

# Type SF Dual, Round & Oval, Oil-Filled Motor Run Capacitors

## Metallized Polypropylene



Type SF dual rated oil filled motor run capacitors made with self-healing metallized polypropylene film are commonly used in air conditioning, motors and compressor applications. The dual ratings in a single can provide two capacitors - one may be used as a fan capacitor and the other as a compressor or motor run capacitor. Three terminals allow one terminal to act as a common while the other two are connected to the individual capacitors.

### Highlights

- Fault current protection up to 10,000 A
- Low energy consumption — <0.1% DF
- Self healing
- UL recognized under E71645
- Meets EIA Standard EIA-456-A
- 60,000 hours life

### Specifications [Click here to view hardware](#)

Capacitance Range	15–5 $\mu$ F to 80–10 $\mu$ F
Capacitance Tolerance	$\pm$ 10% standard ( $\pm$ 6% and $\pm$ 3% available)
Rated Voltage	370 Vac and 440 Vac
Operating Temperature Range with Ripple	-40 °C to 70 °C
<b>RoHS Compliant</b>	

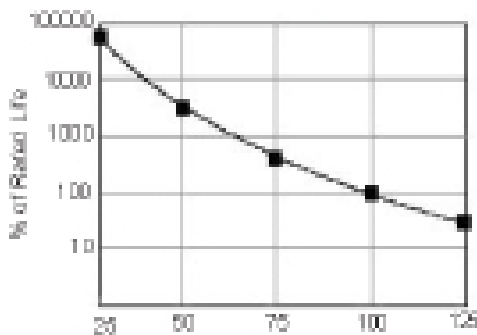
### Service Life Objective

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.

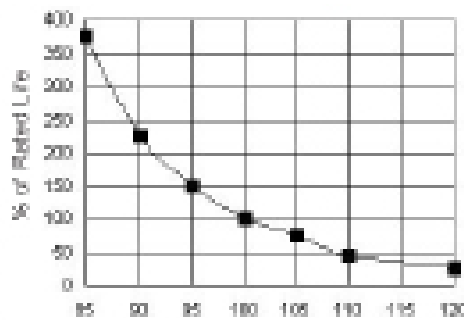
### Capacitance vs. Temperature

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.

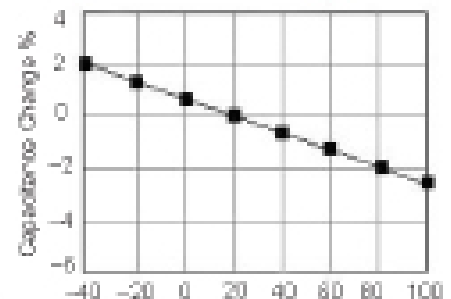
Life vs. Temperature



Life vs. Voltage



Capacitance vs. Temperature



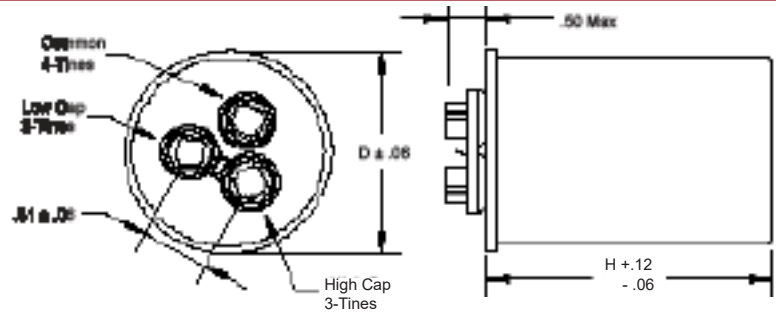
### Part Numbering System

SF	C	37	T	15-5	K	291	E	-F
Type	Case	AC Volt	Case Material	Cap	Tol. $\pm$ %	Can Height	VAR	RoHS
SF	C = 1 3/4" Oval D = 2.0" Oval S = 2.0" Round T = 2 1/2" Round	37 = 370 Vac 44 = 440 Vac X = Other	T = Aluminum w/steel cover	15-5 = 15-5 $\mu$ F 30-20 = 30-20 $\mu$ F 50-7.5 = 50-7.5 $\mu$ F	L = $\pm$ 3% H = $\pm$ 6% K = $\pm$ 10% Z = +10 -5% X = Special	300 = 3.00" 388 = 3.88" 400 = 4.00" 475 = 4.75"	E = Dual 2,3,4 70 °C Z = Other	<b>Compliant</b> -F = Compliant

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## Type SF Dual Round

Case Code	D (Inches)	H
S	2.12	See Ratings Table
T	2.62	See Ratings Table



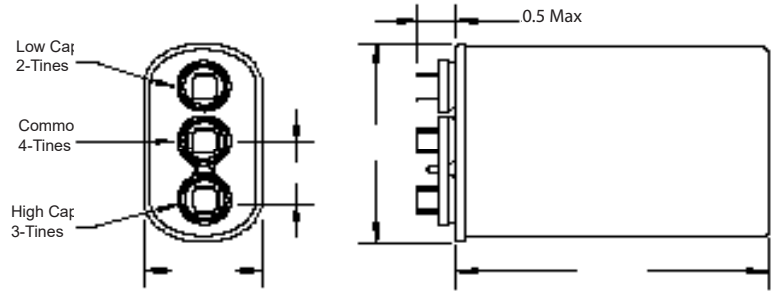
## Ratings

Cap (μF-μF)	Case Code	Aluminum Catalog Part Number	H (in)	Cap (μF-μF)	Case Code	Aluminum Catalog Part Number	H (in)
<b>370V</b>				<b>440V</b>			
15-5	S	SFS37T15-5K291E-F	2.91	15-5	S	SFS44T15-5K291E-F	2.91
15-10	S	SFS37T15-10K291E-F	2.91	15-10	S	SFS44T15-10K291E-F	2.91
20-5	S	SFS37T20-5K291E-F	2.91	20-5	S	SFS44T20-5K291E-F	2.91
20-7.5	S	SFS37T20-7.5K291E-F	2.91	20-7.5	S	SFS44T20-7.5K291E-F	2.91
20-10	S	SFS37T20-10K291E-F	2.91	20-10	S	SFS44T20-10K291E-F	2.91
25-5	S	SFS37T25-5K291E-F	2.91	25-5	S	SFS44T25-5K291E-F	2.91
25-7.5	S	SFS37T25-7.5K291E-F	2.91	25-7.5	S	SFS44T25-7.5K384E-F	3.84
25-10	S	SFS37T25-10K291E-F	2.91	25-10	S	SFS44T25-10K384E-F	3.84
25-15	S	SFS37T25-15K384E-F	3.84	25-15	S	SFS44T25-15K384E-F	3.84
30-5	S	SFS37T30-5K291E-F	2.91	30-5	S	SFS44T30-5K384E-F	3.84
30-7.5	S	SFS37T30-7.5K384E-F	3.84	30-7.5	S	SFS44T30-7.5K384E-F	3.84
30-10	S	SFS37T30-10K384E-F	3.84	30-10	S	SFS44T30-10K384E-F	3.84
30-15	S	SFS37T30-15K384E-F	3.84	30-15	S	SFS44T30-15K475E-F	4.75
30-20	S	SFS37T30-20K384E-F	3.84	30-20	S	SFS44T30-20K475E-F	4.75
35-5	S	SFS37T35-5K384E-F	3.84	35-5	S	SFS44T35-5K384E-F	3.84
35-7.5	S	SFS37T35-7.5K384E-F	3.84	35-7.5	T	SFT44T35-7.5K291E-F	2.91
35-10	S	SFS37T35-10K384E-F	3.84	35-10	T	SFT44T35-10K291E-F	2.91
35-15	S	SFS37T35-15K384E-F	3.84	35-15	T	SFT44T35-15K291E-F	2.91
35-20	S	SFS37T35-20K475E-F	4.75	35-20	T	SFT44T35-20K391E-F	3.91
40-5	S	SFS37T40-5K384E-F	3.84	40-5	T	SFT44T40-5K291E-F	2.91
40-7.5	S	SFS37T40-7.5K384E-F	3.84	40-7.5	T	SFT44T40-7.5K291E-F	2.91
40-10	S	SFS37T40-10K384E-F	3.84	40-10	T	SFT44T40-10K291E-F	2.91
40-15	S	SFS37T40-15K475E-F	4.75	40-15	T	SFT44T40-15K391E-F	3.91
45-5	S	SFS37T45-5K384E-F	3.84	45-5	T	SFT44T45-5K291E-F	2.91
45-7.5	S	SFS37T45-7.5K384E-F	3.84	45-7.5	T	SFT44T45-7.5K291E-F	2.91
45-10	S	SFS37T45-10K475E-F	4.75	45-10	T	SFT44T45-10K391E-F	3.91
45-15	S	SFS37T45-15K475E-F	4.75	45-15	T	SFT44T45-15K391E-F	3.91
50-5	T	SFT37T50-5K291E-F	2.91	50-5	T	SFT44T50-5K391E-F	3.91
50-7.5	T	SFT37T50-7.5K291E-F	2.91	50-7.5	T	SFT44T50-7.5K391E-F	3.91
50-10	T	SFT37T50-10K291E-F	2.91	50-10	T	SFT44T50-10K391E-F	3.91
60-5	T	SFT37T60-5K291E-F	2.91	60-5	T	SFT44T60-5K391E-F	3.91
60-7.5	T	SFT37T60-7.5K291E-F	2.91	60-7.5	T	SFT44T60-7.5K391E-F	3.91
60-10	T	SFT37T60-10K291E-F	2.91	60-10	T	SFT44T60-10K391E-F	3.91
70-5	T	SFT37T70-5K391E-F	3.91				
70-7.5	T	SFT37T70-7.5K391E-F	3.91				
70-10	T	SFT37T70-10K391E-F	3.91				
80-5	T	SFT37T80-5K391E-F	3.91				
80-7.5	T	SFT37T80-7.5K391E-F	3.91				
80-10	T	SFT37T80-10K391E-F	3.91				

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## Type SF Dual Oval

Case Code	Dimensions (Inches)		
	A	B	H
C	1.91	2.91	See Ratings Table
D	1.97	3.66	See Ratings Table



## Ratings

Cap (μF-μF)	Case Code	Aluminum Catalog Part Number	H (in)
<b>370V</b>			
15-5	C	SFC37T15-5K291E-F	2.91
15-10	C	SFC37T15-10K291E-F	2.91
20-5	C	SFC37T20-5K291E-F	2.91
20-7.5	C	SFC37T20-7.5K291E-F	2.91
20-10	C	SFC37T20-10K291E-F	2.91
25-5	C	SFC37T25-5K291E-F	2.91
25-7.5	C	SFC37T25-7.5K291E-F	2.91
25-10	C	SFC37T25-10K291E-F	2.91
25-15	C	SFC37T25-15K391E-F	3.91
30-5	C	SFC37T30-5K391E-F	3.91
30-7.5	C	SFC37T30-7.5K391E-F	3.91
30-10	C	SFC37T30-10K391E-F	3.91
30-15	C	SFC37T30-15K391E-F	3.91
30-20	C	SFC37T30-20K391E-F	3.91
35-5	C	SFC37T35-5K391E-F	3.91
35-7.5	C	SFC37T35-7.5K391E-F	3.91
35-10	C	SFC37T35-10K391E-F	3.91
35-15	C	SFC37T35-15K391E-F	3.91
35-20	C	SFC37T35-20K391E-F	3.91
40-5	C	SFC37T40-5K391E-F	3.91
40-7.5	C	SFC37T40-7.5K391E-F	3.91
40-10	C	SFC37T40-10K391E-F	3.91
40-15	D	SFD37T40-15K391E-F	3.91
45-5	D	SFD37T45-5K391E-F	3.91
45-7.5	D	SFD37T45-7.5K391E-F	3.91
45-10	D	SFD37T45-10K391E-F	3.91
45-15	D	SFD37T45-15K391E-F	3.91
50-5	D	SFD37T50-5K391E-F	3.91
50-7.5	D	SFD37T50-7.5K391E-F	3.91
50-10	D	SFD37T50-10K391E-F	3.91
60-5	D	SFD37T60-5K475E-F	4.75
60-7.5	D	SFD37T60-7.5K475E-F	4.75
60-10	D	SFD37T60-10K475E-F	4.75
70-5	D	SFD37T70-5K475E-F	4.75
70-7.5	D	SFD37T70-7.5K475E-F	4.75
70-10	D	SFD37T70-10K475E-F	4.75
80-5	D	SFD37T80-5K475E-F	4.75
80-7.5	D	SFD37T80-7.5K475E-F	4.75
80-10	D	SFD37T80-10K475E-F	4.75

Cap (μF-μF)	Case Code	Aluminum Catalog Part Number	H (in)
<b>440V</b>			
15-5	C	SFC44T15-5K291E-F	2.91
15-10	C	SFC44T15-10K291E-F	2.91
20-5	C	SFC44T20-5K291E-F	2.91
20-7.5	C	SFC44T20-7.5K291E-F	2.91
20-10	C	SFC44T20-10K291E-F	2.91
25-5	C	SFC44T25-5K391E-F	3.91
25-7.5	C	SFC44T25-7.5K391E-F	3.91
25-10	C	SFC44T25-10K391E-F	3.91
25-15	C	SFC44T25-15K391E-F	3.91
30-5	C	SFC44T30-5K391E-F	3.91
30-7.5	C	SFC44T30-7.5K391E-F	3.91
30-10	C	SFC44T30-10K391E-F	3.91
30-15	C	SFC44T30-15K391E-F	3.91
30-20	C	SFC44T30-20K391E-F	3.91
35-5	C	SFC44T35-5K475E-F	4.75
35-7.5	C	SFC44T35-7.5K475E-F	4.75
35-10	C	SFC44T35-10K475E-F	4.75
35-15	C	SFC44T35-15K475E-F	4.75
35-20	C	SFC44T35-20K475E-F	4.75
40-5	D	SFD44T40-5K475E-F	4.75
40-7.5	D	SFD44T40-7.5K475E-F	4.75
40-10	D	SFD44T40-10K475E-F	4.75
40-15	D	SFD44T40-15K475E-F	4.75
45-5	D	SFD44T45-5K475E-F	4.75
45-7.5	D	SFD44T45-7.5K475E-F	4.75
45-10	D	SFD44T45-10K475E-F	4.75
45-15	D	SFD44T45-15K475E-F	4.75
50-5	D	SFD44T50-5K475E-F	4.75
50-7.5	D	SFD44T50-7.5K475E-F	4.75
50-10	D	SFD44T50-10K475E-F	4.75
60-5	D	SFD44T60-5K616E-F	6.16
60-7.5	D	SFD44T60-7.5K616E-F	6.16
60-10	D	SFD44T60-10K616E-F	6.16

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