

# 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. The service life objective for the 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 below.

### 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

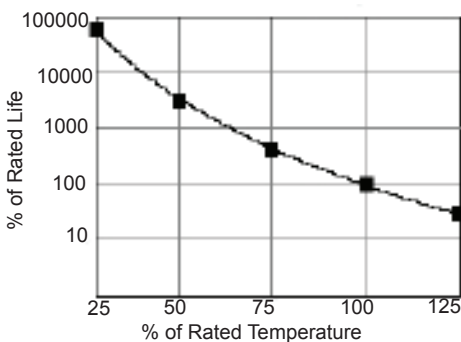


Complies with the EU Directive 2002/95/EC requirement restricting the use of Lead (Pb), Mercury (Hg), Cadmium (Cd), Hexavalent chromium (Cr(VI)), PolyBrominated Biphenyls (PBB) and PolyBrominated Diphenyl Ethers (PBDE).

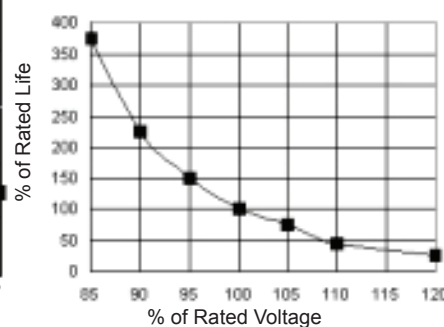
### Specifications

- Capacitance Range:** 15–5  $\mu\text{F}$  to 80–10  $\mu\text{F}$
- Voltage Range:** 370 Vac and 440 Vac
- Capacitance Tolerance:**  $\pm 10\%$  standard ( $\pm 6\%$  and  $\pm 3\%$  available)
- Temperature Range:**  $-40\text{ }^\circ\text{C}$  to  $+70\text{ }^\circ\text{C}$

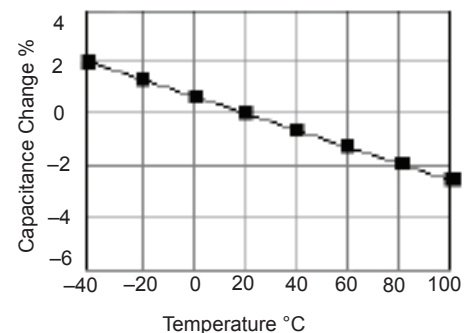
Life vs. Temperature



Life vs. Voltage



Capacitance vs. Temperature



### Part Numbering System

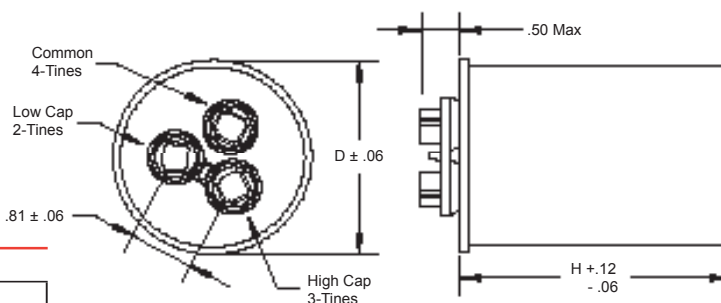
| SF   | C                                | 37  | S  | 15-5  | K  | 291  | B   | -F   |
|------|----------------------------------|---|--|---|--|--|---|--|
| Type | Case                             | AC Volt                                   | Case Material  | Cap   | Tol. $\pm\%$   | Can Height   | VAR   | RoHS   |
| SF   | C = 1 3/4" Oval<br>D = 2.0" Oval | 37 = 370 Vac<br>44 = 440 Vac<br>X = Other | S = Steel<br>T = Aluminum<br>w/steel cover<br>A = All Aluminum | 15-5 = 15-5 $\mu\text{F}$<br>30-20 = 30-20 $\mu\text{F}$<br>50-7.5 = 50-7.5 $\mu\text{F}$ | L = $\pm 3\%$<br>H = $\pm 6\%$<br>K = $\pm 10\%$<br>Z = +10 -5%<br>X = Special | 300 = 3.00"<br>388 = 3.88"<br>400 = 4.00"<br>475 = 4.75" | E = Dual 2,3,4 70 $^\circ\text{C}$<br>Z = Other | Compliant<br>-F = Compliant<br>Blank = Not Compliant |



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

## Type SF Dual Round

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



## Ratings

| Cap<br>( $\mu$ F- $\mu$ F)                  | Catalog<br>Part Number | Case<br>Code | H<br>(Inches) |
|---|------------------------|--------------|---------------|
| <b>370 Vac Round 70 °C Case Temperature</b> |                        |              |               |
| 15-5  | SFS37S15-5K328E-F      | S            | 3.28          |
| 15-10                                       | SFS37S15-10K375E-F     | S            | 3.75          |
| 20-5  | SFS37S20-5K328E-F      | S            | 3.28          |
| 20-7.5                                      | SFS37S20-7.5K328E-F    | S            | 3.28          |
| 20-10                                       | SFS37S20-10K375E-F     | S            | 3.75          |
| 25-5  | SFS37S25-5K328E-F      | S            | 3.28          |
| 25-7.5                                      | SFS37S25-7.5K328E-F    | S            | 3.28          |
| 25-10                                       | SFS37S25-10K400E-F     | S            | 4.00          |
| 25-15                                       | SFS37S25-15K400E-F     | S            | 4.00          |
| 30-5  | SFS37S30-5K400E-F      | S            | 4.00          |
| 30-7.5                                      | SFS37S30-7.5K400E-F    | S            | 4.00          |
| 30-10                                       | SFS37S30-10K400E-F     | S            | 4.00          |
| 30-15                                       | SFS37S30-15K400E-F     | S            | 4.00          |
| 30-20                                       | SFS37S30-20K475E-F     | S            | 4.75          |
| 35-5  | SFS37S35-5K400E-F      | S            | 4.00          |
| 35-7.5                                      | SFS37S35-7.5K400E-F    | S            | 4.00          |
| 35-10                                       | SFS37S35-10K400E-F     | S            | 4.00          |
| 35-15                                       | SFS37S35-15K400E-F     | S            | 4.00          |
| 35-20                                       | SFS37S35-20K475E-F     | S            | 4.75          |
| 40-5  | SFS37S40-5K400E-F      | S            | 4.00          |
| 40-7.5                                      | SFS37S40-7.5K400E-F    | S            | 4.00          |
| 40-10                                       | SFS37S40-10K400E-F     | S            | 4.00          |
| 40-15                                       | SFS37S40-15K475E-F     | S            | 4.75          |
| 45-5  | SFS37S45-5K475E-F      | S            | 4.75          |
| 45-7.5                                      | SFS37S45-7.5K475E-F    | S            | 4.75          |
| 45-10                                       | SFS37S45-10K475E-F     | S            | 4.75          |
| 45-15                                       | SFS37S45-15K475E-F     | S            | 4.75          |
| 50-5  | SFT37S50-5K391E-F      | T            | 3.91          |
| 50-7.5                                      | SFT37S50-7.5K391E-F    | T            | 3.91          |
| 50-10                                       | SFT37S50-10K391E-F     | T            | 3.91          |
| 60-5  | SFT37S60-5K491E-F      | T            | 4.91          |
| 60-7.5                                      | SFT37S60-7.5K491E-F    | T            | 4.91          |
| 60-10                                       | SFT37S60-10K491E-F     | T            | 4.91          |
| 70-5  | SFT37S70-5K491E-F      | T            | 4.91          |
| 70-7.5                                      | SFT37S70-7.5K491E-F    | T            | 4.91          |
| 70-10                                       | SFT37S70-10K491E-F     | T            | 4.91          |
| 80-5  | SFT37S80-5K575E-F      | T            | 5.75          |
| 80-7.5                                      | SFT37S80-7.5K575E-F    | T            | 5.75          |
| 80-10                                       | SFT37S80-10K603E-F     | T            | 6.03          |

## Hardware and Brackets:

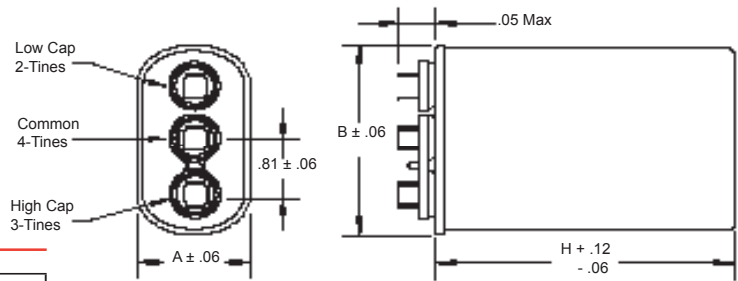
For Capacitor Hardware, refer to page 5.000

| Cap<br>( $\mu$ F- $\mu$ F)                  | Catalog<br>Part Number | Case<br>Code | H<br>(Inches) |
|---|------------------------|--------------|---------------|
| <b>440 Vac Round 70 °C Case Temperature</b> |                        |              |               |
| 15-5  | SFS44S15-5K328E-F      | S            | 3.28          |
| 15-10                                       | SFS44S15-10K388E-F     | S            | 3.88          |
| 20-5  | SFS44S20-5K328E-F      | S            | 3.28          |
| 20-7.5                                      | SFS44S20-7.5K375E-F    | S            | 3.75          |
| 20-10                                       | SFS44S20-10K388E-F     | S            | 3.88          |
| 25-5  | SFS44S25-5K375E-F      | S            | 3.75          |
| 25-7.5                                      | SFS44S25-7.5K400E-F    | S            | 4.00          |
| 25-10                                       | SFS44S25-10K400E-F     | S            | 4.00          |
| 25-15                                       | SFS44S25-15K475E-F     | S            | 4.75          |
| 30-5  | SFS44S30-5K400E-F      | S            | 4.00          |
| 30-7.5                                      | SFS44S30-7.5K400E-F    | S            | 4.00          |
| 30-10                                       | SFS44S30-10K475E-F     | S            | 4.75          |
| 30-15                                       | SFS44S30-15K475E-F     | S            | 4.75          |
| 30-20                                       | SFS44S30-20K475E-F     | S            | 4.75          |
| 35-5  | SFS44S35-5K475E-F      | S            | 4.75          |
| 35-7.5                                      | SFT44S35-7.5K391E-F    | T            | 3.91          |
| 35-10                                       | SFT44S35-10K391E-F     | T            | 3.91          |
| 35-15                                       | SFT44S35-15K491E-F     | T            | 4.91          |
| 35-20                                       | SFT44S35-20K491E-F     | T            | 4.91          |
| 40-5  | SFT44S40-5K391E-F      | T            | 3.91          |
| 40-7.5                                      | SFT44S40-7.5K391E-F    | T            | 3.91          |
| 40-10                                       | SFT44S40-10K391E-F     | T            | 3.91          |
| 40-15                                       | SFT44S40-15K491E-F     | T            | 4.91          |
| 45-5  | SFT44S45-5K491E-F      | T            | 4.91          |
| 45-7.5                                      | SFT44S45-7.5K491E-F    | T            | 4.91          |
| 45-10                                       | SFT44S45-10K491E-F     | T            | 4.91          |
| 45-15                                       | SFT44S45-15K491E-F     | T            | 4.91          |
| 50-5  | SFT44S50-5K491E-F      | T            | 4.91          |
| 50-7.5                                      | SFT44S50-7.5K491E-F    | T            | 4.91          |
| 50-10                                       | SFT44S50-10K491E-F     | T            | 4.91          |
| 60-5  | SFT44S60-5K491E-F      | T            | 4.91          |
| 60-7.5                                      | SFT44S60-7.5K491E-F    | T            | 4.91          |
| 60-10                                       | SFT44S60-10K491E-F     | T            | 4.91          |

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

## 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<br>( $\mu\text{F}$ - $\mu\text{F}$ )   | Catalog<br>Part Number | Case<br>Code | H<br>(Inches) |
|--|------------------------|--------------|---------------|
| <b>370 Vac Oval 70 °C Case Temperature</b> |                        |              |               |
| 15-5                                       | SFC37S15-5K303E-F      | C            | 3.03          |
| 15-10                                      | SFC37S15-10K303E-F     | C            | 3.03          |
| 20-5                                       | SFC37S20-5K303E-F      | C            | 3.03          |
| 20-7.5                                     | SFC37S20-7.5K303E-F    | C            | 3.03          |
| 20-10                                      | SFC37S20-10K303E-F     | C            | 3.03          |
| 25-5                                       | SFC37S25-5K303E-F      | C            | 3.03          |
| 25-7.5                                     | SFC37S25-7.5K303E-F    | C            | 3.03          |
| 25-10                                      | SFC37S25-10K303E-F     | C            | 3.03          |
| 25-15                                      | SFC37S25-15K391E-F     | C            | 3.91          |
| 30-5                                       | SFC37S30-5K391E-F      | C            | 3.91          |
| 30-7.5                                     | SFC37S30-7.5K391E-F    | C            | 3.91          |
| 30-10                                      | SFC37S30-10K391E-F     | C            | 3.91          |
| 30-15                                      | SFC37S30-15K391E-F     | C            | 3.91          |
| 30-20                                      | SFC37S30-20K391E-F     | C            | 3.91          |
| 35-5                                       | SFC37S35-5K391E-F      | C            | 3.91          |
| 35-7.5                                     | SFC37S35-7.5K391E-F    | C            | 3.91          |
| 35-10                                      | SFC37S35-10K391E-F     | C            | 3.91          |
| 35-15                                      | SFC37S35-15K391E-F     | C            | 3.91          |
| 35-20                                      | SFC37S35-20K391E-F     | C            | 3.91          |
| 40-5                                       | SFC37S40-5K391E-F      | C            | 3.91          |
| 40-7.5                                     | SFC37S40-7.5K391E-F    | C            | 3.91          |
| 40-10                                      | SFC37S40-10K391E-F     | C            | 3.91          |
| 40-15                                      | SFD37S40-15K391E-F     | D            | 3.91          |
| 45-5                                       | SFD37S45-5K391E-F      | D            | 3.91          |
| 45-7.5                                     | SFD37S45-7.5K391E-F    | D            | 3.91          |
| 45-10                                      | SFD37S45-10K391E-F     | D            | 3.91          |
| 45-15                                      | SFD37S45-15K391E-F     | D            | 3.91          |
| 50-5                                       | SFD37S50-5K391E-F      | D            | 3.91          |
| 50-7.5                                     | SFD37S50-7.5K391E-F    | D            | 3.91          |
| 50-10                                      | SFD37S50-10K391E-F     | D            | 3.91          |
| 60-5                                       | SFD37S60-5K491E-F      | D            | 4.91          |
| 60-7.5                                     | SFD37S60-7.5K491E-F    | D            | 4.91          |
| 60-10                                      | SFD37S60-10K491E-F     | D            | 4.91          |
| 70-5                                       | SFD37S70-5K491E-F      | D            | 4.91          |
| 70-7.5                                     | SFD37S70-7.5K491E-F    | D            | 4.91          |
| 70-10                                      | SFD37S70-10K491E-F     | D            | 4.91          |
| 80-5                                       | SFD37S80-5K491E-F      | D            | 4.91          |
| 80-7.5                                     | SFD37S80-7.5K491E-F    | D            | 4.91          |
| 80-10                                      | SFD37S80-10K491E-F     | D            | 4.91          |

## Hardware and Brackets:

For Capacitor Hardware, refer to page 5.000

## Ratings

| Cap<br>( $\mu\text{F}$ - $\mu\text{F}$ )   | Catalog<br>Part Number | Case<br>Code | H<br>(Inches) |
|--|------------------------|--------------|---------------|
| <b>440 Vac Oval 70 °C Case Temperature</b> |                        |              |               |
| 15-5                                       | SFC44S15-5K303E-F      | C            | 3.03          |
| 15-10                                      | SFC44S15-10K303E-F     | C            | 3.03          |
| 20-5                                       | SFC44S20-5K303E-F      | C            | 3.03          |
| 20-7.5                                     | SFC44S20-7.5K303E-F    | C            | 3.03          |
| 20-10                                      | SFC44S20-10K303E-F     | C            | 3.03          |
| 25-5                                       | SFC44S25-5K391E-F      | C            | 3.91          |
| 25-7.5                                     | SFC44S25-7.5K391E-F    | C            | 3.91          |
| 25-10                                      | SFC44S25-10K391E-F     | C            | 3.91          |
| 25-15                                      | SFC44S25-15K391E-F     | C            | 3.91          |
| 30-5                                       | SFC44S30-5K391E-F      | C            | 3.91          |
| 30-7.5                                     | SFC44S30-7.5K391E-F    | C            | 3.91          |
| 30-10                                      | SFC44S30-10K391E-F     | C            | 3.91          |
| 30-15                                      | SFC44S30-15K391E-F     | C            | 3.91          |
| 30-20                                      | SFC44S30-20K391E-F     | C            | 3.91          |
| 35-5                                       | SFC44S35-5K491E-F      | C            | 4.91          |
| 35-7.5                                     | SFC44S35-7.5K491E-F    | C            | 4.91          |
| 35-10                                      | SFC44S35-10K491E-F     | C            | 4.91          |
| 35-15                                      | SFC44S35-15K491E-F     | C            | 4.91          |
| 35-20                                      | SFC44S35-20K491E-F     | C            | 4.91          |
| 40-5                                       | SFD44S40-5K491E-F      | D            | 4.91          |
| 40-7.5                                     | SFD44S40-7.5K491E-F    | D            | 4.91          |
| 40-10                                      | SFD44S40-10K491E-F     | D            | 4.91          |
| 40-15                                      | SFD44S40-15K491E-F     | D            | 4.91          |
| 45-5                                       | SFD44S45-5K491E-F      | D            | 4.91          |
| 45-7.5                                     | SFD44S45-7.5K491E-F    | D            | 4.91          |
| 45-10                                      | SFD44S45-10K491E-F     | D            | 4.91          |
| 45-15                                      | SFD44S45-15K491E-F     | D            | 4.91          |
| 50-5                                       | SFD44S50-5K491E-F      | D            | 4.91          |
| 50-7.5                                     | SFD44S50-7.5K491E-F    | D            | 4.91          |
| 50-10                                      | SFD44S50-10K491E-F     | D            | 4.91          |
| 60-5                                       | SFD44S60-5K616E-F      | D            | 6.16          |
| 60-7.5                                     | SFD44S60-7.5K616E-F    | D            | 6.16          |
| 60-10                                      | SFD44S60-10K616E-F     | D            | 6.16          |