5K219B-F	2.19
6.0	Α	SFA24T6K219B-F	2.19
7.5	Α	SFA24T7.5K219B-F	2.19
10.0	Α	SFA24T10K219B-F	2.19
15.0	Α	SFA24T15K288B-F	2.88
20.0	Α	SFA24T20K288B-F	2.88
25.0	C	SFC24T25K291B-F	2.91
30.0	C	SFC24T30K291B-F	2.91
35.0	C	SFC24T35K291B-F	2.91
40.0	С	SFC24T40K291B-F	2.91
45.0	C	SFC24T45K291B-F	2.91
50.0	C	SFC24T50K291B-F	2.91
60.0	C	SFC24T60K391B-F	3.91
70.0	C	SFC24T70K391B-F	3.91
		370V	
2.0	Α	SFA37T2K219B-F	2.19
2.0	Α	SFA37T2K156B-F	1.56
3.0	Α	SFA37T3K219B-F	2.19
3.0	Α	SFA37T3K156B-F	1.56
4.0	Α	SFA37T4K219B-F	2.19
4.0	Α	SFA37T4K156B-F	1.56
5.0	Α	SFA37T5K219B-F	2.19
5.0	Α	SFA37T5K156B-F	1.56
6.0	Α	SFA37T6K219B-F	2.19
6.0	Α	SFA37T6K156B-F	1.56
7.5	Α	SFA37T7.5K219B-F	2.19
10.0	Α	SFA37T10K288B-F	2.88
12.5	Α	SFA37T12.5K288B-F	2.88
15.0	Α	SFA37T15K288B-F	2.88
17.5	C	SFC37T17.5K291B-F	2.91
20.0	C	SFC37T20K291B-F	2.91
20.0	Α	SFA37T20K388B-F	3.88
25.0	C	SFC37T25K291B-F	2.91
30.0	C	SFC37T30K291B-F	2.91
35.0	C	SFC37T35K291B-F	2.91
40.0	C	SFC37T40K391B-F	3.91
45.0	С	SFC37T45K391B-F	3.91
50.0	С	SFC37T50K391B-F	3.91
440V			
2.0	Α	SFA44T2K219B-F	2.19
2.0	Α	SFA44T2K156B-F	1.56

Cap.	Case	Aluminum Catalog	н
(μ <b>F</b> )	Code	Part Number	(in)
		440V	
3.0	Α	SFA44T3K219B-F	2.19
3.0	Α	SFA44T3K156B-F	1.56
4.0	Α	SFA44T4K219B-F	2.19
4.0	Α	SFA44T4K156B-F	1.56
5.0	Α	SFA44T5K219B-F	2.19
6.0	Α	SFA44T6K288B-F	2.88
7.5	Α	SFA44T7.5K288B-F	2.88
10.0	Α	SFA44T10K388B-F	3.88
12.5	Α	SFA44T12.5K388B-F	3.88
12.5	C	SFC44T12.5K291B-F	2.91
15.0	Α	SFA44T15K388B-F	3.88
15.0	C	SFC44T15K291B-F	2.91
17.5	C	SFC44T17.5K291B-F	2.91
20.0	C	SFC44T20K391B-F	3.91
25.0	C	SFC44T25K391B-F	3.91
30.0	С	SFC44T30K391B-F	3.91
35.0	D	SFD44T35K391B-F	3.91
40.0	D	SFD44T40K391B-F	3.91
45.0	D	SFD44T45K391B-F	3.91
50.0	D	SFD44T50K391B-F	3.91
55.0	D	SFD44T55K391B-F	3.91
60.0	D	SFD44T60K391B-F	3.91
		660V	
1.0	Α	SFA66T1K156B-F	1.56
1.0	Α	SFA66T1K219B-F	2.19
2.0	Α	SFA66T2K156B-F	1.56
2.0	Α	SFA66T2K219B-F	2.19
3.0	Α	SFA66T3K288B-F	2.88
4.0	Α	SFA66T4K288B-F	2.88
5.0	Α	SFA66T5K388B-F	3.88
6.0	Α	SFA66T6K388B-F	3.88
8.0	Α	SFA66T8K475B-F	4.75
8.0	С	SFC66T8K291B-F	2.91
10.0	Α	SFA66T10K475B-F	4.75
10.0	C	SFC66T10K291B-F	2.91
12.0	C	SFC66T12K391B-F	3.91
15.0	C	SFC66T15K391B-F	3.91
18.0	С	SFC66T18K391B-F	3.91
20.0	D	SFD66T20K391B-F	3.91
25.0	D	SFD66T25K391B-F	3.91
30.0	D	SFD66T30K391B-F	3.91
35.0	D	SFD66T35K475B-F	4.75
40.0	D	SFD66T40K475B-F	4.75

# Oil Filled/Impregnated, AC Rated, Metallized Polypropylene Capacitors Round Ratings

#### **Round Case Style**



Case	D	
Code	(Inches)	H
P	1.87	6 D.: T.I.
S	2.12	See Ratings Table
Т	2.62	

Construction Details			
Case Material	Aluminum		
Encapsulation	Enviromentally Safe Dielectric Fluid		
Terminal Material	Tin Plated Steel		

Note: The capacitor's safety pressure interrupter is designed to disconnect the capacitor element as the cover expands upward due to gas pressure build up. Catastrophic failure may result if movement of the cover and or terminals are restricted. Rigid bus bars are not recommended as they may restrict movement of the cover or terminals. Customers are advised to provide at least 0.5" clearance above the cover to allow for its expansion.

Cap.	Case	Aluminum Catalog	н
(μ <b>F</b> )	Code	<b>Part Number</b>	(in)
		370V	
2.0	Р	SFP37T2K238B-F	2.38
3.0	Р	SFP37T3K238B-F	2.38
4.0	Р	SFP37T4K238B-F	2.38
5.0	Р	SFP37T5K238B-F	2.38
6.0	Р	SFP37T6K238B-F	2.38
7.5	Р	SFP37T7.5K238B-F	2.38
10.0	Р	SFP37T10K238B-F	2.38
12.5	Р	SFP37T12.5K238B-F	2.38
15.0	Р	SFP37T15K238B-F	2.38
17.5	Р	SFP37T17.5K238B-F	2.38
20.0	Р	SFP37T20K238B-F	2.38
25.0	Р	SFP37T25K284B-F	2.84
30.0	Р	SFP37T30K284B-F	2.84
35.0	S	SFS37T35K291B-F	2.91
40.0	S	SFS37T40K291B-F	2.91
45.0	S	SFS37T45K384B-F	3.84
50.0	S	SFS37T50K384B-F	3.84
55.0	S	SFS37T55K384B-F	3.84
60.0	Т	SFT37T60K291B-F	2.91
65.0	Т	SFT37T65K291B-F	2.91
70.0	Т	SFT37T70K291B-F	2.91
75.0	Т	SFT37T75K391B-F	3.91
80.0	Т	SFT37T80K391B-F	3.91
90.0	Т	SFT37T90K475B-F	4.75
100.0	Т	SFT37T100K475B-F	4.75
		440V	
2.0	Р	SFP44T2K238B-F	2.38
3.0	Р	SFP44T3K238B-F	2.38
4.0	Р	SFP44T4K238B-F	2.38

Cap.	Case	Aluminum Catalog	Н	
(μ <b>F</b> )	Code	Part Number	(in)	
		440V		
5.0	Р	SFP44T5K238B-F	2.38	
6.0	Р	SFP44T6K238B-F	2.38	
7.5	Р	SFP44T7.5K238B-F	2.38	
10.0	Р	SFP44T10K238B-F	2.38	
12.5	Р	SFP44T12.5K238B-F	2.38	
15.0	Р	SFP44T15K284B-F	2.84	
17.5	Р	SFP44T17.5K284B-F	2.84	
20.0	Р	SFP44T20K284B-F	2.84	
25.0	S	SFS44T25K291B-F	2.91	
30.0	S	SFS44T30K291B-F	2.91	
35.0	Т	SFT44T35K291B-F	2.91	
40.0	Т	SFT44T40K391B-F	3.91	
45.0	Т	SFT44T45K391B-F	3.91	
50.0	Т	SFT44T50K391B-F	3.91	
55.0	Т	SFT44T55K391B-F	3.91	
60.0	Т	SFT44T60K475B-F	4.75	
660V				
2.0	Р	SFP66T2K238B-F	2.38	
3.0	Р	SFP66T3K238B-F	2.38	
5.0	Р	SFP66T5K238B-F	2.38	
7.5	Р	SFP66T7.5K284B-F	2.84	
10.0	Р	SFP66T10K284B-F	2.84	
12.5	S	SFS66T12.5K291B-F	2.91	
15.0	S	SFS66T15K384B-F	3.84	
17.5	Т	SFT66T17.5K391B-F	3.91	
20.0	Т	SFT66T20K391B-F	3.91	
25.0	Т	SFT66T25K475B-F	4.75	
30.0	Т	SFT66T30K475B-F	4.75	
35.0	Т	SFT66T35K475B-F	4.75	
40.0	Т	SFT66T40K475B-F	4.75	

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