Type SF Motor-Run and Power Supply Capacitors Oil Filled/Impregnated, AC Rated, Metallized Polypropylene Capacitors



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
- Click here to view hardware CSA File Number 223507

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Capacitance Range	5.0 μF to 120.0 μF			
Capacitance Tolerance	$\pm 10\%$ standard, \pm 6% and $\pm 3\%$ 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

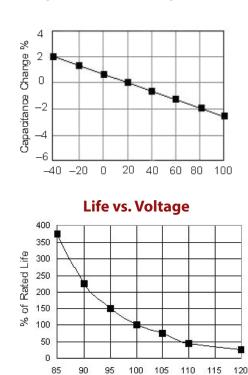
Specifications

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.

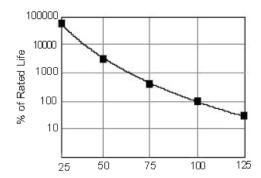
Capacitance vs. Temperature

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.

Capacitance vs. Temperature







Type SF Motor-Run and Power Supply Capacitors Oil Filled/Impregnated, AC Rated, Metallized Polypropylene Capacitors

Part Numbering System

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

K = Forks, 90 °C Res.

L = Forks 100 °C Res.

Z = Other

Options

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.

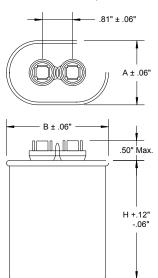
Discharge resistors are available.

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.

Type SF Motor-Run and Power Supply Capacitors Oil Filled/Impregnated, AC Rated, Metallized Polypropylene Capacitors Oval Ratings

Oval Case Style*



	Dimensions (Inches)					
Case Code	A B H					
Α	1.31	2.16				
В	1.56	2.69	See Ratings Table			
с	1.91	2.91				
D	1.97	3.66				

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

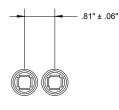
*Note: The capacitor's safety pressure interrupter is designed to disconnect the capacitor element as the cover expands upward due to gas pressure build up. Catastrophic failure may result if movement of the cover and or terminals are restricted. Rigid bus bars are not recommended as they may restrict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

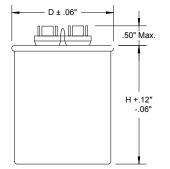
Cap.	Case	Aluminum Catalog	н		Cap.	C
(µF)	Code	Part Number	(in)		(µF)	C
		240V				
4.0	А	SFA24T4K219B-F	2.19		3.0	
5.0	А	SFA24T5K219B-F	2.19		3.0	
6.0	А	SFA24T6K219B-F	2.19		4.0	
7.5	А	SFA24T7.5K219B-F	2.19		4.0	
10.0	А	SFA24T10K219B-F	2.19		5.0	
15.0	А	SFA24T15K288B-F	2.88		6.0	
20.0	А	SFA24T20K288B-F	2.88		7.5	
25.0	С	SFC24T25K291B-F	2.91		10.0	
30.0	С	SFC24T30K291B-F	2.91		12.5	
35.0	С	SFC24T35K291B-F	2.91		12.5	
40.0	С	SFC24T40K291B-F	2.91		15.0	
45.0	С	SFC24T45K291B-F	2.91		15.0	
50.0	С	SFC24T50K291B-F	2.91		17.5	
60.0	С	SFC24T60K391B-F	3.91		20.0	
70.0	С	SFC24T70K391B-F	3.91		25.0	
		370V			30.0	
2.0	А	SFA37T2K219B-F	2.19		35.0	
2.0	А	SFA37T2K156B-F	1.56		40.0	
3.0	А	SFA37T3K219B-F	2.19		45.0	
3.0	А	SFA37T3K156B-F	1.56		50.0	
4.0	А	SFA37T4K219B-F	2.19		55.0	
4.0	А	SFA37T4K156B-F	1.56		60.0	
5.0	А	SFA37T5K219B-F	2.19			
5.0	А	SFA37T5K156B-F	1.56		1.0	
6.0	А	SFA37T6K219B-F	2.19		1.0	
6.0	А	SFA37T6K156B-F	1.56		2.0	
7.5	А	SFA37T7.5K219B-F	2.19		2.0	
10.0	А	SFA37T10K288B-F	2.88		3.0	
12.5	А	SFA37T12.5K288B-F	2.88	[4.0	
15.0	А	SFA37T15K288B-F	2.88		5.0	
17.5	С	SFC37T17.5K291B-F	2.91		6.0	
20.0	С	SFC37T20K291B-F	2.91		8.0	
20.0	А	SFA37T20K388B-F	3.88		8.0	
25.0	С	SFC37T25K291B-F	2.91	[10.0	
30.0	С	SFC37T30K291B-F	2.91		10.0	
35.0	С	SFC37T35K291B-F	2.91		12.0	
40.0	С	SFC37T40K391B-F	3.91		15.0	
45.0	С	SFC37T45K391B-F	3.91		18.0	
50.0	С	SFC37T50K391B-F	3.91		20.0	
		440V			25.0	
2.0	А	SFA44T2K219B-F	2.19		30.0	
2.0	А	SFA44T2K156B-F	1.56		35.0	
				'		

Cap.	Case	Aluminum Catalog	н			
(μF)	Code	Part Number	(in)			
440V						
3.0	Α	SFA44T3K219B-F	2.19			
3.0	А	SFA44T3K156B-F	1.56			
4.0	А	SFA44T4K219B-F	2.19			
4.0	А	SFA44T4K156B-F	1.56			
5.0	А	SFA44T5K219B-F	2.19			
6.0	Α	SFA44T6K288B-F	2.88			
7.5	А	SFA44T7.5K288B-F	2.88			
10.0	А	SFA44T10K388B-F	3.88			
12.5	А	SFA44T12.5K388B-F	3.88			
12.5	С	SFC44T12.5K291B-F	2.91			
15.0	А	SFA44T15K388B-F	3.88			
15.0	С	SFC44T15K291B-F	2.91			
17.5	С	SFC44T17.5K291B-F	2.91			
20.0	С	SFC44T20K391B-F	3.91			
25.0	С	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	А	SFA66T1K156B-F	1.56			
1.0	А	SFA66T1K219B-F	2.19			
2.0	А	SFA66T2K156B-F	1.56			
2.0	А	SFA66T2K219B-F	2.19			
3.0	А	SFA66T3K288B-F	2.88			
4.0	А	SFA66T4K288B-F	2.88			
5.0	А	SFA66T5K388B-F	3.88			
6.0	А	SFA66T6K388B-F	3.88			
8.0	А	SFA66T8K475B-F	4.75			
8.0	С	SFC66T8K291B-F	2.91			
10.0	А	SFA66T10K475B-F	4.75			
10.0	С	SFC66T10K291B-F	2.91			
12.0	С	SFC66T12K391B-F	3.91			
15.0	С	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			

Type SF Motor-Run and Power Supply Capacitors Oil Filled/Impregnated, AC Rated, Metallized Polypropylene Capacitors Round Ratings

Round Case Style





Case	D		
Code	(Inches)	Н	
Р	1.87		
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
(μF)	Code	Part Number	(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
(μF)	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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