

# Medium Power Film Capacitors



## FE (RoHS Compliant)

DC FILTERING



### 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 FE 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 FE has been designed for printed circuit board mounting. FE 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 FE 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) =  $Q \times \text{tg}\delta_0$

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

$\text{tg}\delta_0$  (tan delta)

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

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

where  $C_n$  in Farad     $I_{rms}$  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% from initial value, with no risk of short circuit.

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

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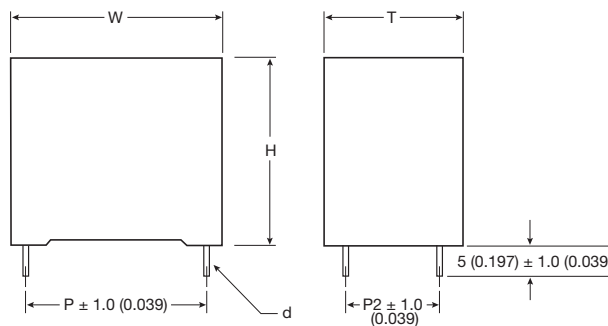
## HOW TO ORDER

|                     |                                                                             |                                         |                                        |                                                                                                       |                       |                                                     |                                                         |
|---------------------|-----------------------------------------------------------------------------|-----------------------------------------|----------------------------------------|-------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------|---------------------------------------------------------|
| <b>FE</b><br>T      | <b>27</b><br>T                                                              | <b>G</b><br>T                           | <b>6</b><br>T                          | <b>K</b><br>T                                                                                         | <b>0685</b><br>T      | <b>K</b><br>T                                       | <b>A</b><br>T                                           |
| <b>Series</b><br>FE | <b>Pitch</b><br>27 = 27.5 (1.083)<br>37 = 37.5 (1.476)<br>52 = 52.5 (2.067) | <b>Case</b><br>G L<br>H M<br>J N<br>K P | <b>Dielectric</b><br>6 = Polypropylene | <b>Voltage</b><br>J = 550V<br>A = 700V<br>B = 800V<br>C = 900V<br>K = 1000V<br>L = 1100V<br>P = 1200V | <b>Cap</b><br>μF Code | <b>Tolerance</b><br>J = ±5%<br>K = ±10%<br>M = ±20% | <b>Pitch P2</b><br>A = 10.2 (0.402)<br>B = 20.3 (0.799) |



DC FILTERING

## DIMENSIONS: millimeters (inches)



millimeters (inches)

| Case Size | W            | H            | T            | P            | P2           | d            |
|-----------|--------------|--------------|--------------|--------------|--------------|--------------|
| G         | 32.0 (1.260) | 37.0 (1.457) | 22.0 (0.866) | 27.5 (1.083) | 10.2 (0.402) | 0.80 (0.031) |
| H         | 42.5 (1.673) | 33.5 (1.319) | 22.0 (0.866) | 37.5 (1.476) | 10.2 (0.402) | 1.20 (0.047) |
| J         | 42.5 (1.673) | 37.0 (1.457) | 28.0 (1.102) | 37.5 (1.476) | 10.2 (0.402) | 1.20 (0.047) |
| K         | 42.5 (1.673) | 40.0 (1.575) | 20.0 (0.787) | 37.5 (1.476) | 10.2 (0.402) | 1.20 (0.047) |
| L         | 42.5 (1.673) | 44.0 (1.732) | 24.0 (0.945) | 37.5 (1.476) | 10.2 (0.402) | 1.20 (0.047) |
| M         | 42.5 (1.673) | 45.0 (1.771) | 30.0 (1.181) | 37.5 (1.476) | 20.3 (0.799) | 1.20 (0.047) |
| N         | 57.5 (2.264) | 45.0 (1.771) | 30.0 (1.181) | 52.5 (2.067) | 20.3 (0.799) | 1.20 (0.047) |
| P         | 57.5 (2.264) | 50.0 (1.969) | 35.0 (1.378) | 52.5 (2.067) | 20.3 (0.799) | 1.20 (0.047) |

## POLYPROPYLENE DIELECTRIC FOR INDUSTRIAL DC FILTERING

These capacitors have been designed principally 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>      | 3.3μF to 75μF                                                  |
| Tolerance on C <sub>n</sub>           | ±5%, ±10%, ±20%                                                |
| Rated DC voltage V <sub>n</sub> dc    | 550V to 1200V                                                  |
| 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                                         |



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DC FILTERING

## 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) | P2<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>mOhms | LS<br>nH | Rth<br>°C/W | Packaging<br>Qty. |
|------------------------------------|----------------------|--------------------|--------------|--------------------|--------------------|--------------------|--------------------|---------------------|--------------------|--------------------|----------------|---------------|--------------|----------|-------------|-------------------|
| Voltage V.DC 550V Voltage Code: J  |                      |                    |              |                    |                    |                    |                    |                     |                    |                    |                |               |              |          |             |                   |
| 15                                 | 550                  | FE27G6J0156*A      | G            | 32.0 (1.260)       | 37.0 (1.457)       | 22.0 (0.866)       | 27.5 (1.083)       | 10.2 (0.402)        | 0.80 (0.031)       | 27.0               | 475.0          | 13.0          | 5.5          | 27.0     | 16.1        | 80                |
| 20                                 | 550                  | FE37K6J0206*A      | K            | 42.5 (1.673)       | 40.0 (1.575)       | 20.0 (0.787)       | 37.5 (1.476)       | 10.2 (0.402)        | 1.20 (0.047)       | 19.0               | 380.0          | 12.5          | 6.5          | 30.0     | 14.8        | 56                |
| 25                                 | 550                  | FE37J6J0256*A      | J            | 42.5 (1.673)       | 37.0 (1.457)       | 28.0 (1.102)       | 37.5 (1.476)       | 10.2 (0.402)        | 1.20 (0.047)       | 19.0               | 475.0          | 13.0          | 6.0          | 30.0     | 14.8        | 35                |
| 30                                 | 550                  | FE37J6J0306*A      | J            | 42.5 (1.673)       | 37.0 (1.457)       | 28.0 (1.102)       | 37.5 (1.476)       | 10.2 (0.402)        | 1.20 (0.047)       | 19.0               | 570.0          | 14.5          | 5.5          | 30.0     | 13.0        | 35                |
| 35                                 | 550                  | FE37M6J0356*B      | M            | 42.5 (1.673)       | 45.0 (1.772)       | 30.0 (1.181)       | 37.5 (1.476)       | 20.3 (0.799)        | 1.20 (0.047)       | 19.0               | 665.0          | 16.0          | 5.0          | 33.0     | 11.7        | 44                |
| 40                                 | 550                  | FE37M6J0406*B      | M            | 42.5 (1.673)       | 45.0 (1.772)       | 30.0 (1.181)       | 37.5 (1.476)       | 20.3 (0.799)        | 1.20 (0.047)       | 19.0               | 760.0          | 16.0          | 5.0          | 33.0     | 11.7        | 44                |
| 50                                 | 550                  | FE52N6J0506*B      | N            | 57.5 (2.264)       | 45.0 (1.772)       | 30.0 (1.181)       | 52.5 (2.067)       | 20.3 (0.799)        | 1.20 (0.047)       | 12.5               | 625.0          | 15.0          | 6.0          | 35.0     | 11.1        | 25                |
| 60                                 | 550                  | FE52N6J0606*B      | N            | 57.5 (2.264)       | 45.0 (1.772)       | 30.0 (1.181)       | 52.5 (2.067)       | 20.3 (0.799)        | 1.20 (0.047)       | 12.5               | 750.0          | 16.0          | 5.5          | 35.0     | 10.7        | 25                |
| 75                                 | 550                  | FE52P6J0756*B      | P            | 57.5 (2.264)       | 50.0 (1.969)       | 35.0 (1.378)       | 52.5 (2.067)       | 20.3 (0.799)        | 1.20 (0.047)       | 12.5               | 937.5          | 17.0          | 5.0          | 37.0     | 10.4        | 20                |
| Voltage V.dc 700V Voltage Code: A  |                      |                    |              |                    |                    |                    |                    |                     |                    |                    |                |               |              |          |             |                   |
| 12                                 | 700                  | FE27G6A0126*A      | G            | 32.0 (1.260)       | 37.0 (1.457)       | 22.0 (0.866)       | 27.5 (1.083)       | 10.2 (0.402)        | 0.80 (0.031)       | 31.0               | 372.0          | 12.5          | 5.5          | 27.0     | 17.5        | 80                |
| 15                                 | 700                  | FE37H6A0156*A      | H            | 42.5 (1.673)       | 33.5 (1.319)       | 22.0 (0.866)       | 37.5 (1.476)       | 10.2 (0.402)        | 1.20 (0.047)       | 21.0               | 315.0          | 10.0          | 8.0          | 30.0     | 18.8        | 49                |
| 20                                 | 700                  | FE37J6A0206*A      | J            | 42.5 (1.673)       | 37.0 (1.457)       | 28.0 (1.102)       | 37.5 (1.476)       | 10.2 (0.402)        | 1.20 (0.047)       | 21.0               | 420.0          | 12.0          | 6.0          | 30.0     | 17.4        | 35                |
| 22                                 | 700                  | FE37L6A0226*A      | L            | 42.5 (1.673)       | 44.0 (1.732)       | 24.0 (0.945)       | 37.5 (1.476)       | 10.2 (0.402)        | 1.20 (0.047)       | 21.0               | 462.0          | 14.0          | 5.5          | 30.0     | 13.9        | 42                |
| 25                                 | 700                  | FE37L6A0256*A      | L            | 42.5 (1.673)       | 44.0 (1.732)       | 24.0 (0.945)       | 37.5 (1.476)       | 10.2 (0.402)        | 1.20 (0.047)       | 21.0               | 525.0          | 14.5          | 5.0          | 30.0     | 14.3        | 42                |
| 30                                 | 700                  | FE37M6A0306*B      | M            | 42.5 (1.673)       | 45.0 (1.772)       | 30.0 (1.181)       | 37.5 (1.476)       | 20.3 (0.799)        | 1.20 (0.047)       | 21.0               | 630.0          | 17.0          | 4.0          | 33.0     | 13.0        | 44                |
| 40                                 | 700                  | FE52N6A0406*B      | N            | 57.5 (2.264)       | 45.0 (1.772)       | 30.0 (1.181)       | 52.5 (2.067)       | 20.3 (0.799)        | 1.20 (0.047)       | 14.5               | 580.0          | 14.0          | 6.0          | 35.0     | 12.8        | 25                |
| 45                                 | 700                  | FE52N6A0456*B      | N            | 57.5 (2.264)       | 45.0 (1.772)       | 30.0 (1.181)       | 52.5 (2.067)       | 20.3 (0.799)        | 1.20 (0.047)       | 14.5               | 652.5          | 15.5          | 5.5          | 35.0     | 11.4        | 25                |
| 50                                 | 700                  | FE52P6A0506*B      | P            | 57.5 (2.264)       | 50.0 (1.969)       | 35.0 (1.378)       | 52.5 (2.067)       | 20.3 (0.799)        | 1.20 (0.047)       | 14.5               | 725.0          | 16.0          | 5.0          | 37.0     | 11.7        | 20                |
| 55                                 | 700                  | FE52P6A0556*B      | P            | 57.5 (2.264)       | 50.0 (1.969)       | 35.0 (1.378)       | 52.5 (2.067)       | 20.3 (0.799)        | 1.20 (0.047)       | 14.5               | 797.5          | 18.0          | 4.5          | 37.0     | 10.3        | 20                |
| 60                                 | 700                  | FE52P6A0606*B      | P            | 57.5 (2.264)       | 50.0 (1.969)       | 35.0 (1.378)       | 52.5 (2.067)       | 20.3 (0.799)        | 1.20 (0.047)       | 14.5               | 870.0          | 19.0          | 4.0          | 37.0     | 10.4        | 20                |
| Voltage V.dc 800V Voltage Code: B  |                      |                    |              |                    |                    |                    |                    |                     |                    |                    |                |               |              |          |             |                   |
| 10                                 | 800                  | FE27G6B0106*A      | G            | 32.0 (1.260)       | 37.0 (1.457)       | 22.0 (0.866)       | 27.5 (1.083)       | 10.2 (0.402)        | 0.80 (0.031)       | 36.0               | 360.0          | 11.5          | 9.5          | 27.0     | 11.9        | 80                |
| 12                                 | 800                  | FE37H6B0126*A      | H            | 42.5 (1.673)       | 33.5 (1.319)       | 22.0 (0.866)       | 37.5 (1.476)       | 10.2 (0.402)        | 1.20 (0.047)       | 24.0               | 288.0          | 9.5           | 10.5         | 30.0     | 15.8        | 49                |
| 15                                 | 800                  | FE37K6B0156*A      | K            | 42.5 (1.673)       | 40.0 (1.575)       | 20.0 (0.787)       | 37.5 (1.476)       | 10.2 (0.402)        | 1.20 (0.047)       | 24.0               | 360.0          | 11.0          | 10.5         | 30.0     | 11.8        | 56                |
| 20                                 | 800                  | FE37L6B0206*A      | L            | 42.5 (1.673)       | 44.0 (1.732)       | 24.0 (0.945)       | 37.5 (1.476)       | 10.2 (0.402)        | 1.20 (0.047)       | 24.0               | 480.0          | 14.0          | 5.5          | 30.0     | 13.9        | 42                |
| 22                                 | 800                  | FE37M6B0226*B      | M            | 42.5 (1.673)       | 45.0 (1.772)       | 30.0 (1.181)       | 37.5 (1.476)       | 20.3 (0.799)        | 1.20 (0.047)       | 24.0               | 528.0          | 15.5          | 5.0          | 33.0     | 12.5        | 44                |
| 25                                 | 800                  | FE37M6B0256*B      | M            | 42.5 (1.673)       | 45.0 (1.772)       | 30.0 (1.181)       | 37.5 (1.476)       | 20.3 (0.799)        | 1.20 (0.047)       | 24.0               | 600.0          | 16.5          | 4.5          | 33.0     | 12.2        | 44                |
| 30                                 | 800                  | FE52N6B0306*B      | N            | 57.5 (2.264)       | 45.0 (1.772)       | 30.0 (1.181)       | 52.5 (2.067)       | 20.3 (0.799)        | 1.20 (0.047)       | 16.5               | 495.0          | 13.0          | 7.5          | 35.0     | 11.8        | 25                |
| 40                                 | 800                  | FE52P6B0406*B      | P            | 57.5 (2.264)       | 50.0 (1.969)       | 35.0 (1.378)       | 52.5 (2.067)       | 20.3 (0.799)        | 1.20 (0.047)       | 16.5               | 660.0          | 15.5          | 5.5          | 37.0     | 11.4        | 20                |
| 47                                 | 800                  | FE52P6B0476*B      | P            | 57.5 (2.264)       | 50.0 (1.969)       | 35.0 (1.378)       | 52.5 (2.067)       | 20.3 (0.799)        | 1.20 (0.047)       | 16.5               | 775.5          | 17.5          | 5.0          | 37.0     | 9.8         | 20                |
| Voltage V.dc 900V Voltage Code: C  |                      |                    |              |                    |                    |                    |                    |                     |                    |                    |                |               |              |          |             |                   |
| 7.5                                | 900                  | FE27G6C0755*A      | G            | 32.0 (1.260)       | 37.0 (1.457)       | 22.0 (0.866)       | 27.5 (1.083)       | 10.2 (0.402)        | 0.80 (0.031)       | 41.5               | 311.3          | 10.5          | 14.5         | 27.0     | 9.4         | 80                |
| 10                                 | 900                  | FE37H6C0106*A      | H            | 42.5 (1.673)       | 33.5 (1.319)       | 22.0 (0.866)       | 37.5 (1.476)       | 10.2 (0.402)        | 1.20 (0.047)       | 28.0               | 280.0          | 9.5           | 11.5         | 30.0     | 14.5        | 49                |
| 15                                 | 900                  | FE37L6C0156*A      | L            | 42.5 (1.673)       | 44.0 (1.732)       | 24.0 (0.945)       | 37.5 (1.476)       | 10.2 (0.402)        | 1.20 (0.047)       | 28.0               | 420.0          | 12.0          | 7.5          | 30.0     | 13.9        | 42                |
| 20                                 | 900                  | FE37M6C0206*B      | M            | 42.5 (1.673)       | 45.0 (1.772)       | 30.0 (1.181)       | 37.5 (1.476)       | 20.3 (0.799)        | 1.20 (0.047)       | 28.0               | 560.0          | 15.0          | 5.5          | 33.0     | 12.1        | 44                |
| 25                                 | 900                  | FE52N6C0256*B      | N            | 57.5 (2.264)       | 45.0 (1.772)       | 30.0 (1.181)       | 52.5 (2.067)       | 20.3 (0.799)        | 1.20 (0.047)       | 18.5               | 462.5          | 12.0          | 9.5          | 35.0     | 11.0        | 25                |
| 35                                 | 900                  | FE52P6C0356*B      | P            | 57.5 (2.264)       | 50.0 (1.969)       | 35.0 (1.378)       | 52.5 (2.067)       | 20.3 (0.799)        | 1.20 (0.047)       | 18.5               | 647.5          | 15.5          | 6.5          | 37.0     | 9.6         | 20                |
| 50                                 | 900                  | FE52P6C0506*B      | P            | 57.5 (2.264)       | 50.0 (1.969)       | 35.0 (1.378)       | 52.5 (2.067)       | 20.3 (0.799)        | 1.20 (0.047)       | 35.0               | 1750.0         | 16.0          | 5.0          | 12.6     | 35.0        | 20.0              |
| Voltage V.dc 1000V Voltage Code: K |                      |                    |              |                    |                    |                    |                    |                     |                    |                    |                |               |              |          |             |                   |
| 6.8                                | 1000                 | FE27G6K0685*A      | G            | 32.0 (1.260)       | 37.0 (1.457)       | 22.0 (0.866)       | 27.5 (1.083)       | 10.2 (0.402)        | 0.80 (0.031)       | 47.0               | 319.6          | 12.0          | 13.5         | 27.0     | 7.7         | 80                |
| 7.5                                | 1000                 | FE37H6K0755*A      | H            | 42.5 (1.673)       | 33.5 (1.319)       | 22.0 (0.866)       | 37.5 (1.476)       | 10.2 (0.402)        | 1.20 (0.047)       | 31.0               | 232.5          | 11.0          | 13.5         | 30.0     | 9.2         | 49                |
| 9.0                                | 1000                 | FE37K6K0905*A      | K            | 42.5 (1.673)       | 40.0 (1.575)       | 20.0 (0.787)       | 37.5 (1.476)       | 10.2 (0.402)        | 1.20 (0.047)       | 31.0               | 279.0          | 12.0          | 13.0         | 30.0     | 8.0         | 56                |
| 10                                 | 1000                 | FE37L6K0106*A      | K            | 42.5 (1.673)       | 44.0 (1.732)       | 24.0 (0.945)       | 37.5 (1.476)       | 10.2 (0.402)        | 1.20 (0.047)       | 31.0               | 310.0          | 12.0          | 12.5         | 30.0     | 8.3         | 56                |
| 12                                 | 1000                 | FE37L6K0126*A      | L            | 42.5 (1.673)       | 44.0 (1.732)       | 24.0 (0.945)       | 37.5 (1.476)       | 10.2 (0.402)        | 1.20 (0.047)       | 31.0               | 372.0          | 13.0          | 9.0          | 30.0     | 9.9         | 42                |
| 15                                 | 1000                 | FE37M6K0156*B      | M            | 42.5 (1.673)       | 45.0 (1.772)       | 30.0 (1.181)       | 37.5 (1.476)       | 20.3 (0.799)        | 1.20 (0.047)       | 31.0               | 465.0          | 15.0          | 7.5          | 33.0     | 8.9         | 44                |
| 22                                 | 1000                 | FE52N6K0226*B      | N            | 57.5 (2.264)       | 45.0 (1.772)       | 30.0 (1.181)       | 52.5 (2.067)       | 20.3 (0.799)        | 1.20 (0.047)       | 21.0               | 462.0          | 14.0          | 7.0          | 35.0     | 10.9        | 25                |
| 30                                 | 1000                 | FE52P6K0306*B      | P            | 57.5 (2.264)       | 50.0 (1.969)       | 35.0 (1.378)       | 52.5 (2.067)       | 20.3 (0.799)        | 1.20 (0.047)       | 21.0               | 630.0          | 15.0          | 6.5          | 37.0     | 10.3        | 20                |
| Voltage V.dc 1100V Voltage Code: L |                      |                    |              |                    |                    |                    |                    |                     |                    |                    |                |               |              |          |             |                   |
| 4.7                                | 1100                 | FE27G6L0475*A      | G            | 32.0 (1.260)       | 37.0 (1.457)       | 22.0 (0.866)       | 27.5 (1.083)       | 10.2 (0.402)        | 0.80 (0.031)       | 70.0               | 329.0          | 9.6           | 9.5          | 27.0     | 17.1        | 80                |
| 5.0                                | 1100                 | FE27G6L0505*A      | G            | 32.0 (1.260)       | 37.0 (1.457)       | 22.0 (0.866)       | 27.5 (1.083)       | 10.2 (0.402)        | 0.80 (0.031)       | 70.0               | 350.0          | 13.0          | 6.1          | 27.0     | 14.6        | 80                |
| 6.8                                | 1100                 | FE37H6L0685*A      | H            | 42.5 (1.673)       | 33.5 (1.319)       | 22.0 (0.866)       | 37.5 (1.476)       | 10.2 (0.402)        | 1.20 (0.047)       | 45.0               | 306.0          | 12.0          | 13.5         | 30.0     | 7.7         | 49                |
| 7.5                                | 1100                 | FE37H6L0755*A      | H            | 42.5 (1.673)       | 33.5 (1.319)       | 22.0 (0.866)       | 37.5 (1.476)       | 10.2 (0.402)        | 1.20 (0.047)       | 45.0               | 337.5          | 12.5          | 11.5         | 30.0     | 8.3         | 49                |
| 10                                 | 1100                 | FE37L6L0106*A      | L            | 42.5 (1.673)       | 44.0 (1.732)       | 24.0 (0.945)       | 37.5 (1.476)       | 10.2 (0.402)        | 1.20 (0.047)       | 45.0               | 450.0          | 15.0          | 8.5          | 30.0     | 7.8         | 42                |
| 12                                 | 1100                 | FE37M6L0126*B      | M            | 42.5 (1.673)       | 45.0 (1.772)       | 30.0 (1.181)       | 37.5 (1.476)       | 20.3 (0.799)        | 1.20 (0.047)       | 45.0               | 540.0          | 16.5          | 7.0          | 33.0     | 7.9         | 44                |
| 20                                 | 1100                 | FE52N6L0206*B      | N            | 57.5 (2.264)       | 45.0 (1.772)       | 30.0 (1.181)       | 52.5 (2.067)       | 20.3 (0.799)        | 1.20 (0.047)       | 23.0               | 460.0          | 15.0          | 8.5          | 35.0     | 7.8         | 25                |
| 22                                 | 1100                 | FE52P6L0226*B      | P            | 57.5 (2.264)       | 50.0 (1.969)       | 35.0 (1.378)       | 52.5 (2.067)       | 20.3 (0.799)        | 1.20 (0.047)       | 23.0               | 506.0          | 16.5          | 7.5          | 38.0     | 7.3         | 20                |
| 25                                 | 1100                 | FE52P6L0256*B      | P            | 57.5 (2.264)       | 50.0 (1.969)       | 35.0 (1.378)       | 52.5 (2.067)       | 20.3 (0.799)        | 1.20 (0.047)       | 23.0               | 575.0          | 17.0          | 6.5          | 38.0     | 8.0         | 20                |
| 30                                 | 1100                 | FE52N6L0306*B      | N            | 57.5 (2.26)        | 45.0 (1.77)        | 30.0 (1.181)       | 52.5 (2.067)       | 20.3 (0.799)        | 1.20 (0.047)       | 35.0               | 1050           | 12.0          | 15.0         | 15.0     | 7.0         | 25                |

Dimensions in millimeters (inches)

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

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

FE (RoHS Compliant)

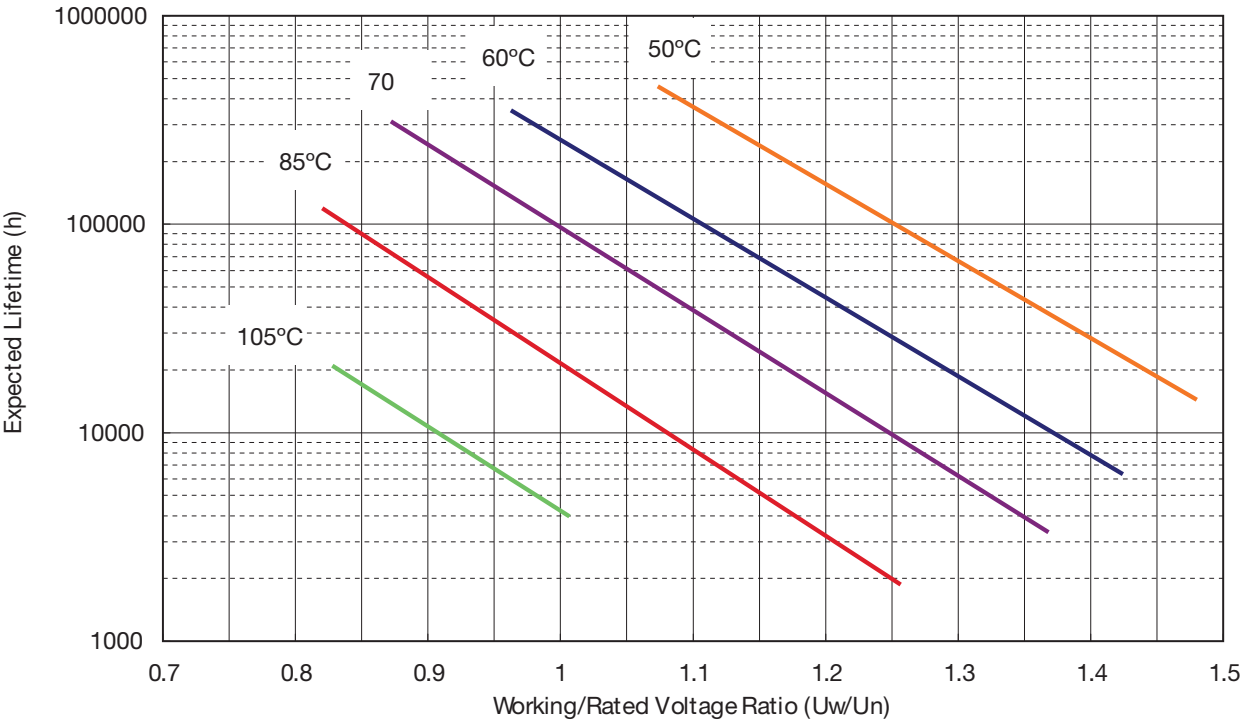


DC FILTERING

| 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) | P2<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>mOhms | Ls<br>nH | Rth<br>°C/W | Packaging<br>Qty. |
|-----------------------------------------------|----------------------|--------------------|--------------|--------------------|--------------------|--------------------|--------------------|---------------------|--------------------|--------------------|----------------|---------------|--------------|----------|-------------|-------------------|
| Voltage V <sub>dc</sub> 1200V Voltage Code: P |                      |                    |              |                    |                    |                    |                    |                     |                    |                    |                |               |              |          |             |                   |
| 3.3                                           | 1200                 | FE27G6P0335*A      | G            | 32.0 (1.260)       | 37.0 (1.457)       | 22.0 (0.866)       | 27.5 (1.083)       | 10.2 (0.402)        | 0.80 (0.031)       | 80.0               | 264.0          | 8.2           | 12.5         | 27.0     | 17.8        | 80                |
| 4.0                                           | 1200                 | FE27G6P0405*A      | G            | 32.0 (1.260)       | 37.0 (1.457)       | 22.0 (0.866)       | 27.5 (1.083)       | 10.2 (0.402)        | 0.80 (0.031)       | 80.0               | 320.0          | 9.0           | 10.5         | 27.0     | 17.6        | 80                |
| 4.7                                           | 1200                 | FE37H6P0475*A      | H            | 42.5 (1.673)       | 33.5 (1.319)       | 22.0 (0.866)       | 37.5 (1.476)       | 10.2 (0.402)        | 1.20 (0.047)       | 55.0               | 258.5          | 7.3           | 19.5         | 30.0     | 14.4        | 49                |
| 5.0                                           | 1200                 | FE37H6P0505*A      | H            | 42.5 (1.673)       | 33.5 (1.319)       | 22.0 (0.866)       | 37.5 (1.476)       | 10.2 (0.402)        | 1.20 (0.047)       | 55.0               | 275.0          | 7.5           | 16.5         | 30.0     | 16.2        | 49                |
| 6.8                                           | 1200                 | FE37L6P0685*A      | L            | 42.5 (1.673)       | 44.0 (1.732)       | 24.0 (0.945)       | 37.5 (1.476)       | 10.2 (0.402)        | 1.20 (0.047)       | 55.0               | 374.0          | 9.0           | 14.0         | 30.0     | 13.2        | 42                |
| 7.5                                           | 1200                 | FE37J6P0755*A      | J            | 42.5 (1.673)       | 37.0 (1.457)       | 28.0 (1.102)       | 37.5 (1.476)       | 10.2 (0.402)        | 1.20 (0.047)       | 55.0               | 412.5          | 9.8           | 11.0         | 30.0     | 14.2        | 35                |
| 10                                            | 1200                 | FE37M6P0106*B      | M            | 42.5 (1.673)       | 45.0 (1.772)       | 30.0 (1.181)       | 37.5 (1.476)       | 20.3 (0.799)        | 1.20 (0.047)       | 55.0               | 550.0          | 12.0          | 8.0          | 35.0     | 13.0        | 44                |
| 12                                            | 1200                 | FE52N6P0126*B      | N            | 57.5 (2.264)       | 45.0 (1.772)       | 30.0 (1.181)       | 52.5 (2.067)       | 20.3 (0.799)        | 1.20 (0.047)       | 35.0               | 420.0          | 10.0          | 13.5         | 35.0     | 11.1        | 25                |
| 15                                            | 1200                 | FE52N6P0156*B      | N            | 57.5 (2.264)       | 45.0 (1.772)       | 30.0 (1.181)       | 52.5 (2.067)       | 20.3 (0.799)        | 1.20 (0.047)       | 35.0               | 525.0          | 11.0          | 10.5         | 35.0     | 11.8        | 25                |
| 20                                            | 1200                 | FE52P6P0206*B      | P            | 57.5 (2.264)       | 50.0 (1.969)       | 35.0 (1.378)       | 52.5 (2.067)       | 20.3 (0.799)        | 1.20 (0.047)       | 35.0               | 700.0          | 14.0          | 8.0          | 35.0     | 9.6         | 20                |

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

## TYPICAL LIFETIME\* CHARACTERISTICS



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

