

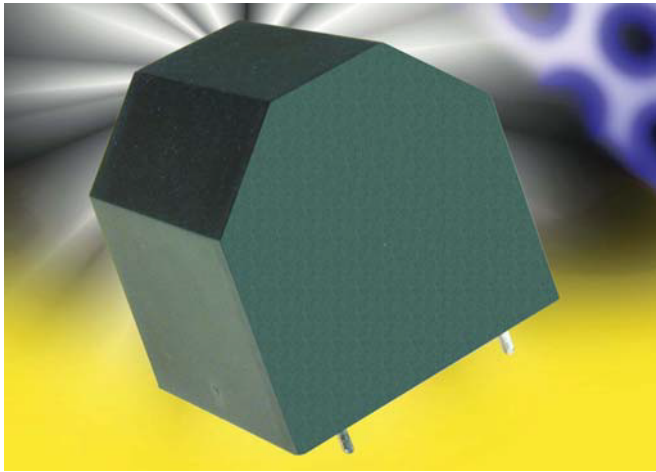


**THE DATASHEET OF
FFV34D0167K--**



DC FILTERING

FFV3* RoHS Compliant



The series uses a metallized polypropylene or polyester dielectric, with the controlled self-healing process, specially treated to have a very high dielectric strength in operating conditions up to 105°C. This is a dry solution for polypropylene and dry or wet for polyester. The FFV3 has been designed for printed circuit board mounting.

APPLICATIONS

The FFV3 capacitors are particularly designed for DC filtering, low reactive power.

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
- IEC 60384-2: Fixed metallized polyester capacitors

LIFETIME EXPECTANCY

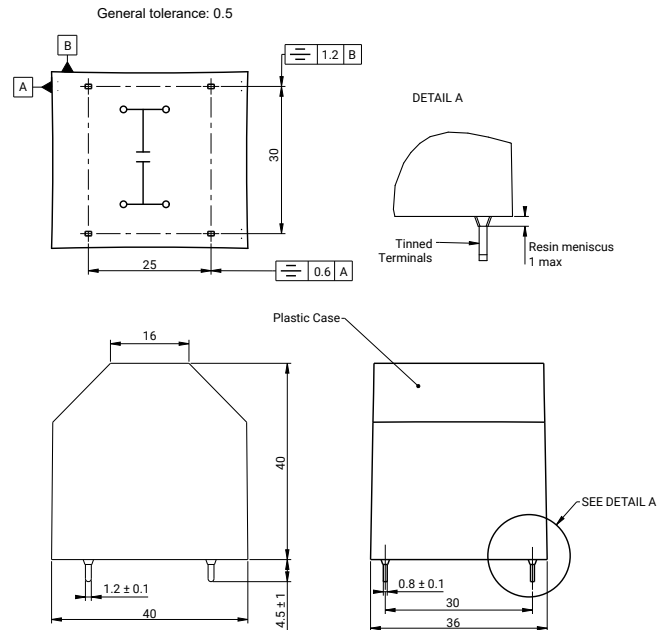
One unique feature of this technology (as opposed to electrolytics) is how the capacitor reacts at the end of its lifetime. Unlike aluminum, electrolytics film capacitors do not have a catastrophic failure mode. Film capacitors simply experience a parametric loss of capacitance of about 2%, with no risk of short circuit.

Please note that this is theoretical, however, as the capacitor continues to be functional even after this 2% decrease.

PACKAGING MATERIAL

Self-extinguishing plastic case (V-0 = in accordance with UL 94; certified classifications according to EN 45545-2) filled with thermosetting resin.

Self-extinguishing thermosetting resin (V-0 = in accordance with UL 94; certified classifications according to EN 45545-2).



HOT SPOT TEMPERATURE CALCULATION

$$\Theta_{\text{hot spot}} = \Theta_{\text{ambient}} + (P_d + P_j) \times (R_{\text{th}} + 7.4) \text{ or}$$

$$\Theta_{\text{hot spot}} = \Theta_{\text{case}} + (P_d + P_j) \times R_{\text{th}}$$

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

$$P_d = [1/2 \times C_n \times (V_{\text{peak to peak}})^2 \times f] \times \text{tg} \delta_0$$

for polypropylene $\text{tg} \delta_0 = 2.10^{-4}$
 for polyester $\text{tg} \delta_0$ value is shown in graph 4 page 3

$$\text{Joules losses } P_j = R_s \times I_{\text{rms}}^2$$

- C_n in Farad
- V in Volt
- R_{th} in °C/W
- I_{rms} in Ampere
- R_s in Ohm
- R_{th} : R_{th} case/hot spot in °C/W
- f in Hertz
- θ in °C

DC FILTERING

FFV3* for Low Voltage Applications **RoHS Compliant**



HOW TO ORDER

FFV3

Series

4

Dielectric

4 = Polyester
6 = Polypropylene

D

Voltage Code

D = 75Vdc J = 525Vdc
E = 100Vdc A = 720Vdc
F = 160Vdc C = 900Vdc
H = 300Vdc L = 1100Vdc
I = 400Vdc

K

Capacitance Tolerances
K = ±10%

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Lead Styles
-- = Standard

Consult Factory for Special Options



ELECTRICAL CHARACTERISTICS – POLYESTER DIELECTRIC

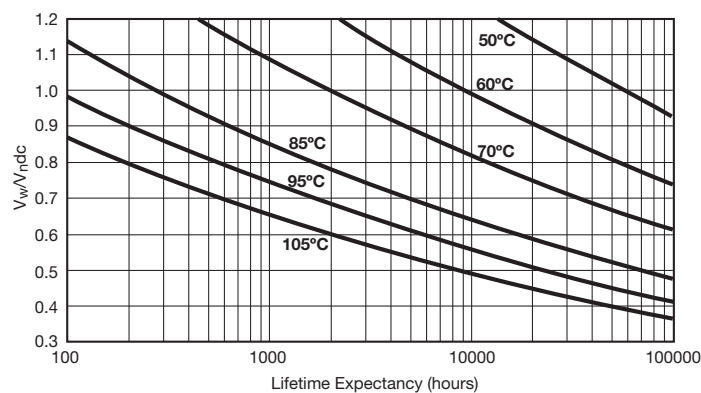
| Items | Characteristics |
|--|------------------------------------|
| Climatic category | 40/105/56 (IEC 60068) |
| Test voltage between terminals @ 25°C | 1.5 x V _{n,dc} during 10s |
| Test voltage between terminals and case @ 25°C " | @ 4 kVrms @ 50 Hz during 1 min. |
| Capacitance range C _n | 30µF to 160µF |
| Tolerance on C _n | ±10% |
| Rated DC voltage V _{n,dc} | 75 to 400 V |
| Dielectric | Polyester |
| Max Stray Inductance | 15nH |

RATINGS AND PART NUMBER REFERENCE – POLYESTER DIELECTRIC

| Part Number | Capacitance (µF) | I _{rms max.} (A) | I ² t _{10 shots} (A ² s) | I ² t _{1000 shots} (A ² s) | R _s (mΩ) | R _{th} (°C/W) | Typical Weight (g) |
|---|------------------|---------------------------|---|---|---------------------|------------------------|--------------------|
| V_{n,dc} = 75 V V_{rms} = 45 v max Voltage Code: D | | | | | | | |
| FFV34D0137K-- | 130 | 23 | 370 | 37 | 0.56 | 5.6 | 90 |
| FFV34D0167K-- | 160 | 28 | 560 | 56 | 0.47 | 5 | 90 |
| V_{n,dc} = 100 V V_{rms} = 60 v max Voltage Code: E | | | | | | | |
| FFV34E0806K-- | 80 | 19 | 250 | 25 | 0.67 | 6.2 | 90 |
| FFV34E0107K-- | 100 | 24 | 390 | 39 | 0.55 | 5.4 | 90 |
| V_{n,dc} = 160 V V_{rms} = 75 v max Voltage Code: F | | | | | | | |
| FFV34F0556K-- | 55 | 17 | 180 | 18 | 0.77 | 6.6 | 90 |
| FFV34F0656K-- | 65 | 20 | 260 | 26 | 0.66 | 6 | 90 |
| V_{n,dc} = 300 V V_{rms} = 90 v max Voltage Code: H | | | | | | | |
| FFV34H0406K-- | 40 | 20 | 150 | 15 | 2.80 | 9.6 | 90 |
| FFV34H0506K-- | 50 | 26 | 230 | 23 | 2.25 | 8.5 | 90 |
| V_{n,dc} = 400 V V_{rms} = 105 v max Voltage Code: I | | | | | | | |
| FFV34I0306K--* | 30 | 17 | 110 | 11 | 2.93 | 9.9 | 90 |
| FFV34I0406K--* | 40 | 23 | 200 | 20 | 2.21 | 8.4 | 90 |

(*) Polyester dielectric film wet silicone

LIFETIME EXPECTANCY VS V_w/V_n AND HOT SPOT TEMPERATURE POLYESTER DIELECTRIC



V_w = Permanent working or operating DC voltage.

DC FILTERING

FFV3* DC for Medium and High Voltage Applications **RoHS Compliant**



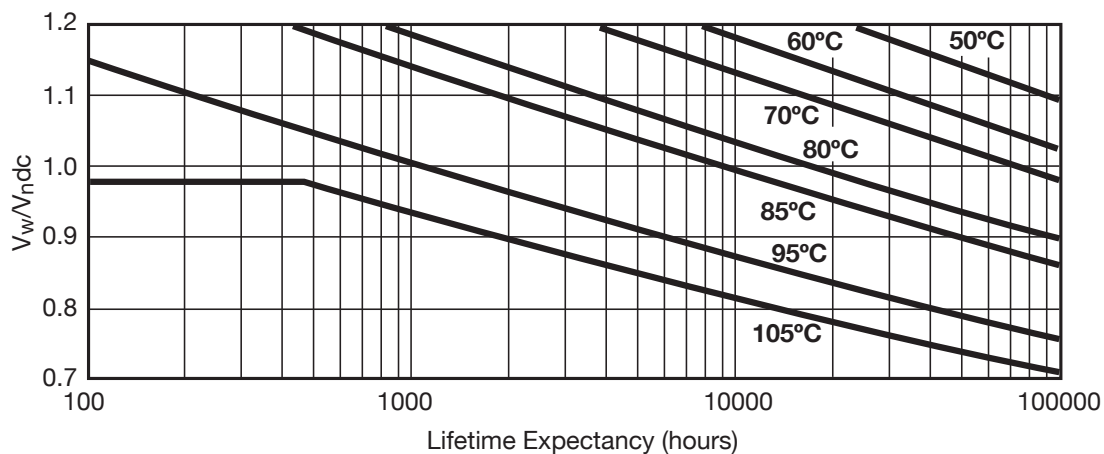
DC FILTERING ELECTRICAL CHARACTERISTICS – POLYPROPYLENE DIELECTRIC

| Items | Characteristics |
|--|------------------------------------|
| Climatic category | 40/105/56 (IEC 60068) |
| Test voltage between terminals @ 25°C | 1.5 x V _{n,dc} during 10s |
| Test voltage between terminals and case @ 25°C " | @ 4 kVrms @ 50 Hz during 1 min. |
| Capacitance range C _n | 6μF to 25μF |
| Tolerance on C _n | ±10% |
| Rated DC voltage V _{n,dc} | 500 to 1100 V |
| Dielectric | Polypropylene |
| Max Stray Inductance | 15nH |

RATINGS AND PART NUMBER REFERENCE – POLYPROPYLENE DIELECTRIC

| Part Number | Capacitance (μF) | I _{rms max.} (A) | I ² t _{10 shots} (A ² s) | I ² t _{1000 shots} (A ² s) | R _s (mΩ) | R _{th} (°C/W) | Typical Weight (g) |
|---|------------------|---------------------------|---|---|---------------------|------------------------|--------------------|
| V_{n,dc} = 500 V Vrms = 105 v max Voltage Code: J | | | | | | | |
| FFV36J0206K- | 20 | 27 | 3200 | 320 | 5.88 | 3.5 | 90 |
| FFV36J0256K- | 25 | 33 | 5000 | 500 | 4.72 | 3.1 | 90 |
| V_{n,dc} = 700 V Vrms = 120 v max Voltage Code: A | | | | | | | |
| FFV36A0146K- | 14 | 21 | 2000 | 200 | 7.34 | 3.7 | 90 |
| FFV36A0206K- | 20 | 30 | 4200 | 420 | 5.15 | 3.1 | 90 |
| V_{n,dc} = 900 V Vrms = 150 v max Voltage Code: C | | | | | | | |
| FFV36C0106K- | 10 | 19 | 1600 | 160 | 8.21 | 3.4 | 90 |
| FFV36C0136K- | 13 | 25 | 2800 | 280 | 6.33 | 2.9 | 90 |
| V_{n,dc} = 1100 V Vrms = 180 v max Voltage Code: L | | | | | | | |
| FFV36L0605K- | 6 | 13 | 800 | 80 | 11.4 | 3.7 | 90 |
| FFV36L0905K- | 9 | 20 | 1900 | 190 | 7.61 | 2.9 | 90 |



LIFETIME EXPECTANCY VS V_w/V_n AND HOT SPOT TEMPERATURE POLYPROPYLENE DIELECTRIC



V_w = Permanent working or operating DC voltage.

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

-  [View FFV34D0167K-- on WIN SOURCE](#)
-  [AVX Corp/Kyocera Corp Information](#)

Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management