

TUNING

FAV* RoHS Compliant



APPLICATIONS

- High Reactive Energy Tuning for Convertors
- Protection of Semi-Conductors

TECHNOLOGY

Metallized polypropylene film and metal foil.
Dry capacitor.

PACKAGING

Rectangular resin case.

4 leads 1.2 x 0.8mm for printed circuit board mounting.

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

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

(Note that FFV3 and FAV3 are in the same packaging.)

STANDARDS

IEC 61071-1: IEC 61071-2: Power electronic capacitors

IEC 60068-1: Environmental testing

IEC 60077: Rules for electric traction equipment

UL 94: Tests for Flammability of Plastic Materials for Parts in Devices and Appliances

HOT SPOT TEMPERATURE CALCULATION

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

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

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

for tuning applications:

$$P_d = (V_{\text{rms}}^2 \times C \times 2 \times \pi \times f) \times 2.10^{-4}$$

For protection applications:

$$P_d = [1/2 \times C_n \times (V_{\text{peak to peak}})^2 \times f] \times 2.10^{-4}$$

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

C_n in Farad I_{rms} in Ampere f in Hertz

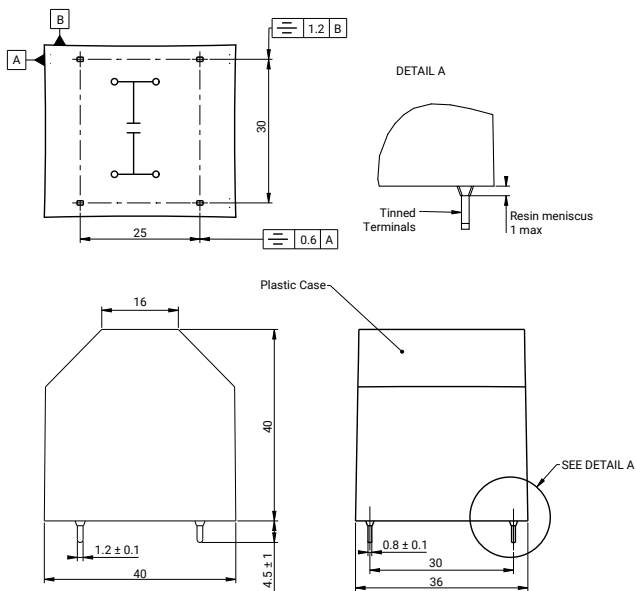
V in Volt R_s in Ohm θ in °C

R_{th} in °C/W R_{th} : R_{th} case/hot spot in °C/W

DIMENSIONS

Case Size 3

General tolerance: 0.5



HOW TO ORDER

FAV

Series

3

Case Size
Case Size 3

6

Dielectric
6 = Polypropylene

K

Voltage
Code
K = 600Vdc
B = 800Vdc
L = 1000Vdc
U = 1200Vdc
R = 1500Vdc
N = 2000Vdc

0125

Capacitance Code
0 + pF code
0125 = 1.2µF (1200nF)
0105 = 1.0µF (1000nF)
0154 = 0.15µF (150nF)
etc.

K

Capacitance
Tolerances
K = ±10%

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Terminal Code
-- = Standard



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ELECTRICAL CHARACTERISTICS

Climatic category	40/085/56 (IEC 60068)
Working temperature	hot spot temperature: -40°C to +85°C
Hot spot temperature	≤85°C (must be calculated: see below)
Capacitance range C _n	80 to 1200nF
Tolerance	±10%
Rated AC voltage	V _{n,rms} = 300 to 650 V
Rated DC voltage	V _{n,dc} = 600 to 2000 V
Maximum rms current	I _{rms} max = 10 to 40 Arms
Maximum reactive power	Q max = 7 to 14 kvar
Stray inductance	15 nH
Test voltage between terminals	1.5 x V _{n,dc} 10s
Withstanding voltage between terminals and case	3000 V _{rms} 60s
Dielectric	Polypropylene

RATINGS AND PART NUMBER REFERENCE

Part Number	Capacitance (nF)	I rms max (A)	Q max (kV)	Rs (mΩ)	Ls (nH)	Rth (°C/W)	Typical Weight (g)
V_{n,dc} 600V Vrms: 300V							
FAV36K0125K-	1200	40	12	0.85	5	4	90
FAV36K0105K-	1000	32	10	1	5	4.1	90
V_{n,dc} 800V Vrms: 400V							
FAV36B0804K-	800	35	14	0.9	5	4	90
FAV36B0624K-	620	27	11	1.1	5	4.1	90
V_{n,dc} 1000V Vrms: 450V							
FAV36L0564K-	560	30	14	1	5	4	90
FAV36L0474K-	470	25	12	1.2	5	4.1	90
V_{n,dc} 1200V Vrms: 500V							
*FAV36U0334K-	330	21	11	1.4	5	4.2	90
*FAV36U0274K-	270	17	9	1.7	5	4.4	90
V_{n,dc} 1500V Vrms: 600V							
*FAV36R0184K-	180	16	10	1.7	5	4.4	90
*FAV36R0154K-	150	13	8	2	5	4.5	90
V_{n,dc} 2000V Vrms: 650V							
*FAV36N0124K-	120	15	10	1.7	5	4.6	90
*FAV36N0104K-	100	12	8	1.9	5	4.9	90
*FAV36N0803K-	80	10	7	2	5	5.2	90

*Silicone oil could resweat in very low quantity (< 0.0X ml) without effect on reliability.

LIFETIME EXPECTANCY

