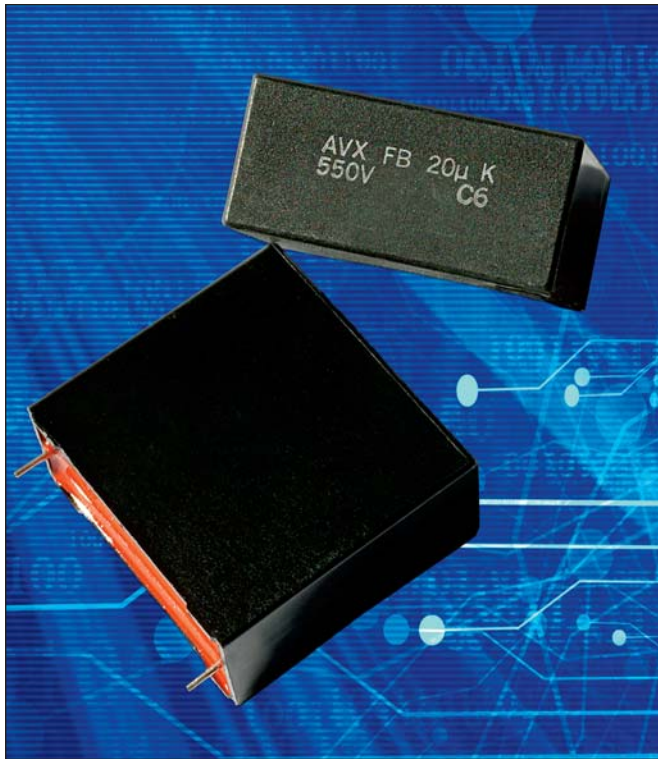


# Medium Power Film Capacitors



## FB (RoHS Compliant)



### PACKAGING MATERIAL

Self-extinguishing plastic case (V0 = in accordance with UL 94) filled thermosetting resin.

Self-extinguishing thermosetting resin (V0 = in accordance with UL 94; I3F2 = in accordance with NF F 16-101).

### STANDARDS

- IEC 61071-1, IEC 61071-2: Power electronic capacitors
- IEC 60384-16: Fixed metallized polypropylene film dielectric DC capacitors
- IEC 60384-16-1: Fixed metallized polypropylene film dielectric DC capacitors  
Assessment level E
- IEC 60384-17: Fixed metallized polypropylene film dielectric AC and pulse capacitors
- IEC 60384-17-1: Fixed metallized polypropylene film dielectric AC and pulse capacitors  
Assessment level E

The FB series uses a non-impregnated metallized polypropylene dielectric specially treated to have a very high dielectric strength in operating conditions up to 100°C.

The FB has been designed for printed circuit board mounting. FB series performance characteristics make them a viable alternative to aluminum electrolytic technology due to much lower ESR and much higher surge voltage capability (dv/dt).

### APPLICATIONS

The FB capacitor is particularly designed for DC filtering, low reactive power.

### HOT SPOT CALCULATION

See *Hot Spot Temperature*, page 3.

$$\theta_{\text{hot spot}} = \theta_{\text{ambient}} + (P_d + P_t) \times R_{th}$$

with  $P_d$  (Dielectric losses) =  $Q \times \text{tg}\delta_0$

$$Q \times \text{tg}\delta_0 \Rightarrow \left[ \frac{1}{2} \times C_n \times (V_{\text{peak to peak}})^2 \times f \right] \times \text{tg}\delta_0$$

(tan delta)

For polypropylene,  $\text{tg}\delta_0 = 2 \times 10^{-4}$  for frequencies up to 1MHz and is independent of temperatures.

$$P_t \text{ (Thermal losses)} = R_s \times (I_{\text{rms}})^2$$

where  $C_n$  in Farad     $I_{\text{rms}}$  in Ampere     $f$  in Hertz  
 $V$  in Volt     $R_s$  in Ohm     $\theta$  in °C  
 $R_{th}$  in °C/W

### OPERATING TEMPERATURE RANGE

Operating temperature range: -40°C to +100°C

### LIFETIME EXPECTANCY

One unique feature of this technology (versus aluminum electrolytics) is how the capacitor reacts at the end of its lifetime.

Unlike aluminum electrolytic, film capacitors do not have a catastrophic failure mode. Film capacitors simply experience a parametric loss of capacitance of about 2% of initial value, with no risk of a short circuit.

The capacitor continues to be functional even after this 2% decrease.

# Medium Power Film Capacitors

FB (RoHS Compliant)



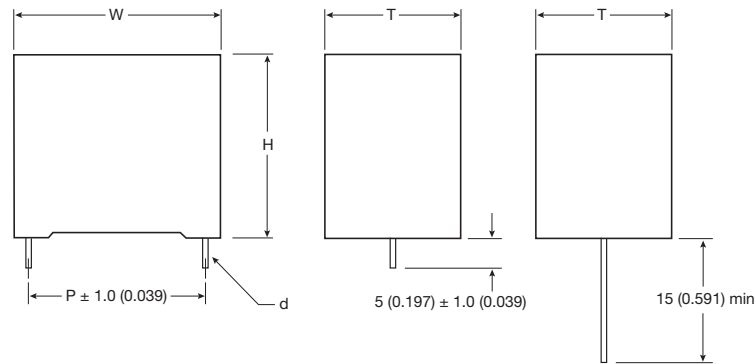
DC FILTERING

## HOW TO ORDER

| FB           | 27                      | A                                                     | 6                               | K                                                                                                          | 0335           | K                                            | C                      |
|--------------|-------------------------|-------------------------------------------------------|---------------------------------|------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------|------------------------|
| Series<br>FB | Pitch<br>27<br>37<br>52 | Case<br>A H<br>B J<br>C K<br>D L<br>E M<br>S N<br>F P | Dielectric<br>6 = Polypropylene | Voltage<br>I = 450V<br>J = 550V<br>A = 700V<br>B = 800V<br>C = 900V<br>K = 1000V<br>L = 1100V<br>P = 1200V | Cap<br>µF Code | Tolerance<br>J = ±5%<br>K = ±10%<br>M = ±20% | Lead Length<br>C = 5mm |



## DIMENSIONS: millimeters (inches)



millimeters (inches)

| Case Size | W            | H            | T            | P            | d            |
|-----------|--------------|--------------|--------------|--------------|--------------|
| A         | 32.0 (1.260) | 20.0 (0.787) | 11.0 (0.433) | 27.5 (1.083) | 0.80 (0.031) |
| B         | 32.0 (1.260) | 22.0 (0.866) | 13.0 (0.512) | 27.5 (1.083) | 0.80 (0.031) |
| C         | 32.0 (1.260) | 24.5 (0.965) | 15.0 (0.591) | 27.5 (1.083) | 0.80 (0.031) |
| D         | 32.0 (1.260) | 25.0 (0.984) | 16.0 (0.630) | 27.5 (1.083) | 0.80 (0.031) |
| E         | 32.0 (1.260) | 28.0 (1.102) | 14.0 (0.551) | 27.5 (1.083) | 0.80 (0.031) |
| S         | 32.0 (1.260) | 28.0 (1.102) | 18.0 (0.709) | 27.5 (1.083) | 0.80 (0.031) |
| F         | 32.0 (1.260) | 33.0 (1.299) | 18.0 (0.709) | 27.5 (1.083) | 0.80 (0.031) |
| G         | 32.0 (1.260) | 37.0 (1.457) | 22.0 (0.866) | 27.5 (1.083) | 0.80 (0.031) |
| H         | 42.5 (1.673) | 33.5 (1.319) | 22.0 (0.866) | 37.5 (1.476) | 1.00 (0.039) |
| J         | 42.5 (1.673) | 37.0 (1.457) | 28.0 (1.102) | 37.5 (1.476) | 1.00 (0.039) |
| K         | 42.5 (1.673) | 40.0 (1.575) | 20.0 (0.787) | 37.5 (1.476) | 1.00 (0.039) |
| L         | 42.5 (1.673) | 44.0 (1.732) | 24.0 (0.945) | 37.5 (1.476) | 1.00 (0.039) |
| M         | 42.5 (1.673) | 45.0 (1.772) | 30.0 (1.181) | 37.5 (1.476) | 1.20 (0.047) |
| N         | 57.5 (2.264) | 45.0 (1.772) | 30.0 (1.181) | 52.5 (2.067) | 1.20 (0.047) |
| P         | 57.5 (2.264) | 50.0 (1.969) | 35.0 (1.378) | 52.5 (2.067) | 1.20 (0.047) |

## POLYPROPYLENE DIELECTRIC FOR INDUSTRIAL DC FILTERING

These capacitors have been designed primarily for high and medium power DC filtering applications.

## ELECTRICAL CHARACTERISTICS – POLYPROPYLENE DIELECTRIC

|                                       |                                                                |
|---------------------------------------|----------------------------------------------------------------|
| Climatic category                     | 40/100/56 (IEC 60068)                                          |
| Test voltage between terminals @ 25°C | 1.5 x V <sub>N</sub> dc                                        |
| Capacitance range C <sub>N</sub>      | 0.68µF to 75µF                                                 |
| Tolerance on C <sub>N</sub>           | ±5%, ±10%, ±20%                                                |
| Rated DC voltage V <sub>N</sub> dc    | 450 to 1200 V                                                  |
| Dielectric                            | Polypropylene                                                  |
| Insulation Resistance:                | >3,000 MΩ.µF/C after 1 minute electrification @ 100 Vdc & 25°C |
| Lifetime (ΔC/C ≤ 5%):                 | 100,000hrs @ Ur & 70°C                                         |



# Medium Power Film Capacitors



FB (RoHS Compliant)

## RATINGS AND PART NUMBER REFERENCE – POLYPROPYLENE DIELECTRIC

| Cap<br>(μF)                                  | Rated<br>Voltage (V) | AVX<br>Part Number | Case<br>Size | W<br>±0.50 (0.020) | H<br>±0.50 (0.020) | T<br>±0.50 (0.020) | P<br>±1.00 (0.039) | d<br>±0.05 (0.002) | dv/dt<br>Volt/usec | I peak<br>Amps | I rms<br>Amps | ESR<br>mΩ | Ls<br>nH | Rth<br>°C/W | Packaging<br>Qty. |
|----------------------------------------------|----------------------|--------------------|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------------|---------------|-----------|----------|-------------|-------------------|
| Voltage V <sub>dc</sub> 450V Voltage Code: I |                      |                    |              |                    |                    |                    |                    |                    |                    |                |               |           |          |             |                   |
| 10.0                                         | 450                  | FB27S6I0106°C      | S            | 32.0 (1.260)       | 28.0 (1.102)       | 18.0 (0.709)       | 27.5 (1.083)       | 0.80 (0.031)       | 75.0               | 89.1           | 9.0           | 8.0       | 25.0     | 23.2        | 95                |
| Voltage V <sub>dc</sub> 550V Voltage Code: J |                      |                    |              |                    |                    |                    |                    |                    |                    |                |               |           |          |             |                   |
| 3.3                                          | 550                  | FB27A6J0335°C      | A            | 32.0 (1.260)       | 22.0 (0.866)       | 13.0 (0.512)       | 27.5 (1.083)       | 0.80 (0.031)       | 27.0               | 89.1           | 5.0           | 22.0      | 25.0     | 27.3        | 150               |
| 5.0                                          | 550                  | FB27B6J0505°C      | B            | 32.0 (1.260)       | 22.0 (0.866)       | 13.0 (0.512)       | 27.5 (1.083)       | 0.80 (0.031)       | 27.0               | 135.0          | 6.0           | 16.5      | 25.0     | 25.3        | 130               |
| 6.8                                          | 550                  | FB27C6J0685°C      | C            | 32.0 (1.260)       | 24.5 (0.965)       | 15.0 (0.591)       | 27.5 (1.083)       | 0.80 (0.031)       | 27.0               | 183.6          | 7.0           | 11.0      | 25.0     | 27.8        | 110               |
| 7.5                                          | 550                  | FB27E6J0755°C      | E            | 32.0 (1.260)       | 28.0 (1.102)       | 14.0 (0.551)       | 27.5 (1.083)       | 0.80 (0.031)       | 27.0               | 202.5          | 8.0           | 10.0      | 25.0     | 23.4        | 110               |
| 10                                           | 550                  | FB27F6J0106°C      | F            | 32.0 (1.260)       | 33.0 (1.299)       | 18.0 (0.709)       | 27.5 (1.083)       | 0.80 (0.031)       | 27.0               | 270.0          | 10.0          | 8.0       | 27.0     | 18.8        | 95                |
| 12                                           | 550                  | FB27F6J0126°C      | F            | 32.0 (1.260)       | 33.0 (1.299)       | 18.0 (0.709)       | 27.5 (1.083)       | 0.80 (0.031)       | 27.0               | 324.0          | 11.0          | 7.0       | 27.0     | 17.7        | 95                |
| 15                                           | 550                  | FB27G6J0156°C      | G            | 32.0 (1.260)       | 37.0 (1.457)       | 22.0 (0.866)       | 27.5 (1.083)       | 0.80 (0.031)       | 27.0               | 405.0          | 12.0          | 6.0       | 27.0     | 17.4        | 80                |
| 20                                           | 550                  | FB37K6J0206°C      | K            | 42.5 (1.673)       | 40.0 (1.575)       | 20.0 (0.787)       | 37.5 (1.476)       | 1.00 (0.039)       | 19.0               | 380.0          | 11.5          | 7.0       | 30.0     | 16.2        | 56                |
| 25                                           | 550                  | FB37J6J0256°C      | J            | 42.5 (1.673)       | 37.0 (1.457)       | 28.0 (1.102)       | 37.5 (1.476)       | 1.00 (0.039)       | 19.0               | 475.0          | 12.0          | 6.5       | 30.0     | 16.0        | 35                |
| 30                                           | 550                  | FB37J6J0306°C      | J            | 42.5 (1.673)       | 37.0 (1.457)       | 28.0 (1.102)       | 37.5 (1.476)       | 1.00 (0.039)       | 19.0               | 570.0          | 13.5          | 6.0       | 30.0     | 13.7        | 35                |
| 35                                           | 550                  | FB37M6J0356°C      | M            | 42.5 (1.673)       | 45.0 (1.772)       | 30.0 (1.181)       | 37.5 (1.476)       | 1.20 (0.047)       | 19.0               | 665.0          | 15.0          | 5.5       | 33.0     | 12.1        | 44                |
| 40                                           | 550                  | FB37M6J0406°C      | M            | 42.5 (1.673)       | 45.0 (1.772)       | 30.0 (1.181)       | 37.5 (1.476)       | 1.20 (0.047)       | 19.0               | 760.0          | 15.0          | 5.5       | 33.0     | 12.1        | 44                |
| 50                                           | 550                  | FB52N6J0506°C      | N            | 57.5 (2.264)       | 45.0 (1.772)       | 30.0 (1.181)       | 52.5 (2.067)       | 1.20 (0.047)       | 12.5               | 625.0          | 14.0          | 6.5       | 35.0     | 11.8        | 25                |
| 60                                           | 550                  | FB52N6J0606°C      | N            | 57.5 (2.264)       | 45.0 (1.772)       | 30.0 (1.181)       | 52.5 (2.067)       | 1.20 (0.047)       | 12.5               | 750.0          | 15.0          | 6.0       | 35.0     | 11.1        | 25                |
| 75                                           | 550                  | FB52P6J0756°C      | P            | 57.5 (2.264)       | 50.0 (1.969)       | 35.0 (1.378)       | 52.5 (2.067)       | 1.20 (0.047)       | 12.5               | 937.5          | 16.0          | 5.5       | 37.0     | 10.7        | 20                |
| Voltage V <sub>dc</sub> 700V Voltage Code: A |                      |                    |              |                    |                    |                    |                    |                    |                    |                |               |           |          |             |                   |
| 2.5                                          | 700                  | FB27A6A0255°C      | A            | 32.0 (1.260)       | 20.0 (0.787)       | 11.0 (0.433)       | 27.5 (1.083)       | 0.80 (0.031)       | 31.0               | 77.5           | 3.5           | 28.0      | 25.0     | 43.7        | 150               |
| 3.3                                          | 700                  | FB27B6A0335°C      | B            | 32.0 (1.260)       | 22.0 (0.866)       | 13.0 (0.512)       | 27.5 (1.083)       | 0.80 (0.031)       | 31.0               | 102.3          | 4.5           | 22.0      | 25.0     | 33.7        | 130               |
| 4.7                                          | 700                  | FB27C6A0475°C      | C            | 32.0 (1.260)       | 24.5 (0.965)       | 15.0 (0.591)       | 27.5 (1.083)       | 0.80 (0.031)       | 31.0               | 145.7          | 5.5           | 15.0      | 25.0     | 33.1        | 110               |
| 10                                           | 700                  | FB27F6A0106°C      | F            | 32.0 (1.260)       | 33.0 (1.299)       | 18.0 (0.709)       | 27.5 (1.083)       | 0.80 (0.031)       | 31.0               | 310.0          | 10.0          | 7.0       | 27.0     | 21.4        | 95                |
| 12                                           | 700                  | FB27G6A0126°C      | G            | 32.0 (1.260)       | 37.0 (1.457)       | 22.0 (0.866)       | 27.5 (1.083)       | 0.80 (0.031)       | 31.0               | 372.0          | 11.5          | 6.0       | 27.0     | 18.9        | 80                |
| 15                                           | 700                  | FB37H6A0156°C      | H            | 42.5 (1.673)       | 33.5 (1.319)       | 22.0 (0.866)       | 37.5 (1.476)       | 1.00 (0.039)       | 21.0               | 315.0          | 9.0           | 9.0       | 30.0     | 20.9        | 49                |
| 20                                           | 700                  | FB37J6A0206°C      | J            | 42.5 (1.673)       | 37.0 (1.457)       | 28.0 (1.102)       | 37.5 (1.476)       | 1.00 (0.039)       | 21.0               | 420.0          | 11.0          | 7.0       | 30.0     | 17.7        | 35                |
| 22                                           | 700                  | FB37L6A0226°C      | L            | 42.5 (1.673)       | 44.0 (1.732)       | 24.0 (0.984)       | 37.5 (1.476)       | 1.00 (0.039)       | 21.0               | 462.0          | 13.0          | 6.0       | 30.0     | 14.8        | 42                |
| 25                                           | 700                  | FB37L6A0256°C      | L            | 42.5 (1.673)       | 44.0 (1.732)       | 24.0 (0.984)       | 37.5 (1.476)       | 1.00 (0.039)       | 21.0               | 525.0          | 13.5          | 5.5       | 30.0     | 15.0        | 42                |
| 30                                           | 700                  | FB37M6A0306°C      | M            | 42.5 (1.673)       | 45.0 (1.772)       | 30.0 (1.181)       | 37.5 (1.476)       | 1.20 (0.047)       | 21.0               | 630.0          | 16.0          | 4.5       | 33.0     | 13.0        | 44                |
| 40                                           | 700                  | FB52N6A0406°C      | N            | 57.5 (2.264)       | 45.0 (1.772)       | 30.0 (1.181)       | 52.5 (2.067)       | 1.20 (0.047)       | 14.5               | 580.0          | 13.0          | 6.5       | 35.0     | 13.7        | 25                |
| 45                                           | 700                  | FB52N6A0456°C      | N            | 57.5 (2.264)       | 45.0 (1.772)       | 30.0 (1.181)       | 52.5 (2.067)       | 1.20 (0.047)       | 14.5               | 652.5          | 14.5          | 6.0       | 35.0     | 11.9        | 25                |
| 50                                           | 700                  | FB52P6A0506°C      | P            | 57.5 (2.264)       | 50.0 (1.969)       | 35.0 (1.378)       | 52.5 (2.067)       | 1.20 (0.047)       | 14.5               | 725.0          | 15.0          | 5.5       | 37.0     | 12.1        | 20                |
| 55                                           | 700                  | FB52P6A0556°C      | P            | 57.5 (2.264)       | 50.0 (1.969)       | 35.0 (1.378)       | 52.5 (2.067)       | 1.20 (0.047)       | 14.5               | 797.5          | 17.0          | 5.0       | 37.0     | 10.4        | 20                |
| 60                                           | 700                  | FB52P6A0606°C      | P            | 57.5 (2.264)       | 50.0 (1.969)       | 35.0 (1.378)       | 52.5 (2.067)       | 1.20 (0.047)       | 14.5               | 870.0          | 18.0          | 4.5       | 37.0     | 10.3        | 20                |
| Voltage V <sub>dc</sub> 800V Voltage Code: B |                      |                    |              |                    |                    |                    |                    |                    |                    |                |               |           |          |             |                   |
| 2.2                                          | 800                  | FB27A6B0225°C      | A            | 32.0 (1.260)       | 20.0 (0.787)       | 11.0 (0.433)       | 27.5 (1.083)       | 0.80 (0.031)       | 36.0               | 79.2           | 4.0           | 30.0      | 25.0     | 31.3        | 150               |
| 3.0                                          | 800                  | FB27C6B0305°C      | C            | 32.0 (1.260)       | 24.5 (0.965)       | 15.0 (0.591)       | 27.5 (1.083)       | 0.80 (0.031)       | 36.0               | 108.0          | 4.5           | 21.0      | 25.0     | 35.3        | 110               |
| 4.0                                          | 800                  | FB27B6B0405°C      | B            | 32.0 (1.260)       | 22.0 (0.866)       | 13.0 (0.512)       | 27.5 (1.083)       | 0.80 (0.031)       | 36.0               | 144.0          | 5.5           | 16.0      | 25.0     | 31.0        | 130               |
| 5.0                                          | 800                  | FB27D6B0505°C      | D            | 32.0 (1.260)       | 25.0 (0.984)       | 16.0 (0.630)       | 27.5 (1.083)       | 0.80 (0.031)       | 36.0               | 180.0          | 7.0           | 13.0      | 25.0     | 23.5        | 100               |
| 6.8                                          | 800                  | FB27F6B0685°C      | F            | 32.0 (1.260)       | 33.0 (1.299)       | 18.0 (0.709)       | 27.5 (1.083)       | 0.80 (0.031)       | 36.0               | 244.8          | 8.5           | 12.0      | 27.0     | 17.3        | 95                |
| 7.5                                          | 800                  | FB27F6B0755°C      | F            | 32.0 (1.260)       | 33.0 (1.299)       | 18.0 (0.709)       | 27.5 (1.083)       | 0.80 (0.031)       | 36.0               | 270.0          | 9.5           | 11.0      | 27.0     | 15.1        | 95                |
| 10                                           | 800                  | FB27G6B0106°C      | G            | 32.0 (1.260)       | 37.0 (1.457)       | 22.0 (0.866)       | 27.5 (1.083)       | 0.80 (0.031)       | 36.0               | 360.0          | 10.5          | 10.0      | 27.0     | 13.6        | 80                |
| 12                                           | 800                  | FB37H6B0126°C      | H            | 42.5 (1.673)       | 33.5 (1.319)       | 22.0 (0.866)       | 37.5 (1.476)       | 1.00 (0.039)       | 24.0               | 288.0          | 8.5           | 11.0      | 30.0     | 18.9        | 49                |
| 15                                           | 800                  | FB37K6B0156°C      | K            | 42.5 (1.673)       | 40.0 (1.575)       | 20.0 (0.787)       | 37.5 (1.476)       | 1.00 (0.039)       | 24.0               | 360.0          | 10.0          | 11.0      | 30.0     | 13.6        | 56                |
| 20                                           | 800                  | FB37L6B0206°C      | L            | 42.5 (1.673)       | 44.0 (1.732)       | 24.0 (0.984)       | 37.5 (1.476)       | 1.00 (0.039)       | 24.0               | 480.0          | 13.0          | 6.0       | 30.0     | 14.8        | 42                |
| 22                                           | 800                  | FB37M6B0226°C      | M            | 42.5 (1.673)       | 45.0 (1.772)       | 30.0 (1.181)       | 37.5 (1.476)       | 1.20 (0.047)       | 24.0               | 528.0          | 14.5          | 5.5       | 33.0     | 13.0        | 44                |
| 25                                           | 800                  | FB37M6B0256°C      | M            | 42.5 (1.673)       | 45.0 (1.772)       | 30.0 (1.181)       | 37.5 (1.476)       | 1.20 (0.047)       | 24.0               | 600.0          | 15.5          | 5.0       | 33.0     | 12.5        | 44                |
| 30                                           | 800                  | FB52N6B0306°C      | N            | 57.5 (2.264)       | 45.0 (1.772)       | 30.0 (1.181)       | 52.5 (2.067)       | 1.20 (0.047)       | 16.5               | 495.0          | 12.0          | 8.0       | 35.0     | 13.0        | 25                |
| 40                                           | 800                  | FB52P6B0406°C      | P            | 57.5 (2.264)       | 50.0 (1.969)       | 35.0 (1.378)       | 52.5 (2.067)       | 1.20 (0.047)       | 16.5               | 660.0          | 14.5          | 6.0       | 37.0     | 11.9        | 20                |
| 47                                           | 800                  | FB52P6B0476°C      | P            | 57.5 (2.264)       | 50.0 (1.969)       | 35.0 (1.378)       | 52.5 (2.067)       | 1.20 (0.047)       | 16.5               | 775.5          | 16.5          | 5.5       | 37.0     | 10.0        | 20                |
| Voltage V <sub>dc</sub> 900V Voltage Code: C |                      |                    |              |                    |                    |                    |                    |                    |                    |                |               |           |          |             |                   |
| 2.2                                          | 900                  | FB27B6C0225°C      | B            | 32.0 (1.260)       | 22.0 (0.866)       | 13.0 (0.512)       | 27.5 (1.083)       | 0.80 (0.031)       | 41.5               | 91.3           | 3.7           | 30.0      | 25.0     | 36.5        | 130               |
| 2.5                                          | 900                  | FB27B6C0255°C      | B            | 32.0 (1.260)       | 22.0 (0.866)       | 13.0 (0.512)       | 27.5 (1.083)       | 0.80 (0.031)       | 41.5               | 103.8          | 4.3           | 26.0      | 25.0     | 31.2        | 130               |
| 3.0                                          | 900                  | FB27C6C0305°C      | C            | 32.0 (1.260)       | 24.5 (0.965)       | 15.0 (0.591)       | 27.5 (1.083)       | 0.80 (0.031)       | 41.5               | 124.5          | 5.0           | 21.0      | 25.0     | 28.6        | 110               |
| 3.3                                          | 900                  | FB27E6C0335°C      | E            | 32.0 (1.260)       | 28.0 (1.102)       | 14.0 (0.551)       | 27.5 (1.083)       | 0.80 (0.031)       | 41.5               | 137.0          | 5.0           | 20.0      | 25.0     | 30.0        | 110               |
| 7.5                                          | 900                  | FB27G6C0755°C      | G            | 32.0 (1.260)       | 37.0 (1.457)       | 22.0 (0.866)       | 27.5 (1.083)       | 0.80 (0.031)       | 41.5               | 311.3          | 9.5           | 15.0      | 27.0     | 11.1        | 80                |
| 10                                           | 900                  | FB37H6C0106°C      | H            | 42.5 (1.673)       | 33.5 (1.319)       | 22.0 (0.866)       | 37.5 (1.476)       | 1.00 (0.039)       | 28.0               | 280.0          | 8.5           | 12.0      | 30.0     | 17.3        | 49                |
| 15                                           | 900                  | FB37L6C0156°C      | L            | 42.5 (1.673)       | 44.0 (1.732)       | 24.0 (0.984)       | 37.5 (1.476)       | 1.00 (0.039)       | 28.0               | 420.0          | 11.0          | 8.0       | 30.0     | 15.5        | 42                |
| 20                                           | 900                  | FB37M6C0206°C      | M            | 42.5 (1.673)       | 45.0 (1.772)       | 30.0 (1.181)       | 37.5 (1.476)       | 1.20 (0.047)       | 28.0               | 560.0          | 14.0          | 6.0       | 33.0     | 12.8        | 44                |
| 25                                           | 900                  | FB52N6C0256°C      | N            | 57.5 (2.264)       | 45.0 (1.772)       | 30.0 (1.181)       | 52.5 (2.067)       | 1.20 (0.047)       | 18.5               | 462.5          | 11.0          | 10.0      | 35.0     | 12.4        | 25                |
| 35                                           | 900                  | FB52P6C0356°C      | P            | 57.5 (2.264)       | 50.0 (1.969)       | 35.0 (1.378)       | 52.5 (2.067)       | 1.20 (0.047)       | 18.5               | 647.5          | 14.5          | 7.0       | 37.0     | 10.2        | 20                |

Dimensions in millimeters (inches)

\* Insert K for 10% capacitance tolerance (standard); J = +5% and M = +20% tolerances available on request.

Last character C denotes 5.00mm (0.197in) lead length (standard). For L option (15mm (0.591in)) contact factory for availability.

Values outside this standard range may be available – please contact AVX for any special requirements.

AVX reserves the right to supply capacitors to a tighter capacitance tolerance or higher voltage rating, in the same case size.



# Medium Power Film Capacitors



## FB (RoHS Compliant)

DC FILTERING

| Cap<br>(μF)                                   | Rated<br>Voltage (V) | AVX<br>Part Number | Case<br>Size | W<br>±0.50 (0.020) | H<br>±0.50 (0.020) | T<br>±0.50 (0.020) | P<br>±1.00 (0.039) | d<br>±0.05 (0.002) | dv/dt<br>Volt/usec | I peak<br>Amps | I rms<br>Amps | ESR<br>mΩms | Ls<br>nH | Rth<br>°C/W | Packaging<br>Qty. |
|-----------------------------------------------|----------------------|--------------------|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|----------------|---------------|-------------|----------|-------------|-------------------|
| Voltage V <sub>dc</sub> 1000V Voltage Code: K |                      |                    |              |                    |                    |                    |                    |                    |                    |                |               |             |          |             |                   |
| 1.5                                           | 1000                 | FB27A6K0155°C      | A            | 32.0 (1.260)       | 20.0 (0.787)       | 11.0 (0.433)       | 27.5 (1.083)       | 0.80 (0.031)       | 47.0               | 70.5           | 4.5           | 42.3        | 25.0     | 17.5        | 150               |
| 2.0                                           | 1000                 | FB27B6K0205°C      | B            | 32.0 (1.260)       | 22.0 (0.866)       | 13.0 (0.512)       | 27.5 (1.083)       | 0.80 (0.031)       | 47.0               | 94.0           | 5.5           | 38.5        | 25.0     | 12.9        | 130               |
| 2.5                                           | 1000                 | FB27C6K0255°C      | C            | 32.0 (1.260)       | 24.5 (0.965)       | 15.0 (0.591)       | 27.5 (1.083)       | 0.80 (0.031)       | 47.0               | 117.5          | 6.0           | 22.6        | 25.0     | 18.4        | 110               |
| 3.0                                           | 1000                 | FB27E6K0305°C      | E            | 32.0 (1.260)       | 28.0 (1.102)       | 14.0 (0.551)       | 27.5 (1.083)       | 0.80 (0.031)       | 47.0               | 141.0          | 7.0           | 18.4        | 25.0     | 16.6        | 110               |
| 4.7                                           | 1000                 | FB27F6K0475°C      | F            | 32.0 (1.260)       | 33.0 (1.299)       | 18.0 (0.709)       | 27.5 (1.083)       | 0.80 (0.031)       | 47.0               | 220.9          | 9.0           | 16.1        | 27.0     | 11.5        | 95                |
| 5.0                                           | 1000                 | FB27F6K0505°C      | F            | 32.0 (1.260)       | 33.0 (1.299)       | 18.0 (0.709)       | 27.5 (1.083)       | 0.80 (0.031)       | 47.0               | 235.0          | 9.0           | 15.0        | 27.0     | 12.3        | 95                |
| 6.8                                           | 1000                 | FB27G6K0685°C      | G            | 32.0 (1.260)       | 37.0 (1.457)       | 22.0 (0.866)       | 27.5 (1.083)       | 0.80 (0.031)       | 47.0               | 319.6          | 11.0          | 14.0        | 27.0     | 8.9         | 80                |
| 7.5                                           | 1000                 | FB37H6K0755°C      | H            | 42.5 (1.673)       | 33.5 (1.319)       | 22.0 (0.866)       | 37.5 (1.476)       | 1.00 (0.039)       | 31.0               | 232.5          | 10.0          | 14.0        | 30.0     | 10.7        | 49                |
| 9.0                                           | 1000                 | FB37K6K0905°C      | K            | 42.5 (1.673)       | 40.0 (1.57)        | 20.0 (0.787)       | 37.5 (1.476)       | 1.00 (0.039)       | 31.0               | 279.0          | 11.0          | 13.4        | 30.0     | 9.3         | 56                |
| 10                                            | 1000                 | FB37K6K0106°C      | K            | 42.5 (1.673)       | 40.0 (1.57)        | 20.0 (0.787)       | 37.5 (1.476)       | 1.00 (0.039)       | 31.0               | 310.0          | 11.0          | 12.8        | 30.0     | 9.7         | 56                |
| 12                                            | 1000                 | FB37L6K0126°C      | L            | 42.5 (1.673)       | 44.0 (1.732)       | 24.0 (0.945)       | 37.5 (1.476)       | 1.00 (0.039)       | 31.0               | 372.0          | 12.0          | 9.4         | 30.0     | 11.1        | 42                |
| 15                                            | 1000                 | FB37M6K0156°C      | M            | 42.5 (1.673)       | 45.0 (1.772)       | 30.0 (1.181)       | 37.5 (1.476)       | 1.20 (0.047)       | 31.0               | 465.0          | 14.0          | 8.0         | 33.0     | 9.6         | 44                |
| 22                                            | 1000                 | FB52N6K0226°C      | N            | 57.5 (2.264)       | 45.0 (1.772)       | 30.0 (1.181)       | 52.5 (2.067)       | 1.20 (0.047)       | 21.0               | 462.0          | 13.0          | 7.5         | 35.0     | 11.8        | 25                |
| 30                                            | 1000                 | FB52P6K0306°C      | P            | 57.5 (2.264)       | 50.0 (1.969)       | 35.0 (1.378)       | 52.5 (2.067)       | 1.20 (0.047)       | 21.0               | 630.0          | 14.0          | 7.0         | 37.0     | 10.9        | 20                |
| Voltage V <sub>dc</sub> 1100V Voltage Code: L |                      |                    |              |                    |                    |                    |                    |                    |                    |                |               |             |          |             |                   |
| 1.2                                           | 1100                 | FB27A6L0125°C      | A            | 32.0 (1.260)       | 20.0 (0.787)       | 11.0 (0.433)       | 27.5 (1.083)       | 0.80 (0.031)       | 70.0               | 84.0           | 3.4           | 40.5        | 25.0     | 33.0        | 150               |
| 1.5                                           | 1100                 | FB27B6L0155°C      | B            | 32.0 (1.260)       | 22.0 (0.866)       | 13.0 (0.512)       | 27.5 (1.083)       | 0.80 (0.031)       | 70.0               | 105.0          | 3.8           | 34.3        | 25.0     | 31.1        | 130               |
| 2.0                                           | 1100                 | FB27C6L0205°C      | C            | 32.0 (1.260)       | 24.5 (0.965)       | 15.0 (0.591)       | 27.5 (1.083)       | 0.80 (0.031)       | 70.0               | 140.0          | 4.5           | 23.0        | 25.0     | 32.2        | 110               |
| 2.2                                           | 1100                 | FB27C6L0225°C      | C            | 32.0 (1.260)       | 24.5 (0.965)       | 15.0 (0.591)       | 27.5 (1.083)       | 0.80 (0.031)       | 70.0               | 154.0          | 4.9           | 21.6        | 25.0     | 28.7        | 110               |
| 2.5                                           | 1100                 | FB27E6L0255°C      | E            | 32.0 (1.260)       | 28.0 (1.102)       | 14.0 (0.551)       | 27.5 (1.083)       | 0.80 (0.031)       | 70.0               | 175.0          | 5.3           | 19.3        | 25.0     | 28.3        | 110               |
| 3.3                                           | 1100                 | FB27F6L0335°C      | F            | 32.0 (1.260)       | 33.0 (1.299)       | 18.0 (0.709)       | 27.5 (1.083)       | 0.80 (0.031)       | 70.0               | 231.0          | 6.8           | 14.0        | 27.0     | 23.2        | 95                |
| 4.0                                           | 1100                 | FB27F6L0405°C      | F            | 32.0 (1.260)       | 33.0 (1.299)       | 18.0 (0.709)       | 27.5 (1.083)       | 0.80 (0.031)       | 70.0               | 280.0          | 8.0           | 11.5        | 27.0     | 20.4        | 95                |
| 4.7                                           | 1100                 | FB27G6L0475°C      | G            | 32.0 (1.260)       | 37.0 (1.457)       | 22.0 (0.866)       | 27.5 (1.083)       | 0.80 (0.031)       | 70.0               | 329.0          | 8.6           | 10.0        | 27.0     | 20.3        | 80                |
| 6.8                                           | 1100                 | FB37H6L0685°C      | H            | 42.5 (1.673)       | 33.5 (1.319)       | 22.0 (0.866)       | 37.5 (1.476)       | 1.00 (0.039)       | 45.0               | 306.0          | 11.0          | 14.0        | 30.0     | 8.9         | 49                |
| 7.5                                           | 1100                 | FB37H6L0755°C      | H            | 42.5 (1.673)       | 33.5 (1.319)       | 22.0 (0.866)       | 37.5 (1.476)       | 1.00 (0.039)       | 45.0               | 337.5          | 11.5          | 12.0        | 30.0     | 9.5         | 49                |
| 10                                            | 1100                 | FB37L6L0106°C      | L            | 42.5 (1.673)       | 44.0 (1.732)       | 24.0 (0.945)       | 37.5 (1.476)       | 1.00 (0.039)       | 45.0               | 450.0          | 14.0          | 9.0         | 30.0     | 8.5         | 42                |
| 12                                            | 1100                 | FB37M6L0126°C      | M            | 42.5 (1.673)       | 45.0 (1.772)       | 30.0 (1.181)       | 37.5 (1.476)       | 1.20 (0.047)       | 45.0               | 540.0          | 15.5          | 7.5         | 33.0     | 8.3         | 44                |
| 20                                            | 1100                 | FB52N6L0206°C      | N            | 57.5 (2.264)       | 45.0 (1.772)       | 30.0 (1.181)       | 52.5 (2.067)       | 1.20 (0.047)       | 23.0               | 460.0          | 14.0          | 9.0         | 35.0     | 8.5         | 25                |
| 22                                            | 1100                 | FB52P6L0226°C      | P            | 57.5 (2.264)       | 50.0 (1.969)       | 35.0 (1.378)       | 52.5 (2.067)       | 1.20 (0.047)       | 23.0               | 506.0          | 15.5          | 8.0         | 38.0     | 7.8         | 20                |
| 25                                            | 1100                 | FB52P6L0256°C      | P            | 57.5 (2.264)       | 50.0 (1.969)       | 35.0 (1.378)       | 52.5 (2.067)       | 1.20 (0.047)       | 23.0               | 575.0          | 16.0          | 7.0         | 38.0     | 8.4         | 20                |
| Voltage V <sub>dc</sub> 1200V Voltage Code: P |                      |                    |              |                    |                    |                    |                    |                    |                    |                |               |             |          |             |                   |
| 0.68                                          | 1200                 | FB27A6P0684°C      | A            | 32.0 (1.260)       | 20.0 (0.787)       | 11.0 (0.433)       | 27.5 (1.083)       | 0.80 (0.031)       | 80.0               | 54.4           | 2.2           | 65.4        | 25.0     | 47.4        | 150               |
| 1.0                                           | 1200                 | FB27B6P0105°C      | B            | 32.0 (1.260)       | 22.0 (0.866)       | 13.0 (0.512)       | 27.5 (1.083)       | 0.80 (0.031)       | 80.0               | 80.0           | 3.0           | 43.0        | 25.0     | 38.8        | 130               |
| 1.5                                           | 1200                 | FB27C6P0155°C      | C            | 32.0 (1.260)       | 24.5 (0.965)       | 15.0 (0.591)       | 27.5 (1.083)       | 0.80 (0.031)       | 80.0               | 120.0          | 4.0           | 32.3        | 25.0     | 29.1        | 110               |
| 2.0                                           | 1200                 | FB27F6P0205°C      | F            | 32.0 (1.260)       | 33.0 (1.299)       | 18.0 (0.709)       | 27.5 (1.083)       | 0.80 (0.031)       | 80.0               | 160.0          | 5.0           | 21.5        | 27.0     | 27.9        | 95                |
| 2.2                                           | 1200                 | FB27F6P0225°C      | F            | 32.0 (1.260)       | 33.0 (1.299)       | 18.0 (0.709)       | 27.5 (1.083)       | 0.80 (0.031)       | 80.0               | 176.0          | 5.5           | 19.8        | 27.0     | 25.1        | 95                |
| 2.5                                           | 1200                 | FB27F6P0255°C      | F            | 32.0 (1.260)       | 33.0 (1.299)       | 18.0 (0.709)       | 27.5 (1.083)       | 0.80 (0.031)       | 80.0               | 200.0          | 5.8           | 18.0        | 27.0     | 24.8        | 95                |
| 3.0                                           | 1200                 | FB27F6P0305°C      | F            | 32.0 (1.260)       | 33.0 (1.299)       | 18.0 (0.709)       | 27.5 (1.083)       | 0.80 (0.031)       | 80.0               | 240.0          | 6.5           | 14.5        | 27.0     | 24.5        | 95                |
| 3.3                                           | 1200                 | FB27G6P0335°C      | G            | 32.0 (1.260)       | 37.0 (1.457)       | 22.0 (0.866)       | 27.5 (1.083)       | 0.80 (0.031)       | 80.0               | 264.0          | 7.2           | 13.0        | 27.0     | 22.3        | 80                |
| 4.0                                           | 1200                 | FB27G6P0405°C      | G            | 32.0 (1.260)       | 37.0 (1.457)       | 22.0 (0.866)       | 27.5 (1.083)       | 0.80 (0.031)       | 80.0               | 320.0          | 8.0           | 11.0        | 27.0     | 21.3        | 80                |
| 4.7                                           | 1200                 | FB37H6P0475°C      | H            | 42.5 (1.673)       | 33.5 (1.319)       | 22.0 (0.866)       | 37.5 (1.476)       | 1.00 (0.039)       | 55.0               | 258.5          | 6.3           | 20.0        | 30.0     | 18.9        | 49                |
| 5.0                                           | 1200                 | FB37H6P0505°C      | H            | 42.5 (1.673)       | 33.5 (1.319)       | 22.0 (0.866)       | 37.5 (1.476)       | 1.00 (0.039)       | 55.0               | 275.0          | 6.5           | 17.0        | 30.0     | 20.9        | 49                |
| 6.8                                           | 1200                 | FB37L6P0685°C      | L            | 42.5 (1.673)       | 44.0 (1.732)       | 24.0 (0.945)       | 37.5 (1.476)       | 1.00 (0.039)       | 55.0               | 374.0          | 8.0           | 14.3        | 30.0     | 16.4        | 42                |
| 7.5                                           | 1200                 | FB37L6P0755°C      | L            | 42.5 (1.673)       | 44.0 (1.732)       | 24.0 (0.945)       | 37.5 (1.476)       | 1.00 (0.039)       | 55.0               | 412.5          | 8.8           | 11.3        | 30.0     | 17.2        | 42                |
| 10                                            | 1200                 | FB37M6P0106°C      | M            | 42.5 (1.673)       | 45.0 (1.772)       | 30.0 (1.181)       | 37.5 (1.476)       | 1.20 (0.047)       | 55.0               | 550.0          | 11.0          | 8.5         | 33.0     | 14.6        | 44                |
| 12                                            | 1200                 | FB52N6P0126°C      | N            | 57.5 (2.264)       | 45.0 (1.772)       | 30.0 (1.181)       | 52.5 (2.067)       | 1.20 (0.047)       | 35.0               | 420.0          | 9.0           | 14.0        | 35.0     | 13.2        | 25                |
| 15                                            | 1200                 | FB52N6P0156°C      | N            | 57.5 (2.264)       | 45.0 (1.772)       | 30.0 (1.181)       | 52.5 (2.067)       | 1.20 (0.047)       | 35.0               | 525.0          | 10.0          | 11.0        | 35.0     | 13.6        | 25                |
| 20                                            | 1200                 | FB52P6P0206°C      | P            | 57.5 (2.264)       | 50.0 (1.969)       | 35.0 (1.378)       | 52.5 (2.067)       | 1.20 (0.047)       | 35.0               | 700.0          | 13.0          | 8.5         | 38.0     | 10.4        | 20                |

Dimensions in millimeters (inches)

\* Insert K for 10% capacitance tolerance (standard); J = +5% and M = +20% tolerances available on request.

Last character C denotes 5.00mm (0.197in) lead length (standard). For L option (15mm (0.591in)) contact factory for availability.

Values outside this standard range may be available – please contact AVX for any special requirements.

AVX reserves the right to supply capacitors to a tighter capacitance tolerance or higher voltage rating, in the same case size.

# Medium Power Film Capacitors



FB (RoHS Compliant)

## TYPICAL LIFETIME\* CHARACTERISTICS



\*Lifetime is the number of operating hours required for the capacitor to lose 3% of its initial value.

DC FILTERING